



Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
Appendix B

Doc./Rev.: EIR-3021970-000
Project: 00225.03.0050 DOE Atlas Project

Appendix B

Atlas Railcar Inspection Documents



Orano Federal Services
**Title: Design and Prototype Fabrication of Railcars for Transport of
 High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
 Appendix B**

Doc./Rev.: EIR-3021970-000
 Project: 00225.03.0050 DOE Atlas Project

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Appendix B.4.5 – AWS Weld Examination Inspector Certification 528
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APPENDIX B.1 – ATLAS FABRICATION INSPECTION DOCUMENTATION

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Appendix B.1.1 – Atlas Railcar Travelers

Orano Federal Services	
DATA TRANSMITTAL FORM	
Supplier: KASGRO RAIL CORP., INC.	DTF No: 052 Page <u>1</u> of <u>1</u>
P.O./SC No: 15C3011916	KLEIN Slade <small>Date: 2019.03.19 10:04:08 -07'00'</small> Date: 3/19/2019
Type of Submittal: <input checked="" type="checkbox"/> First <input type="checkbox"/> Re-Submittal	SDRL List Item No: 15
Submitted for: <input checked="" type="checkbox"/> Approval <input checked="" type="checkbox"/> Review <input type="checkbox"/> Information	Number of Copies Submitted: 1
Submitted By: RICK FORD	Rick Ford <small>Digitally signed by Rick Ford Date: 2019.03.19 07:48:01 -0700</small> PROJECT MANAGER
<small>(Name)</small>	<small>(Signature)</small> <small>(Title)</small>

ITEM NUMBER	DOCUMENT NUMBER	REVISION NUMBER	DOCUMENT DESCRIPTION	FS DISPOSITION
1	KAS 189		ATLAS CASK CAR SHOP TRAVELERS	<input type="checkbox"/> AP <input type="checkbox"/> AWC <input checked="" type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
2	KAS 190		ATLAS BUFFER CAR 1 SHOP TRAVELER	<input type="checkbox"/> AP <input type="checkbox"/> AWC <input checked="" type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
3	KAS 191		ATLAS BUFFER CAR 2 SHOP TRAVELER	<input type="checkbox"/> AP <input type="checkbox"/> AWC <input checked="" type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
				<input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
				<input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
				<input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
				<input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
				<input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
				<input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
				<input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA

Comments: No comments.	Technical Reviewer (i.e., RE, PTL, SME, QA, etc.) KLEIN Slade <small>Date: 2019.03.19 08:36:22 -07'00'</small> Date: 3/19/2019
---------------------------	--

FS DISPOSITION CODES AND DEFINITIONS			
AP	Approved	Work may proceed.	Resubmittal is not required
AWC	Approved with Comment	Work may proceed; comments provided for Supplier's consideration only.	Resubmittal is not required
REV	Reviewed	Work may proceed; comments provided for Supplier's consideration only.	Resubmittal is not required
RWC	Reviewed with Comment	Work may proceed; subject to incorporation and compliance w/ Buyer comments.	Correct and resubmit
DS	Disapproved	Work may <u>not</u> proceed.	Correct and resubmit
RSA	Receipt Submittal Acknowledged	No other action required.	

If, in the judgment of the Supplier, the incorporation of FS' comments will result in a change to the Purchase Order/Subcontract, work shall not proceed and the Supplier shall immediately provide a written notice to FS' C&P Representative describing the change.



Project Manager (PM) / Engineering Manager (EM) or Designated Individual (DI) Approval 	<small>Digitally signed by Mark A. Denton DN: cn=Mark A. Denton, o=Orano Federal Services, email=mark.denton@orano-group.com, ou=Orano Date: 2019.03.19 12:30:37 -0400</small>	Date: 03/19/2019
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FS-EN-FRM-023 Rev 02 (Effective March 1, 2018)
 Refer to FS-EN-PRC-012



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 orano	Orano Federal Services	
	SUPPLIER DOCUMENT SUBMITTAL REVIEW	
Supplier / PO No.:	KASGRO / 15C3011916	DTF No. / Rev: 052
Charge No:	00225.03.0050.02.00001	Due Date: 4/2/2019
Document(s):	See DTF No.: 052	
	<small>REVIEW INSTRUCTIONS: (List Supplier Doc. No. and Rev. FS Spec and Dwg. Codes, Stds, etc.)</small>	
PE	Slade Klein	
REVIEWERS	Slade Klein, Bernie Counterman	
QA	Bernie Counterman	
Technical Review		
Comments/Markup Attached Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Technical Reviewer Comments:		
No comments.		
Technical Reviewer(s) (Sign/Date): KLEIN Slade		Date: 2019.03.19 08:18:55 -07'00'
Quality Assurance Review (As Applicable)		
Comments/Markup Attached Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Technical Reviewer Comments:		
No Comments		
QA Reviewer(s) (Sign/Date): 		Digitally signed by COUNTERMAN Bernard Date: 2019.03.19 08:22:16 -07'00'
COMMENT DISPOSITION (If Applicable. Attached further comments and disposition correspondence as necessary)		

FS-EN-FRM-026 Rev 01 (Effective March 1, 2018)
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Kasgro Specialty Railcar Solutions
Form 84
ATLAS Cask Car Assembly

Quality Assurance
 Body Bolster reporting form
 Fit and Weld Body Bolster

CUSTOMER WITNESS POINT:

* Material Inspection- Deck and/or Car Body Steel to occur on first available car on order.

Customer Signature *Benjamin C. ...* Date 3/24/18

Inspect fit-up OK

CUSTOMER WITNESS POINT:

* Start of Welding Process to occur on first available car on order.

Customer Signature *B. ...* Date 4/9/18

Weld
 Inspect all welds OK

Welders Clock # 819 Thomas R
811 Jim N. ...
804 Ron Price

All repairs to be made and forms completed before moving assembly

Group leader or foreman's signature *Scott Neely* Date 3-29-18

Inspector's signature *Bill Baker* Date 29 APR 18

QA Form 84
 Revision No. 0

ATLAS Cask Car Assembly

April 11, 2017



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Kasgro Specialty Railcar Solutions
 Form 84
ATLAS Cask Car Assembly

Quality Assurance
 Railcar reporting form

Fit - Side sills, Centersill, Center plates, End sills, Body bolsters and Crossmembers to railcar deck plate

Check fit-up for proper application to drawings OK

Weld
 Inspect all welds OK

Welders Clock # 821 T. PA
840
841
824 R. PRICE

All repairs to be made and forms completed before moving assembly

Group leader or foreman's signature Scott Neely Date 7-2-18

Inspector's signature Pull Baker Date 2 JUL 18

QA Form 84
 Revision No. 0

ATLAS Cask Car Assembly

April 11, 2017



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Kasgro Specialty Railcar Solutions
Form 84
ATLAS Cask Car Assembly

Quality Assurance
 Railcar reporting form

Fit – Bottom Cover Plate and Side Sill Gussets

Check fit-up for proper application to drawings OK

Weld

Inspect all welds OK

Welders Clock # 821 - T. Hoff
843 - M. St.
841 - M. St.
874 - B. W. Price, Jr.

All repairs to be made and forms completed before moving assembly

Group leader or foreman's signature Scott Neely Date 7-2-18

Inspector's signature Bill Baker Date 2 JUL 18

CUSTOMER WITNESS POINT:

* Start of NDE Process to occur on first available car on order.

Customer Signature James A. Counts Date 6/19/18

* Witness Jack Lug proof test.

Customer Signature M. DENTON Date LETTER # PS-18-021

* Witness CAR BODY ULTRASONIC TESTING.

Customer Signature: James A. Counts DATE 7/24/18

QA Form 84 ATLAS Cask Car Assembly April 11, 2017
 Revision No. 0



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Kasgro Specialty Railcar Solutions
Form 84
ATLAS Cask Car Assembly

Quality Assurance
 Reporting form

Position #7
 Apply Airbrake, Piping

Inspection
 Inspect all parts/sub-assemblies for proper application to drawings

Inspect all welds and fasteners OK.

Welders Clock # 892 [Signature]
836 [Signature]

All repairs to be made and forms completed before moving assembly

Group leader or foreman's signature [Signature] Date 7-25-18

Inspector's signature [Signature] Date 25 Jul 18

QA Form 84
 Revision No. 0

ATLAS Cask Car Assembly

April 11, 2017



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Kasgro Specialty Railcar Solutions
Form 84
ATLAS Cask Car Assembly

Quality Assurance
 Reporting form

Additional Customer Witness and/or Hold Points

*** CUSTOMER WITNESS POINTS:**

- + AAR Witness Brake Test; to occur on Cask Railcar.

Customer Signature B. Counts Date 1/17/19

- + Laser Layout of Pin Block Attachments on Cask Car Deck to occur near end of final assembly.

Customer Signature B. Counts Date 1/29/19

- * Laser Check of Pin Block Attachments on Atlas Railcar Deck to occur near end of Cask railcar final assembly.

Customer Signature B. Counts Date 1/29/19

- * Pin Block Attachment Weld NDR Test to occur near end of Cask railcar final assembly, after Laser check of welded pin blocks.

Customer Signature B. Counts Date 2/16/19

*** CUSTOMER HOLD POINTS:**

- + Envelope & Deck Height Measurement Hold Point; to occur during Axle/Truck Load Test with load on railcar.

Customer Signature B. Counts Date 1/29/19

- + Final Acceptance Inspection Hold Point; to occur with each railcar.

Customer Signature B. Counts Date 2/19/19

QA Form 84
 Revision No. 0

ATLAS Cask Car Assembly

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WELD RECORD FOR SUB-ASSEMBLY / ASSEMBLY ATLAS CASK CAR

Date	Clock No.	Body Bolsters
3-29-18	11	James Clark
3-29-18	814	Tom Commons



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Appendix B.1.2 – Burning Table Inspection Reports, Forms 9Z and 9Z-A

		Orano Federal Services			
		DATA TRANSMITTAL FORM			
Supplier:	KASGRO RAIL CORP., INC.	DTF No:	041A	Page	1 of 1
P.O./SC No:	15C3011916	Date:	4/02/2019		
Type of Submittal:	<input type="checkbox"/> First <input checked="" type="checkbox"/> Re-Submittal		SDRL List Item No:	24	
Submitted for:	<input checked="" type="checkbox"/> Approval <input type="checkbox"/> Review <input type="checkbox"/> Information		Number of Copies Submitted:	1	
Submitted By:	RICK FORD	Rick Ford	PROJECT MANAGER		
	(Name)	(Signature)	(Title)		

ITEM NUMBER	DOCUMENT NUMBER	REVISION NUMBER	DOCUMENT DESCRIPTION	FS DISPOSITION		
1	KAS 149 Rev 1		Forms 9Z-A Atlas Buffer Cars	<input checked="" type="checkbox"/> AP	<input type="checkbox"/> AWC	<input type="checkbox"/> REV
				<input type="checkbox"/> RWC	<input type="checkbox"/> DS	<input type="checkbox"/> RSA
2	KAS 150 Rev 1		Forms 9Z-A Atlas Cask Car	<input checked="" type="checkbox"/> AP	<input type="checkbox"/> AWC	<input type="checkbox"/> REV
				<input type="checkbox"/> RWC	<input type="checkbox"/> DS	<input type="checkbox"/> RSA
				<input type="checkbox"/> AP	<input type="checkbox"/> AWC	<input type="checkbox"/> REV
				<input type="checkbox"/> RWC	<input type="checkbox"/> DS	<input type="checkbox"/> RSA
				<input type="checkbox"/> AP	<input type="checkbox"/> AWC	<input type="checkbox"/> REV
				<input type="checkbox"/> RWC	<input type="checkbox"/> DS	<input type="checkbox"/> RSA
				<input type="checkbox"/> AP	<input type="checkbox"/> AWC	<input type="checkbox"/> REV
				<input type="checkbox"/> RWC	<input type="checkbox"/> DS	<input type="checkbox"/> RSA
				<input type="checkbox"/> AP	<input type="checkbox"/> AWC	<input type="checkbox"/> REV
				<input type="checkbox"/> RWC	<input type="checkbox"/> DS	<input type="checkbox"/> RSA
				<input type="checkbox"/> AP	<input type="checkbox"/> AWC	<input type="checkbox"/> REV
				<input type="checkbox"/> RWC	<input type="checkbox"/> DS	<input type="checkbox"/> RSA

Comments:	Technical Reviewer (i.e., RE, PTL, SME, QA, etc.)
No comments.	KLEIN Slade Date: 2019.04.03 13:55:26 -07'00'
	Date: 4/3/2019

FS DISPOSITION CODES AND DEFINITIONS			
AP	Approved	Work may proceed.	Resubmittal is not required
AWC	Approved with Comment	Work may proceed; comments provided for Supplier's consideration only.	Resubmittal is not required
REV	Reviewed	Work may proceed; comments provided for Supplier's consideration only.	Resubmittal is not required
RWC	Reviewed with Comment	Work may proceed; subject to incorporation and compliance w/ Buyer comments.	Correct and resubmit
DS	Disapproved	Work may not proceed.	Correct and resubmit
RSA	Receipt Submittal Acknowledged	No other action required.	

If, in the judgment of the Supplier, the incorporation of FS' comments will result in a change to the Purchase Order/Subcontract, work shall not proceed and the Supplier shall immediately provide a written notice to FS' C&P Representative describing the change.

Project Manager (PM) / Engineering Manager (EM) or Designated Individual (DI) Approval		Digitally signed by Mark A. ... DN: cn=Mark A. ... 2.5.4.25=197A370128C410E0021700, c=US, o=Orano, ou=... Date: 2019.04.03 17:20:19-04'00'	Date: 04/03/2019
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FS-EN-FRM-023 Rev 02 (Effective March 1, 2018)
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	Orano Federal Services	
	SUPPLIER DOCUMENT SUBMITTAL REVIEW	
Supplier / PO No.:	KASGRO / 15C3011916	DTF No. / Rev: 041A
Charge No:	00225.03.0050.02.00001	Due Date: 4/15/2019
Document(s):	See DTF No.: 041A	
REVIEW INSTRUCTIONS: (List Supplier Doc. No. and Rev. FS Spec and Dwg, Codes, Stds, etc.)		
PE	Slade Klein	
REVIEWERS	Slade Klein, Bernie Counterman	
QA	Bernie Counterman	
Technical Review		
Comments/Markup Attached Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Technical Reviewer Comments:		
No comments		
Technical Reviewer(s) (Sign/Date): KLEIN Slade Date: 2019.04.02 09:59:27 -07'00'		
Quality Assurance Review (As Applicable)		
Comments/Markup Attached Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Technical Reviewer Comments:		
No Comments		
QA Reviewer(s) (Sign/Date):		Digitally signed by COUNTERMEN Bernard Date: 2019.04.03 08:12:16 -07'00'
COMMENT DISPOSITION (If Applicable. Attached further comments and disposition correspondence as necessary)		

FS-EN-FRM-026 Rev 01 (Effective March 1, 2018)
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KAS 150 Rev. 1

KASGRO RAIL CORP
FORM 9Z
RECEIVING INSPECTION REPORT

DATE 3-15-10

P.O.# 15C3011916 CAR/JOB # ATLAS C

MATERIAL DESCRIPTION CENTER PLATES

DRAWING D-1155-9 ITEM # 3-11

MILL REPORTS RECEIVED YES NO N/A REPORTS CORRECT YES NO N/A

ACCEPTANCE PER SAMPLE SIZE WHEN SAMPLING LOTS OF MATERIAL

LOT SIZE	SAMPLE SIZE	REJECTION CRITERIA
1-10	1	1
11-20	2	2
21-50	3	3
51-100	4	4
101-200	5	5
201-500	6	6
1-UP	7 PER 500 LOT	7 PER 500 LOT

DATE CUT	QUANTITY	QUANTITY REMAINING	REMARKS
<i>4-18-18</i>	<i>2</i>	<i>0</i>	<i>BB</i>

To the best of my knowledge all information contained in this document is accurate.
Signed: *B. Baker* Kasgro Rail



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KASGRO RAIL CORP
FORM 9Z-A
BURNING TABLE INSPECTION REPORT

DATE 7/21/10

P.O.# 15C3011916 CAR/JOB # ATLAS C

MATERIAL DESCRIPTION SIDE SILL BOTTOM FLANGE

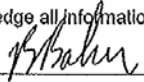
DRAWING 1155-10 ITEM # 3-16

MILL REPORTS RECEIVED YES NO N/A REPORTS CORRECT YES NO N/A

ACCEPTANCE PER SAMPLE SIZE WHEN SAMPLING LOTS OF MATERIAL

LOT SIZE	SAMPLE SIZE	REJECTION CRITERIA
1-10	1	1
11-20	2	2
21-50	3	3
51-100	4	4
101-200	5	5
201-500	6	6
1-UP	7 PER 500 LOT	7 PER 500 LOT

DATE CUT	QUANTITY	QUANTITY REMAINING	REMARKS
6-20-18	4	0	BB KMC 051418-001

To the best of my knowledge all information contained in this document is accurate.
Signed:  Kasgro Rail



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KASGRO RAIL CORP
 FORM 9Z-A
 BURNING TABLE INSPECTION REPORT

DATE 7/21/10

P.O.# 15C3011916 CAR/JOB # ATLAS C
 MATERIAL DESCRIPTION SIDE SILL WEB
 DRAWING 1155-10 ITEM # 3-17

MILL REPORTS RECEIVED YES NO N/A REPORTS CORRECT YES NO N/A

ACCEPTANCE PER SAMPLE SIZE WHEN SAMPLING LOTS OF MATERIAL

LOT SIZE	SAMPLE SIZE	REJECTION CRITERIA
1-10	1	1
11-20	2	2
21-50	3	3
51-100	4	4
101-200	5	5
201-500	6	6
1-UP	7 PER 500 LOT	7 PER 500 LOT

DATE CUT	QUANTITY	QUANTITY REMAINING	REMARKS
5-2-18	2	0	B/B KMC 021318-003

To the best of my knowledge all information contained in this document is accurate.
 Signed: *[Signature]* Kasgro Rail



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KASGRO RAIL CORP
 FORM 9Z-A
 BURNING TABLE INSPECTION REPORT

DATE 7/21/10

P.O.# 15C3011918

CAR/JOB # ATLAS C

MATERIAL DESCRIPTION SIDE SILL WEB

DRAWING 1155-10

ITEM # 3-18

MILL REPORTS RECEIVED YES NO N/A REPORTS CORRECT YES NO N/A

ACCEPTANCE PER SAMPLE SIZE WHEN SAMPLING LOTS OF MATERIAL

LOT SIZE	SAMPLE SIZE	REJECTION CRITERIA
1-10	1	1
11-20	2	2
21-50	3	3
51-100	4	4
101-200	5	5
201-500	6	6
1-UP	7 PER 500 LOT	7 PER 500 LOT

DATE CUT	QUANTITY	QUANTITY REMAINING	REMARKS
5-2-18	2	0	1 1/4" KMC 021518-003

To the best of my knowledge all information contained in this document is accurate.
 Signed: *[Signature]* Kasgro Rail



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KASGRO RAIL CORP
 FORM 9Z-A
 BURNING TABLE INSPECTION REPORT

DATE 7/21/10

P.O.# 15C3011916 CAR/JOB # ATLAS C
 MATERIAL DESCRIPTION SIDE GUSSET
 DRAWING 1155-11 ITEM # 3-19

MILL REPORTS RECEIVED YES NO N/A REPORTS CORRECT YES NO N/A

ACCEPTANCE PER SAMPLE SIZE WHEN SAMPLING LOTS OF MATERIAL

LOT SIZE	SAMPLE SIZE	REJECTION CRITERIA
1-10	1	1
11-20	2	2
21-50	3	3
51-100	4	4
101-200	5	5
201-500	6	6
1-UP	7 PER 500 LOT	7 PER 500 LOT

DATE CUT	QUANTITY	QUANTITY REMAINING	REMARKS
5-2-18	4	4	3/4" BB KMC 022218-003

To the best of my knowledge all information contained in this document is accurate.
 Signed: B Baker Kasgro Rail



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KASGRO RAIL CORP
 FORM 9Z-A
 BURNING TABLE INSPECTION REPORT

DATE 7/21/10

P.O.# 15C3011916 CAR/JOB # ATLAS C
 MATERIAL DESCRIPTION SIDE GUSSET
 DRAWING 1155-11 ITEM # 3-20

MILL REPORTS RECEIVED YES NO N/A REPORTS CORRECT YES NO N/A

ACCEPTANCE PER SAMPLE SIZE WHEN SAMPLING LOTS OF MATERIAL

LOT SIZE	SAMPLE SIZE	REJECTION CRITERIA
1-10	1	1
11-20	2	2
21-50	3	3
51-100	4	4
101-200	5	5
201-500	6	6
1-UP	7 PER 500 LOT	7 PER 500 LOT

DATE CUT	QUANTITY	QUANTITY REMAINING	REMARKS
5-2-18	4	0	3/4" <i>Per KMC022218-007</i>

To the best of my knowledge all information contained in this document is accurate.
 Signed: *[Signature]* Kasgro Rail



Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
Appendix B

Doc./Rev.: EIR-3021970-000
Project: 00225.03.0050 DOE Atlas Project

KASGRO RAIL CORP
 FORM 9Z
 RECEIVING INSPECTION REPORT

DATE 7-21-10

P.O.# 15C3011916 CAR/JOB # ATLAS C

MATERIAL DESCRIPTION CENTER BOTTOM FLANGE

DRAWING D-1155-12 ITEM # 3-26 K17-0370

(IF FABRICATED PART) DRAWING # _____

MILL REPORTS RECEIVED YES NO N/A REPORTS CORRECT YES NO N/A

ACCEPTANCE PER SAMPLE SIZE WHEN SAMPLING LOTS OF MATERIAL

LOT SIZE	SAMPLE SIZE	REJECTION CRITERIA
1-10	1	1
11-20	2	2
21-50	3	3
51-100	4	4
101-200	5	5
201-500	6	6
501-UP	7 PER 500 LOT	7 PER 500 LOT

DATE RECEIVED	QUANTITY	QUANTITY REMAINING	REMARKS
4/23/2018	2	0	BB OK 822Z36500

I, best of my knowledge all information contained in this document is accurate.
 Signed: *Bill Baker* Kasgro Rail



Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
Appendix B

Doc./Rev.: EIR-3021970-000
Project: 00225.03.0050 DOE Atlas Project

KASGRO RAIL CORP
 FORM 9Z
 RECEIVING INSPECTION REPORT

DATE 7-21-10

P.O.# 15C3011916 CAR/JOB # ATLAS C

MATERIAL DESCRIPTION CENTER SILL WEB

DRAWING D-1155-13 ITEM # 3-27 K17-0370

(IF FABRICATED PART) DRAWING # _____

MILL REPORTS RECEIVED YES NO N/A REPORTS CORRECT YES NO N/A

ACCEPTANCE PER SAMPLE SIZE WHEN SAMPLING LOTS OF MATERIAL

LOT SIZE	SAMPLE SIZE	REJECTION CRITERIA
1-10	1	1
11-20	2	2
21-50	3	3
51-100	4	4
101-200	5	5
201-500	6	6
500+ UP	7 PER 500 LOT	7 PER 500 LOT

DATE RECEIVED	QUANTITY	QUANTITY REMAINING	REMARKS
6/6/2018	2	0	BB OK 811A10680

I () best of my knowledge all information contained in this document is accurate.
 Signed: Bill Baker Kasgro Rail



Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
Appendix B

Doc./Rev.: EIR-3021970-000
 Project: 00225.03.0050 DOE Atlas Project

KASGRO RAIL CORP
 FORM 9Z
 RECEIVING INSPECTION REPORT

DATE 7-21-10

P.O.# 15C3011916 CAR/JOB # ATLAS C

MATERIAL DESCRIPTION CENTER SILL WEB

DRAWING D-1155-13 ITEM # 3-28 K17-0370

(IF FABRICATED PART) DRAWING # _____

MILL REPORTS RECEIVED YES NO N/A REPORTS CORRECT YES NO N/A

ACCEPTANCE PER SAMPLE SIZE WHEN SAMPLING LOTS OF MATERIAL

LOT SIZE	SAMPLE SIZE	REJECTION CRITERIA
1-10	1	1
11-20	2	2
21-50	3	3
51-100	4	4
101-200	5	5
201-500	6	6
500+ UP	7 PER 500 LOT	7 PER 500 LOT

DATE RECEIVED	QUANTITY	QUANTITY REMAINING	REMARKS
8/6/2018	2	0	BB OK 811A10680

To the best of my knowledge all information contained in this document is accurate.
 Signed: Bill Baker Kasgro Rail



Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
Appendix B

Doc./Rev.: EIR-3021970-000
Project: 00225.03.0050 DOE Atlas Project

KASGRO RAIL CORP
FORM 9Z-A
BURNING TABLE INSPECTION REPORT

DATE 7/21/10

P.O.# 15C3011916 CAR/JOB # ATLAS C

MATERIAL DESCRIPTION SIDE SILL WEB

DRAWING 1155-14 ITEM # 3-29

MILL REPORTS RECEIVED YES NO N/A REPORTS CORRECT YES NO N/A

ACCEPTANCE PER SAMPLE SIZE WHEN SAMPLING LOTS OF MATERIAL

LOT SIZE	SAMPLE SIZE	REJECTION CRITERIA
1-10	1	1
11-20	2	2
21-50	3	3
51-100	4	4
101-200	5	5
201-500	6	6
1-UP	7 PER 500 LOT	7 PER 500 LOT

DATE CUT	QUANTITY	QUANTITY REMAINING	REMARKS
5/1/18	2	0	BB KMC 022218-001

To the best of my knowledge all information contained in this document is accurate.
Signed: Kasgro Rail



Orano Federal Services

Title: Design and Prototype Fabrication of Railcars for Transport of High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery Appendix B

Doc./Rev.: EIR-3021970-000

Project: 00225.03.0050 DOE Atlas Project

KASGRO RAIL CORP
FORM 9Z-A
BURNING TABLE INSPECTION REPORT

DATE 7/21/10

P.O.# 15C3011916

CAR/JOB # ATLAS C

MATERIAL DESCRIPTION CENTER SILL WEB

DRAWING 1155-14

ITEM # 3-30

MILL REPORTS RECEIVED YES NO N/A REPORTS CORRECT YES NO N/A

ACCEPTANCE PER SAMPLE SIZE WHEN SAMPLING LOTS OF MATERIAL

LOT SIZE	SAMPLE SIZE	REJECTION CRITERIA
1-10	1	1
11-20	2	2
21-50	3	3
51-100	4	4
101-200	5	5
201-500	6	6
1-UP	7 PER 500 LOT	7 PER 500 LOT

DATE CUT	QUANTITY	QUANTITY REMAINING	REMARKS
5/1/18	2	0	BB KMC 022218-001

To the best of my knowledge all information contained in this document is accurate.

Signed: [Signature] Kasgro Rail



Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
Appendix B

Doc./Rev.: EIR-3021970-000
 Project: 00225.03.0050 DOE Atlas Project

KASGRO RAIL CORP
 FORM 9Z
 RECEIVING INSPECTION REPORT

DATE 7-21-10

P.O.# 15C3011916 CAR/JOB # ATLAS C

MATERIAL DESCRIPTION SIDE SILL WEB

DRAWING D-1155-14 ITEM # 3-31 K17-0370

(IF FABRICATED PART) DRAWING # _____

MILL REPORTS RECEIVED YES NO N/A REPORTS CORRECT YES NO N/A

ACCEPTANCE PER SAMPLE SIZE WHEN SAMPLING LOTS OF MATERIAL

LOT SIZE	SAMPLE SIZE	REJECTION CRITERIA
1-10	1	1
11-20	2	2
21-50	3	3
51-100	4	4
101-200	5	5
201-500	6	6
500+ UP	7 PER 500 LOT	7 PER 500 LOT

DATE RECEIVED	QUANTITY	QUANTITY REMAINING	REMARKS
6/6/2018	2	0	BB OK D1431

To the best of my knowledge all information contained in this document is accurate.
 Signed: *[Signature]* Kasgro Rail



Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
Appendix B

Doc./Rev.: EIR-3021970-000
 Project: 00225.03.0050 DOE Atlas Project

KASGRO RAIL CORP
 FORM 9Z
 RECEIVING INSPECTION REPORT

DATE 7-21-10

P.O.# 15C3011916 CAR/JOB # ATLAS C

MATERIAL DESCRIPTION SIDE SILL WEB

DRAWING D-1155-14 ITEM # 3-32 K17-0370

(IF FABRICATED PART) DRAWING # _____

MILL REPORTS RECEIVED YES NO ___ N/A ___ REPORTS CORRECT YES NO ___ N/A ___

ACCEPTANCE PER SAMPLE SIZE WHEN SAMPLING LOTS OF MATERIAL

LOT SIZE	SAMPLE SIZE	REJECTION CRITERIA
1-10	1	1
11-20	2	2
21-50	3	3
51-100	4	4
101-200	5	5
201-500	6	6
500+ UP	7 PER 500 LOT	7 PER 500 LOT

DATE RECEIVED	QUANTITY	QUANTITY REMAINING	REMARKS
6/6/2018	2	0	BB OK D1431

To the best of my knowledge all information contained in this document is accurate.
 Signed: Paul Baker Kasgro Rail



Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
Appendix B

Doc./Rev.: EIR-3021970-000
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KASGRO RAIL CORP
 FORM 9Z-A
 BURNING TABLE INSPECTION REPORT

DATE 7/21/10

P.O.# 15C3011916

CAR/JOB # ATLAS C

MATERIAL DESCRIPTION SIDE GUSSET

DRAWING 1156-11

ITEM # 3-33

MILL REPORTS RECEIVED YES NO N/A REPORTS CORRECT YES NO N/A

ACCEPTANCE PER SAMPLE SIZE WHEN SAMPLING LOTS OF MATERIAL

LOT SIZE	SAMPLE SIZE	REJECTION CRITERIA
1-10	1	1
11-20	2	2
21-50	3	3
51-100	4	4
101-200	5	5
201-500	6	6
1-UP	7 PER 500 LOT	7 PER 500 LOT

DATE CUT	QUANTITY	QUANTITY REMAINING	REMARKS
6-6-18 5/1/18	12	0	3/4" BB KMC 022-218-001

To the best of my knowledge all information contained in this document is accurate.
 Signed: [Signature] Kasgro Rail



Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
Appendix B

Doc./Rev.: EIR-3021970-000
 Project: 00225.03.0050 DOE Atlas Project

KASGRO RAIL CORP
 FORM 92-A
 BURNING TABLE INSPECTION REPORT

DATE 7/21/10

P.O.# 15C3011916 CAR/JOB # ATLAS C

MATERIAL DESCRIPTION CENTER SILL FLANGE

DRAWING 1155-16 ITEM # 3-35

MILL REPORTS RECEIVED YES NO N/A REPORTS CORRECT YES NO N/A

ACCEPTANCE PER SAMPLE SIZE WHEN SAMPLING LOTS OF MATERIAL

LOT SIZE	SAMPLE SIZE	REJECTION CRITERIA
1-10	1	1
11-20	2	2
21-50	3	3
51-100	4	4
101-200	5	5
201-500	6	6
1-UP	7 PER 500 LOT	7 PER 500 LOT

DATE CUT ¹ Rec	QUANTITY	QUANTITY REMAINING	REMARKS
7/9/10	1	0	

To the best of my knowledge all information contained in this document is accurate.
 Signed: B. Baker Kasgro Rail



Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
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KASGRO RAIL CORP
 FORM 92
 RECEIVING INSPECTION REPORT

DATE 7-21-10

P.O.# 15C3011916

CAR/JOB # ATLAS C

MATERIAL DESCRIPTION CENTER SILL WEB

DRAWING D-1155-16

ITEM # 3-36

K17-0370

(IF FABRICATED PART) DRAWING # _____

MILL REPORTS RECEIVED YES NO N/A REPORTS CORRECT YES NO N/A

ACCEPTANCE PER SAMPLE SIZE WHEN SAMPLING LOTS OF MATERIAL

LOT SIZE	SAMPLE SIZE	REJECTION CRITERIA
1-10	1	1
11-20	2	2
21-50	3	3
51-100	4	4
101-200	5	5
201-500	6	6
500+ UP	7 PER 500 LOT	7 PER 500 LOT

DATE RECEIVED	QUANTITY	QUANTITY REMAINING	REMARKS
6/6/2018	2	0	BB OK D1431

To the best of my knowledge all information contained in this document is accurate.
 Signed: Kasgro Rail



Orano Federal Services
 Title: Design and Prototype Fabrication of Railcars for Transport of
 High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
 Appendix B

Doc./Rev.: EIR-3021970-000
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KASGRO RAIL CORP
 FORM 9Z
 RECEIVING INSPECTION REPORT

DATE 7-21-10

P.O.# 15C3011916

CAR/JOB # ATLAS C

MATERIAL DESCRIPTION CENTER SILL WEB

DRAWING D-1155-16

ITEM # 3-37

K17-0370

(IF FABRICATED PART) DRAWING # _____

MILL REPORTS RECEIVED YES NO N/A REPORTS CORRECT YES NO N/A

ACCEPTANCE PER SAMPLE SIZE WHEN SAMPLING LOTS OF MATERIAL

LOT SIZE	SAMPLE SIZE	REJECTION CRITERIA
1-10	1	1
11-20	2	2
21-50	3	3
51-100	4	4
101-200	5	5
201-500	6	6
501-UP	7 PER 500 LOT	7 PER 500 LOT

DATE RECEIVED	QUANTITY	QUANTITY REMAINING	REMARKS
6/6/2018	2	0	BB OK D1431

I hereby certify that the information contained in this document is accurate.

Signed: Bill Baker Kasgro Rail



Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
Appendix B

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KASGRO RAIL CORP
 FORM 9Z-A
 BURNING TABLE INSPECTION REPORT

DATE 7/21/10

P.O.# 15C3011916

CAR/JOB # ATLAS C

MATERIAL DESCRIPTION CROSS BEARER

DRAWING 1155-17

ITEM # 3-39

MILL REPORTS RECEIVED YES NO N/A REPORTS CORRECT YES NO N/A

ACCEPTANCE PER SAMPLE SIZE WHEN SAMPLING LOTS OF MATERIAL

LOT SIZE	SAMPLE SIZE	REJECTION CRITERIA
1-10	1	1
11-20	2	2
21-50	3	3
51-100	4	4
101-200	5	5
201-500	6	6
1-UP	7 PER 500 LOT	7 PER 500 LOT

DATE CUT	QUANTITY	QUANTITY REMAINING	REMARKS
5/1/18	4	0	1" P/O KUC 022218-001

To the best of my knowledge all information contained in this document is accurate.
 Signed: B. Baker Kasgro Rail



Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
Appendix B

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 Project: 00225.03.0050 DOE Atlas Project

KASGRO RAIL CORP
 FORM 9Z-A
 BURNING TABLE INSPECTION REPORT

DATE 7/21/10

P.O.# 15C3011916 CAR/JOB # ATLAS C
 MATERIAL DESCRIPTION CROSS BEARER
 DRAWING 1155-17 ITEM # 3-40

MILL REPORTS RECEIVED YES NO N/A REPORTS CORRECT YES NO N/A

ACCEPTANCE PER SAMPLE SIZE WHEN SAMPLING LOTS OF MATERIAL

LOT SIZE	SAMPLE SIZE	REJECTION CRITERIA
1-10	1	1
11-20	2	2
21-50	3	3
51-100	4	4
101-200	5	5
201-500	6	6
1-UP	7 PER 500 LOT	7 PER 500 LOT

DATE CUT	QUANTITY	QUANTITY REMAINING	REMARKS
5/1/18	2	2	BAK KMC 022218-001

To the best of my knowledge, all information contained in this document is accurate.
 Signed: [Signature] Kasgro Rail



Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
Appendix B

Doc./Rev.: EIR-3021970-000
 Project: 00225.03.0050 DOE Atlas Project

KASGRO RAIL CORP
 FORM 9Z-A
 BURNING TABLE INSPECTION REPORT

DATE 7/21/10

P.O.# 15C3011916

CAR/JOB # ATLAS C

MATERIAL DESCRIPTION CROSS BEARER

DRAWING 1155-17

ITEM # 3-41

MILL REPORTS RECEIVED YES NO N/A REPORTS CORRECT YES NO N/A

ACCEPTANCE PER SAMPLE SIZE WHEN SAMPLING LOTS OF MATERIAL.

LOT SIZE	SAMPLE SIZE	REJECTION CRITERIA
1-10	1	1
11-20	2	2
21-50	3	3
51-100	4	4
101-200	5	5
201-500	6	6
1-UP	7 PER 500 LOT	7 PER 500 LOT

DATE CUT	QUANTITY	QUANTITY REMAINING	REMARKS
5/1/18	4	Φ	1" B2 KMC022218-001

To the best of my knowledge all information contained in this document is accurate.

Signed: *Mabeu* Kasgro Rail



Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
Appendix B

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Project: 00225.03.0050 DOE Atlas Project

KASGRO RAIL CORP
 FORM 92-A
 BURNING TABLE INSPECTION REPORT

DATE 7/21/10

P.O.# 15C3011916 CAR/JOB # ATLAS C

MATERIAL DESCRIPTION CROSS BEARER

DRAWING 1155-17 ITEM # 3-42

MILL REPORTS RECEIVED YES NO N/A REPORTS CORRECT YES NO N/A

ACCEPTANCE PER SAMPLE SIZE WHEN SAMPLING LOTS OF MATERIAL

LOT SIZE	SAMPLE SIZE	REJECTION CRITERIA
1-10	1	1
11-20	2	2
21-50	3	3
51-100	4	4
101-200	5	5
201-500	6	6
1-UP	7 PER 500 LOT	7 PER 500 LOT

DATE CUT	QUANTITY	QUANTITY REMAINING	REMARKS
5/1/18	2	0	BB KMC 022218-001

To the best of my knowledge all information contained in this document is accurate.
 Signed: Kasgro Rail



Orano Federal Services

Title: Design and Prototype Fabrication of Railcars for Transport of High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery Appendix B

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KASGRO RAIL CORP
FORM 9Z-A
BURNING TABLE INSPECTION REPORT

DATE 7/21/10

P.O.# 15C3011916 CAR/JOB # ATLAS C

MATERIAL DESCRIPTION CROSS BEARER WEB

DRAWING 1155-18 ITEM # 3-70

MILL REPORTS RECEIVED YES NO N/A REPORTS CORRECT YES NO N/A

ACCEPTANCE PER SAMPLE SIZE WHEN SAMPLING LOTS OF MATERIAL

Table with 3 columns: LOT SIZE, SAMPLE SIZE, REJECTION CRITERIA. Rows include 1-10, 11-20, 21-50, 51-100, 101-200, 201-500, and 1-UP.

Main inspection table with 4 columns: DATE CUT, QUANTITY, QUANTITY REMAINING, REMARKS. Includes handwritten entry: 5/1/18, 4, 0, B/B KMC 022218-001.

To the best of my knowledge, all information contained in this document is accurate.

Signed: [Signature] Kasgro Rail



Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery Appendix B

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KASGRO RAIL CORP
 FORM 9Z-A
 BURNING TABLE INSPECTION REPORT

DATE 7/21/10

P.O.# 15C3011916 CAR/JOB # ATLAS C

MATERIAL DESCRIPTION STIFFENER

DRAWING 1155-18 ITEM # 3-72

MILL REPORTS RECEIVED YES NO ___ N/A ___ REPORTS CORRECT YES NO ___ N/A ___

ACCEPTANCE PER SAMPLE SIZE WHEN SAMPLING LOTS OF MATERIAL

LOT SIZE	SAMPLE SIZE	REJECTION CRITERIA
1-10	1	1
11-20	2	2
21-50	3	3
51-100	4	4
101-200	5	5
201-500	6	6
1-UP	7 PER 500 LOT	7 PER 500 LOT

DATE CUT	QUANTITY	QUANTITY REMAINING	REMARKS
5/11/18	4	0	1" BB RmC 022218-001

To the best of my knowledge all information contained in this document is accurate.
 Signed: Blaker Kasgro Rail



Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
Appendix B

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 Project: 00225.03.0050 DOE Atlas Project

KASGRO RAIL CORP
 FORM 9Z-A
 BURNING TABLE INSPECTION REPORT

DATE 7/21/10

P.O.# 15C3011916 CAR/JOB # ATLAS C

MATERIAL DESCRIPTION CROSS BEARER WEB

DRAWING 1155-18 ITEM # 3-74

MILL REPORTS RECEIVED YES NO N/A REPORTS CORRECT YES NO N/A

ACCEPTANCE PER SAMPLE SIZE WHEN SAMPLING LOTS OF MATERIAL

LOT SIZE	SAMPLE SIZE	REJECTION CRITERIA
1-10	1	1
11-20	2	2
21-50	3	3
51-100	4	4
101-200	5	5
201-500	6	6
1-UP	7 PER 500 LOT	7 PER 500 LOT

DATE CUT	QUANTITY	QUANTITY REMAINING	REMARKS
5/1/10	4	0	PH-KMC, 022218-001

To the best of my knowledge all information contained in this document is accurate.

Signed: _____ Kasgro Rail



Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
Appendix B

Doc./Rev.: EIR-3021970-000
Project: 00225.03.0050 DOE Atlas Project

KASGRO RAIL CORP
FORM 92-A
BURNING TABLE INSPECTION REPORT

DATE 7/21/10

P.O.# 15C3011916

CAR/JOB # ATLAS C

MATERIAL DESCRIPTION SIDE GUSSET

DRAWING 1155-11

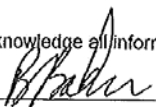
ITEM # 3-76

MILL REPORTS RECEIVED YES NO N/A REPORTS CORRECT YES NO N/A

ACCEPTANCE PER SAMPLE SIZE WHEN SAMPLING LOTS OF MATERIAL

LOT SIZE	SAMPLE SIZE	REJECTION CRITERIA
1-10	1	1
11-20	2	2
21-50	3	3
51-100	4	4
101-200	5	5
201-500	6	6
1-UP	7 PER 500 LOT	7 PER 500 LOT

DATE CUT	QUANTITY	QUANTITY REMAINING	REMARKS
5-1-18	2	0	BB KMC 022:218-001

To the best of my knowledge all information contained in this document is accurate.
Signed:  Kasgro Rail



Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
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KASGRO RAIL CORP
 FORM 92-A
 BURNING TABLE INSPECTION REPORT

DATE 7/21/10

P.O.# 15C3011916 CAR/JOB # ATLAS C

MATERIAL DESCRIPTION STIFFENER

DRAWING 1155-11 ITEM # 3-107

MILL REPORTS RECEIVED YES NO N/A REPORTS CORRECT YES NO N/A

ACCEPTANCE PER SAMPLE SIZE WHEN SAMPLING LOTS OF MATERIAL

LOT SIZE	SAMPLE SIZE	REJECTION CRITERIA
1-10	1	1
11-20	2	2
21-50	3	3
51-100	4	4
101-200	5	5
201-500	6	6
1-UP	7 PER 500 LOT	7 PER 500 LOT

4

1"

DATE CUT	QUANTITY	QUANTITY REMAINING	REMARKS
5-1-18	4	ϕ	BB KMC-0'22218-001

To the best of my knowledge all information contained in this document is accurate.

Signed: *Bob KMC* Kasgro Rail



Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
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KASGRO RAIL CORP
 FORM 9Z-A
 BURNING TABLE INSPECTION REPORT

DATE 7/21/10

P.O.# 15C3011916 CAR/JOB # ATLAS C
 MATERIAL DESCRIPTION JACKING PAD
 DRAWING 1155-11 ITEM # 3-109

MILL REPORTS RECEIVED YES NO N/A REPORTS CORRECT YES NO N/A

ACCEPTANCE PER SAMPLE SIZE WHEN SAMPLING LOTS OF MATERIAL

LOT SIZE	SAMPLE SIZE	REJECTION CRITERIA
1-10	1	1
11-20	2	2
21-50	3	3
51-100	4	4
101-200	5	5
201-500	6	6
1-LP	7 PER 500 LOT	7 PER 500 LOT

DATE CUT	QUANTITY	QUANTITY REMAINING	REMARKS
6-26-18	4	0	10" DIA

To the best of my knowledge all information contained in this document is accurate.
 Signed: [Signature] Kasgro Rail



Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
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KASGRO RAIL CORP
FORM 9Z-A
BURNING TABLE INSPECTION REPORT

DATE 7/21/10

P.O.# 15C3011916 CAR/JOB # ATLAS C

MATERIAL DESCRIPTION SIDE SILL FLANGE

DRAWING 1155-37 ITEM # 3-119

MILL REPORTS RECEIVED YES NO N/A REPORTS CORRECT YES NO N/A

ACCEPTANCE PER SAMPLE SIZE WHEN SAMPLING LOTS OF MATERIAL

LOT SIZE	SAMPLE SIZE	REJECTION CRITERIA
1-10	1	1
11-20	2	2
21-50	3	3
51-100	4	4
101-200	5	5
201-500	6	6
1/2-UP	7 PER 500 LOT	7 PER 500 LOT

DATE CUT	QUANTITY	QUANTITY REMAINING	REMARKS
5/1/18	4	0	66-KMC022218-001

To the best of my knowledge all information contained in this document is accurate.
Signed: B. Becker Kasgro Rail



Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
Appendix B

Doc./Rev.: EIR-3021970-000
Project: 00225.03.0050 DOE Atlas Project

KASGRO RAIL CORP

FORM 9Z-A
 BURNING TABLE INSPECTION REPORT

DATE 7/21/10

P.O.# 15C3011916

CAR/JOB # ATLAS C

MATERIAL DESCRIPTION CENTER SILL FLANGE

DRAWING 1155-37

ITEM # 3-137

MILL REPORTS RECEIVED YES NO N/A REPORTS CORRECT YES NO N/A

ACCEPTANCE PER SAMPLE SIZE WHEN SAMPLING LOTS OF MATERIAL

LOT SIZE	SAMPLE SIZE	REJECTION CRITERIA
1-10	1	1
11-20	2	2
21-50	3	3
51-100	4	4
101-200	5	5
201-500	6	6
UP	7 PER 500 LOT	7 PER 500 LOT

DATE CUT	QUANTITY	QUANTITY REMAINING	REMARKS
5/1/18	2	0	Bb KMC 022218001

To the best of my knowledge all information contained in this document is accurate.

Signed: *[Signature]* Kasgro Rail



Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
Appendix B

Doc./Rev.: **EIR-3021970-000**
 Project: **00225.03.0050 DOE Atlas Project**

KASGRO RAIL CORP
 FORM 92-A
 BURNING TABLE INSPECTION REPORT

DATE 7/21/10

P.O.# 15C3011916

CAR/JOB # ATLAS C

MATERIAL DESCRIPTION CENTER SILL WEB

DRAWING 1155-17

ITEM # 3-150

MILL REPORTS RECEIVED YES NO N/A REPORTS CORRECT YES NO N/A

ACCEPTANCE PER SAMPLE SIZE WHEN SAMPLING LOTS OF MATERIAL

LOT SIZE	SAMPLE SIZE	REJECTION CRITERIA
1-10	1	1
11-20	2	2
21-50	3	3
51-100	4	4
101-200	5	5
201-500	6	6
1-UP	7 PER 500 LOT	7 PER 500 LOT

DATE CUT	QUANTITY	QUANTITY REMAINING	REMARKS
5-1-18	4	0	BA KMC 022218-001

To the best of my knowledge, all information contained in this document is accurate.
 Signed: *Alan* Kasgro Rail



Orano Federal Services

Title: Design and Prototype Fabrication of Railcars for Transport of High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery Appendix B

Doc./Rev.: EIR-3021970-000
Project: 00225.03.0050 DOE Atlas Project

KASGRO RAIL CORP
FORM 9Z-A
BURNING TABLE INSPECTION REPORT

DATE 7/21/10

P.O.# 15C3011918

CAR/JOB # ATLAS C

MATERIAL DESCRIPTION CROSS BEARER

DRAWING 1155-17

ITEM # 3-151

MILL REPORTS RECEIVED YES [checked] NO [] N/A [] REPORTS CORRECT YES [checked] NO [] N/A []

ACCEPTANCE PER SAMPLE SIZE WHEN SAMPLING LOTS OF MATERIAL

Table with 3 columns: LOT SIZE, SAMPLE SIZE, REJECTION CRITERIA. Rows include 1-10, 11-20, 21-50, 51-100, 101-200, 201-500, and 1-UP.

Main inspection table with columns: DATE CUT, QUANTITY, QUANTITY REMAINING, and REMARKS. Includes handwritten entry for 5-1-18 with quantity 2 and remarks AB KMC 022218-001.

To the best of my knowledge all information contained in this document is accurate.

Signed: [Signature] Kasgro Rail



Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
Appendix B

Doc./Rev.: EIR-3021970-000
 Project: 00225.03.0050 DOE Atlas Project

KASGRO RAIL CORP
 FORM 9Z-A
 BURNING TABLE INSPECTION REPORT

DATE 7/21/10

P.O.# 15C3011916 CAR/JOB # ATLAS C

MATERIAL DESCRIPTION CROSS BEARER

DRAWING 1155-17 ITEM # 3-152

MILL REPORTS RECEIVED YES NO N/A REPORTS CORRECT YES NO N/A

ACCEPTANCE PER SAMPLE SIZE WHEN SAMPLING LOTS OF MATERIAL

LOT SIZE	SAMPLE SIZE	REJECTION CRITERIA
1-10	1	1
11-20	2	2
21-50	3	3
51-100	4	4
101-200	5	5
201-500	6	6
1-UP	7 PER 500 LOT	7 PER 500 LOT

DATE CUT	QUANTITY	QUANTITY REMAINING	REMARKS
5-1-18	2	0	66 KMC 02.22.18-001

To the best of my knowledge all information contained in this document is accurate.

Signed: *Baker* Kasgro Rail



Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
Appendix B

Doc./Rev.: EIR-3021970-000
 Project: 00225.03.0050 DOE Atlas Project

KASGRO RAIL CORP
 FORM 92-A
 BURNING TABLE INSPECTION REPORT

DATE 7/21/10


P.O.# 15C3011916 CAR/JOB # ATLAS C
 MATERIAL DESCRIPTION CROSS BEARER
 DRAWING 1155-17 ITEM # 3-153

MILL REPORTS RECEIVED YES NO N/A REPORTS CORRECT YES NO N/A

ACCEPTANCE PER SAMPLE SIZE WHEN SAMPLING LOTS OF MATERIAL

LOT SIZE	SAMPLE SIZE	REJECTION CRITERIA
1-10	1	1
11-20	2	2
21-50	3	3
51-100	4	4
101-200	5	5
201-500	6	6
1-UP	7 PER 500 LOT	7 PER 500 LOT

DATE CUT	QUANTITY	QUANTITY REMAINING	REMARKS
5-1-18	4	4	1/2 KMC 022218-001

To the best of my knowledge all information contained in this document is accurate.
 Signed:  Kasgro Rail



Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
Appendix B

Doc./Rev.: EIR-3021970-000
 Project: 00225.03.0050 DOE Atlas Project

KASGRO RAIL CORP
 FORM 9Z-A
 BURNING TABLE INSPECTION REPORT

DATE 7/21/10

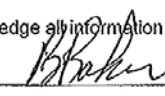
P.O.# 15C3011916 CAR/JOB # ATLAS C
 MATERIAL DESCRIPTION CROSS BEARER
 DRAWING 1155-17 ITEM # 3-154

MILL REPORTS RECEIVED YES NO N/A REPORTS CORRECT YES NO N/A

ACCEPTANCE PER SAMPLE SIZE WHEN SAMPLING LOTS OF MATERIAL

LOT SIZE	SAMPLE SIZE	REJECTION CRITERIA
1-10	1	1
11-20	2	2
21-50	3	3
51-100	4	4
101-200	5	5
201-500	6	6
1-UP	7 PER 500 LOT	7 PER 500 LOT

DATE CUT	QUANTITY	QUANTITY REMAINING	REMARKS
5-1-18	4	0	1" 1/2 KMC 022218-001

To the best of my knowledge all information contained in this document is accurate.
 Signed:  Kasgro Rail



Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
Appendix B

Doc./Rev.: EIR-3021970-000
 Project: 00225.03.0050 DOE Atlas Project

KASGRO RAIL CORP
 FORM 9Z
 RECEIVING INSPECTION REPORT

DATE 7-21-10

P.O.# 15C3011916 CAR/JOB # ATLAS C

MATERIAL DESCRIPTION SUPPORT PLATE

DRAWING D-1155-38 ITEM # 3-139 K17-0370

(IF FABRICATED PART) DRAWING # _____

MILL REPORTS RECEIVED YES NO N/A REPORTS CORRECT YES NO N/A

ACCEPTANCE PER SAMPLE SIZE WHEN SAMPLING LOTS OF MATERIAL

LOT SIZE	SAMPLE SIZE	REJECTION CRITERIA
1-10	1	1
11-20	2	2
21-50	3	3
51-100	4	4
101-200	5	5
201-500	6	6
500+ UP	7 PER 500 LOT	7 PER 500 LOT

DATE RECEIVED	QUANTITY	QUANTITY REMAINING	REMARKS
7/31/2018	4	0	BB OK

To the best of my knowledge, all information contained in this document is accurate.

Signed: Bill Parker Kasgro Rail



Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
Appendix B

Doc./Rev.: EIR-3021970-000
 Project: 00225.03.0050 DOE Atlas Project

KASGRO RAIL CORP
 FORM 9Z-A
 BURNING TABLE INSPECTION REPORT

DATE 7/21/10

P.O.# 15C3011916 CAR/JOB # ATLAS C

MATERIAL DESCRIPTION SIDE SILL FLANGE

DRAWING 1155-15 ITEM # 3-34

MILL REPORTS RECEIVED YES NO N/A REPORTS CORRECT YES NO N/A

ACCEPTANCE PER SAMPLE SIZE WHEN SAMPLING LOTS OF MATERIAL

LOT SIZE	SAMPLE SIZE	REJECTION CRITERIA
1-10	1	1
11-20	2	2
21-50	3	3
51-100	4	4
101-200	5	5
201-500	6	6
1-UP	7 PER 500 LOT	7 PER 500 LOT

DATE CUT	QUANTITY	QUANTITY REMAINING	REMARKS
6-18-18	2	2	BB KMC 021918-001

To the best of my knowledge all information contained in this document is accurate.

Signed: Paul Baker Kasgro Rail



Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
Appendix B

Doc./Rev.: EIR-3021970-000
 Project: 00225.03.0050 DOE Atlas Project

Appendix B.1.3 – Car Body – Heat Identification Form, Form 44B

Orano Federal Services	
DATA TRANSMITTAL FORM	
Supplier: KASGRO RAIL CORP., INC.	DTF No: 39 Page <u>1</u> of <u>1</u>
P.O./SC No: 15C3011916	Date: 2/22/2019
Type of Submittal: <input checked="" type="checkbox"/> First <input type="checkbox"/> Re-Submittal	SDRL List Item No: 24
Submitted for: <input type="checkbox"/> Approval <input type="checkbox"/> Review <input type="checkbox"/> Information	Number of Copies Submitted: 1
Submitted By: RICK FORD	Rick Ford <small>Digitally signed by Rick Ford Date: 2019.02.22 09:16:40 -05'00'</small> PROJECT MANAGER
<small>(Name)</small>	<small>(Signature)</small> <small>(Title)</small>

ITEM NUMBER	DOCUMENT NUMBER	REVISION NUMBER	DOCUMENT DESCRIPTION	FS DISPOSITION
1	KAS 138		ATLAS CASK/BUFFER CARS LATLON INSTALLATION AND TEST DATA	<input checked="" type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
2	KAS 139		ATLAS CASK BODY MATERIAL HEAT IDENTIFICATION, FORMS 42, 42A, 44B	<input checked="" type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
3	KAS 140		ATLAS BUFFER IDOX 20001 BODY MATERIAL HEAT IDENTIFICATION, FORM 44B	<input checked="" type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
4	KAS 141		ATLAS BUFFER IDOX 20002 BODY MATERIAL HEAT IDENTIFICATION, FORM	<input checked="" type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
5	KAS 142		ATLAS CASK CAR FORM 36 STATIC FORCE BRAKE TEST	<input checked="" type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
6	KAS 143		ATLAS CASK CAR IDOX 10001, FORM 5-13-B NEW CAR INSPECTION	<input checked="" type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
7	KAS 144		ATLAS CASK IDOX 10001 SUPPLIER CERTIFICATION/ AMSTED RAIL SEDARSW / MICCABE	<input checked="" type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
				<input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
				<input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA

Comments: No comments	Technical Reviewer (I.e., RE, PTL, SME, QA, etc.) KLEIN Slade <small>Date: 2019.02.26 07:33:08 -08'00'</small> Date 2/26/2019
--------------------------	---

FS DISPOSITION CODES AND DEFINITIONS			
AP	Approved	Work may proceed.	Resubmittal is not required
AWC	Approved with Comment	Work may proceed; comments provided for Supplier's consideration only.	Resubmittal is not required
REV	Reviewed	Work may proceed; comments provided for Supplier's consideration only.	Resubmittal is not required
RWC	Reviewed with Comment	Work may proceed; subject to incorporation and compliance w/ Buyer comments.	Correct and resubmit
DS	Disapproved	Work may <u>not</u> proceed.	Correct and resubmit
RSA	Receipt Submittal Acknowledged	No other action required.	

If, in the judgment of the Supplier, the incorporation of FS' comments will result in a change to the Purchase Order/Subcontract, work shall not proceed and the Supplier shall immediately provide a written notice to FS' C&P Representative describing the change.

Project Manager (PM) / Engineering Manager (EM) or Designated Individual (DI) Approval 	<small>Digitally signed by Mark A. Denton DN: cn=Mark A. Denton, o=Orano Federal Services, email=mark.denton@orano-group.com, ou=Orano Date: 2019.02.26 12:36:54 -0500</small>
	Date: 02/26/2019

FS-EN-FRM-023 Rev 02 (Effective March 1, 2018)
 Refer to FS-EN-PRC-012



Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
Appendix B

Doc./Rev.: EIR-3021970-000
 Project: 00225.03.0050 DOE Atlas Project

	Orano Federal Services	
	SUPPLIER DOCUMENT SUBMITTAL REVIEW	
Supplier / PO No.:	KASGRO / 15C3011916	DTF No. / Rev: 039
Charge No:	00225.03.0050.02.00001	Due Date: 3/8/2019
Document(s):	See DTF No.: 039	
REVIEW INSTRUCTIONS: (List Supplier Doc. No. and Rev. FS Spec and Dwg. Codes, Stds, etc.)		
PE	Slade Klein	
REVIEWERS	Slade Klein, Bernie Counterman	
QA	Bernie Counterman	
Technical Review		
Comments/Markup Attached Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Technical Reviewer Comments:		
No comments		
Technical Reviewer(s) (Sign/Date):		Date: 2019.02.25 15:52:04 -08'00'
KLEIN Slade		
Quality Assurance Review (As Applicable)		
Comments/Markup Attached Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Technical Reviewer Comments:		
KAS 142 Cask Car Form 36 Brake Test - Why is the Gross Shoe Force = 0		
QA Reviewer(s) (Sign/Date):		Digitally signed by COUNTERMAN Bernard Date: 2019.02.25 10:22:16 -08'00'
COMMENT DISPOSITION (If Applicable. Attached further comments and disposition correspondence as necessary)		

FS-EN-FRM-026 Rev 01 (Effective March 1, 2018)
 Refer to FS-EN-PRC-012



Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
Appendix B

Doc./Rev.: EIR-3021970-000
 Project: 00225.03.0050 DOE Atlas Project

12-AXLE ATLAS CASK CAR BODY - HEAT IDENTIFICATION

Atlas

FORM 44B - 3/12/2010

DATE : 11/14/18		BODY NUMBER: IDOX 010001				
TO THE BEST OF MY KNOWLEDGE ALL INFORMATION CONTAINED IS ACCURATE						
SIGNED: <i>Bill Baker</i>				KASGRO RAIL		
Use of ASTM D72 grade 60 material is acceptable for grade 40 material provided the mechanical properties for grade 60 material are achieved						
Charpy impact testing, when required, will be in accordance with ASTM A973. The minimum average absorbed energy shall be 26 ft-lb at zero degrees F. Transverse impact test is required for plate widths over 24 inches						
PART NO.	PRINT NO.	HEAT NUMBER	MELTER	QTY/CAR	MATERIAL	Special testing
3-11	D-1155-09	D60297	NUCOR	2	A-36	hardness
3-11	D-1155-08	D60297	NUCOR	2	A-36	hardness
3-15	D-1155-10	D2569	ARCELORMITTAL	1	A-572 GR60	
3-16	D-1155-10	R12Z36570	ARCELORMITTAL	4	A-572 GR30*	charpy
3-16	D-1155-10	R12Z36570	ARCELORMITTAL	4	A-572 GR30*	charpy
3-16	D-1155-10	R12Z36570	ARCELORMITTAL	4	A-572 GR30*	charpy
3-16	D-1155-10	R12Z36570	ARCELORMITTAL	4	A-572 GR30*	charpy
3-17	D-1155-10	R12Z36570	ARCELORMITTAL	2	A-572 GR60	
3-17	D-1155-10	R12Z36570	ARCELORMITTAL	2	A-572 GR60	
3-18	D-1155-10	R12Z36570	ARCELORMITTAL	2	A-572 GR60	
3-18	D-1155-10	R12Z36570	ARCELORMITTAL	2	A-572 GR60	
3-26	D-1155-12	R22Z36500	ARCELORMITTAL	2	A-572 GR30*	charpy
3-26	D-1155-12	R22Z36500	ARCELORMITTAL	2	A-572 GR30*	charpy
3-27	D-1155-13	R11A10680	ARCELORMITTAL	2	A-572 GR60	
3-27	D-1155-13	R11A10680	ARCELORMITTAL	2	A-572 GR60	
3-20	D-1155-13	R11A10680	ARCELORMITTAL	2	A-572 GR60	
3-28	D-1155-13	R11A10680	ARCELORMITTAL	2	A-572 GR60	
3-31	D-1155-14	D1431	ARCELORMITTAL	2	A-572 GR60	
3-31	D-1155-14	D1431	ARCELORMITTAL	2	A-572 GR60	
3-32	D-1155-14	D1431	ARCELORMITTAL	2	A-572 GR60	
3-32	D-1155-14	D1431	ARCELORMITTAL	2	A-572 GR60	
3-34	D-1155-15	D3081	ARCELORMITTAL	2	A-572 GR30*	charpy
3-34	D-1155-15	D3081	ARCELORMITTAL	2	A-572 GR30*	charpy
3-35	D-1155-16	R22Z36500	ARCELORMITTAL	1	A-572 GR30*	charpy
3-36	D-1155-16	D1431	ARCELORMITTAL	2	A-572 GR60	
3-36	D-1155-16	D1431	ARCELORMITTAL	2	A-572 GR60	
3-37	D-1155-16	D1431	ARCELORMITTAL	2	A-572 GR60	
3-37	D-1155-16	D1431	ARCELORMITTAL	2	A-572 GR60	
3-139	D-1155-38	C4530	ARCELORMITTAL	4	A-572 GR42	
3-139	D-1155-38	C4530	ARCELORMITTAL	4	A-572 GR42	
3-139	D-1155-38	C4530	ARCELORMITTAL	4	A-572 GR42	
3-139	D-1155-38	C4530	ARCELORMITTAL	4	A-572 GR42	
Bolster Assembly Applied		A end 1		B end 2		
Welding Wire		ORANO: HOBART 1/16" 7038A, 70 SERIES, 4081T 80 SERIES				

Note: The recording of false, fictitious or fraudulent statements or entries on this document may be punishable as a felony under Federal statutes.

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Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
Appendix B

Doc./Rev.: EIR-3021970-000
Project: 00225.03.0050 DOE Atlas Project

12-AXLE ATLAS CASK CAR BODY - HEAT IDENTIFICATION

Atlas

FORM 44B - 3/12/2010

DATE : 11/14/18			BODY NUMBER: IDOX 010001			
TO THE BEST OF MY KNOWLEDGE ALL INFORMATION CONTAINED IS ACCURATE						
SIGNED: <i>Bill Parker</i>			KASGRD RAIL			
<small>Use of A516 B or grade 50 material is acceptable for grade 60 material provided the mechanical properties for grade 60 material are established.</small>						
<small>Charpy Impact testing, when required, will be in accordance with ASTM A588. The minimum average absorbed energy will be 20 ft-lbs.</small>						
<small>At 50 degrees F, Transverse Impact test is required for plate widths over 24 inches.</small>						
PART NO.	PRINT NO.	HEAT NUMBER	MELTER	QTY/CAR	MATERIAL	special testing
3-120	D-1155-08	173P84110	ARCELORMITTAL	4	A-514	
3-120	D-1155-08	173P84110	ARCELORMITTAL	4	A-514	
3-120	D-1155-08	173P84110	ARCELORMITTAL	4	A-514	
3-120	D-1155-08	173P84110	ARCELORMITTAL	4	A-514	
3-19	D-1155-11	812236370	ARCELORMITTAL	4	A-572 GR60	
3-19	D-1155-11	812236370	ARCELORMITTAL	4	A-572 GR60	
3-19	D-1155-11	812236370	ARCELORMITTAL	4	A-572 GR60	
3-19	D-1155-11	812236370	ARCELORMITTAL	4	A-572 GR60	
3-20	D-1155-11	812236370	ARCELORMITTAL	4	A-572 GR60	
3-20	D-1155-11	812236370	ARCELORMITTAL	4	A-572 GR60	
3-20	D-1155-11	812236370	ARCELORMITTAL	4	A-572 GR60	
3-20	D-1155-11	812236370	ARCELORMITTAL	4	A-572 GR60	
3-22	D-1155-11	812236370	ARCELORMITTAL	4	A-572 GR60	
3-22	D-1155-11	812236370	ARCELORMITTAL	4	A-572 GR60	
3-22	D-1155-11	812236370	ARCELORMITTAL	4	A-572 GR60	
3-22	D-1155-11	812236370	ARCELORMITTAL	4	A-572 GR60	
3-24	D-1155-11	812236520	ARCELORMITTAL	4	A-572 GR60	
3-24	D-1155-11	812236520	ARCELORMITTAL	4	A-572 GR60	
3-24	D-1155-11	812236520	ARCELORMITTAL	4	A-572 GR60	
3-24	D-1155-11	812236520	ARCELORMITTAL	4	A-572 GR60	
3-33	D-1155-11	81224630	ARCELORMITTAL	12	A-572 GR60	
3-33	D-1155-11	81224630	ARCELORMITTAL	12	A-572 GR60	
3-33	D-1155-11	81224630	ARCELORMITTAL	12	A-572 GR60	
3-33	D-1155-11	81224630	ARCELORMITTAL	12	A-572 GR60	
3-33	D-1155-11	81224630	ARCELORMITTAL	12	A-572 GR60	
3-33	D-1155-11	81224630	ARCELORMITTAL	12	A-572 GR60	
3-33	D-1155-11	81224630	ARCELORMITTAL	12	A-572 GR60	
3-33	D-1155-11	81224630	ARCELORMITTAL	12	A-572 GR60	
3-33	D-1155-11	81224630	ARCELORMITTAL	12	A-572 GR60	
3-33	D-1155-11	81224630	ARCELORMITTAL	12	A-572 GR60	
3-33	D-1155-11	81224630	ARCELORMITTAL	12	A-572 GR60	
3-78	D-1155-11	81224630	ARCELORMITTAL	2	A-572 GR60	
3-76	D-1155-11	81224630	ARCELORMITTAL	2	A-572 GR60	
3-107	D-1155-11	81224630	ARCELORMITTAL	2	A-572 GR60	
3-107	D-1155-11	81224630	ARCELORMITTAL	2	A-572 GR60	
3-109	D-1155-11	7501866	NUCOR	2	A-572 GR60	
3-109	D-1155-11	7501866	NUCOR	2	A-572 GR60	
3-29	D-1155-14	81224630	ARCELORMITTAL	2	A-572 GR60	

Note: The recording of false, fictitious or fraudulent statements or entries on this document may be punishable as a felony under Federal statutes. Page 2 of 5



Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
Appendix B

Doc./Rev.: EIR-3021970-000
 Project: 00225.03.0050 DOE Atlas Project

12-AXLE ATLAS CASK CAR BODY - HEAT IDENTIFICATION

Atlas

FORM 44B - 3/12/2010

DATE : 11/14/18			BODY NUMBER: IDOX 010001			
TO THE BEST OF MY KNOWLEDGE ALL INFORMATION CONTAINED IS ACCURATE						
SIGNED: <i>R. L. Baker</i>			KASGRO RAIL			
Use of ASTM A-572 grade 60 material is acceptable for grade 60 material provided the mechanical properties for grade 60 material are satisfied						
Charpy impact testing, when required, will be in accordance with ASTM A571. The minimum average absorbed energy shall be 20 ft-lbs.						
At zero degrees F, Transverse impact test is required for plate widths over 24 inches						
PART NO.	PRINT NO.	HEAT NUMBER	MELTER	QTY/CAR	MATERIAL	Special testing
3-29	D-1155-14	81226530	ARCELORMITTAL	2	A-572 GR60	
3-30	D-1155-14	022218-001	ARCELORMITTAL	2	A-572 GR60	
3-30	D-1155-14	022218-001	ARCELORMITTAL	2	A-572 GR60	
3-38	D-1155-16	821Y01780	ARCELORMITTAL	4	A-38	
3-38	D-1155-16	821Y01780	ARCELORMITTAL	4	A-38	
3-38	D-1155-16	821Y01780	ARCELORMITTAL	4	A-38	
3-38	D-1155-16	821Y01780	ARCELORMITTAL	4	A-38	
3-38	D-1155-17	81226530	ARCELORMITTAL	4	A-572 GR60	
3-39	D-1155-17	81226530	ARCELORMITTAL	4	A-572 GR60	
3-39	D-1155-17	81226530	ARCELORMITTAL	4	A-572 GR60	
3-39	D-1155-17	81226530	ARCELORMITTAL	4	A-572 GR60	
3-40	D-1155-17	81226530	ARCELORMITTAL	2	A-572 GR60	
3-40	D-1155-17	81226530	ARCELORMITTAL	2	A-572 GR60	
3-41	D-1155-17	81226530	ARCELORMITTAL	4	A-572 GR60	
3-41	D-1155-17	81226530	ARCELORMITTAL	4	A-572 GR60	
3-41	D-1155-17	81226530	ARCELORMITTAL	4	A-572 GR60	
3-41	D-1155-17	81226530	ARCELORMITTAL	4	A-572 GR60	
3-42	D-1155-17	81226530	ARCELORMITTAL	2	A-572 GR60	
3-42	D-1155-17	81226530	ARCELORMITTAL	2	A-572 GR60	
3-75	D-1155-17	N/A		2	A-500 B	
3-75	D-1155-17	N/A		2	A-500 B	
3-150	D-1155-17	81226530	ARCELORMITTAL	2	A-572 GR60	
3-150	D-1155-17	81226530	ARCELORMITTAL	2	A-572 GR60	
3-150	D-1155-17	81226530	ARCELORMITTAL	2	A-572 GR60	
3-150	D-1155-17	81226530	ARCELORMITTAL	2	A-572 GR60	
3-151	D-1155-17	81226530	ARCELORMITTAL	2	A-572 GR60	
3-151	D-1155-17	81226530	ARCELORMITTAL	2	A-572 GR60	
3-152	D-1155-17	81226530	ARCELORMITTAL	2	A-572 GR60	
3-152	D-1155-17	81226530	ARCELORMITTAL	2	A-572 GR60	
3-153	D-1155-17	81226530	ARCELORMITTAL	4	A-572 GR60	
3-153	D-1155-17	81226530	ARCELORMITTAL	4	A-572 GR60	
3-153	D-1155-17	81226530	ARCELORMITTAL	4	A-572 GR60	
3-153	D-1155-17	81226530	ARCELORMITTAL	4	A-572 GR60	
3-154	D-1155-17	81226530	ARCELORMITTAL	4	A-572 GR60	
3-154	D-1155-17	81226530	ARCELORMITTAL	4	A-572 GR60	
3-154	D-1155-17	81226530	ARCELORMITTAL	4	A-572 GR60	
3-154	D-1155-10	81226530	ARCELORMITTAL	4	A-572 GR60	
3-45	D-1155-18	81226530	ARCELORMITTAL	4	A-572 GR60	
3-45	D-1155-10	81226530	ARCELORMITTAL	4	A-572 GR60	

Note: The recording of false, fictitious or fraudulent statements or entries on this document may be punishable as a felony under federal statutes



Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
Appendix B

Doc./Rev.: EIR-3021970-000
 Project: 00225.03.0050 DOE Atlas Project

12-AXLE ATLAS CASK CAR BODY - HEAT IDENTIFICATION
FORM 44B - 3/12/2010

Atlas

DATE: 11/14/18		BODY NUMBER: IDOX 010001				
TO THE BEST OF MY KNOWLEDGE ALL INFORMATION CONTAINED IS ACCURATE						
SIGNED: <i>Bill Kahan</i>			KASGRO RAIL			
<small>Use of ASTM 672 grade 60 material is acceptable for grade 60 steel provided the mechanical properties for grade 60 material are satisfied</small>						
<small>Charpy Impact testing when required, will be in accordance with ASTM 5978. The minimum average absorbed energy shall be 20 ft-lb</small>						
<small>at zero degrees F. Transverse Impact test is required for plate widths over 24 inches</small>						
PART NO.	PRINT NO.	HEAT NUMBER	MELTER	QTY/CAJ	MATERIAL	special testing
3-45	D-1155-18	81276530	ARCELORMITTAL	4	A-572 GR60	
3-45	D-1155-18	81276530	ARCELORMITTAL	4	A-572 GR60	
3-70	D-1155-18	81276530	ARCELORMITTAL	4	A-572 GR60	
3-70	D-1155-18	81276530	ARCELORMITTAL	4	A-572 GR60	
3-70	D-1155-18	81276530	ARCELORMITTAL	4	A-572 GR60	
3-70	D-1155-18	81276530	ARCELORMITTAL	4	A-572 GR60	
3-71	D-1155-18	81226530	ARCELORMITTAL	4	A-572 GR60	
3-71	D-1155-18	81226530	ARCELORMITTAL	4	A-572 GR60	
3-71	D-1155-18	81226530	ARCELORMITTAL	4	A-572 GR60	
3-71	D-1155-18	81226530	ARCELORMITTAL	4	A-572 GR60	
3-72	D-1155-18	81226530	ARCELORMITTAL	4	A-572 GR60	
3-72	D-1155-18	81226530	ARCELORMITTAL	4	A-572 GR60	
3-72	D-1155-18	81226530	ARCELORMITTAL	4	A-572 GR60	
3-72	D-1155-18	81226530	ARCELORMITTAL	4	A-572 GR60	
3-74	D-1155-18	81226530	ARCELORMITTAL	4	A-572 GR60	
3-74	D-1155-18	81226530	ARCELORMITTAL	4	A-572 GR60	
3-74	D-1155-18	81226530	ARCELORMITTAL	4	A-572 GR60	
3-74	D-1155-18	81226530	ARCELORMITTAL	4	A-572 GR60	
3-21	D-1155-24	8703953	NUCOR	4	A-568 GR60	Charpy
3-21	D-1155-24	8703953	NUCOR	4	A-568 GR60	Charpy
3-21	D-1155-24	8703953	NUCOR	4	A-568 GR60	Charpy
3-21	D-1155-24	8703953	NUCOR	4	A-568 GR60	Charpy
3-131	D-1155-36	812236570	ARCELORMITTAL	4	A-572 GR60	
3-131	D-1155-36	812236570	ARCELORMITTAL	4	A-572 GR60	
3-131	D-1155-36	812236570	ARCELORMITTAL	4	A-572 GR60	
3-131	D-1155-36	812236570	ARCELORMITTAL	4	A-572 GR60	
3-138	D-1155-36	822736570	ARCELORMITTAL	8	A-572 GR60	
3-138	D-1155-36	822736570	ARCELORMITTAL	8	A-572 GR60	
3-130	D-1155-36	822736570	ARCELORMITTAL	8	A-572 GR60	
3-138	D-1155-36	822736570	ARCELORMITTAL	8	A-572 GR60	
3-138	D-1155-36	822736570	ARCELORMITTAL	8	A-572 GR60	
3-138	D-1155-36	822736570	ARCELORMITTAL	8	A-572 GR60	
3-138	D-1155-36	822736570	ARCELORMITTAL	8	A-572 GR60	
3-138	D-1155-36	822736570	ARCELORMITTAL	8	A-572 GR60	
3-138	D-1155-36	822736570	ARCELORMITTAL	8	A-572 GR60	
3-141	D-1155-36	812236570	ARCELORMITTAL	8	A-572 GR60	
3-141	D-1155-36	812236570	ARCELORMITTAL	8	A-572 GR60	
3-141	D-1155-36	812236570	ARCELORMITTAL	8	A-572 GR60	
3-141	D-1155-36	812236570	ARCELORMITTAL	8	A-572 GR60	
3-110	D-1155-37	822218-001	ARCELORMITTAL	4	A-572 GR60	Charpy

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Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
Appendix B

Doc./Rev.: EIR-3021970-000
 Project: 00225.03.0050 DOE Atlas Project

12-AXLE ATLAS CASK CAR BODY - HEAT IDENTIFICATION
FORM 44B - 3/12/2010

Atlas

DATE: 11/14/18		BODY NUMBER: IDOX 010001				
TO THE BEST OF MY KNOWLEDGE ALL INFORMATION CONTAINED IS ACCURATE						
SIGNED: <i>Paul Baker</i>			KASGRO RAIL			
<small>Use of ASTM 678 grade 60 material is acceptable for grade 80 - will provide the number of properties for grade 60 material as satisfied</small>						
<small>Charpy Impact testing, when required, will be in accordance with ASTM A978. This number does not describe energy shift to 20 ft-lbs</small>						
<small>At zero degrees F. Transverse Impact test is required for plate widths over 24 inches</small>						
PART NO.	PRINT NO.	HEAT NUMBER	MELTER	QTY/CAR	MATERIAL	Special testing
3-119	D-1155-37	81226530	ARCELORMITTAL	4	A-572 GR60	Charpy
3-119	D-1155-37	81226530	ARCELORMITTAL	4	A-572 GR60	Charpy
3-119	D-1155-37	81226530	ARCELORMITTAL	4	A-572 GR60	Charpy
3-137	D-1155-37	81226530	ARCELORMITTAL	2	A-572 GR60	Charpy
3-137	D-1155-37	81226530	ARCELORMITTAL	2	A-572 GR60	Charpy

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Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
Appendix B

Doc./Rev.: EIR-3021970-000
 Project: 00225.03.0050 DOE Atlas Project

Atlas

12-AXLE ATLAS CASK CAR BODY BOLSTER - HEAT IDENTIFICATION
FORM 44B - 3/12/2010

DATE : 11/14/18		Bolster Number: A:1				
TO THE BEST OF MY KNOWLEDGE ALL INFORMATION CONTAINED IS ACCURATE						
SIGNED: <i>Bill Baker</i>					KASGRO RAIL	
PART NO.	PRINT NO.	HEAT NUMBER	MELTER	QTY/ CAR	MATERIAL	special testing
3-10	D-1155-08	822Z36560	ARCELORMITTAL	1	A-572-60	
3-12	D-1155-08	812Z36570	ARCELORMITTAL	2	A-572-60	
3-12	D-1155-08	812Z36570	ARCELORMITTAL	2	A-572-60	
3-13	D-1155-08	822Z36570	ARCELORMITTAL	2	A-572-60	
3-13	D-1155-08	822Z36570	ARCELORMITTAL	2	A-572-60	
3-14	D-1155-08	822Z36570	ARCELORMITTAL	2	A-572-60	
3-14	D-1155-08	822Z36570	ARCELORMITTAL	2	A-572-60	

12-AXLE ATLAS CASK CAR BODY BOLSTER - HEAT IDENTIFICATION
FORM 44B - 3/12/2010

DATE : 11/14/18		Bolster Number: B:2				
TO THE BEST OF MY KNOWLEDGE ALL INFORMATION CONTAINED IS ACCURATE						
SIGNED: <i>Bill Baker</i>					KASGRO RAIL	
PART NO.	PRINT NO.	HEAT NUMBER	MELTER	QTY/ CA R	MATERIAL	special testing
3-10	D-1155-08	822Z36560	ARCELORMITTAL	1	A-572-60	
3-12	D-1155-08	812Z36570	ARCELORMITTAL	2	A-572-60	
3-12	D-1155-08	812Z36570	ARCELORMITTAL	2	A-572-60	
3-13	D-1155-08	822Z36570	ARCELORMITTAL	2	A-572-60	
3-13	D-1155-08	822Z36570	ARCELORMITTAL	2	A-572-60	
3-14	D-1155-08	822Z36570	ARCELORMITTAL	2	A-572-60	
3-14	D-1155-08	822Z36570	ARCELORMITTAL	2	A-572-60	

Note: The recording of false, fictitious, or fraudulent statements or entries on this document may be punishable as a felony under Federal statutes

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Appendix B

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 Project: 00225.03.0050 DOE Atlas Project

Appendix B.1.4 – Span Bolster Heat Identification Form, Form 42

	Orano Federal Services			
DATA TRANSMITTAL FORM				
Supplier:	KASGRO RAIL CORP., INC.	DTF No:	39	
P.O./SC No:	15C3011916	Date:	2/22/2019	
Type of Submittal:	<input checked="" type="checkbox"/> First <input type="checkbox"/> Re-Submittal	SDRL List Item No:	24	
Submitted for:	<input type="checkbox"/> Approval <input type="checkbox"/> Review <input type="checkbox"/> Information	Number of Copies Submitted:	1	
Submitted By:	RICK FORD <small>(Name)</small>	Rick Ford <small>(Signature)</small>	PROJECT MANAGER <small>(Title)</small>	
Digitally signed by Rick Ford Date: 2019.02.22 09:16:40 -0500				
ITEM NUMBER	DOCUMENT NUMBER	REVISION NUMBER	DOCUMENT DESCRIPTION	FS DISPOSITION
1	KAS 138		ATLAS CASK/BUFFER CARB LAYDOWN INSTALLATION AND TEST DATA	<input checked="" type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
2	KAS 139		ATLAS CASK BODY MATERIAL HEAT IDENTIFICATION, FORMS 42, 40A, 44B	<input checked="" type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
3	KAS 140		ATLAS BUFFER IDOX 20001 BODY MATERIAL HEAT IDENTIFICATION, FORM 44B	<input checked="" type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
4	KAS 141		ATLAS BUFFER IDOX 20002 BODY MATERIAL HEAT IDENTIFICATION, FORM	<input checked="" type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
5	KAS 142		ATLAS CASK CAR FORM 36 STATIC FORCE BRAKE TEST	<input checked="" type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
6	KAS 143		ATLAS CASK CAR IDOX 10001, FORM 5-13-B NEW CAR INSPECTION	<input checked="" type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
7	KAS 144		ATLAS CASK IDOX 10001 SUPPLIER CERTIFICATION/ AMSTED RAIL SEDARSH / MCCABE	<input checked="" type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
				<input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
				<input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
Comments:		Technical Reviewer (I.e., RE, PTL, SME, QA, etc.)		
No comments		KLEIN Slade Date: 2019.02.26 07:33:08 -08'00'		
		Date: 2/26/2019		
FS DISPOSITION CODES AND DEFINITIONS				
AP	Approved	Work may proceed.	Resubmittal is not required	
AWC	Approved with Comment	Work may proceed; comments provided for Supplier's consideration only.	Resubmittal is not required	
REV	Reviewed	Work may proceed; comments provided for Supplier's consideration only.	Resubmittal is not required	
RWC	Reviewed with Comment	Work may proceed; subject to incorporation and compliance w/ Buyer comments.	Correct and resubmit	
DS	Disapproved	Work may <u>not</u> proceed.	Correct and resubmit	
RSA	Receipt Submittal Acknowledged	No other action required.		
<p><small>If, in the judgment of the Supplier, the incorporation of FS' comments will result in a change to the Purchase Order/Subcontract, work shall not proceed and the Supplier shall immediately provide a written notice to FS' C&P Representative describing the change.</small></p>				
Project Manager (PM) / Engineering Manager (EM) or Designated Individual (DI) Approval		Digitally signed by Mark A. Denton <small>DN: cn=Mark A. Denton, o=Orano Federal Services, email=mark.denton@orano.gov, ou=US</small> Date: 02/26/2019 <small>Date: 2019.02.26 10:28:54 -0500</small>		

FS-EN-FRM-023 Rev 02 (Effective March 1, 2018)
 Refer to FS-EN-PRC-012



Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
Appendix B

Doc./Rev.: EIR-3021970-000
 Project: 00225.03.0050 DOE Atlas Project

	Orano Federal Services	
	SUPPLIER DOCUMENT SUBMITTAL REVIEW	
Supplier / PO No.:	KASGRO / 15C3011916	DTF No. / Rev: 039
Charge No:	00225.03.0050.02.00001	Due Date: 3/8/2019
Document(s):	See DTF No.: 039	
REVIEW INSTRUCTIONS: (List Supplier Doc. No. and Rev. FS Spec and Dwg. Codes, Stds, etc.)		
PE	Slade Klein	
REVIEWERS	Slade Klein, Bernie Counterman	
QA	Bernie Counterman	
Technical Review		
Comments/Markup Attached Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Technical Reviewer Comments:		
No comments		
Technical Reviewer(s) (Sign/Date):		Date: 2019.02.25 15:52:04 -08'00'
KLEIN Slade		
Quality Assurance Review (As Applicable)		
Comments/Markup Attached Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Technical Reviewer Comments:		
KAS 142 Cask Car Form 36 Brake Test - Why is the Gross Shoe Force = 0		
QA Reviewer(s) (Sign/Date):		Digitally signed by COUNTERMAN Bernard Date: 2019.02.25 10:22:16 -08'00'
COMMENT DISPOSITION (If Applicable. Attached further comments and disposition correspondence as necessary)		

FS-EN-FRM-026 Rev 01 (Effective March 1, 2018)
 Refer to FS-EN-PRC-012



Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
Appendix B

Doc./Rev.: EIR-3021970-000
 Project: 00225.03.0050 DOE Atlas Project

12-AXLE ATLAS CASK CAR TRI-SPAN BOLSTER - HEAT IDENTIFICATION
FORM 42A - 3/12/2010

Atlas

DATE: 11/14/18		END SILL: 1 & 2				
TO THE BEST OF MY KNOWLEDGE ALL INFORMATION CONTAINED IS ACCURATE						
SIGNED: <i>Bill Baber</i>				KASGRO RAIL		
Use of ASTM 572 grade 50 material is acceptable for grade 60 melt provided the mechanical properties for grade 50 material are achieved.						
Charpy impact testing, when required, will be in accordance with ASTM 6078. The minimum coverage of at least energy level of 20 ft-lbs.						
As per Figure 1, Transverse Impact test is required for plates with a max 24 inches.						
PART NO.	PRINT NO.	HEAT NUMBER	MELTER	QTY/CAR	MATERIAL	special testing
3-27	D-1118-7	5-07265	TOPY INDUSTRIES	2	A-572 GR50	
3-28	D-1118-7	5-07265	TOPY INDUSTRIES	2	A-572 GR50	
3-29	D-1118-7	822Z36560	ARCELORMITTAL	2	A-572 GR50	
3-30	D-1118-7	822Z36560	ARCELORMITTAL	4	A-572 GR50	
3-31	D-1118-7	822Z36560	ARCELORMITTAL	4	A-572 GR50	
3-32	D-1118-7	822Z36560	ARCELORMITTAL	8	A-572 GR50	
3-33	D-1118-7	822Z36560	ARCELORMITTAL	2	A-572 GR50	
WELDING WIRE		HOBART 466TT, 80 SERIES, HOBART 6185A, 71 SERIES				

Note: The recording of false, factitious or fraudulent statements or entries on this document may be punishable as a felony under



Orano Federal Services
 Title: Design and Prototype Fabrication of Railcars for Transport of
 High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
 Appendix B

Doc./Rev.: EIR-3021970-000
 Project: 00225.03.0050 DOE Atlas Project

12-AXLE ATLAS CASK CAR TRI-SPAN BOLSTER - HEAT IDENTIFICATION
 FORM 42 - 3/12/2010

Atlas

DATE: 11/14/18		SPAN BOLSTER: A: 2		B: 1		
TO THE BEST OF MY KNOWLEDGE ALL INFORMATION CONTAINED IS ACCURATE						
SIGNED: <i>K. D. Baker</i>			KASGRO RAIL			
Use of ASTM 572 grade 60 material is acceptable for grade 60 material provided the mechanical properties for grade 60 material in solution are met.						
Chemical analysis, when required, will be in accordance with ASTM 2075. The minimum average absorbed energy shall be 20 ft-lb.						
All welds shall be 1/2" Transverse Impact Test is required for plate with a thickness of 1/2" or greater.						
PART NO.	PRINT NO.	HEAT NUMBER	MELTER	QTY/CAR	MATERIAL	Special testing
3-1	D-1118-2	81223650	ARCELORMITTAL	4	A-572 GR60	
3-2	D-1118-2	81223650	ARCELORMITTAL	2	A-572 GR60	
3-3	D-1118-2	81223650	ARCELORMITTAL	4	A-572 GR60	
3-4	D-1118-2	81223650	ARCELORMITTAL	6	A-572 GR60	
3-5	D-1118-2	81223650	ARCELORMITTAL	6	A-572 GR60	
3-6	D-1118-2	81223650	ARCELORMITTAL	6	A-572 GR60	
3-7	D-1118-2	81223650	ARCELORMITTAL	6	A-572 GR60	
3-8	D-1118-2	81223650	ARCELORMITTAL	2	A-572 GR60	
3-9	D-1118-2	81223650	ARCELORMITTAL	4	A-572 GR60	
3-10	D-1118-2	81223650	ARCELORMITTAL	6	A-572 GR60	
3-11	D-1118-2	81223650	ARCELORMITTAL	6	A-572 GR60	
3-12	D-1118-2	81223650	ARCELORMITTAL	4	A-572 GR60	
3-14	D-1118-3	822236560	ARCELORMITTAL	2	A-572 GR60	
3-15	D-1118-3	822236560	ARCELORMITTAL	2	A-572 GR60	
3-16	D-1118-3	822236560	ARCELORMITTAL	2	A-572 GR60	
3-17	D-1118-4	812236530	ARCELORMITTAL	2	A-572 GR60	
3-18	D-1118-4	812236530	ARCELORMITTAL	2	A-572 GR60	
3-19	D-1118-4	812236530	ARCELORMITTAL	2	A-572 GR60	
3-20	D-1118-4	CC155	METNINIS ROLLER RINGS	2	A-572 GR60	
3-21	D-1118-5	381223650	ARCELORMITTAL	4	A-572 GR60	
3-22	D-1118-5	381223650	ARCELORMITTAL	4	A-572 GR60	
3-23	D-1118-5	381223650	ARCELORMITTAL	4	A-572 GR60	
3-24	D-1118-5	381223650	ARCELORMITTAL	2	A-572 GR60	
3-25	D-1118-5	381223650	ARCELORMITTAL	2	A-572 GR60	
3-26	D-1118-5	381223650	ARCELORMITTAL	4	A-572 GR60	
END SILL APPLIED		A: 2 B: 1				
WELDING WIRE		HOBART 4661T 80 SERIES				

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Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
Appendix B

Doc./Rev.: EIR-3021970-000
 Project: 00225.03.0050 DOE Atlas Project

Appendix B.1.5 – New Car Inspection Form, Form 5-12-B

Orano Federal Services	
DATA TRANSMITTAL FORM	
Supplier: KASGRO RAIL CORP., INC.	DTF No: 39 Page 1 of 1
P.O./SC No: 15C3011916	Date: 2/22/2019
Type of Submittal: <input checked="" type="checkbox"/> First <input type="checkbox"/> Re-Submittal	SDRL List Item No: 24
Submitted for: <input type="checkbox"/> Approval <input type="checkbox"/> Review <input type="checkbox"/> Information	Number of Copies Submitted: 1
Submitted By: RICK FORD	Rick Ford <small>Digitally signed by Rick Ford Date: 2019.02.22 09:16:40 -08'00'</small> PROJECT MANAGER
<small>(Name)</small>	<small>(Signature)</small> <small>(Title)</small>

ITEM NUMBER	DOCUMENT NUMBER	REVISION NUMBER	DOCUMENT DESCRIPTION	FS DISPOSITION
1	KAS 138		ATLAS CASK/BUFFER CARB LATION INSTALLATION AND TEST DATA	<input checked="" type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
2	KAS 139		ATLAS CASK BODY MATERIAL HEAT IDENTIFICATION, FORMS 42, 40A, 44B	<input checked="" type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
3	KAS 140		ATLAS BUFFER IDOX 20001 BODY MATERIAL HEAT IDENTIFICATION, FORM 44B	<input checked="" type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
4	KAS 141		ATLAS BUFFER IDOX 20002 BODY MATERIAL HEAT IDENTIFICATION, FORM	<input checked="" type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
5	KAS 142		ATLAS CASK CAR FORM 35 STATIC FORCE BRAKE TEST	<input checked="" type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
6	KAS 143		ATLAS CASK CAR IDOX 10001, FORM 5-12-B NEW CAR INSPECTION	<input checked="" type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
7	KAS 144		ATLAS CASK IDOX 10001 SUPPLIER CERTIFICATION/ AMSTED RAIL SEDARSO / MCCABE	<input checked="" type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
				<input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
				<input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA

Comments: No comments	Technical Reviewer (I.e., RE, PTL, SME, QA, etc.) KLEIN Slade <small>Date: 2019.02.26 07:33:08 -08'00'</small> Date 2/26/2019
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FS DISPOSITION CODES AND DEFINITIONS			
AP	Approved	Work may proceed.	Resubmittal is not required
AWC	Approved with Comment	Work may proceed; comments provided for Supplier's consideration only.	Resubmittal is not required
REV	Reviewed	Work may proceed; comments provided for Supplier's consideration only.	Resubmittal is not required
RWC	Reviewed with Comment	Work may proceed; subject to incorporation and compliance w/ Buyer comments.	Correct and resubmit
DS	Disapproved	Work may <u>not</u> proceed.	Correct and resubmit
RSA	Receipt Submittal Acknowledged	No other action required.	

If, in the judgment of the Supplier, the incorporation of FS' comments will result in a change to the Purchase Order/Subcontract, work shall not proceed and the Supplier shall immediately provide a written notice to FS' C&P Representative describing the change.

Project Manager (PM) / Engineering Manager (EM) or Designated Individual (DI) Approval 	<small>Digitally signed by Mark A. Denton DN: cn=Mark A. Denton, o=Orano Federal Services, email=mark.denton@orano.com, ou=US Date: 2019.02.28 10:26:54 -0500</small>	Date: 02/26/2019
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FS-EN-FRM-023 Rev 02 (Effective March 1, 2018)
 Refer to FS-EN-PRC-012



Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
Appendix B

Doc./Rev.: EIR-3021970-000
 Project: 00225.03.0050 DOE Atlas Project

	Orano Federal Services	
	SUPPLIER DOCUMENT SUBMITTAL REVIEW	
Supplier / PO No.:	KASGRO / 15C3011916	DTF No. / Rev: 039
Charge No:	00225.03.0050.02.00001	Due Date: 3/8/2019
Document(s):	See DTF No.: 039	
REVIEW INSTRUCTIONS: (List Supplier Doc. No. and Rev. FS Spec and Dwg. Codes, Stds, etc.)		
PE	Slade Klein	
REVIEWERS	Slade Klein, Bernie Counterman	
QA	Bernie Counterman	
Technical Review		
Comments/Markup Attached Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Technical Reviewer Comments:		
No comments		
Technical Reviewer(s) (Sign/Date): KLEIN Slade Date: 2019.02.25 15:52:04 -08'00'		
Quality Assurance Review (As Applicable)		
Comments/Markup Attached Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Technical Reviewer Comments:		
KAS 142 Cask Car Form 36 Brake Test - Why is the Gross Shoe Force = 0		
QA Reviewer(s) (Sign/Date):		Digitally signed by COUNTERMAN Bernard Date: 2019.02.25 10:22:16 -08'00'
COMMENT DISPOSITION (If Applicable. Attached further comments and disposition correspondence as necessary)		

FS-EN-FRM-026 Rev 01 (Effective March 1, 2018)
 Refer to FS-EN-PRC-012



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KASGRO RAIL CORP	
FORM 5-12-B	
NEW CAR INSPECTION	
Rev 1	Date: 09/03/14
Car Number IDOX 010001	Job Number
SPRINGS - PATTERN / TYPE	
Outer Coil	SPECIAL SPRINGS SEE DRAWING D-1155-32
Inner Coil	
Inner Inner Coil	
STABILITY DEVICE (if used)	Model Number
CLEARANCE OF SAFETY APPLIANCES - 2" Minimum — 1/2" Preferred OK	
AIR BRAKES	
Brake Valve	DB 10/ DB 20
SLACK ADJUSTER	
	Model Number ELLCON NAT. 7100-33
BRAKE CYLINDER - TRUCK MOUNTED	
Travel No. 1 Cylinder	2 7/8" Part # 343-L
Travel No. 2 Cylinder	2 15/16" Part # 343-L
Travel No. 3 Cylinder	2 13/16" Part # 343-L
Travel No. 4 Cylinder	2 7/8" Part # 343-L
Travel No. 5 Cylinder	2 7/8" Part # 343-L
Travel No. 6 Cylinder	2 7/8" Part # 343-L
Brake Pins & Cotter Keys	OK
Brake Rigging Free & Clear	OK
Brake Shoe 2"	
CENTER WEAR PLATE LINERS	
No. 1	1/4"
No. 2	1/4"
No. 3	1/4"
No. 4	1/4"
No. 5	1/4"
No. 6	1/4"
INSPECTOR: Cory J. Wagner	Date: 2/19/2019
Note: The recording of false, fictitious, or fraudulent statements on this document may be punishable as a felon under federal statutes	



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KASGRO RAIL CORP			
FORM 5-12-B			
NEW CAR INSPECTION			
Rev 1		Date: 09/03/14	
Car Number IDOX 010001		Job Number _____	
SIDE BEARING CLEARANCE			
BR	5"	BL	5 1/16"
CR	5 1/16"	CL	5 1/16"
DR	5 1/16"	DL	5 1/8"
Span BR	1/8" 1/8 - 3/16"	Span BL	1/8" 1/8 - 3/16"
ER	5"	EL	5 1/8"
FR	5 1/8"	FL	5 1/16"
AR	5 1/16"	AL	5 1/16"
Span AR	1/8" 1/8 - 3/16"	Span AL	1/8" 1/8 - 3/16"
UNDER CAR CLEARANCE - 2 3/4" Minimum OK			
DIMENSIONS			
Maximum Width	10' - 8"		
Working Deck Length	48'		
At "A" End Right Side	57"	At "A" End Left Side	57 1/16"
At Center Right Side	58 11/16"	At Center Left Side	58 3/8"
At "B" End Right Side	57 1/16"	At "B" End Left Side	57 3/16"
TESTING			
Single Car Test	YES	Golden Shoe Test	YES
Brake Pipe Restriction Test	YES	Truck Curve Test	YES
Slack Adjuster Test	YES	Load Test	N/A
Couplers	Type	Height	
A-End	SBE67CE	35"	
B-End	SBE67CE	34 1/2"	
INSPECTOR: Cory J. Wagner		Date: 19-Feb-19	
Note: The recording of false, fictitious, or fraudulent statements on this document may be punishable as a felony under federal statutes			



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KASGRO RAIL CORP FORM 5-12-B NEW CAR INSPECTION
--

Rev 1

Date: 09/03/14

LOCKNUT SECURED AGAINST CONTROL ARM NUT ON SLACK ADJUSTER TRIGGER

TRUCK LOCATION	INSPECTOR	DATE
B YES <u> X </u> NO <u> </u>	<u> BB </u>	<u> 7/15/14 </u>
C YES <u> X </u> NO <u> </u>	<u> BB </u>	<u> 7/15/14 </u>
D YES <u> X </u> NO <u> </u>	<u> BB </u>	<u> 7/15/14 </u>
E YES <u> X </u> NO <u> </u>	<u> BB </u>	<u> 7/15/14 </u>
F YES <u> X </u> NO <u> </u>	<u> BB </u>	<u> 7/15/14 </u>
A YES <u> X </u> NO <u> </u>	<u> BB </u>	<u> 7/15/14 </u>

CROSS KEY RETAINER BOLT TORQUED TO 25 FOOT LBS.	INSPECTOR	DATE
A YES <u> X </u> NO <u> </u>	<u> BB </u>	<u> </u>
B YES <u> X </u> NO <u> </u>	<u> BB </u>	<u> </u>

3 TABS BENT OVER FLAT AGAINST BOLT HEAD	INSPECTOR	DATE
A YES <u> X </u> NO <u> </u>	<u> BB </u>	<u> </u>
B YES <u> X </u> NO <u> </u>	<u> BB </u>	<u> </u>

CHECK AND RECORD LOCKING CENTER PIN TRAVEL	INSPECTOR	DATE
TRUCK LOCATION		
A-OUTBOARD <u> X </u>	<u> BB </u>	<u> </u>
A-INBOARD <u> X </u>	<u> BB </u>	<u> </u>
B-OUTBOARD <u> X </u>	<u> BB </u>	<u> </u>
B-INBOARD <u> X </u>	<u> BB </u>	<u> </u>

CENTER PIN AT CAR BODY	INSPECTOR	DATE
A <u> X </u>	<u> BB </u>	<u> </u>
B <u> X </u>	<u> BB </u>	<u> </u>

CHECK AND RECORD LT. WT. STENCILED ON RAILCAR. MAKE SURE IT MATCHES LIGHTWEIGHT ON FORM 46

L 225700 _____ INSPECTOR CW _____ DATE 02/19/19

R 225700 _____ INSPECTOR CW _____ DATE 02/19/19

CHECK RAILCAR FOR 6 JACKING PADS 4 PCS. 3-42 2 PCS. 3-109

INSPECTOR CW _____ DATE 02/19/19

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Doc./Rev.: EIR-3021970-000

Project: 00225.03.0050 DOE Atlas Project

KASGRO RAIL CORP FORM 5-12-B	
NEW CAR INSPECTION	

Rev 1

Date: 09/03/14

MIDDLE TRUCK COVER PLATES LOCATED IN THE CORRECT POSITION-BOLTS SHOULD BE TOWARD THE OUTBOARD END OF CAR

	YES	NO	INSPECTOR	DATE
A	<u>X</u>	<u> </u>	<u>BB</u>	<u>2/6/2019</u>
B	<u>X</u>	<u> </u>	<u>BB</u>	<u>2/6/2019</u>

TRUCK BOWLS LUBRICATED

	YES	NO	INSPECTOR	DATE
B	<u>X</u>	<u> </u>	<u>BB</u>	<u>2/6/2019</u>
C	<u>X</u>	<u> </u>	<u>BB</u>	<u>2/6/2019</u>
D	<u>X</u>	<u> </u>	<u>BB</u>	<u>2/6/2019</u>
E	<u>X</u>	<u> </u>	<u>BB</u>	<u>2/6/2019</u>
F	<u>X</u>	<u> </u>	<u>BB</u>	<u>2/6/2019</u>
A	<u>X</u>	<u> </u>	<u>BB</u>	<u>2/6/2019</u>

SPAN BOLSTER BOWLS LUBRICATED

	YES	NO	INSPECTOR	DATE
A	<u>X</u>	<u> </u>	<u>BB</u>	<u>2/6/2019</u>
B	<u>X</u>	<u> </u>	<u>BB</u>	<u>2/6/2019</u>

AFTER ALL AIRBRAKE TESTING IS DONE FINAL INSPECTION OF ALL SPRING SETS WHEN RAILCARS ARE FULLY ASSEMBLED, AND WITH THE RAILCAR JACKED TO REMOVE THE WEIGHT OF THE CARBODY FROM THE SPAN BOLSTER/TRUCK ASSEMBLIES

INSPECTOR	CW	DATE	2/19/2019
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Note: The recording of false, fictitious, or fraudulent statements on this document may be punishable as a felony under federal statutes



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<p>KASGRO RAIL CORP FORM 5-12-B</p> <p>NEW CAR INSPECTION</p>
<p>Rev 1 Date: 09/03/14</p>

CHECK SHEVE WHEEL CARRIER ASSEMBLY GAP ON SLIDING SHEVE WHEEL ASSEMBLY
 TO SPAN BOLSTER
 GAP SET TO 1/8" TO -1/16" BL AND AR

BL	1/16"
AR	1/16"

INSPECTOR

DATE

_____ CW _____

_____ 2/19/2019 _____

Note: The recording of false, fictitious, or fraudulent statements on this document may be punishable as a felony under federal statutes



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APPENDIX B.1.6 – SUPPLIER NONCONFORMANCE REPORT KAS-SNR-011

	Orano Federal Services		
	SUPPLIER NONCONFORMANCE REPORT		
FS SNR Number:	KAS-SNR-011	FS SNR Revision No.:	0
Client Name:	DOE	P.O./Contract No.:	15C3011916
		Project:	00225.03.0050
Supplier Name:	Kasgro Rail	Supplier NCR: #2-#5	Supplier NCR Revision Number: 0
ORIGINATOR	NONCONFORMING CONDITION: (Attach Supplier NCR) Several components of the DOE Atlas railcar (IDOX010001) as-built cradle attachments did not meet the requirements of DWG-3018956. See attached for specific non-conforming conditions.		
	FS Originator: (Originator signature/Date)		Date:
	KLEIN Slade		2019.03.27 10:43:05 -07'00'
DISPOSITION	Recommended Supplier Disposition:	<input type="checkbox"/> Rework	<input type="checkbox"/> Repair
		<input checked="" type="checkbox"/> Use-As-Is	<input type="checkbox"/> Reject
	FS Disposition/Technical Review and Justification (Justification required for Repair or Use-as-Is): See attached		
	Disposition/Technical Review By: (Signature/Date)		Date:
	KLEIN Slade		2019.04.08 13:42:29 -07'00'
	Licensing Review Required: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (Basis): Not a licensed component		
	Licensing Review Results: N/A		
	Licensing Review By: N/A (Signature/Date)		
SIGNIFICANCE EVALUATION	Technical Check By: (Signature)		Digitally signed by CONLEY Ethan Date: 2019.04.08 14:26:13 -07'00'
	Ethan Conley		
	Approved By: HILLSTROM Donald (EM signature)		Digitally signed by HILLSTROM Donald DN: cn=AREVA GROUP, 2.5.4.45=5A26210B484657758, o=HILLSTROM Donald Date: 2019.04.08 14:45:51 -07'00'
	Donald Hillstrom		
	Significant Issue Adverse to Quality? (Yes – a CAR must be created)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	CAR No.: N/A
	Condition Evaluated for Significance: (QA signature/Date)		Digitally signed by COUNTERMAN Bernard Date: 2019.04.08 15:48:44 -07'00'
	Bernard Conrath		
APPROVAL	Customer Approval Required?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Customer Approval Received: (Date and method of approval –attach copy of letter, email, etc.)
	Condition Evaluated for Approval: (PM signature/Date)		Digitally signed by COUNTERMAN Bernard DN: cn=AREVA GROUP, 2.5.4.45=187AD7C12BC41DE002170D, o=COUNTERMAN Bernard Date: 2019.04.08 14:25:38 -04'00'
	Bernard Conrath		
CLOSURE	Actions Complete – SNR can be closed: (EM signature/Date)		Digitally signed by HILLSTROM Donald DN: cn=AREVA GROUP, 2.5.4.45=5A26210B484657758, o=HILLSTROM Donald Date: 2019.04.15 17:38:14 -07'00'
	HILLSTROM Donald		
	Actions Verified – SNR Closed: (QA signature/Date)		Digitally signed by COUNTERMAN Bernard Date: 2019.04.15 12:32:30 -07'00'
	Bernard Conrath		

FS-QA-FRM-15.11 Rev. 04 (Effective October 8, 2018)
 Refer to FS-QA-PRC-15.1



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NONCONFORMING CONDITION

Some components of the DOE Atlas railcar (IDOX010001) as-built cradle attachment components did not meet the requirements of DWG-3018956-000. The Atlas railcar was inspected by several different methods and at several different times following rework or repair. FS created the attached Atlas Railcar - As-Built Dimensional Inspection report spreadsheet (Attachment 1) to list all DWG-3018956 dimensions, their required tolerance, the inspected dimension/reference and the associated Kasgro nonconformance report (NCR) number where appropriate. Attachment 1, spreadsheet references are provided in Attachments 2-4. Specific nonconforming conditions are listed below.

Nonconforming Condition 1

DWG-3018956, Flag Note 8, requires that a stainless steel facing be applied to the inner pin blocks, Item 7 and Item 8, and outer pin blocks, Items 10-12. The fabricated inner and outer pin blocks do not have stainless steel cladding and the indicated surfaces are painted. Reference Kasgro NCR #2.

Nonconforming Condition 2

DWG-3018956, Sheet 8, Zone D8/D7 shows Item 15 extending thru Item 3 to provide clearance for Item 4. The fabricated pin loading weldment has the Item 15 flush with Item 3. Reference Kasgro NCR #3

Nonconforming Condition 3

DWG-3018956, Sheet 6, Detail Item 10 (Applied also to Items 11 and 12) nonconforming dimensions. Reference Kasgro NCR #4

Drawing location	Dimension	Tolerance	Actual
Sheet 6/Detail 10	18.0	±.1	17.75-18.125
Sheet 6/Detail 10	2X 16.0	±.1	16.1875 max
Sheet 6/Detail 10	11.0	±.1	11-11.25
Sheet 6/Detail 10	3.00	±.06	3.25
Sheet 6/Detail 10	1.50	±.06	1.625
Sheet 6/ Zone C-5	2X 4.37	+06/-00	4.361 - 4.4001
Sheet 6/ Zone C-5	⊕ 1/16 T S (8.00 ±.03)	1/16	7.875 - 8.075
Sheet 6/Zone C-1	2X 4.37	+06/-00	4.323-4.43
Sheet 6/Zone B-1	⊕ 1/16 R T (8.00 ±.03) (48.00 ±.03)	1/16	7.875 - 8.0625 48-48.125
Sheet 6/Detail 10	⊥ 1/32 S	1/32	Not inspected
Sheet 6/Detail 10	2X 5.37	+06/-00	5.340-5.43



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Nonconforming Condition 4

DWG-3018956, Sheet 5, Detail Item 8 (applies also to Item 7) nonconforming dimensions. Reference Kasgro NCR #5

Drawing location	Dimension	Tolerance	Actual
Sheet 5/Detail 8	5.37	+0.06/-0.00	5.2987-5.3539
Sheet 5/Detail 8	4.37	+0.06/-0.00	4.3354-4.3643
Sheet 5/Detail 8	16.0	±1	16.1875-16.75

Nonconforming Condition 5

DWG-3018956, Sheet 6, Detail Item 9 nonconforming dimensions. Reference Kasgro NCR #6. Note that Kasgro NCR #6 only lists 90.0 as out-of-tolerance, however the 21.0 dimension is also listed out-of-tolerance on the Kasgro provided inspection (Attachment 2).

Drawing location	Dimension	Tolerance	Actual
Sheet 6/Detail 9	90.0	±1	90.1875 max
Sheet 6/Detail 9	21.0	±1	21.125 max

Atlas railcar attachment components Rework

Some rework was performed on the Atlas railcar. This rework was not required to be documented on an NCR, but is listed here for reference.

1. From the results of the post-welding laser inspection it was noted that the 9.5 inch height between the inner pin block slot center and the cradle placement pads was too short due to weld shrinkage. Kasgro performed rework to reduce the thickness of the Item 6 and Item 5 pads to achieve the required height. This was rework, as an in-tolerance condition was achieved and documented with re-inspection. The final condition and inspection references are noted in Attachment 1.
2. The outer pin blocks were reworked to repair some surface imperfections and to adjust for machining errors. Not all dimensions were corrected to within tolerance and nonconforming dimensions are documented in Kasgro NCR #4 and NCR #5.



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FS Disposition/Technical Review and Justification

The Atlas railcar cradle attachment components have multiple dimensions that do not meet their required tolerance. The cradle attachments provide an interface with the 17 different Atlas railcar payloads and the Atlas railcar must be able to interface with the conceptual cradle designs which will be provided to the final cradle designer and the test loads that have been designed and are being fabricated for testing.

Nonconforming Condition 1

The stainless steel facing was required to provide a corrosion resistant surface at the interface between the railcar and the cradles. Without facing, the wear due to use may remove paint at the interface surfaces and could lead to corrosion of the carbon steel inner and outer pin blocks. To combat this, the loading procedures were revised to add a requirement to grease the interface surfaces which will help mitigate corrosion and wear concerns.

Without the stainless steel facing, the nominal gap between the outer pin blocks is increased from 3.00 inches to 3.25 inches. This increases the bending on the outer pin blocks attachment pins. CALC-3015276 was revised to neglect the facing from the pin bending evaluation. Positive margins were maintained. See CALC-3015276-004.

The lack of stainless steel facing will not limit the cradle attachment components from performing their design function and a use-as-is disposition is approved.

Nonconforming Condition 2

The pin loading weldment was fabricated with Item 15 flush with Item 3 leaving no clearance for the Item 4 pin keeper. The pin loaded weldment was then modified by Kasgro to add six ¼ inch tabs to the back of the Item 3 plate to provide the necessary clearance for the pin keeper during installation. Although the pin keeper weldment does not meet the requirements of DWG-3018956-000, the modified assembly will meet its functional design requirements and a use-as-is disposition is approved.

Nonconforming Condition 3

The 18.0, 2X 16.0 and 11.0 out-of-tolerance dimensions do not affect the form fit or function of the Atlas railcar cradle attachments and are acceptable for use-as-is. The 3.00 and 1.50 dimensions are a result of the decision to not use stainless steel cladding and were evaluated in Nonconforming Condition 1 above. The outer pin block hole and slot locations and sizes are critical to the required cradle interface and are evaluated in Evaluation of Final Interface Condition (Attachment 5). The perpendicularity of the outer pin block slot to the back of the outer pin block was not inspected by Kasgro; however, this was not required based on the following: 1) The outer pin blocks were placed using laser inspection to verify alignment 2) The slot size provides additional clearance (for pin insertion) that would mitigate any out-of-perpendicular condition 3) Typical hole fabrication includes perpendicularity to backing surface 4) FS did not observe any gross out of perpendicularity of the slots. Therefore, a use-as-is disposition is approved.



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Nonconforming Condition 4

The 16.0 dimension controls the top block chamfer and an out-of-tolerance condition does not affect the form fit or function of the Atlas railcar cradle attachments and is acceptable for use-as-is. The inner pin block slot sizes are critical to the required cradle interface and are evaluated in Evaluation of Final Interface Condition (Attachment 5). Although not listed on a Kasgro NCR the 2X 11.0 ±.1 dimension is listed as roughly 10.9 in the Kasgro Cradle Attachment Inspection (Attachment 2). Based on the provided inspection wording "roughly" could mean the Item 7 or Item 8 pin blocks have an out-of-tolerance condition for the 2X 11.0 dimension. This dimension locates the block vertical taper and an out-of-tolerance condition would not affect the form fit or function of the Atlas railcar cradle attachments and is acceptable for use-as-is.

Nonconforming Condition 5

The 90.0 and 21.0 out-of-tolerance dimension does not affect the form fit or function of the Atlas railcar cradle attachments. The location of the interfacing edge of the shear block was confirmed by laser measurement to be acceptable and therefore these deviations are acceptable for use-as-is.

Nonconforming Condition 6

Although not listed on a Kasgro NCR, the load test required by DWG-3018956-000, general note 7 was not performed per the drawing requirement. The drawing dictated that two separate loads be placed on the railcar to verify two separate deck heights. The load test was performed with only one approximately 215,000 pound load. This was justified based on the evaluation documented in Attachment 6.

Attachments

1. Atlas Railcar - As-Built Dimensional Inspection report spreadsheet
2. Kasgro Cradle Attachment Inspection
3. DTF-038 KAS 127 CMS Laser Report
4. CMS Email 2/14/19 and CMS Email 3/7/2019
5. Evaluation of Final Interface Condition
6. Atlas Load Test Memo



Orano Federal Services
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Appendix B

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Atlas Railcar - As-Built Dimensional Inspection report
 Drawing: DWG-3018956-000 Atlas Railcar, Cradle Attachment

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KAS-SNR-011 Attachment 1

Item/Description	Sheet/Zone or detail	Required Dimension	Tolerance	Actual Dimension	Accept	Reject	Inspection Reference	Comments
A1	-	-	-	-	-	-	-	
outer pin blocks P13-P17	-	-	-	-	-	-	-	
Item 11	3/D-7	// 1/16 B	1/16	-	X		DTF-038, KAS 127, Laser Tracker FN 1	
Item 11	3/D-7	⊥ 1/16 A	1/16	-	X		DTF-038, KAS 127, Laser Tracker FN 2	
Item 10	3/D-7	// 1/16 B	1/16	-	X		DTF-038, KAS 127, Laser Tracker FN 9	
Item 10	3/D-7	⊥ 1/16 A	1/16	-	X		DTF-038, KAS 127, Laser Tracker FN 10	
Item 10	3/C-7	// 1/16 B	1/16	-	X		DTF-038, KAS 127, Laser Tracker FN 15	
Item 10	3/C-7	⊥ 1/16 A	1/16	-	X		DTF-038, KAS 127, Laser Tracker FN 16	
Item 12	3/C-7	// 1/16 B	1/16	-	X		DTF-038, KAS 127, Laser Tracker FN 7	
Item 12	3/C-7	⊥ 1/16 A	1/16	-	X		DTF-038, KAS 127, Laser Tracker FN 8	
outer pin blocks P5-P12	-	-	-	-	-	-	-	
Item 12	3/D-1	// 1/16 B	1/16	-	X		DTF-038, KAS 127, Laser Tracker FN 3	
Item 12	3/D-1	⊥ 1/16 A	1/16	-	X		DTF-038, KAS 127, Laser Tracker FN 4	
Item 10	3/D-1	// 1/16 B	1/16	-	X		DTF-038, KAS 127, Laser Tracker FN 11	
Item 10	3/D-1	⊥ 1/16 A	1/16	-	X		DTF-038, KAS 127, Laser Tracker FN 12	
Item 10	3/C-1	// 1/16 B	1/16	-	X		DTF-038, KAS 127, Laser Tracker FN 13	
Item 10	3/C-1	⊥ 1/16 A	1/16	-	X		DTF-038, KAS 127, Laser Tracker FN 14	
Item 11	3/C-1	// 1/16 B	1/16	-	X		DTF-038, KAS 127, Laser Tracker FN 5	
Item 11	3/C-1	⊥ 1/16 A	1/16	-	X		DTF-038, KAS 127, Laser Tracker FN 6	
Outer pin block location	-	-	-	-	-	-	-	
Item 10 face	3/D-1	4X 18.05	±.03*	-	X		DTF-038, KAS 127, Laser Tracker FN 40	
Item 11/12 face	3/C-1	4X 25.20	±.03*	-	X		DTF-038, KAS 127, Laser Tracker FN 41	
Item 10/11/12 edge	3/B-6	148.5	±.06	-	X		DTF-038, KAS 127, Laser Tracker FN 37	
Item 10/11/12 edge	3/B-3	148.5	±.06	-	X		DTF-038, KAS 127, Laser Tracker FN 38	
Item 10 (P11/P6)	4/C-8	⊕ 1/16 F G	1/16	-	X		DTF-038, KAS 127, Laser Tracker FN 42	
Item 10 (P19-P14)	4/B-6	⊕ 1/16 M J	1/16	-	X		DTF-038, KAS 127, Laser Tracker FN 43	
Item 10 (P10-P7)	4/A-4	⊕ 1/16 N H	1/16	-	X		DTF-038, KAS 127, Laser Tracker FN 44	
Item 10 (P18-P15)	4/A-3	⊕ 1/16 L K	1/16	-	X		DTF-038, KAS 127, Laser Tracker FN 45	
center pin block location	-	-	-	-	-	-	-	
width from centerline	3/D-6	2X 98*	-	-	-	-	-	CMS chose to measure from the railcar centerline (datum B). CMS chose a tolerance of ±.03 on the 46.50 dimension to meet the intent of the drawing. This 2(±.03) = ±.06 tolerance matches the conceptual attachment drawing.
width from centerline	3/C-6	2X 46.50	±.03*	-	X		DTF-038, KAS 127, Laser Tracker FN 46	CMS chose to inspect using a ±.03 tolerance. This meets the conceptual attachment drawing
width between	4/C-3	4X 11.75	±.03*	-	X		DTF-038, KAS 127, Laser Tracker FN 47	
Item 7	3/C-6	⊥ 1/16 A	1/16	-	X		DTF-038, KAS 127, Laser Tracker 21	
Item 7	3/C-6	⊥ 1/16 A	1/16	-	X		DTF-038, KAS 127, Laser Tracker 22	
Item 7	3/C-6	⊥ 1/16 A	1/16	-	X		DTF-038, KAS 127, Laser Tracker 23	
Item 7	3/C-6	⊥ 1/16 A	1/16	-	X		DTF-038, KAS 127, Laser Tracker 24	
Item 8	3/C-6	⊥ 1/16 A	1/16	-	X		DTF-038, KAS 127, Laser Tracker 25	
Item 8	3/C-6	⊥ 1/16 A	1/16	-	X		DTF-038, KAS 127, Laser Tracker 26	
Item 8	3/C-6	⊥ 1/16 A	1/16	-	X		DTF-038, KAS 127, Laser Tracker 27	
Item 8	3/C-6	⊥ 1/16 A	1/16	-	X		DTF-038, KAS 127, Laser Tracker 28	



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Atlas Railcar - As-Built Dimensional Inspection report
 Drawing: DWG-3018956-000 Atlas Railcar, Cradle Attachment

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KAS-SNR-011 Attachment 1

Item/Description	Sheet/Zone or detail	Required Dimension	Tolerance	Actual Dimension	Accept	Reject	Inspection Reference	Comments
Item 7 (3/C-4)	3/B-5	1/16 A E B	1/16 (.0625)	.296 Reworked to .045	X		DTF-038, KAS 127, Laser Tracker 29 and CMS deviation report and Kasgro Cradle Attachment Inspection, 5. Stainless Pad Dimensions	Slot 5 on CMS Deviation Report longitudinal, (.0069) Height, (-.1483) Total Positional = .2961 Minimum Worst Case Condition KAS inspected height = 7.311 min (any pad) minimum slot height from CMS Deviation Report = 4.3354 (any slot) Total = 4.3354/2 + 7.311 = 9.4787 Maximum Worst Case Condition KAS inspected height = 7.342 max (any pad) maximum slot height from CMS Deviation Report = 4.3643 (any slot) Total = 4.3643/2 + 7.342 = 9.524 Final condition following rework: max deviation = .024 (using worst case) updated positional longitudinal, (.0069) Height, (.024) Total Positional = .045 < .0625 OK
Item 8 (3/C-4)	3/B-5	1/16 A E B	1/16 (.0625)	.275 Reworked to .056	X		DTF-038, KAS 127, Laser Tracker 30 and CMS deviation report and Kasgro Cradle Attachment Inspection, 5. Stainless Pad Dimensions	Slot 4 on CMS Deviation Report longitudinal, (-.0280) Height, (-.1373) Total Positional = .2750 Final condition following rework: max deviation = .024 (using worst case) updated positional longitudinal, (-.0280) Height, (.024) Total Positional = .074 > .0625 NOT OK Actual Reworked Condition KAS inspected height = 7.329 min (A-end lower) slot height from CMS Deviation Report = 4.3476 (slot 5) = 4.3354 (slot 4) Min total = 4.3354/2 + 7.329 = 9.4967 Max total = 4.3476/2 + 7.329 = 9.503 max deviation = .003 updated positional longitudinal, (-.0280) Height, (.003) Total Positional = .056 < .0625 OK



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Atlas Railcar - As-Built Dimensional Inspection report
 Drawing: DWG-3018956-000 Atlas Railcar, Cradle Attachment

Item/Description	Sheet/Zone or detail	Required Dimension	Tolerance	Actual Dimension	Accept	Reject	Inspection Reference	Comments
Item 8 (3/D-4)	3/B-5	1/16 A E B	1/16 (.0625)	0.435 Reworked to .061	X		DTF-038, KAS 127, Laser Tracker 31 and CMS deviation report and Kasgro Cradle Attachment Inspection, 5. Stainless Pad Dimensions	Slot 7 on CMS Deviation Report longitudinal, (-.0289) Height, (-.2170) Total Positional = .4346 Final condition following rework: max deviation = .024 updated positional longitudinal, (-.0289) Height, (.024) Total Positional = .075 > .0625 NOT OK <u>Actual Reworked Condition</u> KAS inspected height = 7.321 min (A-end upper) slot height from CMS Deviation Report = 4.338 (slot 7) = 4.3643 (slot 8) Min total=4.338/2+7.321= 9.49 Max total = 4.3643/2+7.321 = 9.503 max deviation = .01 updated positional longitudinal, (-.0289) Height, (.01) Total Positional = .061 < .0625 OK
Item 7 (3/D-4)	3/B-5	1/16 A E B	1/16 (.0625)	0.421 Reworked to .062	X		DTF-038, KAS 127, Laser Tracker 32 and CMS deviation report and Kasgro Cradle Attachment Inspection, 5. Stainless Pad Dimensions	Slot 8 on CMS Deviation Report: longitudinal, (-.0295) Height, (-.2104) Total Positional = .4208 Final condition following rework: max deviation = .024 updated positional longitudinal, (-.0295) Height, (.024) Total Positional = .076 > .0625 NOT OK <u>Actual Reworked Condition</u> KAS inspected height = 7.321 min (A-end upper) slot height from CMS Deviation Report = 4.338 (slot 7) = 4.3643 (slot 8) Min total=4.338/2+7.321= 9.49 Max total = 4.3643/2+7.321 = 9.503 max deviation = .01 updated positional longitudinal, (-.0295) Height, (.01) Total Positional = .0623 < .0625 OK



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Item/Description	Sheet/Zone or detail	Required Dimension	Tolerance	Actual Dimension	Accept	Reject	Inspection Reference	Comments
Item 7 (3/C-5)	3/B-5	1/16 C-D	1/16 (.0625)	0.414 Reworked to .049	X		DTF-038, KAS 127, Laser Tracker 33 and CMS deviation report and Kasgro Cradle Attachment Inspection, 5. Stainless Pad Dimensions	Slot 3 on CMS Deviation Report longitudinal, (-.0039) Height, (-.2069) Total Positional = .4135 Final condition following rework: max deviation = .024 (using worst case) updated positional longitudinal, (-.0039) Height, (.024) Total Positional = .0486 < .0625 OK
Item 8 (3/C-5)	3/B-5	1/16 C-D	1/16 (.0625)	0.334 Reworked to .049	X		DTF-038, KAS 127, Laser Tracker 34 and CMS deviation report and Kasgro Cradle Attachment Inspection, 5. Stainless Pad Dimensions	Slot 2 on CMS Deviation Report longitudinal, (-.0042) Height, (-.1668) Total Positional = .3335 Final condition following rework: max deviation = .024 (using worst case) updated positional longitudinal, (-.0042) Height, (.024) Total Positional = .0487 < .0625 OK
Item 8 (3/D-5)	3/B-5	1/16 C-D	1/16 (.0625)	0.511 Reworked to .048	X		DTF-038, KAS 127, Laser Tracker 35 and CMS deviation report and Kasgro Cradle Attachment Inspection, 5. Stainless Pad Dimensions	Slot 1 on CMS Deviation Report longitudinal, (.0028) Height, (-.2554) Total Positional = .5108 Final condition following rework: max deviation = .024 (using worst case) updated positional longitudinal, (.0028) Height, (.024) Total Positional = .0483 < .0625 OK
Item 7 (3/D-5)	3/B-5	1/16 C-D	1/16 (.0625)	0.412 Reworked to .049	X		DTF-038, KAS 127, Laser Tracker 36 and CMS deviation report and Kasgro Cradle Attachment Inspection, 5. Stainless Pad Dimensions	Slot 6 on CMS Deviation Report longitudinal, (-.0059) Height, (-.2061) Total Positional = .4120 Final condition following rework: max deviation = .024 (using worst case) updated positional longitudinal, (-.0059) Height, (.024) Total Positional = .0494 < .0625 OK
shear block location	-	-	-	-	-	-	-	-
Item 9 edge to B	3/D-5	45.00	±1/2		X		DTF-038, KAS 127, Laser Tracker FN 39	Tracker and tape measure
	3/D-5	1/16 C-D	1/16		X		DTF-038, KAS 127, Laser Tracker FN 17	
	3/D-5	1 1/16 A	1/16		X		DTF-038, KAS 127, Laser Tracker FN 18	
	3/D-5	1/16 C-D	1/16		X		DTF-038, KAS 127, Laser Tracker FN 19	
	3/D-5	1 1/16 A	1/16		X		DTF-038, KAS 127, Laser Tracker FN 20	



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Item/Description	Sheet/Zone or detail	Required Dimension	Tolerance	Actual Dimension	Accept	Reject	Inspection Reference	Comments
Item 6 size / location	-	-	-	-	-	-	-	
	3/C-4	4X 9.0	±.1		X		Kasgro Cradle Attachment Inspection, 1. Kasgro Measurements	
	3/3-C	4X 12.0	±.1		X		Kasgro Cradle Attachment Inspection, 1. Kasgro Measurements	
	3/4-C	6.00 TYP	±.06		X		Kasgro Cradle Attachment Inspection, 1. Kasgro Measurements	
	3/4-C	4.50 TYP	±.06		X		Kasgro Cradle Attachment Inspection, 1. Kasgro Measurements	
	3/4-C	1.38 TYP	±.06		X		Kasgro Cradle Attachment Inspection, 1. Kasgro Measurements	
Item 5 size / location	-	-	-	-	-	-	-	
	3/D-4	2X 12.0	±.1		X		Kasgro Cradle Attachment Inspection, 1. Kasgro Measurements	
	3/D-4	6.00 TYP	±.06		X		Kasgro Cradle Attachment Inspection, 1. Kasgro Measurements	
	3/C-4	2X 12.0	±.1		X		Kasgro Cradle Attachment Inspection, 1. Kasgro Measurements	
	5/D-2	2X 1/8	+0/-1/16		X		Kasgro Cradle Attachment Inspection, 6. Kasgro Item 5 Email	
Item 7 hole locations	-	-	-	-	-	-	-	
	5/Detail 7	5.50	±.06		X		Kasgro Cradle Attachment Inspection, 1. Kasgro Measurements	
	5/Detail 7	6.50	±.06		X		Kasgro Cradle Attachment Inspection, 1. Kasgro Measurements	
	5/Detail 7	3.25	±.06		X		Kasgro Cradle Attachment Inspection, 1. Kasgro Measurements	
	5/Detail 7	2.60	±.06		X		Kasgro Cradle Attachment Inspection, 1. Kasgro Measurements	
	5/Detail 7	3X 5/8-11 UNC-2B ↓1.5			X		Kasgro Cradle Attachment Inspection, 1. Kasgro Measurements	
Item 7/8 size	-	-	-	-	-	-	-	
	5/Detail 8	2X 10°	1°		X		Kasgro Cradle Attachment Inspection, 1. Kasgro Measurements	
	5/Detail 8	8.00	±.06		X		Kasgro Cradle Attachment Inspection, 2. Inboard Attachment drawing	
	5/Detail 8	2X 11.0	±.1		X		Kasgro Cradle Attachment Inspection,	
	5/Detail 8	2X R	±.1		X		Kasgro Cradle Attachment Inspection, 1. Kasgro Measurements	
	5/Detail 8	6.0	±.1		X		Kasgro Cradle Attachment Inspection, 1. Kasgro Measurements	
	5/Detail 8	12.0	±.1		X		Kasgro Cradle Attachment Inspection, 2. Inboard Attachment drawing	
	5/Detail 8	5.37	+0.06/-0.00	5.2987-5.3539		X	DTF-038, KAS 127, CMS Deviation Report	See Kasgro NC #5
	5/Detail 8	4.37	+0.06/-0.00	4.3354-4.3643		X	DTF-038, KAS 127, CMS Deviation Report	See Kasgro NC #5
	5/Detail 8	2X R.5	±.1		X		DTF-038, KAS 127, CMS Deviation Report	
	5/Detail 8	3.75	±.06		X		Kasgro Cradle Attachment Inspection, 2. Inboard Attachment drawing	



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Item/Description	Sheet/Zone or detail	Required Dimension	Tolerance	Actual Dimension	Accept	Reject	Inspection Reference	Comments
	5/Detail 8	30°	1°		X		Kasgro Cradle Attachment Inspection, 1. Kasgro Measurements	
	5/Detail 8	18.0	±.1		X		Kasgro Cradle Attachment Inspection, 2. Inboard Attachment drawing	
	5/Detail 8	16.0	±.1	16.1875-16.75		X	Kasgro Cradle Attachment Inspection, 2. Inboard Attachment drawing	See Kasgro NC #5
	5/Detail 8	4.0	±.1		X		Kasgro Cradle Attachment Inspection, 2. Inboard Attachment drawing	
	5/Detail 8	2.0	±.1		X		Kasgro Cradle Attachment Inspection, 2. Inboard Attachment drawing	
Item 2 size	-	-	-	-	-	-	-	
	5/Detail 2	6.00	±.06		X		Kasgro Cradle Attachment Inspection, 1. Kasgro Measurements	
	5/Detail 2	1.50	±.06		X		Kasgro Cradle Attachment Inspection, 1. Kasgro Measurements	
	5/Detail 2	2X R.25	±.06		X		Kasgro Cradle Attachment Inspection, 1. Kasgro Measurements	
	5/Detail 2	1.50	±.06		X		Kasgro Cradle Attachment Inspection, 1. Kasgro Measurements	
Item 13/14 size	-	-	-	-	-	-	-	
	5/Detail13/14	2X .50 x 45°	±.06 / 1°		X		Kasgro Cradle Attachment Inspection, 1. Kasgro Measurements	
Item 13	5/Detail13/14	20.70	±.06		X		Kasgro Cradle Attachment Inspection, 1. Kasgro Measurements	
Item 14	5/Detail13/14	37.20	±.06		X		Kasgro Cradle Attachment Inspection, 1. Kasgro Measurements	
	5/Detail13/14	Ø4.000	±.002		X		Kasgro Cradle Attachment Inspection, 1. Kasgro Measurements	
	5/Detail13/14	5/8-11 UNC-2B ↓2.0			X		Kasgro Cradle Attachment Inspection, 1. Kasgro Measurements	
Item 15 size	-	-	-	-	-	-	-	
	5/Detail 15	5.56	±.06	5.5	X		Kasgro Cradle Attachment Inspection, 1. Kasgro Measurements	
	5/Detail 15	2X R1.00	±.06		X		Kasgro Cradle Attachment Inspection, 1. Kasgro Measurements	
	5/Detail 15	40.0	±.1		X		Kasgro Cradle Attachment Inspection, 1. Kasgro Measurements	
Item 10/11/12 size	-	-	-	-	-	-	-	
	6/Detail 10	18.0	±.1	17.75-18.125		X	Kasgro Cradle Attachment Inspection, 3a. Outboard Attachment, Rev A	dimension "D", See Kasgro NC #4
	6/Detail 10	2X 16.0	±.1	16.1875 max		X	Kasgro Cradle Attachment Inspection, 1. Kasgro Measurements	See Kasgro NC #4
	6/Detail 10	5.5	±.1		X		Kasgro Cradle Attachment Inspection, 1. Kasgro Measurements	
	6/Detail 10	11.0	±.1	11-11.25		X	Kasgro Cradle Attachment Inspection, 1. Kasgro Measurements	See Kasgro NC #4
	6/Detail 10	2.0	±.1		X		Kasgro Cradle Attachment Inspection, 3a. Outboard Attachment, Rev A	dimension "F"
	6/Detail 10	3.00	±.06	3.25		X	Kasgro Cradle Attachment Inspection, 3a. Outboard Attachment, Rev A	dimension "A", See Kasgro NC #4
	6/Detail 10	1.50	±.06	1.625		X	Kasgro Cradle Attachment Inspection, 1. Kasgro Measurements	See Kasgro NC #4
	6/Detail 10	2X 30°	1°		X		Kasgro Cradle Attachment Inspection, 1. Kasgro Measurements	



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Item/Description	Sheet/Zone or detail	Required Dimension	Tolerance	Actual Dimension	Accept	Reject	Inspection Reference	Comments
	6/Detail 10	4X 15°	1°		X		Kasgro Cradle Attachment Inspection, 1. Kasgro Measurements	
	6/Detail 10	2X 8.0	±1	7.91-8.00	X		Kasgro Cradle Attachment Inspection, 3b. Outboard Attachment Item 10	dimensions ("J"/2)-"B"
	6/Detail 10	4X 11.0	±1		X		Kasgro Cradle Attachment Inspection, 1. Kasgro Measurements	
	6/Detail 10	2X 64.00	±.06		X		Kasgro Cradle Attachment Inspection, 3b. Outboard Attachment Item 10	dimension "J"
	6/C-5	2X 4.37	+0.06/-0.00	4.361 -4.4001		X	CMS email 2/14/2019	See Kasgro NC #4
hole	6/C-5	1/16 T S (8.00 ±.03)	1/16	7.875 - 8.075		X	Kasgro Cradle Attachment Inspection, 3b. Outboard Attachment Item 10, Rev B DTF-03B, KAS 127, CMS Laser Report CMS email 2/14/2019 and CMS email 3/7/2019	OUTBOARD ATTACHMENT ITEM 10, Rev B drawing, See Kasgro NC #4 Additional measurements taken from top to edge of hole provided on Outboard Attachment Item 10, Rev B, Dimension "C" and "I" with a range of 5.6875 (part 8) to 5.875 without (part 8) the range is 5.75 to 5.875 From the CMS email the range for the hole height (all parts) is 4.323 to 4.4401 From the CMS email 2 the range for the hole height (part 8) is 4.375 to 4.4001 and (all others) 4.323 to 4.4401 The max and min for the additional measurements is: 5.875+4.4001/2 = 8.075 maximum 5.6875+4.375/2 = 7.875 minimum 5.75+4.323/2 = 7.912 minimum
	6/Detail 10	4X R.5	±1		X		Kasgro Cradle Attachment Inspection, 1. Kasgro Measurements	
	6/C-1	2X 4.37	+0.06/-0.00	4.323-4.43		X	CMS email 2/14/2019	See Kasgro NC #4
slot	6/B-1	1/16 R T (8.00 ±.03) (48.00 ±.03)	1/16	7.875 - 8.075 48-48.125		X	Kasgro Cradle Attachment Inspection, 3b. Outboard Attachment Item 10, Rev B DTF-03B, KAS 127, CMS Laser Report CMS email 2/14/2019 and CMS email 3/7/2019	OUTBOARD ATTACHMENT ITEM 10, Rev B drawing, See Kasgro NC #4 Range for top of part to hole = 7.875-8.075
	6/Detail 10	1 1/32 S	1/32				Kasgro Cradle Attachment Inspection, 1. Kasgro Measurements	See Kasgro NC #4
Item 9 size	6/Detail 10	2X 5.37	+0.06/-0.00	5.340-5.43		X	CMS 2/14/2019	See Kasgro NC #4
	6/Detail 9	90.0	±1	90.1875 max		X	Kasgro Cradle Attachment Inspection, 1. Kasgro Measurements	See Kasgro NC #6
	6/Detail 9	21.0	±1	21.125 max		X	Kasgro Cradle Attachment Inspection, 1. Kasgro Measurements	See Kasgro NC #6
	6/Detail 9	4X .5 x 45°	±.1 / 1°		X		Kasgro Cradle Attachment Inspection, 1. Kasgro Measurements	
Item 11/12 hole sizes								
	7/Detail 11/12	2X 5.50	±.06		X		Kasgro Cradle Attachment Inspection, 1. Kasgro Measurements	



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Atlas Railcar - As-Built Dimensional Inspection report
 Drawing: DWG-301 8956-000 Atlas Railcar, Cradle Attachment

Page 8 of 8

KAS-SNR-011 Attachment 1

Item/Description	Sheet/Zone or detail	Required Dimension	Tolerance	Actual Dimension	Accept	Reject	Inspection Reference	Comments
	7/Detail 11/12	2X 6.50	±.06		X		Kasgro Cradle Attachment Inspection, 1. Kasgro Measurements	
	7/Detail 11/12	2X 3.25	±.06		X		Kasgro Cradle Attachment Inspection, 1. Kasgro Measurements	
	7/Detail 11/12	2.60	±.06		X		Kasgro Cradle Attachment Inspection, 1. Kasgro Measurements	
	7/Detail 11/12	2X 8.0	±.1		X		Kasgro Cradle Attachment Inspection, 1. Kasgro Measurements	
	7/Detail 11/12	6X 5/8-11 UNC-2B ↓1.5			X		Kasgro Cradle Attachment Inspection, 1. Kasgro Measurements	
Item 3 size	-	-	-	-	-	-	-	
	8/Detail 3	6.50	±.06		X		Kasgro Cradle Attachment Inspection, 1. Kasgro Measurements	
		3.25	±.06		X		Kasgro Cradle Attachment Inspection, 1. Kasgro Measurements	
		∅ 1.50	±.06		X		Kasgro Cradle Attachment Inspection, 1. Kasgro Measurements	
		2X ∅.69	±.03		X		Kasgro Cradle Attachment Inspection, 1. Kasgro Measurements	
		∅ 5.63	±.06		X		Kasgro Cradle Attachment Inspection, 1. Kasgro Measurements	
		8.00	±.06		X		Kasgro Cradle Attachment Inspection, 1. Kasgro Measurements	
		4.00	±.06		X		Kasgro Cradle Attachment Inspection, 1. Kasgro Measurements	
		4X .13 X 45°	±.06 / 1°		X		Kasgro Cradle Attachment Inspection, 1. Kasgro Measurements	
		5.10	±.06		X		Kasgro Cradle Attachment Inspection, 1. Kasgro Measurements	
		2.60	±.06		X		Kasgro Cradle Attachment Inspection, 1. Kasgro Measurements	
Item 4 size	-	-	-	-	-	-	-	
	8/Detail 4	4X R.5	±.1		X		Kasgro Cradle Attachment Inspection, 1. Kasgro Measurements	
		2X 15°	± 1°		X		Kasgro Cradle Attachment Inspection, 1. Kasgro Measurements	
		2X 5.0	±.1		X		Kasgro Cradle Attachment Inspection, 1. Kasgro Measurements	
		4.0	±.1		X		Kasgro Cradle Attachment Inspection, 1. Kasgro Measurements	
		2.0	±.1		X		Kasgro Cradle Attachment Inspection, 1. Kasgro Measurements	
		10.0	±.1		X		Kasgro Cradle Attachment Inspection, 1. Kasgro Measurements	
		∅.69	±.03		X		Kasgro Cradle Attachment Inspection, 1. Kasgro Measurements	
		2.13	±.06		X		Kasgro Cradle Attachment Inspection, 1. Kasgro Measurements	



Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
Appendix B

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KAS-SNR-011 Attachment 2

Kasgro Rail Corporation
121 Rundle Road • New Castle, PA 16102
724-658-9061 • 724-658-7856 FAX • www.KASGRO.com



KASGRO

March 27, 2019

Kasgro Response sent via Email

Slade Klein
ORANO Federal Services LLC
505 S 336th Street Suite 400
Federal Way, WA 98003

Subject: ATLAS Cask Car Cradle Attachment Dimensional Data
Reference: ATLAS HLRM Railcar Project, AFS PO 15C3011916

Slade,

Find attached the supporting inspection documents listing all of the measurements taken for the cradle attachments for the Atlas Cask Car IDOX 10001.

These inspection attachments support Kasgro Non-Conformances Reports:

- NC#1
- NC#2
- NC#3
- NC#4
- NC#5
- NC#6

If there are any questions or if further clarification is needed regarding this information, please contact me to discuss.

Sincerely,

Rick Ford
Project Manager

Cc: Mark Denton
Bernie Counterman
Mark Zeigler
Nick Hinsch

Attachment: Kasgro Cradle Attachment Inspection (10 pages)

Specialty Rail Car Solutions



Orano Federal Services
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High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
Appendix B

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KAS-SNR-011 Attachment 2

Kasgro Cradle Attachment Inspection

1. Kasgro Measurements – general measurements shown in blue highlighted text on provided spreadsheet.
2. Inboard Attachment (DWG-3018956-000 Items 7-8) – Inboard attachment measurements provided on Kasgro Drawing "INBOARD ATTACHMENT". Note that slot sizes are provided by CMS separately.
3. Outboard Attachment (DWG-3018956-000 Items 10-12) – Outboard attachment measurements are provided on three separate Kasgro drawings listed below. Note that slot sizes are provided by CMS separately. Outboard attachment parts are listed as 1-8 with the orientation shown in 4.
 - a. Kasgro Outboard Attachment drawing, Rev A. Listing of selected measurements taken by Kasgro. Dimensions "A"-L"
 - b. Kasgro Outboard Attachment Item 10 drawing. Some re-inspection was performed with new values provided for dimension "B" and "J"
 - c. Kasgro Outboard Attachment Item 10 drawing, Rev B. Some re-inspection was performed with new values provided for dimensions "C" and "I"
4. Outboard Attachment Orientation – location of outboard attachment parts 1-8 as labeled by Kasgro provided in Kasgro drawing "Attachment Reference".
5. Stainless Pad Dimensions – Cradle pad (DWG-3018956-000 Items 5-6) dimensions are provided on the Kasgro sketch. Dimensions taken following rework. Dimensions are from the top of the pad (Datum A) to the bottom of Item 7/8 slot. Note that slot sizes are provided by CMS separately.
6. Kasgro Item 5 Email – Cradle center pad (DWG-3018956-000 Item 5) dimension verification provided in email. The provided email confirms the completion of rework on the Item 5 pads to within required drawing tolerance.
7. Kasgro notes that measurements not taken using Laser Measurement Equipment were performed using basic tape measures and straight edge rulers, at shop ambient temperatures and are as accurate as these methods allow.



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KAS-SNR-011 Attachment 2

1. Kasgro Measurements

Atlas Railcar - Kasgro Provided Inspection

Drawing #: DWG-3018956-000
 Drawing: Atlas Railcar, Cradle Attachment

Item/Description	Sheet/Zone or detail	Required Dimension	Tolerance	Kasgro Inspection	Comments
A1	-	-	-	-	-
outer pin blocks P13-P17	-	-	-	-	-
Item 11	3/D-7	// 1/16 B	1/16	Laser Tracker FN 1	
Item 11	3/D-7	⊥ 1/16 A	1/16	Laser Tracker FN 2	
Item 10	3/D-7	// 1/16 B	1/16	Laser Tracker FN 9	
Item 10	3/D-7	⊥ 1/16 A	1/16	Laser Tracker FN 10	
Item 10	3/C-7	// 1/16 B	1/16	Laser Tracker FN 15	
Item 10	3/C-7	⊥ 1/16 A	1/16	Laser Tracker FN 16	
Item 12	3/C-7	// 1/16 B	1/16	Laser Tracker FN 7	
Item 12	3/C-7	⊥ 1/16 A	1/16	Laser Tracker FN 8	
outer pin blocks P5-P12	-	-	-	-	-
Item 12	3/D-1	// 1/16 B	1/16	Laser Tracker FN 3	
Item 12	3/D-1	⊥ 1/16 A	1/16	Laser Tracker FN 4	
Item 10	3/D-1	// 1/16 B	1/16	Laser Tracker FN 11	
Item 10	3/D-1	⊥ 1/16 A	1/16	Laser Tracker FN 12	
Item 10	3/C-1	// 1/16 B	1/16	Laser Tracker FN 13	
Item 10	3/C-1	⊥ 1/16 A	1/16	Laser Tracker FN 14	
Item 11	3/C-1	// 1/16 B	1/16	Laser Tracker FN 5	
Item 11	3/C-1	⊥ 1/16 A	1/16	Laser Tracker FN 6	
Outer pin block location	-	-	-	-	-
Item 10 face	3/D-1	4X 18.05	±.03*	Laser Tracker FN 40	
Item 11/12 face	3/C-1	4X 25.20	±.03*	Laser Tracker FN 41	
Item 10/11/12 edge	3/B-6	148.5	±.06	Laser Tracker FN 37	
Item 10/11/12 edge	3/B-3	148.5	±.06	Laser Tracker FN 38	
Item 10 (P11/P6)	4/C-8	⊕ 1/16 F G	1/16	Laser Tracker FN 42	
Item 10 (P19-P14)	4/B-6	⊕ 1/16 M J	1/16	Laser Tracker FN 43	
Item 10 (P10-P7)	4/A-4	⊕ 1/16 N H	1/16	Laser Tracker FN 44	
Item 10 (P18-P15)	4/A-3	⊕ 1/16 L K	1/16	Laser Tracker FN 45	
center pin block location	-	-	-	-	-
width from centerline	3/D-6	2X 98*	-	-	*CMS measured from centerline
width from centerline	3/C-6	2X 46.50	±.03*	Laser Tracker FN 46	
width between	4/C-3	4X 11.75	±.03*	Laser Tracker FN 47	
Item 7	3/C-6	⊥ 1/16 A	1/16	Laser Tracker 21	
Item 7	3/C-6	⊥ 1/16 A	1/16	Laser Tracker 22	
Item 7	3/C-6	⊥ 1/16 A	1/16	Laser Tracker 23	
Item 7	3/C-6	⊥ 1/16 A	1/16	Laser Tracker 24	
Item 8	3/C-6	⊥ 1/16 A	1/16	Laser Tracker 25	
Item 8	3/C-6	⊥ 1/16 A	1/16	Laser Tracker 26	
Item 8	3/C-6	⊥ 1/16 A	1/16	Laser Tracker 27	
Item 8	3/C-6	⊥ 1/16 A	1/16	Laser Tracker 28	
Item 7 (3/C-4)	3/B-5	⊕ 1/16 A E B	1/16	Laser Tracker 29	
Item 8 (3/C-4)	3/B-5	⊕ 1/16 A E B	1/16	Laser Tracker 30	
Item 8 (3/D-4)	3/B-5	⊕ 1/16 A E B	1/16	Laser Tracker 31	
Item 7 (3/D-4)	3/B-5	⊕ 1/16 A E B	1/16	Laser Tracker 32	
Item 7 (3/C-5)	3/B-5	⊕ 1/16 C-D	1/16	Laser Tracker 33	
Item 8 (3/C-5)	3/B-5	⊕ 1/16 C-D	1/16	Laser Tracker 34	
Item 8 (3/D-5)	3/B-5	⊕ 1/16 C-D	1/16	Laser Tracker 35	
Item 7 (3/D-5)	3/B-5	⊕ 1/16 C-D	1/16	Laser Tracker 36	
shear block location	-	-	-	-	-
Item 9 edge to B	3/D-5	45.00	±1/2	Laser Tracker FN 39	Tracker and tape measure
	3/D-5	⊕ 1/16 C-D	1/16	Laser Tracker FN 17	
	3/D-5	⊥ 1/16 A	1/16	Laser Tracker FN 18	
	3/D-5	⊕ 1/16 C-D	1/16	Laser Tracker FN 19	
	3/D-5	⊥ 1/16 A	1/16	Laser Tracker FN 20	
Item 6 size / location	-	-	-	-	-
	3/C-4	4X 9.0	±.1	Kasgro measurement	All within tolerance
	3/B-C	4X 12.0	±.1	Kasgro measurement	All within tolerance
	3/4-C	6.00 TYP	±.06	Kasgro measurement	All within tolerance
	3/4-C	4.50 TYP	±.06	Kasgro measurement	All within tolerance
	3/4-C	1.38 TYP	±.06	Kasgro measurement	All within tolerance
Item 5 size / location	-	-	-	-	-
	3/D-4	2X 12.0	±.1	Kasgro measurement	All within tolerance
	3/D-4	6.00 TYP	±.06	Kasgro measurement	All within tolerance
	3/C-4	2X 12.0	±.1	Kasgro measurement	All within tolerance
	5/D-2	2X 1/8	+0/-1/16	Kasgro	Kasgro Item 5 email
Item 7 hole locations	-	-	-	-	-
	5/Detail 7	5.50	±.06	Kasgro measurement	All within tolerance (Dimension to top of whole)
	5/Detail 7	6.50	±.06	Kasgro measurement	All within tolerance
	5/Detail 7	3.25	±.06	Kasgro measurement	All within tolerance
	5/Detail 7	2.60	±.06	Kasgro measurement	All within tolerance
	5/Detail 7	3X 5/8-11 UNC-2B ↓1.5	-	Kasgro measurement	All within tolerance
Item 7/8 size	-	-	-	-	-
	5/Detail 8	2X 10°	1°	Kasgro measurement	All within tolerance
	5/Detail 8	8.00	±.06	KAS Inspection Sheet	INBOARD ATTACHMENT drawing
	5/Detail 8	2X 11.0	±.1	Kasgro measurement	All roughly 10.9
	5/Detail 8	2X R	±.1	Kasgro measurement	All within tolerance
	5/Detail 8	6.0	±.1	Kasgro measurement	All within tolerance



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KAS-SNR-011 Attachment 2
1. Kasgro Measurements

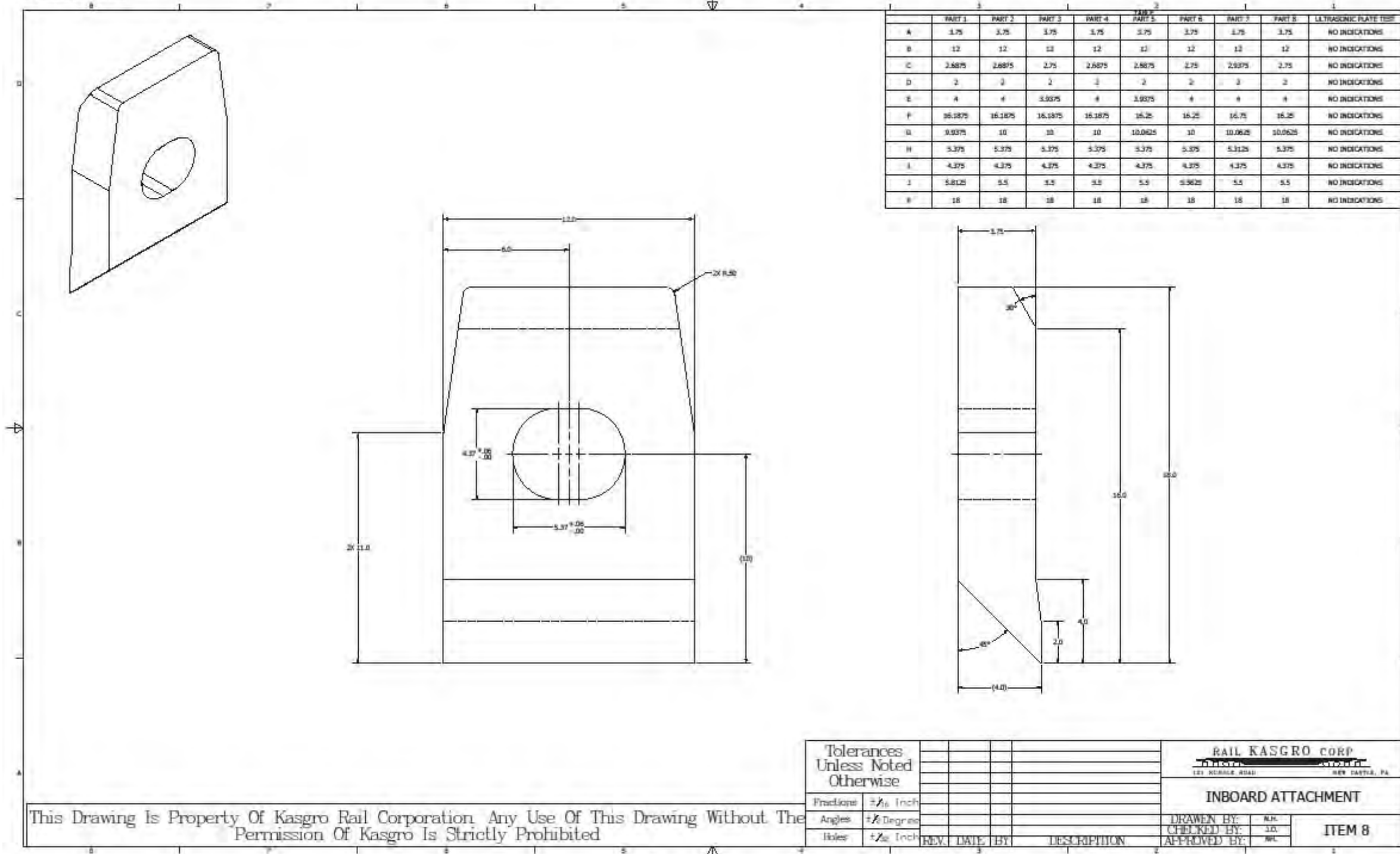
	5/Detail 8	12.0	±.1	KAS Inspection Sheet	INBOARD ATTACHMENT drawing
	5/Detail 8	5.37	+0.06/-0.00	CMS Deviation Report	
	5/Detail 8	4.37	+0.06/-0.00	CMS Deviation Report	
	5/Detail 8	2X R.5	±.1	CMS Deviation Report	
	5/Detail 8	3.75	±.06	KAS Inspection Sheet	INBOARD ATTACHMENT drawing
	5/Detail 8	30°	1°	Kasgro measurement	All within 1/2 deg.
	5/Detail 8	18.0	±.1	KAS Inspection Sheet	INBOARD ATTACHMENT drawing
	5/Detail 8	16.0	±.1	KAS Inspection Sheet	INBOARD ATTACHMENT drawing
	5/Detail 8	4.0	±.1	KAS Inspection Sheet	INBOARD ATTACHMENT drawing
	5/Detail 8	2.0	±.1	KAS Inspection Sheet	INBOARD ATTACHMENT drawing
Item 2 size	-	-	-	-	-
	5/Detail 2	6.00	±.06	Kasgro measurement	All within tolerance
	5/Detail 2	1.50	±.06	Kasgro measurement	All within tolerance
	5/Detail 2	2X R.25	±.06	Kasgro measurement	All within tolerance
	5/Detail 2	1.50	±.06	Kasgro measurement	All within tolerance
Item 13/14 size	-	-	-	-	-
	5/Detail 13/14	2X .50 x 45°	±.06 / 1°	Kasgro measurement	All within tolerance (existing parts)
Item 13	5/Detail 13/14	20.70	±.06	Kasgro measurement	All within tolerance (existing parts)
Item 14	5/Detail 13/14	37.20	±.06	Kasgro measurement	All within tolerance (existing parts)
	5/Detail 13/14	∅4.000	±.002	Kasgro measurement	All within tolerance (existing parts)
	5/Detail 13/14	5/8-11 UNC-2B ↓2.0	-	Kasgro measurement	All within tolerance (existing parts)
Item 15 size	-	-	-	-	-
	5/Detail 15	5.56	±.06	Kasgro measurement	5.5
	5/Detail 15	2X R1.00	±.06	Kasgro measurement	Within tolerance
	5/Detail 15	40.0	±.1	Kasgro measurement	Within tolerance
Item 10/11/12 size	-	-	-	-	-
	6/Detail 10	18.0	±.1	KAS Inspection Sheet	OUTBOARD ATTACHMENT drawing
	6/Detail 10	2X 16.0	±.1	Kasgro measurement	Parts 4 and 5 are 16.1875 (All other within tolerance)
	6/Detail 10	5.5	±.1	Kasgro measurement	All within tolerance (Dimension to top of whole)
	6/Detail 10	11.0	±.1	Kasgro measurement	All 11 at the base and 11.25 at the top
	6/Detail 10	2.0	±.1	KAS Inspection Sheet	OUTBOARD ATTACHMENT drawing
	6/Detail 10	3.00	±.06	KAS Inspection Sheet	OUTBOARD ATTACHMENT drawing
	6/Detail 10	1.50	±.06	Kasgro measurement	All 1.625
	6/Detail 10	2X 30°	1°	Kasgro measurement	All within tolerance
	6/Detail 10	4X 15°	1°	Kasgro measurement	All within tolerance
	6/Detail 10	2X 8.0	±.1	KAS Inspection Sheet	OUTBOARD ATTACHMENT drawing
	6/Detail 10	4X 11.0	±.1	Kasgro measurement	All within tolerance
	6/Detail 10	2X 64.00	±.06	KAS Inspection Sheet	OUTBOARD ATTACHMENT ITEM 10 drawing
	6/C-5	2X 4.37	+0.06/-0.00	CMS email	
hole	6/C-5	1/16 T S (8.00 ±.03)	1/16	KAS Inspection Sheet	OUTBOARD ATTACHMENT ITEM 10 drawing
	6/Detail 10	4X R.5	±.1	Kasgro measurement	All within tolerance
	6/C-1	2X 4.37	+0.06/-0.00	CMS email	
slot	6/B-1	1/16 R T (8.00 ±.03) (48.00 ±.03)	1/16	KAS Inspection Sheet	OUTBOARD ATTACHMENT ITEM 10 drawing
	6/Detail 10	1 1/32 S	1/32	Kasgro measurement	NA (cant get an accurate dimension)
Item 9 size	6/Detail 10	2X 5.37	+0.06/-0.00	CMS email	
	6/Detail 9	90.0	±.1	Kasgro measurement	(B-END 90.1875) (A-END within tolerance)
	6/Detail 9	21.0	±.1	Kasgro measurement	Both A-END and B-END 21.125
	6/Detail 9	4X .5 x 45°	±.1 / 1°	Kasgro measurement	All within tolerance
Item 11/12 hole sizes	-	-	-	-	-
	7/Detail 11/12	2X 5.50	±.06	Kasgro measurement	All within tolerance (dimension to the top of the hole)
	7/Detail 11/12	2X 6.50	±.06	Kasgro measurement	(All within tolerance)
	7/Detail 11/12	2X 3.25	±.06	Kasgro measurement	(All within tolerance)
	7/Detail 11/12	2.60	±.06	Kasgro measurement	(All within tolerance)
	7/Detail 11/12	2X 8.0	±.1	Kasgro measurement	(All within tolerance)
	7/Detail 11/12	6X 5/8-11 UNC-2B ↓1.5	-	Kasgro measurement	(All within tolerance)
Item 3 size	-	-	-	-	-
	8/Detail 3	6.50	±.06	Kasgro measurement	(All within tolerance)
		3.25	±.06	Kasgro measurement	(All within tolerance)
		∅ 1.50	±.06	Kasgro measurement	(All within tolerance)
		2X ∅.69	±.03	Kasgro measurement	(All within tolerance)
		∅ 5.63	-	Kasgro measurement	(All within tolerance)
		8.00	-	Kasgro measurement	(All within tolerance)
		4.00	-	Kasgro measurement	(All within tolerance)
		4X .13 X 45°	-	Kasgro measurement	(All within tolerance)
		5.10	-	Kasgro measurement	(All within tolerance)
		2.60	-	Kasgro measurement	(All within tolerance)
Item 4 size	-	-	-	-	-
	8/Detail 4	4X R.5	-	Kasgro measurement	(All within tolerance)
		2X 15°	-	Kasgro measurement	(All within tolerance)
		2X 5.0	-	Kasgro measurement	(All within tolerance)
		4.0	-	Kasgro measurement	(All within tolerance)
		2.0	-	Kasgro measurement	(All within tolerance)
		10.0	-	Kasgro measurement	(All within tolerance)
		∅.69	±.03	Kasgro measurement	(All within tolerance)
		2.13	-	Kasgro measurement	(All within tolerance)



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KAS-SNR-011 Attachment 2
 2. Inboard attachment



This Drawing Is Property Of Kasgro Rail Corporation. Any Use Of This Drawing Without The Permission Of Kasgro Is Strictly Prohibited

Tolerances Unless Noted Otherwise		RAIL KASGRO CORP 121 NERRILL ROAD NEW CASTLE, PA	
Fractions	±.005 Inch	INBOARD ATTACHMENT	
Angles	±.2 Degree	DRAWN BY:	ML
Holes	±.005 Inch	CHECKED BY:	ML
REV.	DATE	BY	DESCRIPTION
			APPROVED BY:
			ML

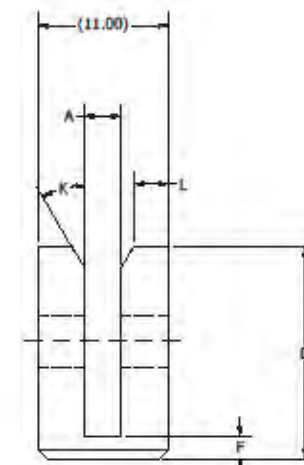
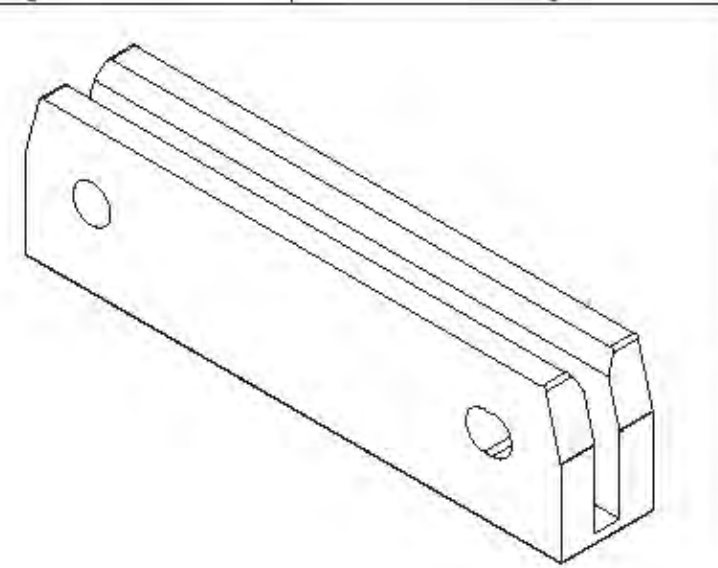
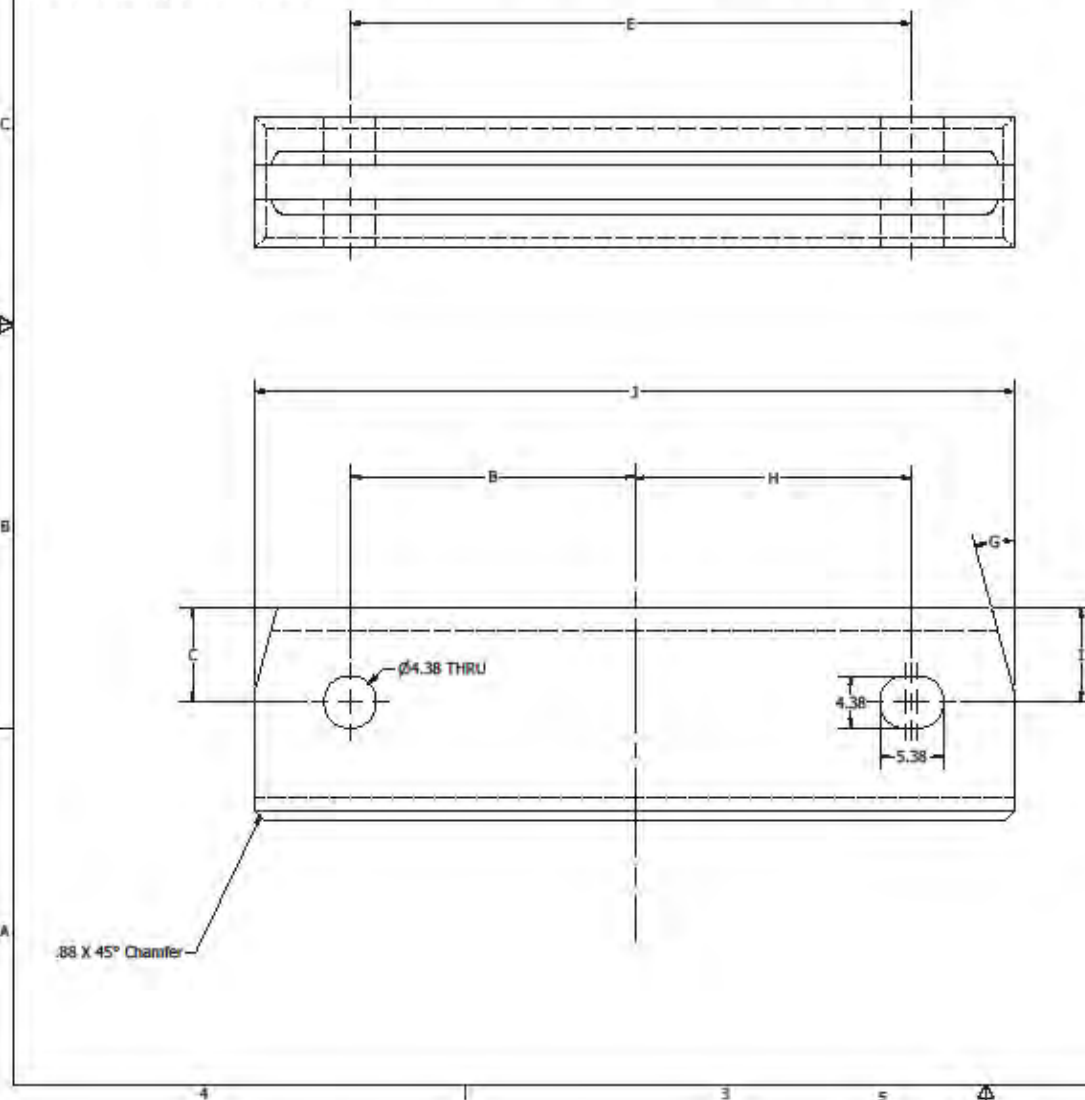
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KAS-SNR-011 Attachment 2
 3b. Outboard Attachment Item 10

	Part 1	Parts 2	Part 3	Part 4	Parts 5	Parts 6	Parts 7	Parts 8
A	3.25	3.25	3.25	3.25	3.25	3.25	3.25	3.25
B	23.875	23.9375	24	24.0625	24.0625	23.9375	23.8125	24.0625
C	7.8125	8.125	8	8	8.125	8	8	8.0625
D	17.75	18.125	17.9375	17.9375	18.0625	18	18	18
E	48	48.0625	48	48.0625	48.0625	48.125	47.9375	48
F	2	2	2.0625	2.0625	2.0625	2	2	2
G	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
H	24.1875	24.125	24	24	24	24.1875	24.125	23.9375
I	7.8125	8.1875	8	7.9375	8.125	8	8	8.0625
J	63.875	64	64	63.875	64	63.875	64	64
K	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
L	3	3	2.8125	3	2.875	3	2.875	3.125

NOTE: ALL DIMENSIONS ARE IN INCHES.



DRAWN NICK HENSCH	9/27/2018	KASGR0 RAIL CORPORATION	
CHECKED JON ODDEN		TITLE	
QA		OUTBOARD ATTACHMENT	
MFG		SIZE C	DWG NO ITEM 10
APPROVED		SCALE	REV A
		SHEET 1 OF 1	

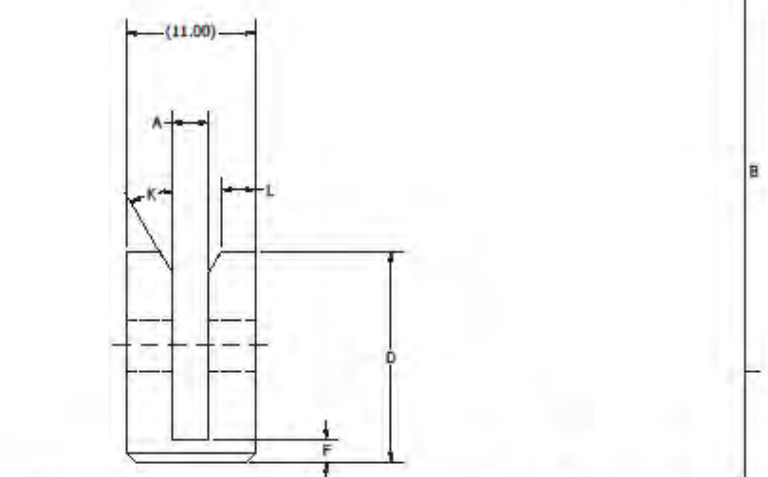
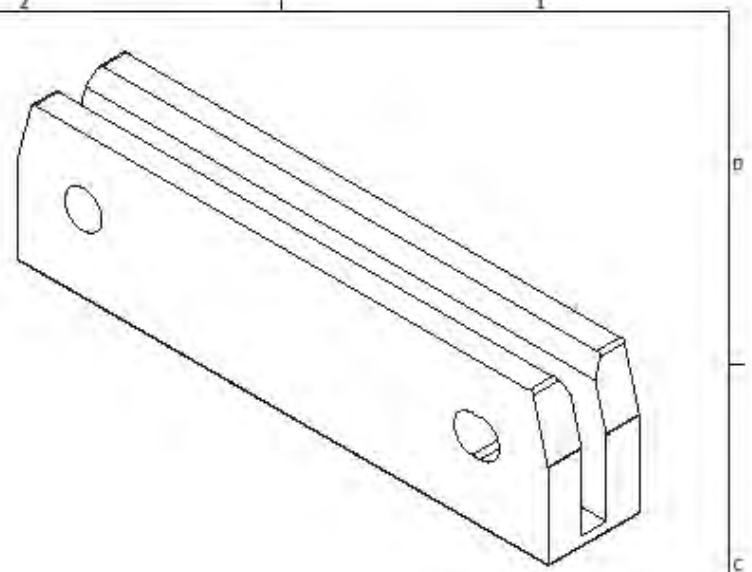
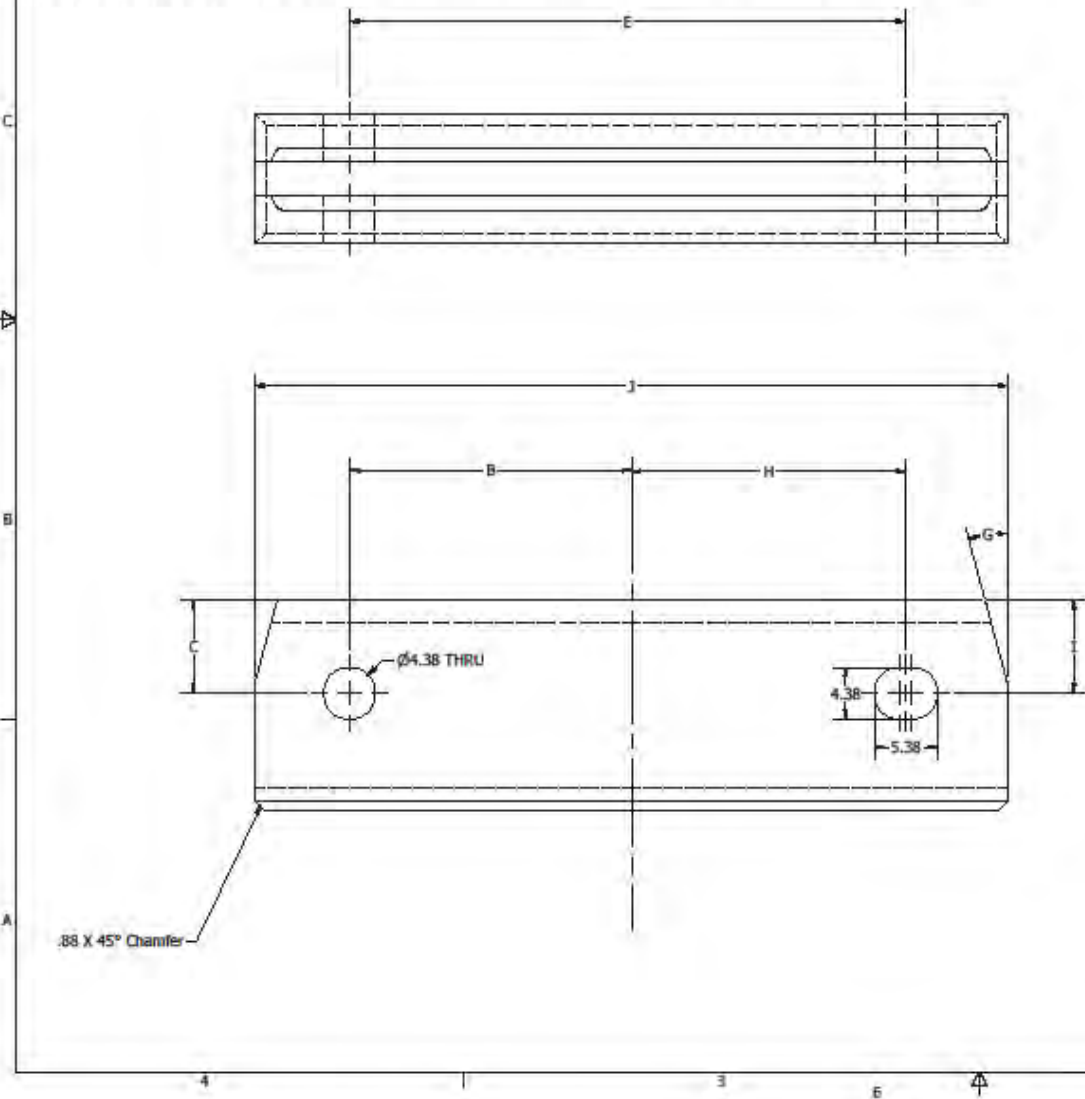
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KAS-SNR-011 Attachment 2
 3a. Outboard Attachment, Rev A

	Part 1	Parts 2	Part 3	Part 4	Parts 5	Parts 6	Parts 7	Parts 8
A	3.1875	3.25	3.25	3.25	3.25	3.25	3.25	3.25
B	24.0625	24	24	24	24	24.03125	24.0625	24.0625
C	8	8	8	8	7.9375	7.875	7.9375	8.0625
D	NA	NA	NA	NA	NA	NA	NA	NA
E	48.125	48	48	48	48	48.0625	48.125	48.125
F	NA	NA	NA	NA	NA	NA	NA	NA
G	NA	NA	NA	NA	NA	NA	NA	NA
H	24.0625	24	24	24	24	24.03125	24.0625	24.0625
I	8	7.9375	8	8	7.9375	7.875	8	8.0625
J	63.9375	64	64	64	64	64	64	63.9375
K	NA	NA	NA	NA	NA	NA	NA	NA
L	2.75	2.75	2.75	2.8125	2.8125	2.8125	2.8125	2.8125

NOTE: ALL DIMENSIONS ARE IN INCHES.



DRAWN NICK HINSCH	9/27/2018	KASGRO RAIL CORP.	
CHECKED			
QA		OUTBOARD ATTACHMENT ITEM 10	
MFG			
APPROVED		SIZE C	DWG NO 10
		SCALE	REV
			SHEET 1 OF 1

Orano Federal Services
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 High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
 Appendix B

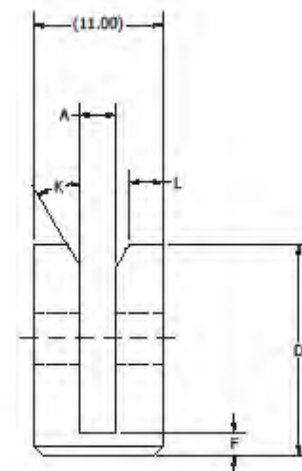
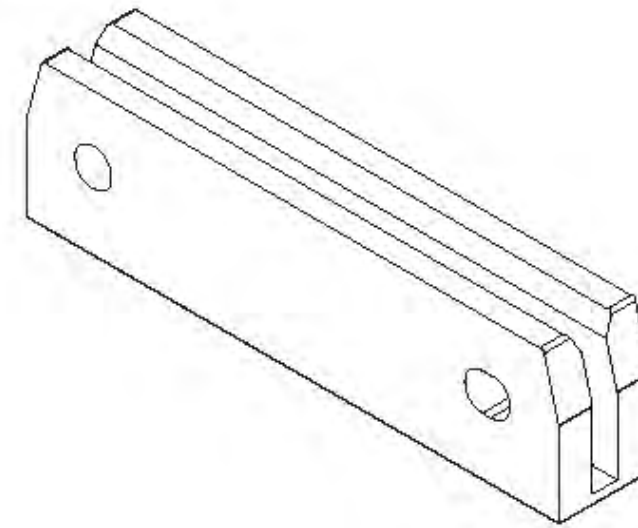
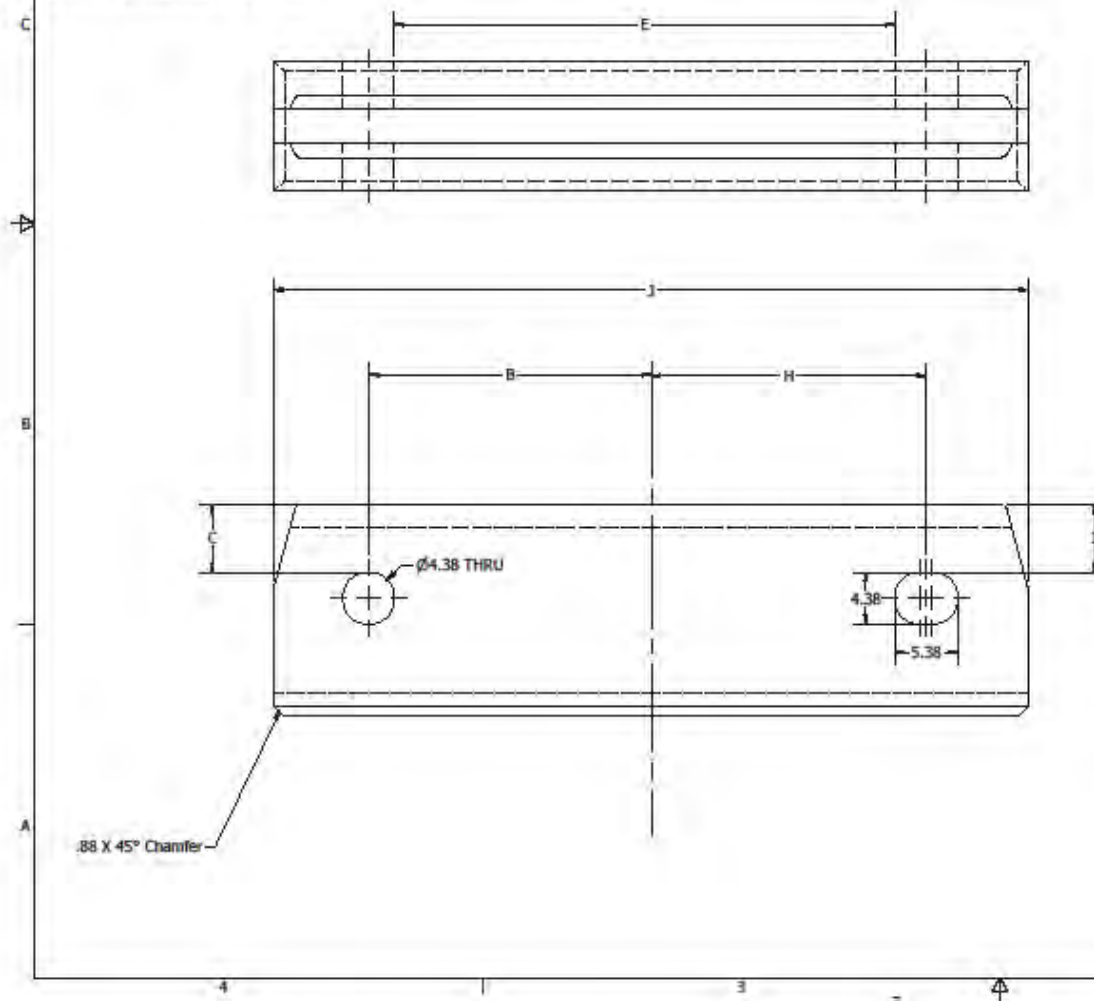
Doc./Rev.: EIR-3021970-000
 Project: 00225.03.0050 DOE Atlas Project

KAS-SNR-011 Attachment 2
 3c. Outboard Attachment Item 10, Rev B

	Part 1	Part 2	Part 3	Part 4	Part 5	Part 6	Part 7	Part 8
A	3.25	3.25	3.25	3.25	3.25	3.25	3.25	3.25
B	NA	NA	NA	NA	NA	NA	NA	NA
C	5.8125	5.8125	5.8125	5.8125	5.75	5.6875	5.75	5.875
D	NA	NA	NA	NA	NA	NA	NA	NA
E	43.25	43.125	43.125	43.125	43.125	43.1875	43.25	43.25
F	NA	NA	NA	NA	NA	NA	NA	NA
G	NA	NA	NA	NA	NA	NA	NA	NA
H	NA	NA	NA	NA	NA	NA	NA	NA
I	5.8125	5.75	5.8125	5.8125	5.75	5.6875	5.8125	5.875
J	63.9375	64	64	64	64	64	64	63.9375
K	NA	NA	NA	NA	NA	NA	NA	NA
L	2.75	2.75	2.75	2.8125	2.8125	2.8125	2.8125	2.8125

NOTE: DIMENSION (A) MEASURED AT THE BOTTOM

NOTE: ALL DIMENSIONS ARE IN INCHES.



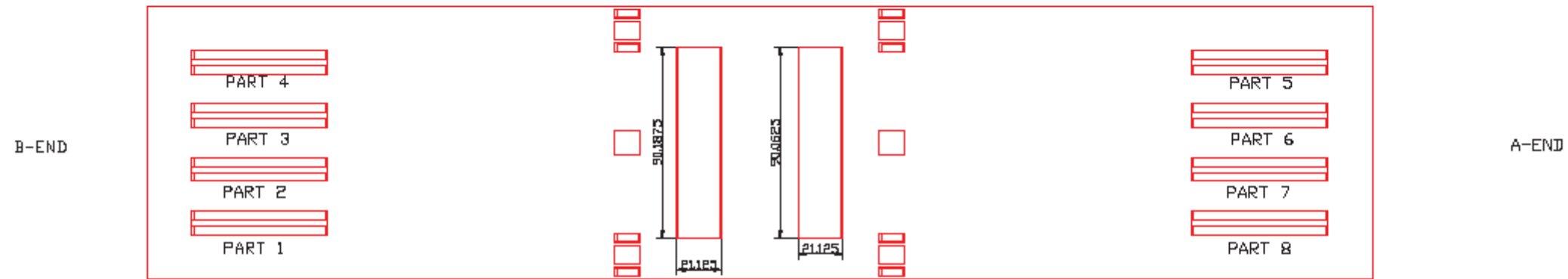
DRAWN NEOK HINSCH	9/27/2018	KASGRO RAIL CORP.	
CHECKED			
QA		OUTBOARD ATTACHMENT ITEM 10	
MFG			
APPROVED		SIZE C	DWG NO 10
		SCALE	REV B
			SHEET 1 OF 1



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KAS-SNR-011 Attachment 2
 4. Outboard Attachment Orientation



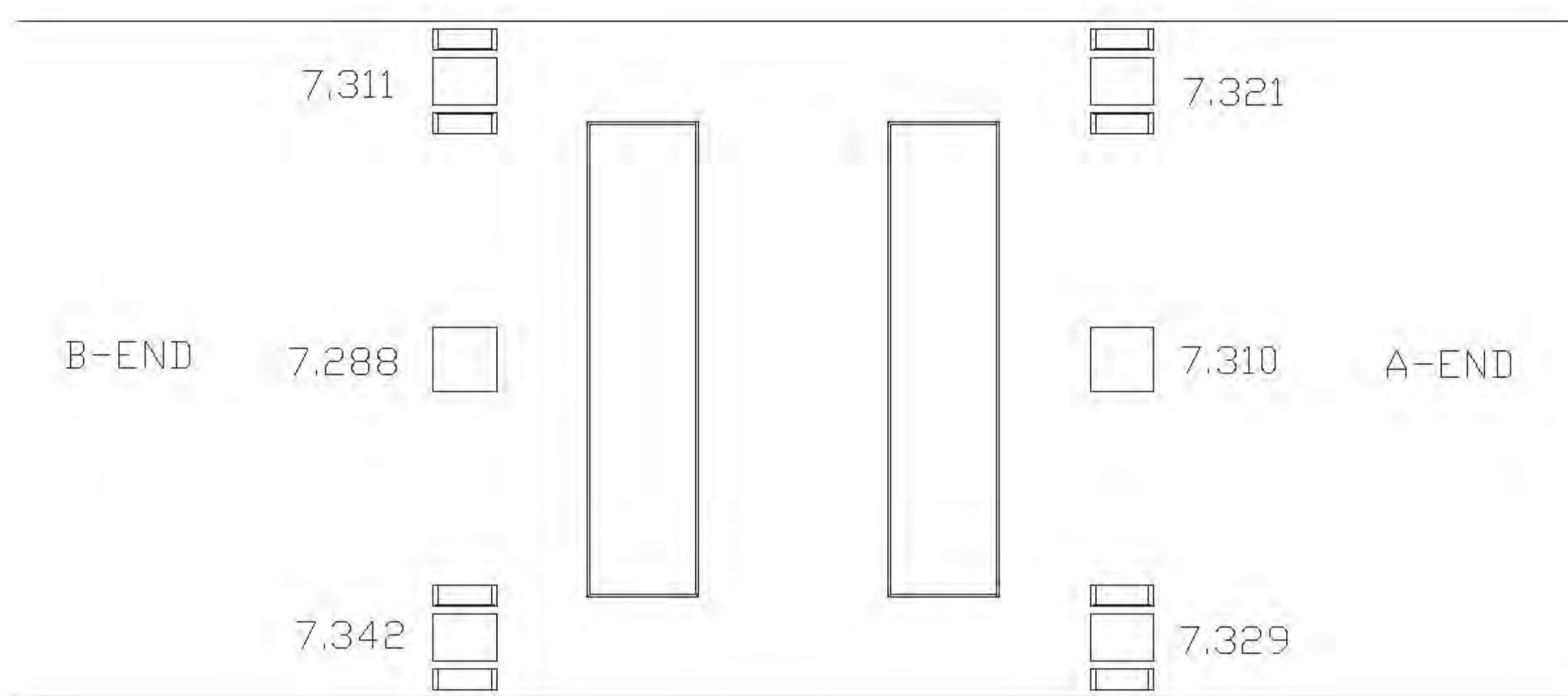
RAIL KASGRO CORP	
121 BUNNIE RD. NEW CASTLE, PA	
ATTACHMENT REFERENCE	
DRG: NH	8/16
CHK: JD	8/16
APP'D:	



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KAS-SNR-011 Attachment 2
5. Stainless pad dimensions





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KAS-SNR-011 Attachment 2
6. Kasgro Item 5 Email

KLEIN Slade (ORN-RE)

From: Nick Hinsch <nick@kasgro.com>
Sent: Tuesday, March 05, 2019 8:58 AM
To: KLEIN Slade (ORN-RE); 'Rick Ford'
Cc: DENTON Mark (ORN-RE); COUNTERMAN Bernie (ORN-RE)
Subject: RE: TTCI Questions

Security Notice: Please be aware that this email was sent by an external sender.

Slade,

Both Item 5 parts are now within tolerance to the item 6 parts.

Nick

From: KLEIN Slade (ORANO) <slade.klein@orano.group>
Sent: Monday, March 04, 2019 2:07 PM
To: Rick Ford (rick@kasgrorail.com) <rick@kasgrorail.com>
Cc: Nick Hinsch <nick@kasgro.com>; DENTON Mark (ORANO) <mark.denton@orano.group>; COUNTERMAN Bernie (ORANO) <bernard.counterman@orano.group>
Subject: RE: TTCI Questions

Rick,

The two center item 5 pads need to be 1/16 to 1/8 inch lower than the Item 6 pads. Based on the attached dimensions, the center pads need to be lowered.



Slade W. Klein
Engineering Supervisor
Orano Federal Services LLC
505 S. 336th Street, Suite 400
Federal Way, WA 98003
253-552-1338
slade.klein@orano.group

From: Nick Hinsch [<mailto:nick@kasgro.com>]
Sent: Tuesday, February 26, 2019 11:05 AM
To: KLEIN Slade (ORN-RE)
Subject: RE: TTCI Questions

Security Notice: Please be aware that this email was sent by an external sender.

Yes, I have the measurements from the bottom of the slot to the top of the pad right now. I did this by placing a machined bar across the slots and used a mechanical depth micrometer.



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		Orano Federal Services	
DATA TRANSMITTAL FORM			
Supplier:	KASGRO RAIL CORP., INC.	DTF No:	038
P.O./SC No:	15C3011916	Date:	2/19/2019
Type of Submittal:	<input checked="" type="checkbox"/> First <input type="checkbox"/> Re-Submittal	SDRL List Item No:	24
Submitted for:	<input checked="" type="checkbox"/> Approval <input type="checkbox"/> Review <input type="checkbox"/> Information	Number of Copies Submitted:	1
Submitted By:	RICK FORD <small>(Name)</small>	<i>Rick Ford</i> <small>Digitally signed by Rick Ford Date: 2019.02.27 13:31:27 +0800'</small> <small>(Signature)</small>	PROJECT MANAGER <small>(Title)</small>
ITEM NUMBER	DOCUMENT NUMBER	REVISION NUMBER	DOCUMENT DESCRIPTION
1	KAS 127		ATLAS CASK CAR OMS LASER DIMENSIONS FOR PIN BLOCK ATTACHMENT BLOCKS
2	KAS 128		FRA S-2044 INPSECTION FOR BUFFER CARS
3	KAS 129		AAR S-488 BRAKE TEST CERTIFICATION
4	KAS 130		TRACK SCALE CALIBRATION RECORDS
5	KAS 131		TUV UT NDE REPORT CASK CAR
6	KAS 132		TUV PT NDE REPORT CASK CAR
7	KAS 133		TUV MT NDE REPORT CASK CAR
8	KAS 143 134		TUV VT NDE REPORT CASK CAR
Comments:		Technical Reviewer (i.e., RE, PTL, SME, QA, etc.)	
1) NOTE: KAS 127 provides as-built railcar dimensions. Kasgro rework modified some of these. Kasgro to submit final dimensions separately. 2) KAS 133 does not include the shear block or outer pin block weld MT. 3) KAS 134 does not include VT of the shear block welds.		KLEIN Slade Date: 2019.02.27 13:47:33 -08'00'	
		Date: 2/27/2019	
FS DISPOSITION CODES AND DEFINITIONS			
AP	Approved	Work may proceed.	Resubmittal is not required
AWC	Approved with Comment	Work may proceed; comments provided for Supplier's consideration only.	Resubmittal is not required
REV	Reviewed	Work may proceed; comments provided for Supplier's consideration only.	Resubmittal is not required
RWC	Reviewed with Comment	Work may proceed; subject to incorporation and compliance w/ Buyer comments.	Correct and resubmit
DS	Disapproved	Work may <u>not</u> proceed.	Correct and resubmit
RSA	Receipt Submittal Acknowledged	No other action required.	
If, in the judgment of the Supplier, the incorporation of FS' comments will result in a change to the Purchase Order/Subcontract, work shall not proceed and the Supplier shall immediately provide a written notice to FS' C&P Representative describing the change.			
Project Manager (PM) / Engineering Manager (EM) or Designated Individual (DI) Approval		<i>Mark A. Denton</i> <small>Digitally signed by Mark A. Denton DN: cn=Mark A. Denton, o=Orano Federal Services, email=mark.denton@orano-group.com c=US Date: 2019.02.27 17:04:03 -0800'</small>	Date: 02/27/2019

FS-EN-FRM-023 Rev 02 (Effective March 1, 2018)
 Refer to FS-EN-PRC-012



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 orano	Orano Federal Services	
SUPPLIER DOCUMENT SUBMITTAL REVIEW		
Supplier / PO No.:	KASGRO / 15C3011916	DTF No. / Rev: 038
Charge No:	00225.03.0050.02.00001	Due Date: 3/8/2019
Document(s):	See DTF No.: 038	
REVIEW INSTRUCTIONS: (List Supplier Doc. No. and Rev. FS Spec and Dwg, Codes, Stds, etc.)		
PE	Slade Klein	
REVIEWERS	Slade Klein, Bernie Counterman	
QA	Bernie Counterman	
Technical Review		
Comments/Markup Attached Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Technical Reviewer Comments:		
KAS 133 does not include the required MT inspection of the shear blocks and outer pin blocks. This was required by Kasgro drawing 1155-41.		
Technical Reviewer(s) (Sign/Date): KLEIN Slade		Date: 2019.02.26 07:23:43 -08'00'
Quality Assurance Review (As Applicable)		
Comments/Markup Attached Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Technical Reviewer Comments:		
Only potential question was regarding missing signature by the technician on the UT report. Discussed with TUV Rheinland Level III (Randy @ 616-818-8188). The technician signature is not required provided the report is signed by his supervisor. This report is signed by the individuals supervisor.		
QA Reviewer(s) (Sign/Date):		Digitally signed by COUNTERMAN Bernard Date: 2019.02.25 09:29:24 -08'00'
COMMENT DISPOSITION (If Applicable. Attached further comments and disposition correspondence as necessary)		

FS-EN-FRM-026 Rev 01 (Effective March 1, 2018)
 Refer to FS-EN-PRC-012



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Railcar # 1DOX010001			Kasgro PO 15C3011916		Notes:	Traveler
Drawing: 3018956			Sheet: 3		Revision:	0
Feature Number	Drawing Zone	Drawing Requirements OUTER 4 ITEMS 11 & 12	Insp. Freq.	Code	Inspection Method (If Required)	
1	D-7 IT 11	// 1/16" B	100%	A-1	LASER TRACKER	
2	D-7 IT 11	⊥ 1/16" A	100%	A-1	LASER TRACKER	
3	D-1 IT 12	// 1/16" B	100%	A-1	LASER TRACKER	
4	D-1 IT 12	⊥ 1/16" A	100%	A-1	LASER TRACKER	
5	C-1 IT 11	// 1/16" B	100%	A-1	LASER TRACKER	
6	C-1 IT 11	⊥ 1/16" A	100%	A-1	LASER TRACKER	
7	C-7 IT 12	// 1/16" B	100%	A-1	LASER TRACKER	
8	C-7 IT 12	⊥ 1/16" A	100%	A-1	LASER TRACKER	

Feature Number	Tool Number	Actual Results	OOT Conditions	Deficiency Number	Inspector/Date	Temperature (F)
1	4674	.025	N/A	N/A	<i>[Signature]</i> 1/17/19	47
2	4674	.009	N/A	N/A	<i>[Signature]</i> 1/17/19	47
3	4674	.015	N/A	N/A	<i>[Signature]</i> 1/17/19	47
4	4674	.042	N/A	N/A	<i>[Signature]</i> 1/17/19	47
5	4674	.042	N/A	N/A	<i>[Signature]</i> 1/17/19	47
6	4674	.062	N/A	N/A	<i>[Signature]</i> 1/17/19	47
7	4674	.014	N/A	N/A	<i>[Signature]</i> 1/17/19	47
8	4674	.059	N/A	N/A	<i>[Signature]</i> 1/17/19	47

* 4674 IS THE LAST FOUR DIGITS OF THE S/N OF THE LASER TRACKER

CODES: A-1 = Actual Recorded dimension(s) for each occurrence: A-2 = Actual recorded range (high/low) for each occurrence:
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Orano Federal Services
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Railcar # 1DOX010001			Kasgro PO 15C3011916		Notes:	Traveler
Drawing: 3018956			Sheet: 3		Revision:	0
Feature Number	Drawing Zone	Drawing Requirements INNER 4 ITEM 10	Insp. Freq.	Code	Inspection Method (If Required)	
9	D-7 IT 10	// 1/16" B	100%	A-1	LASER TRACKER	
10	D-7 IT 10	⊥ 1/16" A	100%	A-1	LASER TRACKER	
11	D-1 IT 10	// 1/16" B	100%	A-1	LASER TRACKER	
12	D-1 IT 10	⊥ 1/16" A	100%	A-1	LASER TRACKER	
13	C-1 IT 10	// 1/16" B	100%	A-1	LASER TRACKER	
14	C-1 IT 10	⊥ 1/16" A	100%	A-1	LASER TRACKER	
15	C-7 IT 10	// 1/16" B	100%	A-1	LASER TRACKER	
16	C-7 IT 10	⊥ 1/16" A	100%	A-1	LASER TRACKER	

Feature Number	Tool Number	Actual Results	OOT Conditions	Deficiency Number	Inspector/Date	Temperature (F)
9	4674	.015	N/A	N/A	<i>[Signature]</i> 1/17/19	47
10	4674	.047	N/A	N/A	<i>[Signature]</i> 1/17/19	47
11	4674	.010	N/A	N/A	<i>[Signature]</i> 1/17/19	47
12	4674	.027	N/A	N/A	<i>[Signature]</i> 1/17/19	47
13	4674	.027	N/A	N/A	<i>[Signature]</i> 1/17/19	47
14	4674	.029	N/A	N/A	<i>[Signature]</i> 1/17/19	47
15	4674	.006	N/A	N/A	<i>[Signature]</i> 1/17/19	47
16	4674	.027	N/A	N/A	<i>[Signature]</i> 1/17/19	47

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Railcar # 1DOX010001			Kasgro PO 15C3011916		Notes:	Traveler
Drawing: 3018956			Sheet: 3		Revision:	0
Feature Number	Drawing Zone	Drawing Requirements	Insp. Freq.	Code	Inspection Method (If Required)	
17	D-5 IT 9	$\oplus 1/16''$ C-D	100%	A-1	LASER TRACKER	
18	D-5 IT 9	$\perp 1/16''$ A	100%	A-1	LASER TRACKER	
19	D-5 IT 9	$\oplus 1/16''$ C-D	100%	A-1	LASER TRACKER	
20	D-5 IT 9	$\perp 1/16''$ A	100%	A-1	LASER TRACKER	
21	C-6 IT 7	$\perp 1/16''$ A	100%	A-1	LASER TRACKER	
22	C-6 IT 7	$\perp 1/16''$ A	100%	A-1	LASER TRACKER	
23	C-6 IT 7	$\perp 1/16''$ A	100%	A-1	LASER TRACKER	
24	C-6 IT 7	$\perp 1/16''$ A	100%	A-1	LASER TRACKER	

Feature Number	Tool Number	Actual Results	OOT Conditions	Deficiency Number	Inspector/Date	Temperature (F)
17	4674	.051	N/A	N/A	<i>[Signature]</i> 1/17/19	47
18	4674	.018	N/A	N/A	<i>[Signature]</i> 1/17/19	47
19	4674	.004	N/A	N/A	<i>[Signature]</i> 1/17/19	47
20	4674	.014	N/A	N/A	<i>[Signature]</i> 1/17/19	47
21	4674	.007	N/A	N/A	<i>[Signature]</i> 1/17/19	47
22	4674	.007	N/A	N/A	<i>[Signature]</i> 1/17/19	47
23	4674	.016	N/A	N/A	<i>[Signature]</i> 1/17/19	47
24	4674	.004	N/A	N/A	<i>[Signature]</i> 1/17/19	47

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Railcar # 1DOX010001				Kasgro PO 15C3011916		Notes:	Traveler
Drawing: 3018956				Sheet: 3		Revision:	0
Feature Number	Drawing Zone	Drawing Requirements	Insp. Freq.	Code	Inspection Method (If Required)		
25	C-6 IT 8	\perp 1/16" A	100%	A-1	LASER TRACKER		
26	C-6 IT 8	\perp 1/16" A	100%	A-1	LASER TRACKER		
27	C-6 IT 8	\perp 1/16" A	100%	A-1	LASER TRACKER		
28	C-6 IT 8	\perp 1/16" A	100%	A-1	LASER TRACKER		
29	B-5 IT 7	\oplus 1/16" A E B	100%	A-1	LASER TRACKER		
30	B-5 IT 8	\oplus 1/16" A E B	100%	A-1	LASER TRACKER		
31	B-5 IT 8	\oplus 1/16" A E B	100%	A-1	LASER TRACKER		
32	B-5 IT 7	\oplus 1/16" A E B	100%	A-1	LASER TRACKER		

Feature Number	Tool Number	Actual Results	OOT Conditions	Deficiency Number	Inspector/Date	Temperature (F)
25	4674	.012	N/A	N/A	<i>[Signature]</i> 1/17/19	47
26	4674	.002	N/A	N/A	<i>[Signature]</i> 1/17/19	47
27	4674	.008	N/A	N/A	<i>[Signature]</i> 1/17/19	47
28	4674	.002	N/A	N/A	<i>[Signature]</i> 1/17/19	47
29	4674	.296	.234	1	<i>[Signature]</i> 1/17/19	47
30	4674	.275	.213	2	<i>[Signature]</i> 1/17/19	47
31	4674	.435	.372	3	<i>[Signature]</i> 1/17/19	47
32	4674	.421	.358	4	<i>[Signature]</i> 1/17/19	47

* 4674 IS THE LAST FOUR DIGITS OF THE S/N OF THE LASER TRACKER

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Deficiency numbers added by FS for traceability to deviation report



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 Project: 00225.03.0050 DOE Atlas Project

Railcar # 1DOX010001			Kasgro PO 15C3011916		Notes:	Traveler
Drawing: 3018956			Sheet: 3		Revision:	0
Feature Number	Drawing Zone	Drawing Requirements	Insp. Freq.	Code	Inspection Method (If Required)	
33	B-6 IT 7	$\oplus 1/16" \text{ (M)} \text{ C-D}$	100%	A-1	LASER TRACKER	
34	B-6 IT 8	$\oplus 1/16" \text{ (M)} \text{ C-D}$	100%	A-1	LASER TRACKER	
35	B-6 IT 8	$\oplus 1/16" \text{ (M)} \text{ C-D}$	100%	A-1	LASER TRACKER	
36	B-6 IT 7	$\oplus 1/16" \text{ (M)} \text{ C-D}$	100%	A-1	LASER TRACKER	
37	B-6	148.5" \pm .06"	100%	A-1	LASER TRACKER	
38	B-3	148.5" \pm .06"	100%	A-1	LASER TRACKER	
39	D-5	45.0" \pm .50" TYP	100%	A-2	LASER / TAPE MEASURE	
40	D-1	4X 18.05	100%	A-2	LASER TRACKER	
41	C-1	4X 25.20	100%	A-2	LASER TRACKER	

Feature Number	Tool Number	Actual Results	OOT Conditions	Deficiency Number	Inspector/Date	Temperature (F)
33	4674	.414	.351	5	<i>[Signature]</i> 1/17/19	47
34	4674	.334	.271	6	<i>[Signature]</i> 1/17/19	47
35	4674	.511	.448	7	<i>[Signature]</i> 1/17/19	47
36	4674	.412	.350	8	<i>[Signature]</i> 1/17/19	47
37	4674	148.441	N/A	N/A	<i>[Signature]</i> 1/17/19	47
38	4674	148.445	N/A	N/A	<i>[Signature]</i> 1/17/19	47
39	TAPE	45.00	N/A	N/A	<i>[Signature]</i> 1/17/19	47
40	4674	18.062-18.029	N/A	N/A	<i>[Signature]</i> 1/17/19	47
41	4674	25.214-25.182	N/A	N/A	<i>[Signature]</i> 1/17/19	47

* 4674 IS THE LAST FOUR DIGITS OF THE S/N OF THE LASER TRACKER

CODES: A-1 = Actual Recorded dimension(s) for each occurrence: A-2 = Actual recorded range (high/low) for each occurrence:
 Δ = Actual recorded range (high/low) for each occurrence to be submitted to customer: B = Record as "accept": C= Record as "OK to gage" (for go/no go functional gauging): Out of Tolerance dimensions-Record actual dimension and the applicable NCR # in the deficiency No. box.

Note: THE PERSON DESIGNATED TO SIGN FOR SUCH AN ACTION VERIFIES BASED ON PERSONAL OBSERVATION OR CERTIFIED RECORDS, AND CERTIFIES BY THIS SIGNATURE THAT THE ACTION HAS ACTUALLY BEEN PERFORMED IN ACCORDANCE WITH THE SPECIFIED REQUIREMENT.

THE RECORDING OF FALSE, FICTITIOUS OR FRAUDULENT STATEMENTS OR ENTRIES ON THIS DOCUMENT MAY BE PUNISHED AS A FELONY UNDER FEDERAL STATUTES, INCLUDING TITLE 18, CHAPTER 47.

Deficiency numbers added by FS for traceability to deviation report



Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
Appendix B

Doc./Rev.: EIR-3021970-000
 Project: 00225.03.0050 DOE Atlas Project

Railcar #			Kasgro PO 15C3011916	Notes:	Traveler
Drawing: 3018956			Sheet: 4	Revision:	0
Feature Number	Drawing Zone	Drawing Requirements	Insp. Freq.	Code	Inspection Method (If Required)
42	C-8	⊕ 1/16" F G	100%	A-1	LASER TRACKER
43	B-6	⊕ 1/16" M J	100%	A-1	LASER TRACKER
44	A-4	⊕ 1/16" N H	100%	A-1	LASER TRACKER
45	A-3	⊕ 1/16" L K	100%	A-1	LASER TRACKER

Feature Number	Tool Number	Actual Results	OOT Conditions	Deficiency Number	Inspector/Date	Temperature (F)
42	4674	.002	N/A	N/A	<i>[Signature]</i> 1/17/19	47
43	4674	.057	N/A	N/A	<i>[Signature]</i> 1/17/19	47
44	4674	.034	N/A	N/A	<i>[Signature]</i> 1/17/19	47
45	4674	.059	N/A	N/A	<i>[Signature]</i> 1/17/19	47

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Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
Appendix B

Doc./Rev.: EIR-3021970-000
 Project: 00225.03.0050 DOE Atlas Project

Railcar # 1DOX010001			Kasgro PO 15C3011916		Notes:	Traveler
Drawing: 3018956			Sheet: 3&4		Revision:	0
Feature Number	Drawing Zone	Drawing Requirements	Insp. Freq.	Code	Inspection Method (If Required)	
46	C-6	46.50"	100%	A-2	LASER TRACKER	
47	C-3	11.75"	100%	A-2	LASER TRACKER	

Feature Number	Tool Number	Actual Results	OOT Conditions	Deficiency Number	Inspector/Date	Temperature (F)
46	4674	46.482"-46.520"	N/A	N/A	<i>[Signature]</i> 1/17/19	47
47	4674	11.720"-11.729"	N/A	N/A	<i>[Signature]</i> 1/17/19	47

* 4674 IS THE LAST FOUR DIGITS OF THE S/N OF THE LASER TRACKER

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Title: Design and Prototype Fabrication of Railcars for Transport of
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Appendix B

Doc./Rev.: EIR-3021970-000
Project: 00225.03.0050 DOE Atlas Project

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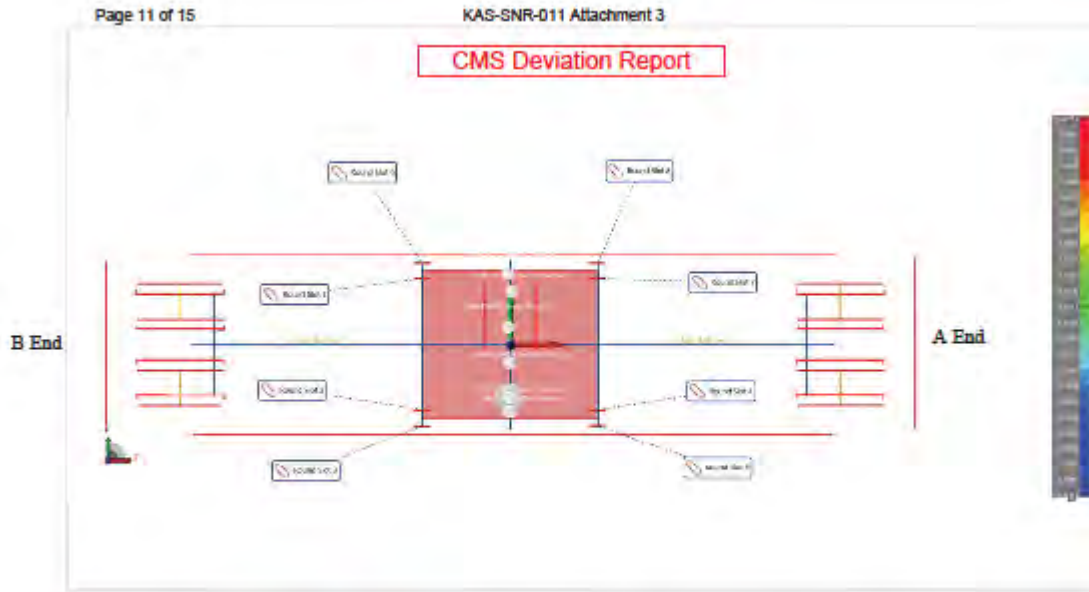
P.O. Box 540784
Grand Prairie, TX 75054
972-322-3615

jason@cmsllc1.com
<http://www.cmsllc1.com>
17 Jan 2019 08:51 PM

Session Information	
File Name of FCD	Areva Atlas Railcar.fcd
Operator	MATTHEW DILLE
Company Name	KASGRO
Date	1/17/2019
Time	8:51 PM
Ambient Temperature	47°F
Active Alignment Error	
Active Device	V01001304674
P08-05-11-09017 Current Device Error	
V01001304674 -> Device Position 1 Device Error	
V01001304674 -> Device Position 2 Device Error	
V01001304674 -> Device Position 3 Device Error	
V01001304674 -> Device Position 4 Device Error	
V01001304674 -> Device Position 5 Device Error	
V01001304674 -> Device Position 6 Device Error	0.0017h

Orano Federal Services
 Title: Design and Prototype Fabrication of Railcars for Transport of
 High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
 Appendix B

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 Project: 00225.03.0050 DOE Atlas Project



Round Slot 2		Deficiency #6					Readings: 0
	actual	nominal	dev	-tol	+tol	oot	
Center.x	-62.5042in	-62.5000in	-0.0042in	-0.0300in	0.0300in	0.0000in	
Center.z	9.3332in	9.5000in	-0.1668in	-0.0300in	0.0300in	-0.1368in	
Length	5.2987in	5.3700in	-0.0713in	0.0000in	0.0600in	-0.0713in	
Width	4.3452in	4.3700in	-0.0248in	0.0000in	0.0600in	-0.0248in	
Form	0.0202in		0.0202in	0.0000in	0.0204in	0.0000in	
↕ Position	0.3335in		0.3335in	0.0000in	0.0625in	0.2710in	

Round Slot 3		Deficiency #5					Readings: 8
	actual	nominal	dev	-tol	+tol	oot	
Center.x	-62.5039in	-62.5000in	-0.0039in	-0.0300in	0.0300in	0.0000in	
Center.z	9.2931in	9.5000in	-0.2069in	-0.0300in	0.0300in	-0.1769in	
Length	5.3243in	5.3700in	-0.0457in	0.0000in	0.0600in	-0.0457in	
Width	4.3531in	4.3700in	-0.0169in	0.0000in	0.0600in	-0.0169in	
Form	0.0134in		0.0134in	0.0000in	0.0204in	0.0000in	
↕ Position	0.4135in		0.4135in	0.0000in	0.0625in	0.3510in	

Deficiency numbers added by FS for traceability to Laser Data Sheets



Orano Federal Services
 Title: Design and Prototype Fabrication of Railcars for Transport of
 High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
 Appendix B

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Round Slot 4		Deficiency #2					Readings:0.
	actual	nominal	dev	- tol	+tol	oot	
Center.x	62.4720in	62.5000in	-0.0280in	-0.0300in	0.0300in	0.0000in	
Center.z	9.3627in	9.5000in	-0.1373in	-0.0300in	0.0300in	-0.1073in	
Length	5.3442in	5.3700in	-0.0258in	0.0000in	0.0600in	-0.0258in	
Width	4.3354in	4.3700in	-0.0346in	0.0000in	0.0600in	-0.0346in	
Form	0.0167in		0.0167in	0.0000in	0.0204in	0.0000in	
⚡ Position	0.2750in		0.2750in	0.0000in	0.0625in	0.2125in	

Round Slot 5		Deficiency #1					Readings:8.
	actual	nominal	dev	- tol	+tol	oot	
Center.x	62.5069in	62.5000in	0.0069in	-0.0300in	0.0300in	0.0000in	
Center.z	9.3517in	9.5000in	-0.1483in	-0.0300in	0.0300in	-0.1183in	
Length	5.3301in	5.3700in	-0.0399in	0.0000in	0.0600in	-0.0399in	
Width	4.3476in	4.3700in	-0.0224in	0.0000in	0.0600in	-0.0224in	
Form	0.0118in		0.0118in	0.0000in	0.0204in	0.0000in	
⚡ Position	0.2961in		0.2961in	0.0000in	0.0625in	0.2336in	

Round Slot 1		Deficiency #7					Readings:8.
	actual	nominal	dev	- tol	+tol	oot	
Center.x	-62.4972in	-62.5000in	0.0028in	-0.0300in	0.0300in	0.0000in	
Center.z	9.2446in	9.5000in	-0.2554in	-0.0300in	0.0300in	-0.2254in	
Length	5.3350in	5.3700in	-0.0350in	0.0000in	0.0600in	-0.0350in	
Width	4.3376in	4.3700in	-0.0324in	0.0000in	0.0600in	-0.0324in	
Form	0.0067in		0.0067in	0.0000in	0.0204in	0.0000in	
⚡ Position	0.5108in		0.5108in	0.0000in	0.0625in	0.4483in	

Round Slot 6		Deficiency #8					Readings:8.
	actual	nominal	dev	- tol	+tol	oot	
Center.x	-62.5059in	-62.5000in	-0.0059in	-0.0300in	0.0300in	0.0000in	
Center.z	9.2939in	9.5000in	-0.2061in	-0.0300in	0.0300in	-0.1761in	
Length	5.3539in	5.3700in	-0.0161in	0.0000in	0.0600in	-0.0161in	
Width	4.3576in	4.3700in	-0.0124in	0.0000in	0.0600in	-0.0124in	
Form	0.0091in		0.0091in	0.0000in	0.0204in	0.0000in	
⚡ Position	0.4120in		0.4120in	0.0000in	0.0625in	0.3496in	

Round Slot 7		Deficiency #3					Readings:7.
	actual	nominal	dev	- tol	+tol	oot	
Center.x	62.4711in	62.5000in	-0.0289in	-0.0300in	0.0300in	0.0000in	
Center.z	9.2830in	9.5000in	-0.2170in	-0.0300in	0.0300in	-0.1870in	
Length	5.3304in	5.3700in	-0.0396in	0.0000in	0.0600in	-0.0396in	
Width	4.3380in	4.3700in	-0.0320in	0.0000in	0.0600in	-0.0320in	
Form	0.0014in		0.0014in	0.0000in	0.0204in	0.0000in	
⚡ Position	0.4346in		0.4346in	0.0000in	0.0625in	0.3721in	

Deficiency numbers added by FS for traceability to Laser Data Sheets



Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
Appendix B

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Project: 00225.03.0050 DOE Atlas Project

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Round Slot 8	Deficiency #4	Readings:8				
	actual	nominal	dev	-tol	+tol	root
Center.x	62.4706in	62.5000in	-0.0295in	-0.0300in	0.0300in	0.0000in
Center.z	9.2896in	9.5000in	-0.2104in	-0.0300in	0.0300in	-0.1804in
Length	5.3402in	5.3700in	-0.0298in	0.0000in	0.0600in	-0.0298in
Width	4.3643in	4.3700in	-0.0057in	0.0000in	0.0600in	-0.0057in
Form	0.0109in		0.0109in	0.0000in	0.0204in	0.0000in
ψ Position	0.4208in		0.4208in	0.0000in	0.0625in	0.3583in

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Orano Federal Services
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High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
Appendix B

Doc./Rev.: EIR-3021970-000
Project: 00225.03.0050 DOE Atlas Project

Page 14 of 15

KAS-SNR-011 Attachment 3

KLEIN Slade (ORN-RE)

From: matt <matt@cmsllc1.com>
Sent: Thursday, February 14, 2019 1:52 PM
To: KLEIN Slade (ORN-RE)
Subject: RE: Atlas Project - Outboard Pin Blocks

Security Notice: Please be aware that this email was sent by an external sender.

Slade
I have reviewed the numbers you have listed that i gave you via phone call are correct and match what i have
Thank You
Matthew Dille

From: KLEIN Slade (ORANO) [<mailto:slade.klein@orano.group>]
Sent: Thursday, February 14, 2019 4:42 PM
To: matt
Subject: RE: Atlas Project - Outboard Pin Blocks

Matt,

Thanks for taking the time to talk to me. Please confirm the numbers you provided to me.

For the outer pin blocks:

The round hole diameters (4.37 +.06/-0) range from 4.361 to 4.4001 inches

The slot length and width (5.37 +.06/-0, 4.37 +.06/-0) meet the upper tolerance, but have some undersize with the a minimum length of 5.340 inches and a minimum width of 4.323 inches



Slade W. Klein
Engineering Supervisor
Orano Federal Services LLC
505 S. 336th Street, Suite 400
Federal Way, WA 98003
253-552-1338
slade.klein@orano.group

From: matt [<mailto:matt@cmsllc1.com>]
Sent: Wednesday, February 13, 2019 6:25 PM
To: KLEIN Slade (ORN-RE)
Subject: RE: Atlas Project - Outboard Pin Blocks

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Slade,
Sorry for the late reply as i do not check this email often i was expecting a call from you if you can call around 4 est tomorrow i will try to answer any questions you have



Orano Federal Services
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Appendix B

Doc./Rev.: EIR-3021970-000
Project: 00225.03.0050 DOE Atlas Project

Page 15 of 15

KAS-SNR-011 Attachment 3

From: KLEIN Slade (ORANO) [<mailto:slade.klein@orano.orano>]
Sent: Monday, February 11, 2019 8:52 AM
To: Rick Ford; matt@cmsllc1.com
Cc: Mark; DENTON Mark (ORANO)
Subject: RE: Atlas Project - Outboard Pin Blocks

Matt! Do you have time to talk later on today or tomorrow? I am flying this morning but need to set up a time for a quick chat. I am looking to add a few things to your report if possible:

1. Outer Pin Blocks, the 8" hole or slot center to the top of the block. This may be covered already by the positional results. Please confirm.
2. Outer Pin Blocks, the 48" between hole and slot centers. This may be covered already by the positional results. Please confirm.
3. Outer Pin Blocks, the actual hole and slot sizes (4.37/5.37). Need actuals or range added to report if you have them.
4. Outer Pin Blocks, 3.25 (3.00 on drawing) slot widths. Need actuals or range added to report if you have them.

Thanks,



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Engineering Supervisor
Orano Federal Services LLC
505 S. 336th Street, Suite 400
Federal Way, WA 98003
253-552-1338
slade.klein@orano.orano

From: Rick Ford [<mailto:rick@kasgorail.com>]
Sent: Friday, February 08, 2019 4:57 AM
To: KLEIN Slade (ORN-RE)
Cc: matt@cmsllc1.com; Mark
Subject: Atlas Project - Outboard Pin Blocks

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Hi Slade,

Have you had a chance to talk with Matt of CMS laser about your request for the dimensions for the outboard pin block hole alignment?

Sincerely,

Rick Ford
Kasgro Rail



Orano Federal Services
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Appendix B

Doc./Rev.: EIR-3021970-000
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Page 1 of 9

KAS-SNR-011 Attachment 4

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From: matt <matt@cmsllc1.com>
Sent: Thursday, February 14, 2019 1:52 PM
To: KLEIN Slade (ORN-RE)
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Engineering Supervisor
Orano Federal Services LLC
505 S. 336th Street, Suite 400
Federal Way, WA 98003
253-552-1338
slade.klein@orano.group

From: matt [<mailto:matt@cmsllc1.com>]
Sent: Wednesday, February 13, 2019 6:25 PM
To: KLEIN Slade (ORN-RE)
Subject: RE: Atlas Project - Outboard Pin Blocks

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Slade,
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Orano Federal Services
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High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
Appendix B

Doc./Rev.: EIR-3021970-000
Project: 00225.03.0050 DOE Atlas Project

Page 2 of 9

KAS-SNR-011 Attachment 4

From: KLEIN Slade (ORANO) [<mailto:slade.klein@orano.orano>]
Sent: Monday, February 11, 2019 8:52 AM
To: Rick Ford; matt@cmsllc1.com
Cc: Mark; DENTON Mark (ORANO)
Subject: RE: Atlas Project - Outboard Pin Blocks

Matt! Do you have time to talk later on today or tomorrow? I am flying this morning but need to set up a time for a quick chat. I am looking to add a few things to your report if possible:

1. Outer Pin Blocks, the 8" hole or slot center to the top of the block. This may be covered already by the positional results. Please confirm.
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slade.klein@orano.orano

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Appendix B

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Project: 00225.03.0050 DOE Atlas Project

Page 3 of 9

KAS-SNR-011 Attachment 4

KLEIN Slade (ORN-RE)

From: matt <matt@cmsllc1.com>
Sent: Thursday, March 07, 2019 7:38 AM
To: KLEIN Slade (ORN-RE)
Subject: RE: Atlas Project - Outboard Pin Blocks

Security Notice: Please be aware that this email was sent by an external sender.

yes

From: KLEIN Slade (ORANO) [mailto:slade.klein@orano.group]
Sent: Wednesday, March 06, 2019 7:04 PM
To: matt
Subject: RE: Atlas Project - Outboard Pin Blocks

Same A end and B end orientation as before? Right?



Slade W. Klein
Engineering Supervisor
Orano Federal Services LLC
505 S. 336th Street, Suite 400
Federal Way, WA 98003
253-552-1338
slade.klein@orano.group

From: matt [mailto:matt@cmsllc1.com]
Sent: Wednesday, March 06, 2019 3:39 PM
To: KLEIN Slade (ORN-RE)
Subject: RE: Atlas Project - Outboard Pin Blocks

Security Notice: Please be aware that this email was sent by an external sender.

Slade
Sorry i got called out today and just got home to get this to you

From: KLEIN Slade (ORANO) [mailto:slade.klein@orano.group]
Sent: Tuesday, March 05, 2019 5:32 PM
To: matt
Subject: RE: Atlas Project - Outboard Pin Blocks

Matt,

Can you please let me know which of the outer attachment blocks (items 10/11/12) parts labeled part 1- part 8 on the attachment have the holes/slot heights that are less than 4.375.



Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
Appendix B

Doc./Rev.: EIR-3021970-000
Project: 00225.03.0050 DOE Atlas Project



KAS-SNR-011 Attachment 4

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505 S. 336th Street, Suite 400
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253-552-1338
slade.klein@orano.group

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To: KLEIN Slade (ORN-RE)
Subject: RE: Atlas Project - Outboard Pin Blocks

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Orano Federal Services LLC
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Federal Way, WA 98003
253-552-1338
slade.klein@orano.group

From: matt [<mailto:matt@cmsllc1.com>]
Sent: Wednesday, February 13, 2019 6:25 PM
To: KLEIN Slade (ORN-RE)
Subject: RE: Atlas Project - Outboard Pin Blocks



Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
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Security Notice: Please be aware that this email was sent by an external sender.

Slade,

Sorry for the late reply as i do not check this email often i was expecting a call from you if you can call around 4 est tomorrow i will try to answer any questions you have

From: KLEIN Slade (ORANO) [<mailto:slade.klein@orano.orano>]
Sent: Monday, February 11, 2019 8:52 AM
To: Rick Ford; matt@cmsllc1.com
Cc: Mark; DENTON Mark (ORANO)
Subject: RE: Atlas Project - Outboard Pin Blocks

Matt! Do you have time to talk later on today or tomorrow? I am flying this morning but need to set up a time for a quick chat. I am looking to add a few things to your report if possible:

1. Outer Pin Blocks, the 8" hole or slot center to the top of the block. This may be covered already by the positional results. Please confirm.
2. Outer Pin Blocks, the 48" between hole and slot centers. This may be covered already by the positional results. Please confirm.
3. Outer Pin Blocks, the actual hole and slot sizes (4.37/5.37). Need actuals or range added to report if you have them.
4. Outer Pin Blocks, 3.25 (3.00 on drawing) slot widths. Need actuals or range added to report if you have them.

Thanks,



Slade W. Klein
Engineering Supervisor
Orano Federal Services LLC
505 S. 336th Street, Suite 400
Federal Way, WA 98003
253-552-1338
slade.klein@orano.group

From: Rick Ford [<mailto:rick@kasnorail.com>]
Sent: Friday, February 08, 2019 4:57 AM
To: KLEIN Slade (ORN-RE)
Cc: matt@cmsllc1.com; Mark
Subject: Atlas Project - Outboard Pin Blocks

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Hi Slade,

Have you had a chance to talk with Matt of CMS laser about your request for the dimensions for the outboard pin block hole alignment?

Sincerely,



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Kasgro Rail

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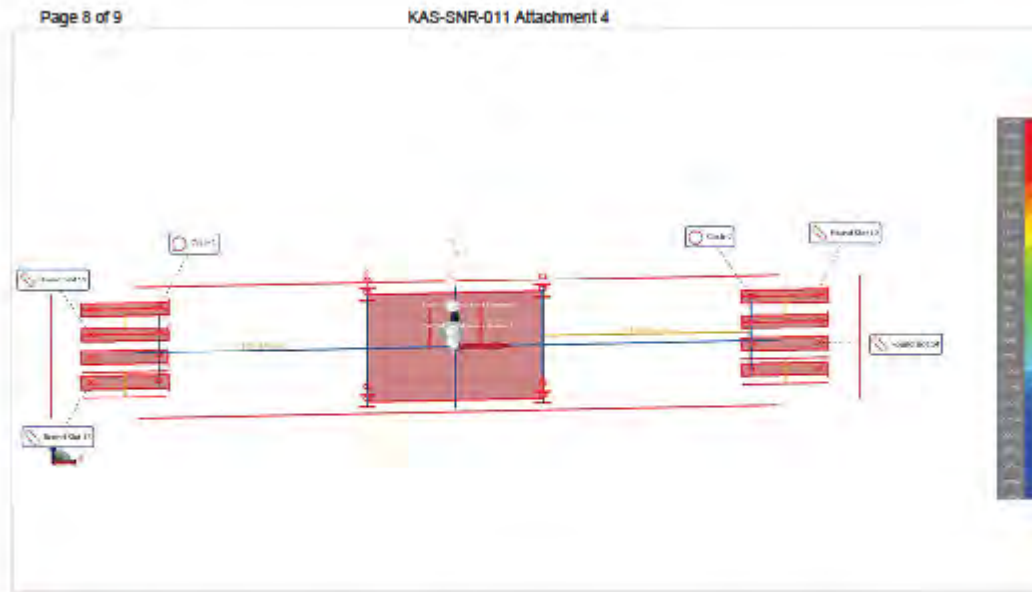
P.O. Box 540784
Grand Prairie, TX 75054
972-322-3615

jason@cmsllc1.com
<http://www.cmsllc1.com>
06 Mar 2019 06:35 PM

Session Information	
File Name of FCD	Areva Atlas Railcar.fcd
Operator	MATTHEW DILLE
Company Name	KASGRO
Date	1/17/2019
Time	6:35 PM
Ambient Temperature	47°F
Active Alignment Error	
Active Device	V01001304674
P08-05-11-09017 Current Device Error	
V01001304674 -> Device Position 1 Device Error	
V01001304674 -> Device Position 2 Device Error	
V01001304674 -> Device Position 3 Device Error	
V01001304674 -> Device Position 4 Device Error	
V01001304674 -> Device Position 5 Device Error	
V01001304674 -> Device Position 6 Device Error	0.0017h

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Circle 1						Readings: 0.
	actual	nominal	dev	- tol	+tol	oot
Center.x	-210.962fin			-0.0020in	0.0020in	
Center.z	8.6179in			-0.0020in	0.0020in	
Diameter	4.3608in	4.3700in	-0.0092in	0.0000in	0.0600in	-0.0092in
○ Circularity	0.0225in		0.0225in	0.0000in	0.0100in	0.0125in

Circle 2						Readings: 7.
	actual	nominal	dev	- tol	+tol	oot
Center.x	210.8819in			-0.0020in	0.0020in	
Center.z	8.3793in			-0.0020in	0.0020in	
Diameter	4.3660in	4.3700in	-0.0040in	0.0000in	0.0600in	-0.0040in
○ Circularity	0.0092in		0.0092in	0.0000in	0.0100in	0.0000in

Round Slot 10						Readings: 0.
	actual	nominal	dev	- tol	+tol	oot
Center.x	258.8630in			-0.0020in	0.0020in	
Center.z	7.7647in			-0.0020in	0.0020in	
Length	5.3402in	5.3700in	-0.0298in	0.0000in	0.0600in	-0.0298in
Width	4.3526in	4.3700in	-0.0174in	0.0000in	0.0600in	-0.0174in
Form	0.0001in		0.0001in	0.0000in	0.0020in	0.0000in



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Round Slot 11						Readings:8
	actual	nominal	dev	-tol	+tol	oot
Center.x	-258.9630in			-0.0020in	0.0020in	
Center.z	7.5654in			-0.0020in	0.0020in	
Length	5.3965in	5.3700in	0.0265in	0.0000in	0.0600in	0.0000in
Width	4.3663in	4.3700in	-0.0037in	0.0000in	0.0600in	-0.0037in
Form	0.0200in		0.0200in	0.0000in	0.0100in	0.0100in

Round Slot 14						Readings:9
	actual	nominal	dev	-tol	+tol	oot
Center.x	258.9345in			-0.0020in	0.0020in	
Center.z	7.8087in			-0.0020in	0.0020in	
Length	5.3833in	5.3700in	0.0133in	0.0000in	0.0600in	0.0000in
Width	4.3626in	4.3700in	-0.0074in	0.0000in	0.0600in	-0.0074in
Form	0.0100in		0.0100in	0.0000in	0.0101in	0.0000in

Round Slot 15						Readings:8
	actual	nominal	dev	-tol	+tol	oot
Center.x	-258.9184in			-0.0020in	0.0020in	
Center.z	7.6236in			-0.0020in	0.0020in	
Length	5.3730in	5.3700in	0.0030in	0.0000in	0.0600in	0.0000in
Width	4.3227in	4.3700in	-0.0473in	0.0000in	0.0600in	-0.0473in
Form	0.0236in		0.0236in	0.0000in	0.0100in	0.0136in



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Evaluation of Final Interface Condition

Evaluation of the nonconforming Atlas railcar cradle attachment dimensions is performed below using values documented in [1].

The purpose of this evaluation is to demonstrate that the as-built dimensions of the Atlas railcar cradle attachment components meet the interface design requirements of the conceptual cradle designs. The acceptance criterion for this evaluation is positive clearance between the interface of the Atlas railcar attachment components and the conceptual cradle designs listed below:

The conceptual attachment design is provided in:

DWG-3015278-002 [3]

CALC-3015276-004 [4]

The conceptual cradle designs and associated interface dimensions are contained in the following drawings:

DWG-3015137-002 [5]

DWG-3015138-001 [6]

DWG-3015277-000 [7]

DWG-3015139-000 [8]

DWG-3015140-001 [9]

The as-built DOE Atlas Railcar is documented in:

DWG-3018956-000 [16] and Kasgro NCR #2-6

The conceptual cradle to conceptual railcar attachment interface was previously evaluated in:

CALC-3015934-002 [10]

1.0 CALCULATIONS

The following evaluations are performed to verify that the dimensions of the as-built Atlas railcar will satisfy the interface between the Atlas railcar and the conceptual cradle designs. Variations of this interface calculation were performed using the design dimensions provided by the conceptual attachment design.

1.1 Central Cradle – Longitudinal Clearance

The conceptual cradle designs for Families 2-4 are supported longitudinally by the shear blocks welded to the railcar. The conceptual cradle designs for Family 1 are supported longitudinally by the end stop assemblies which are shimmed to remove any gap. Therefore, there are no clearance concerns in the longitudinal direction for the Family 1 conceptual cradle designs.



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For the cradles in Families 2-4, the longitudinal interface is evaluated in the table below:

Table 1-1: Cradle to Rail Longitudinal Clearance

Atlas Railcar As-Built dimensions [1]	DWG-3015278-002 (Cradle Attachment Components)	DWG-3015138-001, DWG-3015139-000, DWG-3015140-001, DWG-3015277-000 (Conceptual Cradle Families 2-4 Drawings)
Distance between shear blocks = 36 ± 1/16	Distance between shear blocks = 36.00±.12	Distance between shear blocks $= (80.25 \pm .12) - (44.75 \pm .12) = 35.5 \pm .24$ DWG-3015138-001 $= 35.5 \pm .12$ DWG-3015139-000 $= 35.5 \pm .125$ DWG-3015140-001 $= (80.25 \pm .12) - (44.75 \pm .12) = 35.5 \pm .24$ DWG-3015277-000

Using the as-built dimensions:

The minimum gap is:

$$\text{min clearance} = (36.00 - .0625) - (35.5 + .24) = .20 \text{ inches}$$

The maximum gap is

$$\text{max clearance} = (36.00 + .0625) - (35.5 - .24) = .80 \text{ inches}$$

The family 2-4 longitudinal loading must be supported by the shear blocks. To ensure this, the clearance between the shear blocks and cradle must be less than the available slot length at the center four pin locations. The minimum Item 7 / Item 8 slot length is 5.299 inches from [1]. The maximum pin diameter is 4.002 inches. The minimum gap is 5.299 - 4.002 = 1.297 inches. This is less than the shear block gap and therefore contact will first occur at the shear blocks and the longitudinal gap is acceptable.

1.2 Central Cradle – Longitudinal Interface

The as-built distance between the center of the pin slot locations is dimensioned as 62.50±.03 inches from the railcar center line or 125±.06 between slot centers (Positional tolerance met as shown on [1]). The conceptual cradle is dimensioned as 125±.12. There is a .06 maximum off-set between the as-built railcar and conceptual cradle design. This is accommodated by the slot provided in the center pin attachment block. The as-built slot length is a minimum of 5.299 inches [1]. The maximum pin diameter is 4.002 inches [16]. The available clearance is 5.299 - 4.002 = 1.297 inches which is adequate to cover the .06 maximum off-set.

1.3 Central Cradle – Lateral Clearance

All of the conceptual cradle designs are supported laterally by the center pin attachment blocks. The structural evaluation of the attachment components is performed in CALC-3015276 [4]. From Section 5.2.7 of [4], the conceptual cradle I-beam width is 11.265 inches. The lateral interface is evaluated in the table below:



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Table 1-2: Cradle to Railcar Lateral Clearance

Atlas Railcar As-Build dimensions [1]	DWG-3015278-002 (Cradle Attachment Components)	DWG-3015137-001, DWG-3015138-000, DWG-3015139-000, DWG-3015140-001, DWG-3015277-000 (Conceptual Cradle Drawings)
Edge of inboard center pin attachment blocks dimension 2(46.5±.03) = 93.00±.06	Edge of inboard center pin attachment blocks dimension = 93.00±.06	Inside edges of cradle I-beams =93.50±.25 DWG-3015137-001 =93.50±.25 DWG-3015138-000 =93.50±.12 DWG-3015139-000 =93.50±.25 DWG-3015140-001 =93.50±.25 DWG-3015277-000
Edge of outboard center pin attachment blocks 2(46.5±.03 + 11.75±.03) =116.50±.12	Edge of outboard center pin attachment blocks = 116.50±.06	Outside of cradle I-beams =93.50±.25+2(11.265) = 116.03±.25

Using the as-built dimensions:

At the inboard center pin attachment to cradle I-beam interface:

The minimum gap is:

$$\text{min clearance} = (93.50 - .25) - (93.00 + .06) = .19 \text{ inches}$$

The maximum gap is

$$\text{max clearance} = (93.50 + .25) - (93.00 - .06) = .81 \text{ inches}$$

At the outboard center pin attachment to cradle I-beam interface:

The minimum gap is:

$$\text{min clearance} = (116.50 - .12) - (116.03 + .25) = .10 \text{ inches}$$

The maximum gap is

$$\text{max clearance} = (116.50 + .12) - (116.03 - .25) = .84 \text{ inches}$$

A minimum clearance exists and therefore the lateral clearance is acceptable.

1.4 Central Cradle – Vertical Interface

All of the conceptual central cradle designs are supported vertically by the center pin attachment blocks. A pinned connection is used with an $\varnothing 4.000 \pm .002$ pin [2]. The $\varnothing 4.13 \pm .06$ hole on the cradle is round while the cradle connection is a slotted hole with a $4.370 + .060 / -.035$ height [1].

The maximum clearance can be calculated using the minimum of the slot and hole maximum conditions and the smallest pin diameter. This assumes the hole/slot size is not reduced from misalignment which would reduce the clearance.



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The maximum vertical clearance is

$$\text{max clearance} = (4.370 + .060) - (4.000 - .002) = .432 \text{ inches}$$

The minimum vertical clearance can be calculated using the minimum condition hole and slot sizes, with the maximum sized pin, and the maximum misalignment per the hole locations.

The minimum cradle hole size is: $4.13 - .06 = 4.07$

The minimum center pin attachment block slot height is: $4.370 - .035 = 4.335$

The maximum misalignment comes from the tolerance on the cradle and pin block hole/slot vertical locations.

The center pin attachment block tolerance height from base plate is (from the positional tolerance on [16] and confirmed on [1]) = $9.50 \pm .03$

The cradle hole height from base plate (bottom of cradle) = $9.50 \pm .06$

The maximum misalignment = $.03 + .06 = .09$

This half difference in slot height – cradle hole = $(4.335 - 4.07) / 2 = .1325$

The minimum through hole due to misalignment = $4.07 - (.09 - .1325) = 4.11 \text{ inches}$

The maximum pin diameter is 4.002 inches.

$$\text{min clearance} = 4.11 - 4.002 = .108 \text{ inches}$$

1.5 Cradle End Stops – Vertical Clearance

The conceptual cradle end stop holes are dimensioned as $8.00 \pm .06$ from the top shelf [5]. The as-built outer attachment block holes are $7.875 - 8.075$ ($8.000 + .075 / - .125$) from the top of the block [1]. The outer pin attachment block holes are very closely aligned with less than 1/16 positional difference in hole centers.

The minimum cradle end stop hole size is: $4.13 - .06 = 4.07$

The minimum outer pin attachment block hole diameter is (from [1]): $4.370 - .047 = 4.323$

The maximum misalignment comes from the tolerance on the cradle and pin block hole vertical locations.

The outer pin attachment block tolerance height from base plate = $8.000 + .075 / - .125$

The cradle hole height from base plate (bottom of cradle) = $8.00 \pm .06$

The maximum misalignment = $.125 + .06 = .185$

This half difference in attachment hole – cradle hole = $(4.323 - 4.07) / 2 = .1265$

The minimum through hole due to misalignment = $4.07 - (.185 - .1265) = 4.012 \text{ inches}$

The maximum pin diameter is 4.002 inches.

$$\text{min clearance} = 4.012 - 4.002 = .010 \text{ inches}$$

1.6 Ballast and Test Loads

The ballast and test loads listed in [11] through [15] were designed to match the conceptual cradle interface and therefore are still acceptable for the as-built Atlas railcar.



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2.0 RESULTS AND SNR DISPOSITION

2.1 Design Change Summary

The fabricated Atlas railcar did not meet the requirements of DWG-3018956-000. The documented changes resulted from difficulty in fabricating the first of a kind railcar and from the manufacturing techniques used by the fabricator.

2.2 SNR Disposition

As shown in the calculations above, the final condition of the railcar still meets the interface design of the conceptual cradle and ballast designs that will be provided to the final cradle designers. Therefore, the Atlas railcar, as fabricated, meets its design and contract requirements and a us-as-is disposition is approved.

3.0 REFERENCES

1. KAS-SNR-011 Attachment 1, *Orano Federal Services Atlas Railcar - As-Built Dimensional Inspection report spreadsheet.*
2. Orano Federal Services Drawing, DWG-3015934, *Atlas Railcar Cradle Attachment*, Rev. 000
3. Orano Federal Services Drawing, DWG-3015278, *Atlas Railcar Cradle Attachment Components*, Rev. 002.
4. Orano Federal Services Calculation, CALC-3015276, *Atlas Railcar Cradle Attachment and Combined Center of Gravity Calculation*, Rev. 004
5. Orano Federal Services Drawing, DWG-3015137, *Atlas Railcar Cradle Family 1 Conceptual Drawing*, Rev. 002
6. Orano Federal Services Drawing, DWG-3015138, *Atlas Railcar, Cradle Family 2 (NAC), Conceptual Drawing*, Rev. 001
7. Orano Federal Services Drawing, DWG-3015277, *Atlas Railcar, Cradle Family 2 (TN-68), Conceptual Drawing*, Rev. 0.
8. Orano Federal Services Drawing, DWG-3015139, *Atlas Railcar Cradle Family 3 Conceptual Drawing*, Rev. 000
9. Orano Federal Services Drawing, DWG-3015140, *Atlas Railcar, Cradle Family 4, Conceptual Drawing*, Rev. 1
10. Orano Federal Services Calculation, CALC-3015934-002, *Atlas Railcar Cask and Cradle Dynamic Modeling Inputs*, Rev. 002
11. Orano Federal Services Drawing, DWG-3018955, *Atlas Railcar Ballast Load Assembly Conceptual Drawing*, Rev. 000
12. Orano Federal Services Drawing, DWG-3020457, *Ballast Test Load, Atlas Railcar Test Loads*, Rev. 001
13. Orano Federal Services Drawing, DWG-3020459, *Minimum Test Load Cradle, Atlas Railcar Test Loads*, Rev. 001
14. Orano Federal Services Drawing, DWG-3020461, *Maximum Test Load Cradle, Atlas Railcar Test Loads*, Rev. 001
15. Orano Federal Services Drawing, DWG-3020458, *Minimum Test Load, Atlas Railcar Test Loads*, Rev. 001
16. Orano Federal Services Drawing, DWG-3018956, *Atlas Railcar, Cradle Attachment*, Rev. 000



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Orano Federal Services

DOE Atlas Railcar Engineering Oversight Report

Orano FS Project No.: 00225.03.0050

Date: 1/29/2019

Orano FS witnessed the load testing of the Atlas railcar on 1/29/2019. This memo documents the results of the load test and checks the results of the load test to the deck height acceptance criteria.

Atlas Railcar Load Test:

The Atlas railcar is required to be load tested with a partial load to determine acceptability of the deck height. The deck height must be at a sufficient height from the rails such that all Atlas Railcar payloads will meet the Plate E height requirements. The Plate E height requirement is 189 inches from the rail. (Separately, the combined center of gravity S-2043 98 inch height requirement is confirmed in CALC-3015276-004 for all payloads using a conservative unloaded deck height). The Atlas railcar was evaluated by Kasgro to determine the partial loaded deck height and testing was selected from these analytical results to verify the most limiting case. The following loaded deck heights were provided by Kasgro and documented in AFS-IN-17-0008 which is attached. Note that only casks with impact limiters less than 128 inches are evaluated for Plate E height. Casks with impact limiters greater than 128 inches will not meet Plate E width or height limits.

Table 1 – Family 2-4 Loaded Deck Height Inputs

Cask	Family	Cask Weight (empty), lb	Cradle Weight (min), lb	Total Empty/light weight, lb.	Loaded Deck Height for 12-axle Atlas, in
NAC-STC	2	188,767	37,800	226,567	57.00
NAC-UMS UTC	2	178,798	37,800	216,598	57.06
MAGNATRAM	2	208,000	37,800	245,800	56.875
MP187	4	190,200	29,250	219,450	57.00
MP197	3	176,710	23,400	200,110	57.125
MP197HB	3	179,000	23,400	202,400	57.125
TN-68	2	-	-	-	Don't Need
TS125	3	-	-	-	Don't Need



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Table 2 – Family 1 Loaded Deck Height Inputs

Cask	Family	Cask Weight (empty), lb.	Central Cradle Weight (min), lb.	End Stop weight, lb.	Loaded Deck Height for 12-axle Atlas
HI-STAR 100	1	179,710	18,491	10,473	57.00
HI-STAR HB	1	187,200	13,500	13,091	57.00
HI-STAR 180	1	262,400	8,264	11,045	56.625
HI-STAR 60	1	142,530	12,827 14,482 ⁽¹⁾	15,382 10,800 ⁽¹⁾	57.375 ⁽¹⁾
HI-STAR 190 SL	1	282,746	12,027	9,573	56.50
HI-STAR 190 XL	1	304,369	12,273	9,000	56.375
TN-32B	1	-	-	-	Don't Need
TN-40	1	-	-	-	Don't Need
TN4OHT	1	-	-	-	Don't Need

Notes:

- The HI-STAR 60 conceptual cradle weight was revised per FS CAR 2018-6804. This change reduced the end stop weight and increased the weight located at the center of the car – based on inspection this would decrease the deck height and the Kasgro provided deck height is conservative.



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With the exception of the MP187, all other Atlas railcar payloads have circular impact limiters, and the maximum payload height can be calculated by adding the deck height (from Table 1 and Table 2 above), the center of impact limiter/cask cg off the deck (from Table 4-3 of CALC-301526-004) and the impact limiter radius (from Appendix A of EIR-3014611-009). The maximum payload heights are calculated and listed in Table 3 below.

Table 3 – Max Payload Heights

Cask	Family	Cask IL Diameter, in	Cask cg, in (from deck)	Empty Cask Deck Height (From KASGRO, for 12-axle Atlas)	Max Height (with empty cask deck heights, for 12 axle)
NAC-STC	2	128	68.00	57.00	189.00
NAC-UMS UTC	2	124	68.00	57.00	187
MAGNATRAN	2	128	68.00	56.875	188.875
HI-STAR 100	1	128	66.50	57.00	187.5
HI-STAR HB	1	128	66.50	57.00	187.50
HI-STAR 180	1	128	65.00	56.625	185.625
HI-STAR 60	1	128	60.13	57.375	181.505
MP187	4	126.75	65.00	57.00	185.375 ⁽²⁾
MP197	3	122	62.50	57.125	180.625
MP197HB	3	126	64.50	57.125	184.625
TN-32B	1	144	-	-	-
TN-40	1	144	-	-	-
TN4DHT	1	144	-	-	-
TN-68	2	144	-	-	-
TS125	3	143.5	-	-	-
HI-STAR 190 SL	1	128	65.00	56.50	185.50
HI-STAR 190 XL	1	128	65.00	56.38	185.38

Notes:

1. Only casks with impact limiters less than 128 inches are evaluated for Plate E height. Casks with impact limiters greater than 128 inches will not meet Plate E width or height limits.
2. The MP187 cask has a square impact limiter and needs to have a deck height of 57.00 inches to meet Plate E. See Figure 1.



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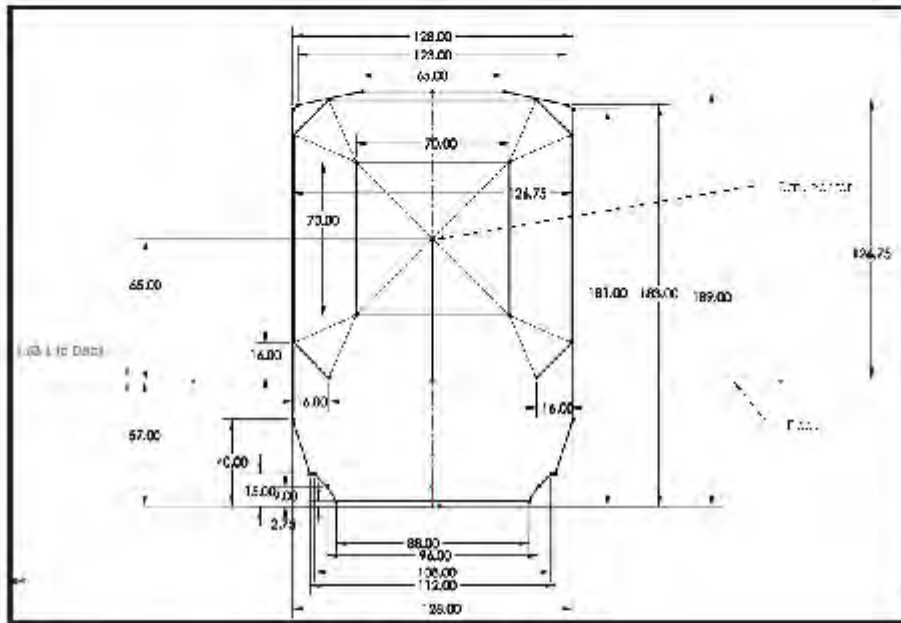


Figure 1 – MP187 for Plate E

Deck Height Acceptance Criteria

From the table above, it can be seen that there are three payloads critical to meeting the Plate E height requirement (189 inches from the rail). All of the critical payloads apply loads at the center four pin locations. Weights are taken from Table 1, deck heights are taken from Table 3.

Table 4 – Critical Deck Heights

Payload	Weight	Deck height required
NAC-STC	226,567 pounds	57.00
MANATLAN	245,800 pounds	56.875
MP187	219,450 pounds	57.00



Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
Appendix B

Doc./Rev.: EIR-3021970-000
Project: 00225.03.0050 DOE Atlas Project



KAS-SNR-011 Attachment 6

Orano Federal Services
DOE Atlas Railcar Engineering Oversight Report

Load Test Results

On 1/29/2019 FS witness the railcar deck loaded to approximately 215,240 ±1000 pounds. Weights for each component of the load used are listed below:

Frame: 850 pounds
Plate: 15,000 pounds
Stack 1: 107,100 pounds
Stack 2: 43,250 pounds
Stack 3: 43,250 pounds
Stack 4: 5790 pounds

The weights were added sequentially and placed on a frame that distributed the weight to the center four pin locations. See the attached load test figures. The deck height at the location of the cradle support pad was measured to the shop floor using a straight edge and tape measure. This measurement method is typical for Kasgro deck height measurements and is considered the official deck height to rail verification. The results of the deck height measurements taken by Kasgro are listed below.

Right, B end: 56 3/4 inches
Right, A end: 56 7/8 inches
Left, B end: 56 9/16 inches
Left, A end: 56 5/8 inches

FS engineering took some additional unofficial measurements to verify that the shop floor was equivalent to measuring to the rail. All equipment used was not calibrated and results are for only for information. A self-leveling laser was used to determine a datum from the top of the rail. The datum was then used to measure to the top of the cradle support pads. The ground was not level, and in some cases, the ground was slightly less than the top of the rails. However, a maximum deck height of 56 7/8 inches was confirmed to be bounding.

The DOE Atlas load test confirmed that the Atlas railcar deck height meets the design requirements. The deck was loaded to a weight of 215,000 pounds and met the deck height requirements of Table 4.



Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
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Project: 00225.03.0050 DOE Atlas Project

KAS-SNR-011 Attachment 6



Orano Federal Services

DOE Atlas Railcar Engineering Oversight Report

Load Test Pictures

Load test frame being lowered onto railcar





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Orano Federal Services

DOE Atlas Railcar Engineering Oversight Report

Test load frame on seated on pin location





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Orano Federal Services
DOE Atlas Railcar Engineering Oversight Report

Assembled test load:





Orano Federal Services
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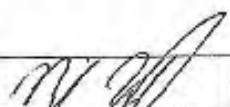
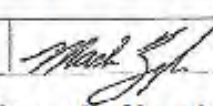
FORM 1	KASGRO RAIL CORP	3-21-17
Non-Conformance/Corrective/Preventative Action Form		
Distribute To: ORANO Engineering, Kasgro Project Manager		NC# 2
Audit General:	Item Number: 10,11,12	PO#: 15C3011916
Location: Car Shop	Date: 3-13-2019	Quantity: 8
Non-Conformance:		
The inner and outer pin blocks were not fabricated with the required stainless-steel cladding.		
Reference Requirements:		
Drawing: 3018956 Sheet 1 Note 8 calls for a stainless-steel cladding to be applied to the inner and outer pin blocks.		
Corrective/Preventative Action		
Assignee: Nick Hinsch	Date Requested: 3-13-2019	Date Due: 3-27-2019
1.) Determination of Root Cause:		
It was determined that it would be very difficult to apply the stainless-steel cladding to the inner and outer pin blocks and maintain required dimensions.		
2.) Corrective Action / Preventative Action Taken:		
N/A		
4.) Verification Method/Action:		
Kasgro held a meeting with ORANO and both parties were in agreement to use the inner and outer pin blocks without the stainless-steel cladding applied.		
ORANO Engineering Department to evaluate. ORANO Engineering Department approved to use as is.		
5.) To be completed by Action Acceptable: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	3.) Assignee Signature:	Date: 4-15-2019
6.) Verification Required? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Follow-up Audit Required? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> TBD	
7.) Quality Assurance:		Date NCCAF Closed: 4-15-2019

Note: Sections 1-3 to be completed by assignee. Sections 4-7 to be completed by Plant QA Department.



Orano Federal Services
 Title: Design and Prototype Fabrication of Railcars for Transport of
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 Project: 00225.03.0050 DOE Atlas Project

FORM 1	KASGRO RAIL CORP	3-21-17
Non-Conformance/Corrective/Preventative Action Form		
Distribute To: Kasgro Engineering Department, Shop, Project Manager		NC# 3
Audit General:	Item Number: A-2	PO#:
Location :Car Shop	Date: 3-13-2019	Quantity: 1
Non-Conformance:		
Pin tray A2, item 3 to item 15 assembly was fabricated per Drawing 3018956, sheet 8.		
Reference Requirements:		
Drawing 3018956 Sheet 8 does not show a ¼ inch extension of item 15 beyond the back side of item 3 nor a spacer plate to be welded to the back side of the pin tray item 3.		
Corrective/Preventative Action		
Assignee: Nick Hirsch	Date Requested: 3-13-2019	Date Due: 3-13-2019
1.) Determination of Root Cause:		
The required ¼ inch offset dimension is not illustrated on drawing 3018956 sheet 8. When pin tray assembly A2 was inspected by ORANO Engineering and QA it was noted the item 15 was supposed to extend past the back side of item 3 by ¼ inch.		
This issue was discussed with ORANO Engineering and it was determined that spacer tabs could be added to back of item 3 mounting plate to obtain the proper clearance for correct installation.		
2.) Corrective Action / Preventative Action Taken:		
Six ¼ inch spacer tabs have been welded on the back side of item 3 of the pin tray.		
4.) Verification Method/Action:		
Use modified pin tray A2. Kasgro QC has verified the six ¼ inch spacer tabs are properly welded in place.		
5.) To be completed by	3.) Assignee Signature: 	Date: 04-09-2019
Action Acceptable: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	6.) Verification Required? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Follow-up Audit Required? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> TBD
7.) Quality Assurance: 	Date NCCAF Closed: 04-09-2019	

Note: Sections 1-3 to be completed by assignee. Sections 4-7 to be completed by Plant QA Department.



Orano Federal Services
**Title: Design and Prototype Fabrication of Railcars for Transport of
 High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
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Doc./Rev.: EIR-3021970-000
 Project: 00225.03.0050 DOE Atlas Project

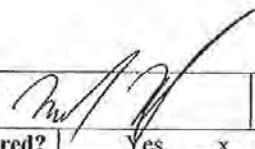

FORM 1	KASGRO RAIL CORP	3-21-17
Non-Conformance/Corrective/Preventative Action Form		
Distribute To: ORANO Engineering, Kasgro Project Manager		NC# 4
Audit General:	Item Number: 10	PO#: 15C3011916
Location: Car Shop	Date: 3-13-2019	Quantity: 8
Non-Conformance:		
Item 10 Outboard attachment on drawing 3018956 sheet 6 of 8 some of the final inspection dimensions are out of tolerance.		
Reference Requirements:		
NA		
Corrective/Preventative Action		
Assignee: Nick Hinsch	Date Requested: 3-13-2019	Date Due: 3-13-2019
1.) Determination of Root Cause:		
The Machine shop did not hold the tolerance.		
2.) Corrective Action / Preventative Action Taken:		
Continue to inspect incoming material from the machine shop.		
4.) Verification Method/Action:		
The outboard attachment item 10 that are out of tolerance are dimension E on part numbers 2,3,4,5, and 6 and dimension I on part number 6. These dimensions are shown on Kasgro Rail Corp. Outboard Attachment drawing item 10 revision B.		
ORANO Engineering Department to evaluate dimensions. ORANO Engineering Department approved to use as is.		
5.) To be completed by Action Acceptable: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	3.) Assignee Signature:	Date: 4-15-2019
6.) Verification Required? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Follow-up Audit Required? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> TBD	
7.) Quality Assurance:		Date NCCAF Closed: 4-15-2019

Note: Sections 1-3 to be completed by assignee. Sections 4-7 to be completed by Plant QA Department.



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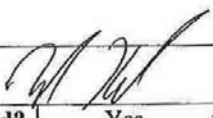
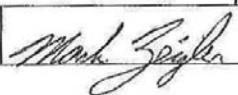
FORM 1	KASGRO RAIL CORP	3-21-17
Non-Conformance/Corrective/Preventative Action Form		
Distribute To: ORANO Engineering, Kasgro Project Manager		NC# 5
Audit General:	Item Number: 8	PO#: 15C3011916
Location: Car Shop	Date: 3-13-2019	Quantity: 8
Non-Conformance: Inboard attachment Item #8 on Drawing 30108956 sheet 5 of 8 some of the final inspection dimensions are out of tolerance.		
Reference Requirements: NA		
Corrective/Preventative Action		
Assignee: Nick Hinsch	Date Requested: 3-13-2019	Date Due: 3-13-2019
1.) Determination of Root Cause: The machine shop did not hold the tolerance.		
2.) Corrective Action / Preventative Action Taken: Continue to inspect incoming material from the machine shop.		
4.) Verification Method/Action: The inboard attachments item #8 that are out of tolerance are dimension F on all the inboard attachments are shown on Kasgro Rail Drawing for the inboard attachments. ORANO Engineering Department to evaluate dimensions. ORANO Engineering Department approved to use as is		
5.) To be completed by Action Acceptable: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	3.) Assignee Signature: 	Date: 4-15-2019
6.) Verification Required? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Follow-up Audit Required? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> TBD	
7.) Quality Assurance: 	Date NCCAF Closed:	4-15-2019

Note: Sections 1-3 to be completed by assignee. Sections 4-7 to be completed by Plant QA Department.



Orano Federal Services
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FORM 1	KASGRO RAIL CORP	3-21-17
Non-Conformance/Corrective/Preventative Action Form		
Distribute To: ORANO Engineering, Kasgro Project Manager		NC# 6
Audit General:	Item Number: 9	PO#: 15C3011916
Location: Car Shop	Date: 3-25-2019	Quantity: 2
Non-Conformance: Shear blocks Item #9 on Drawing 3018956 sheet 6 of 8 length dimension out of tolerance B-end shear block		
Reference Requirements: Detail item 9, Drawing 3018956, sheet 6 Length dimension 90 inches plus .1		
Corrective/Preventative Action		
Assignee: Nick Hinsch	Date Requested: 3-25-2019	Date Due: 4-09-2019
1.) Determination of Root Cause: The machine shop did not cut to proper length.		
2.) Corrective Action / Preventative Action Taken: Continue to inspect incoming material from machine shop		
4.) Verification Method/Action: The overall length of item #9 on the B-end is out of tolerance. The dimension is shown on Kasgro drawing Attachment Reference. ORANO Engineering Department to evaluate dimensions. ORANO Engineering Department approved to use as is.		
5.) To be completed by Action Acceptable: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	3.) Assignee Signature: 	Date: 4-15-2019
6.) Verification Required? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Follow-up Audit Required? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> TBD	
7.) Quality Assurance: 	Date NCCAF Closed:	4-15-2019

Note: Sections 1-3 to be completed by assignee. Sections 4-7 to be completed by Plant QA Department.



Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
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Appendix B.1.7 – Certificate of Conformance

Orano Federal Services	
DATA TRANSMITTAL FORM	
Supplier: KASGRO RAIL CORP., INC.	DTF No: 055 Page 1 of 1
P.O./SC No: 15C3011916	Date: 4/22/2019
Type of Submittal: <input type="checkbox"/> First <input checked="" type="checkbox"/> Re-Submittal	SDRL List Item No: 24
Submitted for: <input checked="" type="checkbox"/> Approval <input type="checkbox"/> Review <input type="checkbox"/> Information	Number of Copies Submitted: 1
Submitted By: RICK FORD	Rick Ford <small>Digitally signed by Rick Ford Date: 2019.04.22 15:54:00 -0400</small>
<small>(Name)</small>	<small>(Signature)</small>
PROJECT MANAGER <small>(Title)</small>	

ITEM NUMBER	DOCUMENT NUMBER	REVISION NUMBER	DOCUMENT DESCRIPTION	FS DISPOSITION
1	KAS 198		KASGRO CERTIFICATE OF CONFORMANCE ATLAS BOFFER CAR IDOX 10001	<input checked="" type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA <input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA <input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA <input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA <input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA <input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA <input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA <input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
			<div style="border: 1px solid red; padding: 2px; display: inline-block;"> KLEIN Slade <small>Date: 2019.04.24 07:24:55 -0700</small> </div>	

Comments: No comments	Technical Reviewer (I.e., RE, PTL, SME, QA, etc.) KLEIN Slade <small>Date: 2019.04.24 07:22:44 -07'00'</small> Date 4/24/2019
--------------------------	---

FS DISPOSITION CODES AND DEFINITIONS			
AP	Approved	Work may proceed.	Resubmittal is not required
AWC	Approved with Comment	Work may proceed; comments provided for Supplier's consideration only.	Resubmittal is not required
REV	Reviewed	Work may proceed; comments provided for Supplier's consideration only.	Resubmittal is not required
RWC	Reviewed with Comment	Work may proceed; subject to incorporation and compliance w/ Buyer comments.	Correct and resubmit
DS	Disapproved	Work may <u>not</u> proceed.	Correct and resubmit
RSA	Receipt Submittal Acknowledged	No other action required.	

If, in the judgment of the Supplier, the incorporation of FS' comments will result in a change to the Purchase Order/Subcontract, work shall not proceed and the Supplier shall immediately provide a written notice to FS' C&P Representative describing the change.

Project Manager (PM) / Engineering Manager (EM) or Designated Individual (DI) Approval 	<small>Digitally signed by GENTON Mark DN: c=ARENA GROUP, 2.5.4.45=167A37C138C410E2D031700, ou=GENTON Mark Date: 2019.04.24 10:40:42 -0400</small>	Date: 04/24/2019
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FS-EN-FRM-023 Rev 02 (Effective March 1, 2018)
 Refer to FS-EN-PRC-012



Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
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Doc./Rev.: EIR-3021970-000
 Project: 00225.03.0050 DOE Atlas Project

	Orano Federal Services	
	SUPPLIER DOCUMENT SUBMITTAL REVIEW	
Supplier / PO No.:	KASGRO / 15C3011916	DTF No. / Rev: 055
Charge No:	00225.03.0050.02.00001	Due Date: 4/22/2019
Document(s):	See DTF No.: 055	
REVIEW INSTRUCTIONS: (List Supplier Doc. No. and Rev. FS Spec and Dwg. Codes, Stds, etc.)		
PE	Slade Klein	
REVIEWERS	Slade Klein, Bernie Counterman	
QA	Bernie Counterman	
Technical Review		
Comments/Markup Attached Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Technical Reviewer Comments:		
No comments		
Technical Reviewer(s) (Sign/Date):		Date: 2019.04.24 07:21:18 -07'00'
KLEIN Slade		
Quality Assurance Review (As Applicable)		
Comments/Markup Attached Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Technical Reviewer Comments:		
No Comments		
QA Reviewer(s) (Sign/Date):		Digitally signed by COUNTERMAN Bernard Date: 2019.04.24 05:41:43 -07'00'
COMMENT DISPOSITION (If Applicable. Attached further comments and disposition correspondence as necessary)		

FS-EN-FRM-026 Rev 01 (Effective March 1, 2018)
 Refer to FS-EN-PRC-012



Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
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Project: 00225.03.0050 DOE Atlas Project

KAS 198

Kasgro Rail Corporation
121 Rundle Rd. New Castle, PA 16102
724-658-9061 • 724-658-7689 Fax • www.kasgro.com



KASGRO

CERTIFICATE OF ORDER CONFORMANCE

Date: 04/22/2019

SUPPLIER:
KasgroRail Corp
121 Rundle Rd
New Castle PA 16102

Rail Car Number: IDOX 010001

WE HEREBY CERTIFY THAT WE HAVE COMPLIED WITH AAR REQUIREMENTS AND
ALL THE REQUIREMENTS OF YOUR PURCHASE ORDER NO. 15C3011916


Mark Zeigler

Director of Quality Control

TITLE

NOTE: The Recording of False, Fictitious or Fraudulent Statements or Entries on
the Document may be Punishable as Felony Under Federal Statutes.

Specialty Rail Car Solutions



Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
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Project: 00225.03.0050 DOE Atlas Project

APPENDIX B.2 – SPECIAL PROCESS INSPECTION DOCUMENTATION

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**Title: Design and Prototype Fabrication of Railcars for Transport of
 High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery**
 Appendix B

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 Project: 00225.03.0050 DOE Atlas Project

Appendix B.2.1 – Securing and Jacking Lug Proof Test Certification Form, Form 45

Orano Federal Services	
DATA TRANSMITTAL FORM	
Supplier: KASGRO RAIL CORP., INC.	DTF No: 035 Page 1 of 1
P.O./SC No: 15C3011916	KLEIN Slade <small>Digitally signed by KLEIN Slade Date: 2018.10.22 11:57:15 -0400</small> Date: 10/22/2018
Type of Submittal: <input checked="" type="checkbox"/> First <input type="checkbox"/> Re-Submittal	SDRL List Item No: 24
Submitted for: <input checked="" type="checkbox"/> Approval <input checked="" type="checkbox"/> Review <input type="checkbox"/> Information	Number of Copies Submitted: 1
Submitted By: RICK FORD	Rick Ford <small>Digitally signed by Rick Ford Date: 2018.10.22 11:57:15 -0400</small> PROJECT MANAGER
<small>(Name)</small>	<small>(Signature)</small> <small>(Title)</small>

ITEM NUMBER	DOCUMENT NUMBER	REVISION NUMBER	DOCUMENT DESCRIPTION	FS DISPOSITION
1	KAS 116		LUG PROOF TEST FORM 45 FOR ATLAS CASK CAR, HYDRAULIC TEST PRESSURE GAUGE, AND DWG. D-1128-1	<input checked="" type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA <input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA <input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA <input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA <input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA <input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA <input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA <input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA

Comments: No comments	Technical Reviewer (I.e., RE, PTL, SME, QA, etc.) KLEIN Slade <small>Digitally signed by KLEIN Slade Date: 2018.11.12 16:16:25 -0800</small> Date: 11/12/2018
--------------------------	---

FS DISPOSITION CODES AND DEFINITIONS			
AP	Approved	Work may proceed.	Resubmittal is not required
AWC	Approved with Comment	Work may proceed; comments provided for Supplier's consideration only.	Resubmittal is not required
REV	Reviewed	Work may proceed; comments provided for Supplier's consideration only.	Resubmittal is not required
RWC	Reviewed with Comment	Work may proceed; subject to incorporation and compliance w/ Buyer comments.	Correct and resubmit
DS	Disapproved	Work may <u>not</u> proceed.	Correct and resubmit
RSA	Receipt Submittal Acknowledged	No other action required.	

If, in the judgment of the Supplier, the incorporation of FS' comments will result in a change to the Purchase Order/Subcontract, work shall not proceed and the Supplier shall immediately provide a written notice to FS' C&P Representative describing the change.

Project Manager (PM) / Engineering Manager (EM) or Designated Individual (DI) Approval 	<small>Digitally signed by Mark A. Denton DN: cn=Mark A. Denton, o=Orano Federal Services, email=mark.denton@orano.com, c=US Date: 2018.11.12 16:25:08 -0800</small> Date: 11/12/2018
--	--

FS-EN-FRM-023 Rev 02 (Effective March 1, 2018)
 Refer to FS-EN-PRC-012



Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
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Doc./Rev.: EIR-3021970-000
 Project: 00225.03.0050 DOE Atlas Project

	Orano Federal Services	
	SUPPLIER DOCUMENT SUBMITTAL REVIEW	
Supplier / PO No.:	KASGRO / 15C3011916	DTF No. / Rev: 035
Charge No:	00225.03.0050.02.00001	Due Date: 11/13/2018
Document(s):	See DTF No.: 035	
REVIEW INSTRUCTIONS: (List Supplier Doc. No. and Rev. FS Spec and Dwg. Codes, Stds, etc.)		
PE	Slade Klein	
REVIEWERS	Slade Klein, Bernie Counterman	
QA	Bernie Counterman	
Technical Review		
Comments/Markup Attached Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Technical Reviewer Comments:		
No comments.		
Technical Reviewer(s) (Sign/Date): KLEIN Slade		Digitally signed by KLEIN Slade Date: 2018.11.12 13:51:30 -08'00'
Quality Assurance Review (As Applicable)		
Comments/Markup Attached Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Technical Reviewer Comments:		
No Comments		
QA Reviewer(s) (Sign/Date):		Digitally signed by COUNTERMAN Bernard Date: 2018.11.12 15:37:05 -08'00'
COMMENT DISPOSITION (If Applicable. Attached further comments and disposition correspondence as necessary)		

FS-EN-FRM-026 Rev 01 (Effective March 1, 2018)
 Refer to FS-EN-PRC-012



Orano Federal Services
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Doc./Rev.: EIR-3021970-000
 Project: 00225.03.0050 DOE Atlas Project

Kasgro Rail Corporation
 Lug Proof Test Procedure 11-Atlas

LETT-11-Atlas M-1003 Rev. 5

SECURING AND JACKING LUG PROOF TEST CERTIFICATION FORM
 Form 45 Rev. 2 02-28-2018

Component – Tie Down Lugs
 Drawing Number – E-1155-1, 1155-38
 Part Number – 3-138
 Standard Identifier – NA
 Car CASK-1
 Use Lug Proof Test Procedure # 11-A

Lug Location	Test Pressure PSI.	Test Load in Pounds	Minutes Tested	Post Test Inspection	Date
CL	2860-3045	66826-71171	10	ACCEPTED	8/28/18
CR	2860-3045	66826-71171	10	ACCEPTED	8/28/18
AL	2860-3045	66826-71171	10	ACCEPTED	8/28/18
AR	2860-3045	66826-71171	10	ACCEPTED	8/28/18

Securing and Jacking Lug Proof Test to be performed using Kasgro Rail Corp Lug Test Fixture Drawing D-1128-1

The securing and jacking lugs have been proof tested in strict accordance with all applicable specifications, drawings, procedures and contract requirements, including amendments / change notices.

Proof Test Certification covering compliance to this specification, Proof Test Procedure and results of pre-and post-proof test NDT inspection results are onfile at Kasgro Rail Corp.

Seller's Authorized Representative: Bill Baker

Bill Baker

Date: 8/28/18

Sellers Name: KASGRO RAIL CORP

Note: The recording of false, fictitious, or fraudulent statements on this document may be punishable as a felony under federal statutes.

Printed copy valid for 24 hours from time of printing unless printed "CONTROLLED COPY" in red.

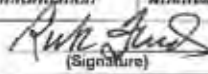
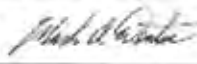
Date printed 9/24/18 6:36 AM



Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
Appendix B

Doc./Rev.: EIR-3021970-000
 Project: 00225.03.0050 DOE Atlas Project

Appendix B.2.2 – Spring Test Requirements and Tolerances Procedure #12

AREVA Federal Services LLC				
DATA TRANSMITTAL FORM				
Supplier:	KASGRD RAIL CORP., INC.	DTF No:	001	Page 1 of 2
P.O./SC No:	15C3011916	Date:	06/29/17	
Type of Submittal:	<input checked="" type="checkbox"/> First <input type="checkbox"/> Re-Submittal		SDRL List Item No: 9,10	
Submitted for:	<input checked="" type="checkbox"/> Approval <input type="checkbox"/> Review <input type="checkbox"/> Information		Number of Copies Submitted: 1	
Submitted By:	RICK FORD (Name)	 (Signature)	PROJECT MANAGER (Title)	
ITEM NUMBER	DOCUMENT NUMBER	REVISION NUMBER	DOCUMENT DESCRIPTION	AFS DISPOSITION
1	KAS001	0	ATLAS PROJECT PHASE 2 DOCUMENT SUBMITTAL (SEE ATTACHED)	<input type="checkbox"/> AP <input checked="" type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
The enclosed document submittals are accepted with comment for continued use on the Atlas railcar project. Resubmittal is not required, however consideration of AFS comments should be included in future work with the ultimate validation of Atlas project phase two documents being the receipt of the AAR EECs notice-to-proceed with test phase for the Atlas and buffer railcars.				<input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
				<input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
				<input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
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				<input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
Comments: See above statement and attached comments.				Technical Reviewer (i.e., RC, PTL, SME, QA, etc.) KLEIN Slade <small>Digitally signed by KLEIN Slade Date: 2017.08.01 09:54:31 -0700</small> Date: 8/1/2017
AFS DISPOSITION CODES AND DEFINITIONS				
AP	Approved	Work may proceed.	Resubmittal is not required	
AWC	Approved with Comment	Work may proceed; comments provided for Supplier's consideration only.	Resubmittal is not required.	
REV	Reviewed	Work may proceed; comments provided for Supplier's consideration only.	Resubmittal is not required	
RWC	Reviewed with Comment	Work may proceed; subject to incorporation and compliance w/ Buyer comments.	Correct and resubmit	
DS	Disapproved	Work may <u>not</u> proceed.	Correct and resubmit	
RSA	Receipt Submittal Acknowledged	No other action required.		
If, in the judgment of the Supplier, the incorporation of AFS' comments will result in a change to the Purchase Order/Subcontract, work shall not proceed and the Supplier shall immediately provide a written notice to AFS' C&P Representative describing the change.				
Project Manager (PM) / Engineering Manager (EM) or Designated Individual (DI) Approval 			Date: 08/31/2017	

AFS-FN-FRM-023 Rev 01 (Effective August 18, 2014)
 Refer to AFS-EN-PRC-012



Orano Federal Services
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Appendix B

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 Project: 00225.03.0050 DOE Atlas Project

	AREVA Federal Services LLC	
	SUPPLIER DOCUMENT SUBMITTAL REVIEW	
Supplier / PO No.:	Kasgro Rail / 15C3011916	DTF No. / Rev: 001
Charge No:	00225.03.0050.02.00001	Due Date: 7/14/2017
Document(s):	See DTF No.:001	
REVIEW INSTRUCTIONS: (List Supplier Doc. No. and Rev. AFS Spec and Dwg. Codes, Stds, etc.)		
PE	Slade Klein	
REVIEWERS	Slade Klein, Bernie Counterman	
QA	Bernie Counterman	
Technical Review		
Comments/Markup Attached Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Technical Reviewer Comments:		
1) WPS F002, Material specification should be: A572 Grade 50 and A572 Grade 60 2) Multiple documents have been provided as an example based on the M290 these documents will need to be updated or reproduced for the Atlas railcar. 3) The track scale test is an annual test and was last performed May 2016. 4) TUV UT Reference section 2.0 lists AWS D15.2, it should be AWS D15.1.		
Technical Reviewer(s) (Sign/Date): KLEIN Slade		Digitally signed by KLEIN Slade Date: 2017.07.11 10:26:14 -07'00'
Quality Assurance Review (As Applicable)		
Comments/Markup Attached Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Technical Reviewer Comments:		
See attached comments.		
QA Reviewer(s) (Sign/Date): COUNTERMAN Bernard		Digitally signed by COUNTERMAN Bernard Date: 2017.07.31 15:33:14 -07'00'
COMMENT DISPOSITION (If Applicable. Attached further comments and disposition correspondence as necessary)		



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Project: 00225.03.0050 DOE Atlas Project

#01	<ul style="list-style-type: none">Joint detail states "See Attached" no joint detail attached.
#02	<ul style="list-style-type: none">ASTM A52, Grade 60 is not listed in AWS D15.1, Table 8.1 for prequalified materials. ASTM A52 was withdrawn in 1925 and replaced by ASTM A83 (which is also not prequalified material).Preheat and interpass temperatures are identified as "See Attached Report". The attached report contains joint geometry and does not contain preheat or interpass temperatures.
#03	<ul style="list-style-type: none">No Comments
#04	<ul style="list-style-type: none">Tensile Test Results state "See Attached Report". Report is not attached.Need to include UT report #23.
#05	<ul style="list-style-type: none">No Comments
#06	<ul style="list-style-type: none">It is assumed (not stated) that the values are the pulling force. Therefore the test pressure should be changed to 2800 PSI +185 PSI -0 PSI and the test load would be 86828 LBS +4345 LBS - 0 LBS
#07	<ul style="list-style-type: none">No Comments
#08	<ul style="list-style-type: none">No Comments
#09-10	<ul style="list-style-type: none">Need to identify the ID of trucks A through F on Exhibit F. Also, might be good to identify front or rear (A end or B end).
#11	<ul style="list-style-type: none">No Comments
#12	<ul style="list-style-type: none">No Comments
#13	<ul style="list-style-type: none">No Comments
#14	<ul style="list-style-type: none">No Comments
#15	<ul style="list-style-type: none">No Comments
#16	<ul style="list-style-type: none">No Comments
#17	<ul style="list-style-type: none">No Comments
#18	<ul style="list-style-type: none">No Comments
#19	<ul style="list-style-type: none">Originator signature not legible. Also, is he a Level III?Need TÜV document NDTG-CTP-1Need TÜV document NDTG-UTQC-1
#20	<ul style="list-style-type: none">No Comments
#21	<ul style="list-style-type: none">No Comments
#22	<ul style="list-style-type: none">No Comments
#23	<ul style="list-style-type: none">No Comments
#23	<ul style="list-style-type: none">No Comments
#23	<ul style="list-style-type: none">No Comments
#24	<ul style="list-style-type: none">No Comments
#25	<ul style="list-style-type: none">No Comments
#26	<ul style="list-style-type: none">No Comments
#27	<ul style="list-style-type: none">No Comments
#28	<ul style="list-style-type: none">No Comments
#29	<ul style="list-style-type: none">No Comments
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#31	<ul style="list-style-type: none">No Comments
#32	<ul style="list-style-type: none">No Comments
#33	<ul style="list-style-type: none">No Comments
#34	<ul style="list-style-type: none">No Comments
#35	<ul style="list-style-type: none">No Comments
#36	<ul style="list-style-type: none">No Comments
#37	<ul style="list-style-type: none">No Comments
#38	<ul style="list-style-type: none">No Comments
#39	<ul style="list-style-type: none">Need to add a statement similar to "Except as noted on NCR Nos.:" if any NCRs are generated
#40	<ul style="list-style-type: none">No Comments
#41	<ul style="list-style-type: none">No Comments
#42	<ul style="list-style-type: none">No Comments
#43	<ul style="list-style-type: none">No Comments
WPS F001	<ul style="list-style-type: none">No Comments
WPS F004	<ul style="list-style-type: none">Preheat and interpass temperature states "See attached report". Report is not attached



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Spring Test Requirements and Tolerances Procedure #12 Rev. 3

23 February 2016

Kasgro Rail Corporation Spring Testing

290-ton flatcar springs shall be manufactured in accordance with the Association of American Railroads Specification M-114, ASTM A125, Kasgro Rail Corporation (Kasgro) Drawing D-1114-33, and the requirements specified herein. Kasgro reserves the right to reject springs not meeting the below stated requirements. All criteria herein shall be met unless otherwise approved or authorized by Kasgro.

Subsequent to end grinding, wet florescent magnetic particle testing of each spring shall be performed as specified on Drawing D-1114-33. Test and acceptance criteria shall be as follows:

- > Examination shall be by the continuous method.
- > Indications less than 1/64 inch shall be disregarded.
- > There shall be no linear indications 1/32 inch or greater. A linear indication is any indication where the length of the major axis is at least three times the length of the minor axis.
- > Rounded indications larger than 1/16 are cause for rejection.
- > Linearly disposed rounded indications shall be cause for rejection. Linearly disposed indications are three or more indications where adjacent indications are separated by less than 1/8 inch and a straight line can be drawn touching all three indications.
- > Surface indications that are not crack-like in appearance and are due to surface roughness may be accepted provided that at least 10 percent of each type of indication is removed and the indications do not reappear upon re-examination.
- > Local material removal (reworked surfaces) to determine the relevancy of an indication or to evaluate surface roughness shall be limited to a depth of 1/64 inch. Material may be removed by polishing or hand grinding (e.g., 100 grit stone).
- > Reworked surfaces shall be blended. Blended contours shall have no discontinuities or lapped-over surfaces. The bottom radius of a blended cavity shall be at least three times

Kasgro Rail Corporation

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Spring Test Requirements and Tolerances Procedure #12 Rev. 3 23 February 2016

the depth of the cavity, and the edges of the cavity shall be blended into the surrounding surfaces. All reworked and blended areas shall be re-wet florescent magnetic particle tested to confirm defect removal.

> All indications revealed by magnetic particle inspection do not necessarily represent defects since non-relevant indications are sometimes encountered. Indications caused by approved marking methods may be considered non-relevant. Examples of other such indications are as follows:

(a) Magnetic Writing. These indications are caused by contact with other steel or magnets while magnetized. They may be fuzzy and will be destroyed by demagnetization. They shall be verified as non-relevant by demagnetizing and re-examination.

(b) Change in Section. Indications which are broad and fuzzy may be caused by a concentration of the magnetic field coincident with a change in section. Non-relevancy shall be verified by a visual examination of the section and re-examination at a lower magnetizing current.

(c) Flow Lines. These are large groups of parallel indications which may occur in wrought material under excessive currents. Non-relevancy shall be determined by demagnetization and re-examination at a lower current.

Spring measurement and load test requirements and tolerances are defined as follows:

1. All springs are to be tested with the following values to be recorded.
 - 1.1. Free Height – Spring height in inches under zero load. If heights are measured in fractions of an inch, minimum data resolution is to be 0.03125 inches (1/32). If heights are measured digitally, minimum data resolution is to be 0.02 inches.
 - 1.2. Solid Height – Spring height in inches under a load which forces all or most coils into contact. If heights are measured in fractions of an inch, minimum data resolution is to

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Spring Test Requirements and Tolerances Procedure #12 Rev. 3

23 February 2016

be 0.03125 inches (1/32). If heights are measured digitally, minimum data resolution is to be 0.02 inches.

- 1.3. Load at Test Height 1 – Spring load in pounds at a defined test height (Test Height 1). Actual test height is to be within ± 0.0625 inches (1/16) of the defined test height. Minimum data resolution is to be to 1 pound.
- 1.4. Load at Test Height 2 – Spring load in pounds at a defined test height (Test Height 2). Actual test height is to be within ± 0.0625 inches (1/16) of the defined test height. Minimum data resolution is to be 1 pound.
2. Springs are to be compressed to solid height three (3) times before start of the above tests.
3. Testing is to be performed using industry-accepted methods. All gages, test machines, load cells, or other test equipment are to be properly maintained and have current calibration certificates. Evidence of such calibration is to be provided on request.
4. Results are to be provided in the form of a Microsoft Excel spreadsheet. The spreadsheet is to include header lines clearly identifying the spring tested and the test equipment used. Test results are to then follow in tabular form. Data are to include: Spring Serial Number, Free Height, Solid Height, Load at Test Height 1, Load at Test Height 2, Test Date, and Test Operator. Average and standard deviation values for each of the numeric data are to be calculated (using the Microsoft Excel AVERAGE and STDEVP functions). These values are to be followed by lines providing the minimum and maximum accepted value for each measurement as per the tables given in Paragraphs 5 and 6 below. A sample spreadsheet meeting the above requirements will be provided. A signed and dated paper copy of the spreadsheet is to be provided attesting that the measurements are accurate and have been performed according to the stated requirements.
5. Test heights and acceptance tolerances for individual springs are as shown in Table 1. Minimum and maximum accepted values are given in the shaded columns. Solid Height max-

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Spring Test Requirements and Tolerances Procedure #12 Rev. 3 23 February 2016

imum tolerances must be maintained per values listed in Table 1. * Solid height minimum dimensions are shown as desired values only and it is not required to have all springs meet the minimum value.

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Spring Test Requirements and Tolerances Procedure #12 Rev. 3
 23 February 2016

Table 1. Spring Test Heights and Acceptance Tolerances

Spring	Free Height (inches)		Solid Height (inches)		Test Heights		Load (lbs) at Height 1		Load (lbs) at Height 2	
	Min	Max	Min*	Max	1	2	Min	Max	Min	Max
1-88	11.720	11.501	6.690	6.750	10.250	8.000	1707	1999	4320	4612
1-89	11.720	11.501	6.690	6.750	10.250	8.000	736	861	1861	1987
1-90	13.000	12.750	6.690	6.750	10.250	8.000	2955	3494	5373	5712
1-91	13.000	12.750	6.690	6.750	10.250	8.000	957	1067	1741	1851
1-92	9.250	9.125	6.690	6.750	9.000	8.000	1047	1583	5234	5770
1-93	9.250	9.125	6.690	6.750	9.000	8.000	555	271	2776	3061
1-94	11.090	10.903	6.690	6.750	10.250	8.000	1116	1409	4106	4399
1-95	11.090	10.903	6.690	6.750	10.250	8.000	552	696	2080	2175
1-96	11.000	10.813	6.690	6.750	10.250	8.000	1808	2327	7231	7751
1-97	11.000	10.813	6.690	6.750	10.250	8.000	701	902	2804	3005
1-99	7.500	7.375	5.375	5.435	7.250	6.250	139	198	694	753

6. Table 2 provides acceptance tolerance per spring population (i.e., all springs of one type). The given tolerance ranges apply to the average value for a population. This requirement is intended to ensure that springs within a population do not cluster to one side or other of the tolerance range for individual springs. Minimum and maximum accepted values are again given in the shaded columns.



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 Project: 00225.03.0050 DOE Atlas Project

Spring...est Requirements and Tolerances Procedure #12 Rev. 2 23 February 2016

Table 2. Spring Population Acceptance Tolerances

Spring	Free Height (inches)		Load (lbs) at Height 1		Load (lbs) at Height 2	
	Min	Max	Min	Max	Min	Max
1-88	11.720	11.793	1707	1804	4320	4417
1-89	11.720	11.793	736	778	1861	1903
1-90	13.000	13.083	2955	3068	5373	5486
1-91	13.000	13.083	957	994	1741	1778
1-92	9.250	9.292	1047	868	5234	5413
1-93	9.250	9.292	555	461	2776	2871
1-94	11.090	11.153	1116	1019	4106	4204
1-95	11.090	11.153	552	600	2030	2078
1-96	11.000	11.063	1808	1981	7231	7404
1-97	11.000	11.063	701	634	2804	2871
1-99	7.500	7.542	139	119	694	714

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 Project: 00225.03.0050 DOE Atlas Project

Appendix B.2.3 – Brake Cylinder Piston Travel Adjustment Procedure #12

		Orano Federal Services			
		DATA TRANSMITTAL FORM			
Supplier:	KASGRO RAIL CORP., INC.	DTF No:	048	Page 1 of 1	
P.O./SC No:	15C3011916	Date:		3/7/2019	
Type of Submittal:	<input checked="" type="checkbox"/> First <input type="checkbox"/> Re-Submittal	SDRL List Item No:		24	
Submitted for:	<input checked="" type="checkbox"/> Approval <input type="checkbox"/> Review <input type="checkbox"/> Information	Number of Copies Submitted:		1	
Submitted By:	RICK FORD	Rick Ford	<small>Digitally signed by Rick Ford Date: 2019.03.07 10:45:17 -0500</small>	PROJECT MANAGER	
	<small>(Name)</small>	<small>(Signature)</small>		<small>(Title)</small>	
ITEM NUMBER	DOCUMENT NUMBER	REVISION NUMBER	DOCUMENT DESCRIPTION	FS DISPOSITION	
1	KAS 181		KASGRO PROCEDURE 14, FOR ATLAS CASK CAR INCLUDES TEST RESULTS APPLICABLE TO CASK CAR IDOX 10001 ONLY	<input checked="" type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA	
				<input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA	
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				<input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA	
Comments:			Technical Reviewer (i.e., RE, PTL, SME, QA, etc.)		
No comments			KLEIN Slade Date: 2019.03.13 15:05:50 -07'00'		
			Date 3/13/2019		
FS DISPOSITION CODES AND DEFINITIONS					
AP	Approved	Work may proceed.	Resubmittal is not required		
AWC	Approved with Comment	Work may proceed; comments provided for Supplier's consideration only.	Resubmittal is not required		
REV	Reviewed	Work may proceed; comments provided for Supplier's consideration only.	Resubmittal is not required		
RWC	Reviewed with Comment	Work may proceed; subject to incorporation and compliance w/ Buyer comments.	Correct and resubmit		
DS	Disapproved	Work may <u>not</u> proceed.	Correct and resubmit		
RSA	Receipt Submittal Acknowledged	No other action required.			
If, in the judgment of the Supplier, the incorporation of FS' comments will result in a change to the Purchase Order/Subcontract, work shall not proceed and the Supplier shall immediately provide a written notice to FS' C&P Representative describing the change.					
Project Manager (PM) / Engineering Manager (EM) or Designated Individual (DI) Approval			<small>Digitally signed by Mark A. Denton DN: cn=Mark A. Denton, o=Orano Federal Services, email=mark.denton@orano.gov, ou=ORNL Date: 2019.03.13 16:15:22 -0400</small>	Date: 03/13/2019	

FS-EN-FRM-023 Rev 02 (Effective March 1, 2018)
 Refer to FS-EN-PRC-012



Orano Federal Services
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High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
Appendix B

Doc./Rev.: EIR-3021970-000
 Project: 00225.03.0050 DOE Atlas Project

	Orano Federal Services	
	SUPPLIER DOCUMENT SUBMITTAL REVIEW	
Supplier / PO No.:	KASGRO / 15C3011916	DTF No. / Rev: 048
Charge No:	00225.03.0050.02.00001	Due Date: 3/21/2019
Document(s):	See DTF No.: 048	
REVIEW INSTRUCTIONS: (List Supplier Doc. No. and Rev. FS Spec and Dwg. Codes, Stds, etc.)		
PE	Slade Klein	
REVIEWERS	Slade Klein, Bernie Counterman	
QA	Bernie Counterman	
Technical Review		
Comments/Markup Attached Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Technical Reviewer Comments:		
No comments.		
Technical Reviewer(s) (Sign/Date):		KLEIN Slade
		Date: 2019.03.12 15:05:56 -07'00'
Quality Assurance Review (As Applicable)		
Comments/Markup Attached Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Technical Reviewer Comments:		
No Comments		
QA Reviewer(s) (Sign/Date):		Digitally signed by COUNTERMAN Bernard
		Date: 2019.03.13 13:48:09 -07'00'
COMMENT DISPOSITION (If Applicable. Attached further comments and disposition correspondence as necessary)		

FS-EN-FRM-026 Rev 01 (Effective March 1, 2018)
 Refer to FS-EN-PRC-012



Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
Appendix B

Doc./Rev.: EIR-3021970-000

Project: 00225.03.0050 DOE Atlas Project

MARK BAKER

Mark Baker

KAS 181

3-1-19

IDOX 010001

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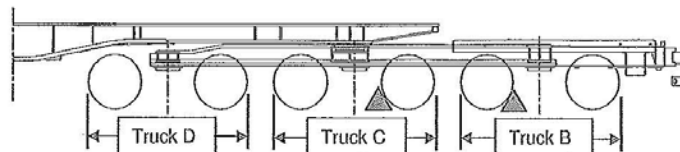
Brake Cylinder Piston Travel Adjustment Procedure
Empty Car Offset Axle Method to Simulate a Loaded Railcar Condition

This procedure is a general set of guidelines for adjusting the brake cylinder piston travel on the railcar using shop service air and a Single-car Test Device, locomotive, or equivalent pressure regulating equipment. Because the load on the railcar affects the relative position of the elastomeric adapter pads within the truck side frames which in turn affects brake system response, hardwood wedges (or equivalent) shall be used to offset the axles within the side frames to simulate the loaded car condition.

Per the Field Manual of the AAR Interchange Rules (Rule 3, Figure 4), brake cylinder travel for the system used on the railcar should range between 2-1/2 and 3 inches at setup, and subsequent in-service checks may range from 2-1/4 inches to 3-3/4 inches. Piston travel in excess of 4 inches is ineffective. However, for the purpose of this procedure refer to General Requirement Item F below.

General Requirements:

- A. The operations to inspect and adjust brake cylinder piston travel should be performed on a section of track that is relatively straight and level.
- B. Install shoring, chocks, wheel retarders, or other restraining devices to preclude movement of the railcar along the track. The restraints (\triangle) should be installed between the axles on two separate trucks as illustrated below. This allows axle movement when the brakes are applied.



- C. When releasing or engaging the hand brake, make sure all personnel are free and clear of the brake rigging and moving parts. A three point stance should be used when applying the handbrakes (i.e., two feet spaced and firmly planted on the railcar end platform and one hand on the safety grip bar) to ensure personnel safety.
- D. Per AAR Standard S-486, piston travel adjustments shall be made using a 20 psi reduction, starting at 90 psig.
- E. A 2 to 2-1/4 inch block shall be positioned below the empty/load detector at each end of the railcar when adjusting brake cylinder piston travel. This reflects the loaded position.
- F. With the hardwood wedges installed, brake cylinder piston travel shall be set between 2-1/2 and 2-7/8 inches.



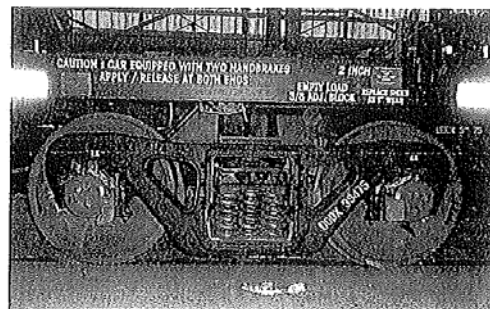
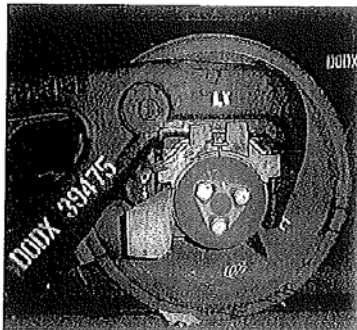
Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
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Procedure for Adjustment of Brake Cylinder Piston Travel:

1. Set up the system to check piston travel using a Single-Car Test Device in accordance with AAR Standard S-486, locomotive, or equivalent pressure regulating equipment.
2. Using a soap solution, or equivalent, confirm there is no leakage at any of the piping connections including the railcar glad-hand connection.
3. Confirm that the handbrakes on each end of the railcar are "fully" set.
4. Release the handbrakes by pulling the quick release lever at each end of the railcar.
5. Confirm that the brake cylinder pistons are fully retracted at each truck location.
6. Place a 2 to 2-1/4 inch block beneath each empty/load detector.
7. Perform an initial check of the piston travel (3 cycles, 20 psi reduction) as follows:
 - a. Pressurize the system to 90 psig. Hold until the flow rate is stabilized or below the condemning limit.
 - b. Reduce the system pressure to 70 psig and hold for approximately 15 seconds.
 - c. Repeat steps 7.a and 7.b for three full cycles.
8. With the system pressure at 70 psig, measure brake cylinder pressure (using a pressure tap hose assembly connected to the empty/load detectors at each end of the railcar) and the piston travel at each truck assembly and record in the data table on Form #66.
9. Reduce the system pressure another 15 psi (to a value of 55 psig). Measure brake cylinder pressure (at the two empty/load detectors) and the piston travel at each truck assembly and record in the data table on Form #66.
10. With the system pressure at 55 psig, drive hardwood wedges between the wheel/axle assemblies and the side frames as illustrated below to hold the axles in an offset outboard position.

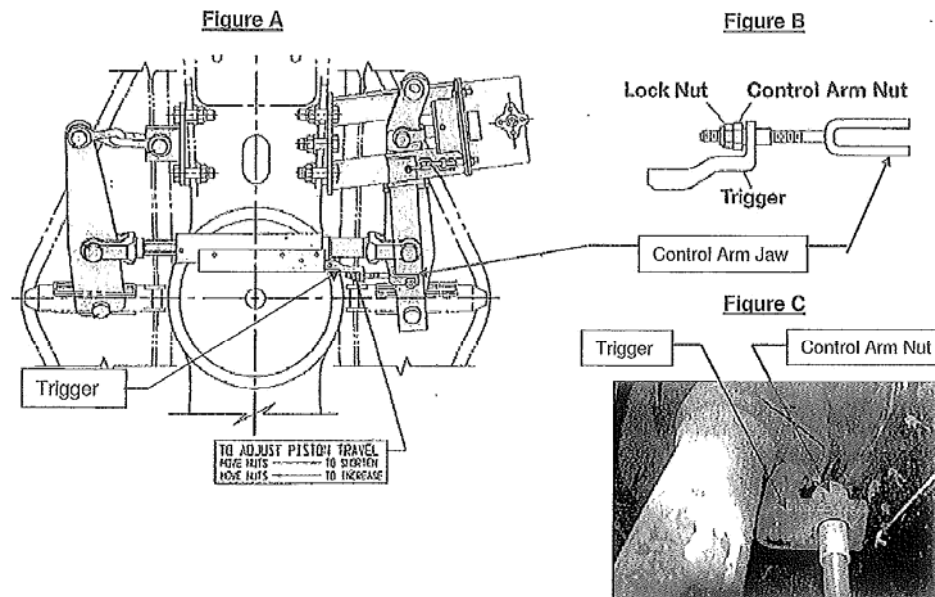


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11. With the wedges in place, cycle the brake system (5 cycles 20 psig reduction) as follows:
 - a. Pressurize the system to 90 psig. Hold until the flow rate is stabilized or below the condemning limit.
 - b. Reduce the system pressure to 70 psig and hold for approximately 15 seconds. Inspect the wedges to ensure they are still securely in place.
 - c. Repeat steps 11.a and 11.b for a total of five complete cycles.
12. With the system pressure at 70 psig, measure brake cylinder pressure (at each empty/load detector) and the piston travel at each truck assembly and record in the data table on Form #66.
13. Ensure the wedges are still securely in place, and then re-pressurize the system to 90 psig. Hold until the flow rate is stabilized or below the condemning limit, and confirm that the pistons have fully retracted at each truck location and the pressure at each empty load sensor is zero (0).
14. If the piston travel at any truck location (with the wedges installed) is outside the range of 2-1/2 to 2-7/8 adjust the travel at the deviated locations as follows.
 - a. Using a 7/8-inch open ended wrench and the aid of a light source, unthread (backoff) the lock nut from the control arm nut. Backoff a sufficient distance to enable adjustment of the control arm nut (see Step 14.b). Refer to Figures A, B and C for the brake arrangement and piece part location.
 - b. Using a 1-inch open ended wrench and the aid of a light source, adjust the control arm nut to shorten or increase piston travel to obtain travel between 2-1/2 to 2-7/8 inches. Move the nut away from the control arm jaw to increase piston travel or closer to the control arm jaw to shorten piston travel (see Figures A and B). Approximately 0.4 inch of control arm nut travel equates to 1.0-inch of change in brake cylinder piston travel. Refer to Table 1 for how to calculate control arm nut adjustment and direction.





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15. Repeat Steps 14.a and 14.b at each truck assembly where adjustment is necessary.
16. With the wedges still in place, cycle the brake system (5 cycles 20 psig reduction) as follows:
 - a. Reduce the system pressure to 70 psig and hold for approximately 15 seconds.
 - b. Ensure the wedges are still securely in place, and then increase the system pressure to 90 psig. Hold until the flow rate is stabilized or below the condemning limit.
 - c. Reduce the system pressure to 70 psig and hold for approximately 15 seconds.
 - d. Repeat steps 16.a and 16.b for a total of five complete cycles.
17. With the system pressure at 70 psig, measure brake cylinder pressure (at each empty/load detector) and the piston travel at each truck assembly and record in the data table on Form # 66.
18. If the piston travel at each truck position is between 2-1/2 and 2-7/8 inches proceed to Step 19. Otherwise, repeat steps 13 through 17.
19. Perform a check of the loaded car piston travel at a full service brake application as follows:
 - a. Ensure the wedges are still securely in place, and then increase the system pressure to 90 psig. Hold until the flow rate is stabilized or below the condemning limit.
 - b. Reduce the system pressure to 60 psig and hold.
20. With the system pressure at 60 psig, measure brake cylinder pressure (at each empty/load detector) and the piston travel at each truck assembly and record in the data table on Form # 66. Piston travel should be between 2-1/4 and 3-3/4 inches.
21. With the system pressure at 60 psig, remove the hardwood wedges.
22. Perform a check of the piston travel (5 cycles, 20 psi reduction) as follows:
 - a. Pressurize the system to 90 psig. Hold until the flow rate is stabilized or below the condemning limit.
 - b. Reduce the system pressure to 70 psig and hold for approximately 15 seconds.
 - c. Repeat steps 22.a and 22.b for five full cycles.
23. With the system pressure at 70 psig, measure brake cylinder pressure (at each empty/load detector) and the piston travel at each truck assembly and record in the data table on Form #66. Piston travel should be between 2-1/4 and 3-3/4 inches. If any value is outside the acceptance range, contact the Plant Manager for further direction.
24. Perform a check of the empty car piston travel at a 20 psi reduction:
 - a. Increase the system pressure to 90 psig. Hold until the flow rate is stabilized or below the condemning limit.
 - b. Remove the 2 to 2-1/4 inch blocks from below the empty/load detectors.
 - c. Reduce the system pressure to 70 psig and hold.



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25. With the system pressure at 70 psig, measure brake cylinder pressure (at each empty/load detector) and the piston travel at each truck assembly and record in the data table on Form # 66. Piston travel should be between 2-1/4 and 3-3/4 inches.
26. Perform a check of the empty car piston travel at a full service brake application as follows:
 - a. Increase the system pressure to 90 psig. Hold until the flow rate is stabilized or below the condemning limit.
 - b. Reduce the system pressure to 60 psig and hold.
27. With the system pressure at 60 psig, measure brake cylinder pressure (at each empty/load detector) and the piston travel at each truck assembly and record in the data table on Form # 66. Piston travel should be between 2-1/4 and 3-3/4 inches.
28. Relieve and vent system pressure and remove the single-car test device, or other equivalent system.



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TABLE 1 – CALCULATION FOR CONTROL ARM NUT ADJUSTMENT

Truck	I	II	III	IV	V	VI
B/1	2	2.625	.625	.25	1/4	OUT
C/2	2	2.625	.625	.25	1/4	
D/3	1 3/4	2.625	.875	.35	5/16	
E/4	1 5/8	2.625	1	.4	3/8	
F/5	2 1/8	2.625	.5	.2	3/16	
A/6	2 1/8	2.625	.5	.2	3/16	OUT

- Column I Record the measured piston travel.
- Column II 2.625 inches is the target value for the adjusted travel.
- Column III Subtract Column I from Column II (or II from I).
- Column IV Multiply Column III by 0.4.
- Column V Convert the decimal value in Column IV to the 1/16 inch fraction equivalent (refer to Table 2). If between two values, use the lower fraction equivalent.
- Column VI Identify whether the slack adjuster control arm nut must be moved "IN" or "OUT". If Column I is less than Column II move the control arm nut "OUT". If Column I is greater than Column II move the control arm nut "IN".

TABLE 2 – FRACTION TO DECIMAL EQUIVALENT

1/16	0.063
1/8	0.125
3/16	0.188
1/4	0.250
5/16	0.313
3/8	0.375
7/16	0.438
1/2	0.500
9/16	0.563
5/8	0.625
11/16	0.688
3/4	0.750
13/16	0.813
7/8	0.875
15/16	0.938



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Data Record Sheets
 Form #66 1/17/13

Record Data from Step 8 (Initial Piston Travel Check; 20 psi reduction)		
Truck Location	Cylinder Pressure	Piston Travel
B	51	2 1/2
C		2 3/8
D		2 1/2
E	50	2 3/8
F		2 3/8
A		2 1/2

Record Data from Step 9 (Initial Piston Travel Check; 35 psi reduction)		
Truck Location	Cylinder Pressure	Piston Travel
B	63	2 3/8
C		3 1/16
D		2 7/8
E	62	2 3/4
F		3 1/8
A		2 7/8

Record Data from Step 12 (Wedges Installed, Prior to Initial Adjustment)		
Truck Location	Cylinder Pressure	Piston Travel
B	60	2
C		2
D		1 3/4
E	58	1 5/8
F		2 1/8
A		2 1/8



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Record Data from Step 17 (Wedges Installed; Subsequent to Initial Adjustment)		
Truck Location	Cylinder Pressure	Piston Travel
B	50	2 1/16
C		2 3/8
D		2 3/8
E	48	2 3/8
F		2 1/16
A		2 1/16

Record Data from Step 17 Repeat (if necessary) (Wedges Installed; Subsequent to Additional/Final Adjustment)		
Truck Location	Cylinder Pressure	Piston Travel
B		
C		
D		
E		
F		
A		

Record Data from Step 20 (Wedges Installed; Full Service Brake Application; 30 psi Reduction)		
Truck Location	Cylinder Pressure	Piston Travel
B	64	2 1/16
C		2 3/8
D		2 3/4
E	63	2 1/16
F		2 3/4
A		2 3/4



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Record Data from Step 23 (Piston Travel Check without Wedges)		
Truck Location	Cylinder Pressure	Piston Travel
B	46	2 7/8
C		3 1/8
D		3
E	45	3 1/8
F		2 7/8
A		2 7/8

Record Data from Step 25 (Empty Car Piston Travel; 20 psi Reduction)		
Truck Location	Cylinder Pressure	Piston Travel
B	26	2 1/2
C		2 5/8
D		2 1/2
E	26	2 5/8
F		2 5/8
A		2 1/2

Record Data from Step 27 (Empty Car Full Service Brake Application; 30 psi Reduction)		
Truck Location	Cylinder Pressure	Piston Travel
B	28	2 1/2
C		2 1/16
D		2 1/2
E	28	2 1/16
F		2 1/2
A		2 1/2

Sellers Authorized Representative _____ Date: _____

Note: The recording of false, fictitious, or fraudulent statements on this document may be punishable as a felony under federal statutes.

MARK R BAKER

MR & BL

3-1-19

IDOX 010001



Orano Federal Services
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Appendix B.2.4 – Railcar Weighting Form, Form 46-A


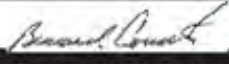
		Orano Federal Services		
DATA TRANSMITTAL FORM				
Supplier:	KASGRO RAIL CORP., INC.	DTF No:	037	
P.O./SC No:	15C3011916	Date:	2/1/2019	
Type of Submittal:	<input checked="" type="checkbox"/> First <input type="checkbox"/> Re-Submittal	SDRL List Item No:	24	
Submitted for:	<input checked="" type="checkbox"/> Approval <input type="checkbox"/> Review <input type="checkbox"/> Information	Number of Copies Submitted:	1	
Submitted By:	RICK FORD	Rick Ford <small>Digitally signed by Rick Ford Date: 2019.02.01 14:58:44 -08'00'</small>	PROJECT MANAGER	
	<small>(Name)</small>	<small>(Signature)</small>	<small>(Title)</small>	
ITEM NUMBER	DOCUMENT NUMBER	REVISION NUMBER	DOCUMENT DESCRIPTION	FS DISPOSITION
1	KAS 118		FORM 45A, ATLAS CASK CAR IDOX 010001 WEIGHING FORM	<input checked="" type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
2	KAS 119		ATLAS BUFFER CARS IDOX 020001-020002, TUV WELD INSPECTION REPORTS	<input checked="" type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
3	KAS 120		ATLAS BUFFER CARS IDOX 020001-020002 TUV NDE INSPECTION REPORTS	<input checked="" type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
4	KAS 121		ATLAS BUFFER CAR IDOX 020001-020002 BRAKE EQUALIZATION, EMERGENCY APPLICATION AND HANDBRAKE TESTS	<input checked="" type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
5	KAS 122		ATLAS BUFFER CARS IDOX 020001-020002 MIKE YON / S-486 WITNESS / ACCEPTANCE LETTER FOR SINGLE CAR AIR BRAKE TEST	<input checked="" type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
6	KAS 123		FORM 36, S-A, ATLAS BUFFER CARS IDOX 020001-020002 STATIC BRAKE FORCE TEST	<input checked="" type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
7	KAS 124		SUPPLIER CERTIFICATION FORM / AMSTED RAIL TOM SEDARSKI TMS- / HANDBRAKE INSPECTION IDOX 020001-020002	<input checked="" type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
8	KAS 125		SUPPLIER CERTIFICATION FORM / AMSTED RAIL SHAWN PIETZ BUFFER CARS TRUCK INSPECTION IDOX 020001-020002	<input checked="" type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
9	KAS 126		SUPPLIER CERTIFICATION FORM / TTCI MATT DEGEORGE IDOX 020001-020002 EQUIPMENT MET S-401	<input checked="" type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
Comments:		Technical Reviewer (i.e., RE, PTL, SME, QA, etc.)		
No comments		KLEIN Slade Date: 2019.02.19 06:42:35 -08'00'		
		Date: 2/19/2019		
FS DISPOSITION CODES AND DEFINITIONS				
AP	Approved	Work may proceed.	Resubmittal is not required	
AWC	Approved with Comment	Work may proceed; comments provided for Supplier's consideration only.	Resubmittal is not required	
REV	Reviewed	Work may proceed; comments provided for Supplier's consideration only.	Resubmittal is not required	
RWC	Reviewed with Comment	Work may proceed; subject to incorporation and compliance w/ Buyer comments.	Correct and resubmit	
DS	Disapproved	Work may not proceed.	Correct and resubmit	
RSA	Receipt Submittal Acknowledged	No other action required.		
If, in the judgment of the Supplier, the incorporation of FS' comments will result in a change to the Purchase Order/Subcontract, work shall not proceed and the Supplier shall immediately provide a written notice to FS' C&P Representative describing the change.				
Project Manager (PM) / Engineering Manager (EM) or Designated Individual (DI) Approval			Digitally signed by Mark A. Denton DN: cn=Mark A. Denton, o=Orano Federal Services, email=mark.denton@orano.gov, ou=ORNL Date: 2019.02.19 10:22:30 -0800	Date: 02/19/2019

FS-EN-FRM-023 Rev 02 (Effective March 1, 2018)
 Refer to FS-EN-PRC-012



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 orano	Orano Federal Services	
SUPPLIER DOCUMENT SUBMITTAL REVIEW		
Supplier / PO No.:	KASGRO / 15C3011916	DTF No. / Rev: 037
Charge No:	00225.03.0050.02.00001	Due Date: 2/22/2019
Document(s):	See DTF No.: 037	
<small>REVIEW INSTRUCTIONS: (List Supplier Doc. No. and Rev. FS Spec and Dwg. Codes, Stds, etc.)</small>		
PE	Slade Klein	
REVIEWERS	Slade Klein, Bernie Counterman	
QA	Bernie Counterman	
Technical Review		
Comments/Markup Attached Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Technical Reviewer Comments:		
No comments		
Technical Reviewer(s) (Sign/Date): KLEIN Slade		Date: 2019.02.19 06:40:32 -08'00'
Quality Assurance Review (As Applicable)		
Comments/Markup Attached Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Technical Reviewer Comments:		
No Comments		
QA Reviewer(s) (Sign/Date): 		Digitally signed by COUNTERMAN Bernard Date: 2019.02.19 06:58:53 -08'00'
COMMENT DISPOSITION (If Applicable. Attached further comments and disposition correspondence as necessary)		

FS-EN-FRM-026 Rev 01 (Effective March 1, 2018)
 Refer to FS-EN-PRC-012



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RAILCAR WEIGHING FORM
 Form 46A 3-29-18

ATLAS Project Cask Car
 Drawing Number -- E-1155-3
 Car # IDOX 010001
 Use Car Weighing Procedure # 13

Truck	Weight of Empty Car Pounds	Weight of Loaded Car Pounds	Percentage of Total Weight
A	43200	88600	19.77
F	35100	58200	12.98
E	33950	77700	17.33
D	34550	78200	17.44
C	35650	58400	13.03
B	43250	87050	19.42
TOTAL	225700	448150	

Acceptance Criteria:

1. The percentage of weight on individual trucks shall range from 10% to 20%, plus/minus 1% of the total weight.
2. The greater weight must be on the outboard trucks, (A & B).

Seller's Authorized Representative: Bill Baker 1-29-19

Sellers Name: KASGRO RAIL CORP.

Note: The recording of false, fictitious, or fraudulent statements on this document may be punishable as a felony under federal statutes.



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Appendix B.2.5 – Static Force Brake Test Data, Form 36-A

		Orano Federal Services	
DATA TRANSMITTAL FORM			
Supplier:	KASGRO RAIL CORP., INC.	DTF No:	39
P.O./SC No:	15C3011916	Date:	2/22/2019
Type of Submittal:	<input checked="" type="checkbox"/> First <input type="checkbox"/> Re-Submittal	SDRL List Item No:	24
Submitted for:	<input checked="" type="checkbox"/> Approval <input type="checkbox"/> Review <input type="checkbox"/> Information	Number of Copies Submitted:	1
Submitted By:	RICK FORD	Rick Ford	PROJECT MANAGER
	(Name)	(Signature)	(Title)

ITEM NUMBER	DOCUMENT NUMBER	REVISION NUMBER	DOCUMENT DESCRIPTION	FS DISPOSITION
1	KAS 138		ATLAS CASK/BUFFER CARS LAT/LON INSTALLATION AND TEST DATA	<input checked="" type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
2	KAS 139		ATLAS CASK BODY MATERIAL HEAT IDENTIFICATION, FORMS 42, 40A, 44B	<input checked="" type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
3	KAS 140		ATLAS BUFFER IDOX 2001 BODY MATERIAL HEAT IDENTIFICATION, FORM 44B	<input checked="" type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
4	KAS 141		ATLAS BUFFER IDOX 2002 BODY MATERIAL HEAT IDENTIFICATION, FORM	<input checked="" type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
5	KAS 142		ATLAS CASK CAR FORM 36 STATIC FORCE BRAKE TEST	<input checked="" type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
6	KAS 143		ATLAS CASK CAR IDOX 10001, FORM 5-13-B NEW CAR INSPECTION	<input checked="" type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
7	KAS 144		ATLAS CASK IDOX 10001 SUPPLIER CERTIFICATION/ AMSTED RAIL SEDAR90 / MCCABE	<input checked="" type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
				<input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
				<input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA

Comments:	Technical Reviewer (i.e., RE, PTL, SME, QA, etc.)
No comments	KLEIN Slade Date: 2019.02.26 07:33:08 -08'00'
	Date: 2/26/2019

FS DISPOSITION CODES AND DEFINITIONS			
AP	Approved	Work may proceed.	Resubmittal is not required
AWC	Approved with Comment	Work may proceed; comments provided for Supplier's consideration only.	Resubmittal is not required
REV	Reviewed	Work may proceed; comments provided for Supplier's consideration only.	Resubmittal is not required
RWC	Reviewed with Comment	Work may proceed; subject to incorporation and compliance w/ Buyer comments.	Correct and resubmit
DS	Disapproved	Work may <u>not</u> proceed.	Correct and resubmit
RSA	Receipt Submittal Acknowledged	No other action required.	

If, in the judgment of the Supplier, the incorporation of FS' comments will result in a change to the Purchase Order/Subcontract, work shall not proceed and the Supplier shall immediately provide a written notice to FS' C&P Representative describing the change.



Project Manager (PM) / Engineering Manager (EM) or Designated Individual (DI) Approval		Date:	02/26/2019
	Digitally signed by Mark A. Denton DN: cn=Mark A. Denton, o=Orano Federal Services, email=mark.denton@orano.gov, c=US Date: 2019.02.26 12:29:54 -0500		

FS-EN-FRM-023 Rev 02 (Effective March 1, 2018)
 Refer to FS-EN-PRC-012



Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
Appendix B

Doc./Rev.: EIR-3021970-000
 Project: 00225.03.0050 DOE Atlas Project

 orano	Orano Federal Services	
	SUPPLIER DOCUMENT SUBMITTAL REVIEW	
Supplier / PO No.:	KASGRO / 15C3011916	DTF No. / Rev: 039
Charge No:	00225.03.0050.02.00001	Due Date: 3/8/2019
Document(s):	See DTF No.: 039	
<small>REVIEW INSTRUCTIONS: (List Supplier Doc. No. and Rev. FS Spec and Dwg. Codes, Stds, etc.)</small>		
PE	Slade Klein	
REVIEWERS	Slade Klein, Bernie Counterman	
QA	Bernie Counterman	
Technical Review		
Comments/Markup Attached Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Technical Reviewer Comments:		
No comments		
Technical Reviewer(s) (Sign/Date): KLEIN Slade Date: 2019.02.25 15:52:04 -08'00'		
Quality Assurance Review (As Applicable)		
Comments/Markup Attached Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Technical Reviewer Comments:		
KAS 142 Cask Car Form 36 Brake Test - Why is the Gross Shoe Force = 0		
QA Reviewer(s) (Sign/Date): 		Digitally signed by COUNTERMAN Bernard Date: 2019.02.25 10:22:16 -08'00'
COMMENT DISPOSITION (If Applicable. Attached further comments and disposition correspondence as necessary)		

FS-EN-FRM-026 Rev 01 (Effective March 1, 2018)
 Refer to FS-EN-PRC-012



Orano Federal Services
 Title: Design and Prototype Fabrication of Railcars for Transport of
 High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
 Appendix B

Doc./Rev.: EIR-3021970-000
 Project: 00225.03.0050 DOE Atlas Project

KASGRO RAIL CORP										
FORM 36-A-R		STATIC FORCE BRAKE TEST DATA				Rev 4 4/4/16				
Brake System:	DB 10/DB 20			Date:	February 12, 2019					
Brake Rigging:	TRUCK MOUNTED			Product Order:						
Stack Adjuster:	ELLCON 7100			Car Type:	12 AXLE FLAT					
Handbrake:	ELLCON 33000-2			For:						
Bell Crank:				Car Series:	IDOX 010001					
Sheave Wheel:	8"			Test Car No:	IDOX 010001					
Brake Shoe:	2"			Date Built:	Jan-19					
Air Brake Force (Gross):		#		Light Weight:	225,700		#			
Brake Lever Ratio:		:	1	Gross Rail Load:	710,700		#			
Handbrake Force (Gross):		#		Brake Force Schem.:						
EMPTY LOAD %:		%		Brake Arrangement:						
MEASURED BRAKE SHOE FORCE (IN NET POUNDS)										
Brake Cylinder Pressure (psig):										
P N E U M A T I C	WHEEL	Min red 8-7		Light Car:		Loaded Car:		FORCE	4040 lbs. on Vert. Chain	
		UNTAPPED	TAPPED	UNTAPPED	TAPPED	UNTAPPED	TAPPED			
	L-1	4	565	1246	1466	3566	3505	A	4126	
	R-1	2	849	1720	1676	4482	4284	N	4823	
	L-2	3	813	1590	1634	4137	4020	D	5018	
	R-2	1	670	1580	1618	4226	4052	B	4976	
	L-3	5	450	1153	1216	3482	3160	R	2420	
	R-3	7	1180	1848	1749	4354	4000	A	3408	
	L-4	6	890	1515	1705	3886	4065	K	3514	
	R-4	8	950	1566	1588	3949	3851	E	3518	
	L-5	S-2 (#3)	880	1409	1453	3810	3928		2048	
	R-5	S-2 (#2)	935	1488	1638	4026	4414		2272	
	L-6	S-2 (#4)	1110	1596	1675	4020	4032		3271	
	R-6	S-2 (#1)	1025	1601	1680	3752	4417		3135	
	L-7	2/S-2 (#4)	515	1678	1675	4131	4220		3225	
	R-7	2/S-2 (#2)	518	1599	1651	3836	4096		3067	
	L-8	2/S-2 (#3)	553	1848	1803	4390	4383		2810	
	R-8	2/S-2 (#1)	517	1131	1350	3750	3761		1735	
	L-9	6	150	1310	1417	3914	4057		3741	
	R-9	8	277	1395	1392	3692	3829		3641	
	L-10	5	272	1294	1478	4322	3981		3442	
	R-10	7	154	820	1099	3593	3410		2643	
	L-11	4	334	1612	1600	4193	4292		5393	
	R-11	2	363	1542	1580	4000	4008		5252	
	L-12	3	264	1445	1371	4032	4330		4740	
	R-12	1	60	595	815	3362	3730		3896	
TOTALS:			14294		36329		95825		86114	
BCP @ Min. Red.		"A" End	(AVERAGE) 535.58	"B" End		(MINIMUM) 3673.3	(AVERAGE) 3992.7	(MAXIMUM) 4312.1		
PISTON TRAVEL:		2 5/8, 2 7/8, 2 3/4			Brake Cylinder Pressure, Min. 30psig Reduction:			Emergency Application: <input type="text"/> 74.1		
		2 7/8, 2 3/4, 2 3/4								
		Pneumatic Loaded %		Handbrake Loaded %		Pneumatic Light %				
NET SHOE FORCE x100 = LIGHT WEIGHT						$\frac{36329 \times 100}{225700} = 16.10$				
NET SHOE FORCE x100 = GROSS RAIL LOAD		$\frac{95825}{710700} = 13.48$		$\frac{86114 \times 100}{710700} = 12.12$						
BRAKE PIPE CHARGE OF		90 psig		ATTESTED: CORY J. WAGNER						



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Appendix B

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Appendix B.2.6 – Single Car Air Brake Test Report Form 6-A

		Orano Federal Services	
DATA TRANSMITTAL FORM			
Supplier:	KASGRO RAIL CORP., INC.	DTF No:	046
P.O./SC No:	15C3011916	Date:	2/28/2019
Type of Submittal:	<input checked="" type="checkbox"/> First <input type="checkbox"/> Re-Submittal	SDRL List Item No:	24
Submitted for:	<input checked="" type="checkbox"/> Approval <input checked="" type="checkbox"/> Review <input type="checkbox"/> Information	Number of Copies Submitted:	1
Submitted By:	RICK FORD	Rick Ford	PROJECT MANAGER
	(Name)	(Signature)	(Title)

ITEM NUMBER	DOCUMENT NUMBER	REVISION NUMBER	DOCUMENT DESCRIPTION	FS DISPOSITION
1	KAS 171		IDOX 10001 FORM 6 AIR BRAKE TEST 2/12/2019	<input checked="" type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
2	KAS 172		IDOX 20001 FORM 6 AIR BRAKE TEST 2/12/2019	<input checked="" type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
3	KAS 173		IDOX 20002 FORM 6 AIR BRAKE TEST 2/12/2019	<input checked="" type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
4	KAS 174		IDOX 10001 FORM 6 AIR BRAKE TEST 2/27/2019	<input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input checked="" type="checkbox"/> DS <input type="checkbox"/> RSA
			KAS 174 2/27/2019 ABT TEST REPEATED DUE TO TRUCK BOLSTER WORK.	<input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
				<input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
				<input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
				<input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
				<input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA

Comments:	Technical Reviewer (i.e., RE, PTL, SME, QA, etc.)
KAS 174, add a identification to the form that this brake test was performed after Amstead boss inspection and car reassembly.	KLEIN Slade Date: 2019.03.12 11:30:57 -07'00'
	Date: 3/4/2019

FS DISPOSITION CODES AND DEFINITIONS			
AP	Approved	Work may proceed.	Resubmittal is not required
AWC	Approved with Comment	Work may proceed; comments provided for Supplier's consideration only.	Resubmittal is not required
REV	Reviewed	Work may proceed; comments provided for Supplier's consideration only.	Resubmittal is not required
RWC	Reviewed with Comment	Work may proceed; subject to incorporation and compliance w/ Buyer comments.	Correct and resubmit
DS	Disapproved	Work may <u>not</u> proceed.	Correct and resubmit
RSA	Receipt Submittal Acknowledged	No other action required.	

If, in the judgment of the Supplier, the incorporation of FS' comments will result in a change to the Purchase Order/Subcontract, work shall not proceed and the Supplier shall immediately provide a written notice to FS' C&P Representative describing the change.

Project Manager (PM) / Engineering Manager (EM) or Designated Individual (DI) Approval		Date:	03/12/2019
	Digitally signed by Mark A. Denton DN: cn=Mark A. Denton, o=Orano Federal Services, email=mark.denton@orano-group.com, ou=Orano Date: 2019.03.12 15:44:35 -0400		

FS-EN-FRM-023 Rev 02 (Effective March 1, 2018)
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 Project: 00225.03.0050 DOE Atlas Project

	Orano Federal Services	
	SUPPLIER DOCUMENT SUBMITTAL REVIEW	
Supplier / PO No.:	KASGRO / 15C3011916	DTF No. / Rev: 046
Charge No:	00225.03.0050.02.00001	Due Date: 3/8/2019
Document(s):	See DTF No.: 046	
REVIEW INSTRUCTIONS: (List Supplier Doc. No. and Rev. FS Spec and Dwg, Codes, Stds, etc.)		
PE	Slade Klein	
REVIEWERS	Slade Klein, Bernie Counterman	
QA	Bernie Counterman	
Technical Review		
Comments/Markup Attached Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Technical Reviewer Comments:		
No comments.		
Technical Reviewer(s) (Sign/Date): KLEIN Slade		Date: 2019.03.04 19:32:42 -08'00'
Quality Assurance Review (As Applicable)		
Comments/Markup Attached Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Technical Reviewer Comments:		
Should KAS 174 IDOX 010001 Form 6 ABT 2-27-19 be identified as "Brake test reperformed after Amstead boss inspection"?		
QA Reviewer(s) (Sign/Date):		Digitally signed by COUNTERMAN Bernard Date: 2019.03.12 10:39:38 -07'00'
COMMENT DISPOSITION (If Applicable. Attached further comments and disposition correspondence as necessary)		

FS-EN-FRM-026 Rev 01 (Effective March 1, 2018)
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Orano Federal Services
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Project: 00225.03.0050 DOE Atlas Project

Rev.5		Kasgro Rail Corp	
Air Brake Test Report (X=Tested)		FORM 6 2/24/2016	CAR NUMBER <u>2D0X 010001</u>
Single Car Test, 1Set	_____	Single Car Test, 2 Sets	_____X
Single Car Test (includes B.C. Pressure Test)	_____	Single Car Test (includes B.C. Pressure Test), 2 Sets	_____X
Slack Adjuster Test	_____X	Retainer Valve Test	_____X
Empty / Load Valve Test	_____X	Brake Pipe Leakage Test	_____X
System Leakage Test	_____X	Equilization Pressure	_____X
Piston Travel (Unit Brakes)	_____	If Equipped With Load Sensor	_____X
Piston Travel (Trk MTD Brakes)	_____X	Equilization Pressure Load Sensor	_____X
WABCO PAC / NYPOAC Piston Travel Adjustment	_____	Equilization Pressure Loaded	_____X
(Truck Mounted Brake es with Slack Adjuster	_____	Equilization Pressure Empty	_____X
Lube Handbrake	_____	Slack Adjuster Rack Measurement	_____
SYSTEM REPAIRS- List repairs, parts replaced, Location, and why made.			
Piston Travels	B 2 ⁹ / ₁₆ C 2 ³ / ₄ D 2 ¹¹ / ₁₆ E 2 ¹¹ / ₁₆ F 2 ⁷ / ₈ A 2 ⁵ / ₈		
EQUILIZATION PRESSURE	B END SER 64 EM 76 EMPTY 27		
	A END SER 63 EM 76 EMPTY 28		
DB-10 C)			
DB-20) A+B			
NEW YORK AIR BRAKE EL LOAD SENSOR 40%			
Signature of Tester	<u>Mark J. Bl</u>		Date <u>2-12-19</u>



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Orano Federal Services		
DATA TRANSMITTAL FORM		
Supplier: KASGRO RAIL CORP., INC.	DTF No: 046A	Page <u>1</u> of <u>1</u>
P.O./SC No: 15C3011916	Date: 03/25/2019	
Type of Submittal: <input type="checkbox"/> First <input checked="" type="checkbox"/> Re-Submittal	SDRL List Item No: 24	
Submitted for: <input checked="" type="checkbox"/> Approval <input type="checkbox"/> Review <input type="checkbox"/> Information	Number of Copies Submitted: 1	
Submitted By: RICK FORD	Rick Ford <small>Digitally signed by Rick Ford Date: 2019.03.29 14:20:46 +0300'</small>	PROJECT MANAGER
(Name)	(Signature)	(Title)

ITEM NUMBER	DOCUMENT NUMBER	REVISION NUMBER	DOCUMENT DESCRIPTION	FS DISPOSITION
1	KAS 174		(ID# 1000) FORM R AIRBRAKE TEST 03/22/2019 (TEST REPEATED AFTER TRUCK DISASSEMBLY/REASSEMBLY)	<input checked="" type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA <input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA <input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA <input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA <input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA <input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA <input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA <input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA

Comments: No comments.	Technical Reviewer (i.e., RE, PTL, SME, QA, etc.) KLEIN Slade Date: 2019.03.29 10:17:25 -07'00' Date: 3/29/2019
---------------------------	--

FS DISPOSITION CODES AND DEFINITIONS			
AP	Approved	Work may proceed.	Resubmittal is not required
AWC	Approved with Comment	Work may proceed; comments provided for Supplier's consideration only.	Resubmittal is not required
REV	Reviewed	Work may proceed; comments provided for Supplier's consideration only.	Resubmittal is not required
RWC	Reviewed with Comment	Work may proceed; subject to incorporation and compliance w/ Buyer comments.	Correct and resubmit
DS	Disapproved	Work may <u>not</u> proceed.	Correct and resubmit
RSA	Receipt Submittal Acknowledged	No other action required.	

If, in the judgment of the Supplier, the incorporation of FS' comments will result in a change to the Purchase Order/Subcontract, work shall not proceed and the Supplier shall immediately provide a written notice to FS' C&P Representative describing the change.

Project Manager (PM) / Engineering Manager (EM) or Designated Individual (DI) Approval 	<small>Digitally signed by DENTON Mark DN: cn=DENTON, o=ORANO c=USA, email=DENTON.MARK@ORANO.COM, ou=DENTON, ou=ORANO Date: 2019.03.29 12:36:02 -0400'</small>	Date: 03/29/2019
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FS-EN-FRM-023 Rev 02 (Effective March 1, 2018)
 Refer to FS-EN-PRC-012



Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
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Project: 00225.03.0050 DOE Atlas Project

	Orano Federal Services	
	SUPPLIER DOCUMENT SUBMITTAL REVIEW	
Supplier / PO No.:	KASGRO / 15C3011916	DTF No. / Rev: 046A
Charge No:	00225.03.0050.02.00001	Due Date: 4/8/2019
Document(s):	See DTF No.: 046A	
REVIEW INSTRUCTIONS: (List Supplier Doc. No. and Rev. FS Spec and Dwg. Codes, Stds, etc.)		
PE	Slade Klein	
REVIEWERS	Slade Klein, Bernie Counterman	
QA	Bernie Counterman	
Technical Review		
Comments/Markup Attached Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Technical Reviewer Comments:		
No comments.		
Technical Reviewer(s) (Sign/Date): KLEIN Slade Date: 2019.03.28 12:17:06 -07'00'		
Quality Assurance Review (As Applicable)		
Comments/Markup Attached Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Technical Reviewer Comments:		
No Comments		
QA Reviewer(s) (Sign/Date):		Digitally signed by COUNTERMEN Bernard Date: 2019.03.29 08:29:28 -07'00'
COMMENT DISPOSITION (If Applicable. Attached further comments and disposition correspondence as necessary)		

FS-EN-FRM-026 Rev 01 (Effective March 1, 2018)
Refer to FS-EN-PRC-012



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Project: 00225.03.0050 DOE Atlas Project

Rev.5	Kasgro Rail Corp	
Air Brake Test Report (X=Tested)	FORM 6 2/24/2016	CAR NUMBER <u>IDEX 010001</u>
Single Car Test, 1Set	_____	Single Car Test, 2 Sets
Single Car Test (Includes B.C. Pressure Test)	_____	Single Car Test (Includes B.C. Pressure Test), 2 Sets
Slack Adjuster Test	<u>X</u>	Retainer Valve Test
Empty / Load Valve Test	_____	Brake Pipe Leakage Test
System Leakage Test	<u>X</u>	Equalization Pressure
Piston Travel (Unit Brakes)	_____	If Equipped With Load Sensor
Piston Travel (Trk MTD Brakes)	<u>X</u>	Equalization Pressure Load Sensor
WABCO PAC / NYPOAC Piston Travel Adjustment	_____	Equalization Pressure Loaded
(Truck Mounted Brakes with Slack Adjuster	_____	Equalization Pressure Empty
Lube Handbrake	_____	Slack Adjuster Rack Measurement
SYSTEM REPAIRS- List repairs, parts replaced, Location, and why made.		
Piston Travels	<u>B 2¹³/₁₆ C 2⁷/₁₆ D 2⁵/₁₆ E 2⁷/₁₆ F 2⁴/₁₆ A 2³/₁₆</u>	
	<u>B- END 64 HENID 65</u>	
<u>LEAK TEST PER RULE 3 PAR FIELD MANUAL</u>		
<u>ADJUST PISTON TRAVELS CAR IN LOADED CONDITION</u>		
THIS BRAKE TEST WAS PERFORMED AFTER DISASSEMBLY/REASSEMBLY OF ATLAS CAR AFTER TRUCK BOLSTERS WERE REPLACED BY SUPPLIER AMSTED RAIL WITH SPRING RETAINER PIPE BOSSES CORRECTLY WELDED, TO AMSTED DRAWING REQUIREMENTS.		
Project Manager: RICK FORD	<u>Rick Ford</u>	DATE: 03/25/2019
Signature of Tester	<u>Mike R</u>	Date <u>2-27-19</u>



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Appendix B.2.7 – AAR Witness Letter for Single Car Brake Test Results

		Orano Federal Services		
DATA TRANSMITTAL FORM				
Supplier:	KASGRO RAIL CORP., INC.	DTF No: 050	Page 1 of 1	
P.O./SC No:	15C3011916	KLEIN Slade <small>Date: 2019.03.19 08:46:54 -0700</small>	Date: 3/14/2019	
Type of Submittal:	<input checked="" type="checkbox"/> First <input type="checkbox"/> Re-Submittal	SDRL List Item No: 24		
Submitted for:	<input checked="" type="checkbox"/> Approval <input type="checkbox"/> Review <input checked="" type="checkbox"/> Information	Number of Copies Submitted: 1		
Submitted By:	RICK FORD	Rick Ford <small>Digitally signed by Rick Ford Date: 2019.03.14 14:22:34 -0700</small>	PROJECT MANAGER	
	<small>(Name)</small>	<small>(Signature)</small>	<small>(Title)</small>	
ITEM NUMBER	DOCUMENT NUMBER	REVISION NUMBER	DOCUMENT DESCRIPTION	FS DISPOSITION
1	KAS 183		ATLAS BUFFER CARS AAR / TTCI SINGLE CAR AIR BRAKE TEST WITNESS LETTER FOR COMPLIANCE TO 8-488	<input checked="" type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
2	KAS 184		ATLAS CAB CAR AAR / TTCI SINGLE CAR AIR BRAKE TEST WITNESS LETTER FOR COMPLIANCE TO 8-488	<input checked="" type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
				<input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
				<input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
				<input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
				<input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
				<input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
				<input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
				<input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
				<input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
Comments:		Technical Reviewer (i.e., RE, PTL, SME, QA, etc.)		
No comments		KLEIN Slade <small>Date: 2019.03.19 08:11:34 -0700</small>		
		Date 3/19/2019		
FS DISPOSITION CODES AND DEFINITIONS				
AP	Approved	Work may proceed.	Resubmittal is not required	
AWC	Approved with Comment	Work may proceed; comments provided for Supplier's consideration only.	Resubmittal is not required	
REV	Reviewed	Work may proceed; comments provided for Supplier's consideration only.	Resubmittal is not required	
RWC	Reviewed with Comment	Work may proceed; subject to incorporation and compliance w/ Buyer comments.	Correct and resubmit	
DS	Disapproved	Work may <u>not</u> proceed.	Correct and resubmit	
RSA	Receipt Submittal Acknowledged	No other action required.		
If, in the judgment of the Supplier, the incorporation of FS' comments will result in a change to the Purchase Order/Subcontract, work shall not proceed and the Supplier shall immediately provide a written notice to FS' C&P Representative describing the change.				
Project Manager (PM) / Engineering Manager (EM) or Designated Individual (DI) Approval			Date: 03/19/2019	
		<small>Digitally signed by Mark A. Denton DN: cn=Mark A. Denton, o=Orano Federal Services, email=mark.denton@orano.gov, c=US Date: 2019.03.18 11:30:13 -0400</small>		

FS-EN-FRM-023 Rev 02 (Effective March 1, 2018)
 Refer to FS-EN-PRC-012



Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
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Doc./Rev.: EIR-3021970-000
 Project: 00225.03.0050 DOE Atlas Project

	Orano Federal Services	
	SUPPLIER DOCUMENT SUBMITTAL REVIEW	
Supplier / PO No.:	KASGRO / 15C3011916	DTF No. / Rev: 050
Charge No:	00225.03.0050.02.00001	Due Date: 3/18/2019
Document(s):	See DTF No.: 050	
REVIEW INSTRUCTIONS: (List Supplier Doc. No. and Rev. FS Spec and Dwg. Codes, Stds, etc.)		
PE	Slade Klein	
REVIEWERS	Slade Klein, Bernie Counterman	
QA	Bernie Counterman	
Technical Review		
Comments/Markup Attached Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Technical Reviewer Comments:		
No comments		
Technical Reviewer(s) (Sign/Date): KLEIN Slade		Date: 2019.03.14 15:16:48 -07'00'
Quality Assurance Review (As Applicable)		
Comments/Markup Attached Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Technical Reviewer Comments:		
No Comments		
QA Reviewer(s) (Sign/Date):		Digitally signed by COUNTERMAN Bernard Date: 2019.03.15 08:08:53 -07'00'
COMMENT DISPOSITION (If Applicable. Attached further comments and disposition correspondence as necessary)		

FS-EN-FRM-026 Rev 01 (Effective March 1, 2018)
 Refer to FS-EN-PRC-012



Orano Federal Services
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High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
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Project: 00225.03.0050 DOE Atlas Project



Mike Yon
Field Inspector - MID/QA Auditor
Cell: 814-515-3803
Email: Mike_yon@aar.com

March 12, 2019

File:KAS-NEWCPA-MC06-0219b-MSY

Subject: Single Car Air Brake Test Observations Specification testing
of IDOX 010001, Heavy Duty Flat Car

Mr. David L. Cackovic
Chief – Technical Standards & Inspections
Transportation Technology Center, Inc.
P.O. Box 11130
Pueblo, CO 81001
E-mail: David_Cackovic@aar.com

Dear Mr. Cackovic,

Specification testing of IDOX 010001, Heavy Duty Flat Car, specifically the Single Car Air Brake Test and restriction test has been completed. Testing was done at the Kasgro Rail Corporation facility in New Castle, Pennsylvania on February 12, 2019 to comply with Specification S-2043 and S-486.

I was present (test witness) for the required Single Car Air Brake Test and can conclude that applicable requirements of AAR Specification S-486 have been satisfactorily addressed.

Attached information was supplied by the Kasgro Rail Corporation in support of the approval process. Should you need any additional information, please do not hesitate to call.

Sincerely,

Mike Yon

cc: Anna Fox, TTCI
Richard Jones, Kasgro
J. Hannafious, TTCI
Kasgro, mark@kasgro.com



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Rev. 1	Kasgro Rail Corp FORM 5-A 2/25/2016	CAR NUMBER <i>DDX 010001</i>	
Air Brake Test Report (See asterisk)			
Single Car Test, 1 Set			X
Single Car Test (Includes B.C. Pressure Test)			X
Stack Adjuster Test			X
Empty / Load Valve Test			X
System Leakage Test			X
Piston Travel (Unit Brakes)			X
Piston Travel (TK MTD Brakes)			X
WABCO/FAC / MPD/AC Piston Travel adjustment			X
Thick Mounted Brakes with Slack Adjustment			X
#1 #2 #3 #4			X
Lube discharge			X
SYSTEM REPAIRS -List repairs, parts replaced, location, and why made.			
Piston Travels	<i>B 27% C 24% D 26% E 26% F 26% A 28%</i>		
EQUALIZATION PRESSURE:	<i>B FWD SER 64, EM 76 EMPTY 27 A FWD SER 63, EM 76, EMPTY 28</i>		
DB-100	<i>NEW MAKE AIR BRAKE ELK-B LOW SERVIC 44026</i>		
DB-20	<i>AIR RED</i>		
RESTRICTION TEST	<i>467 min, 50 actual (SHORT BALL OK)</i>		
Signature of Tester	<i>DAVID R. RYAN</i>		
Date	<i>2-2-19</i>		

Note: The recording of false, fictitious, or fraudulent statements on this document may be punishable as a felony under federal statutes.



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Appendix B.2.8 – NDE & Weld Examination Results – Atlas Railcar Fabrication

Orano Federal Services	
DATA TRANSMITTAL FORM	
Supplier: KASGRO RAIL CORP., INC.	DTF No: 038 Page 1 of 1
P.O./SC No: 15C3011916	KLEIN Slade <small>Date: 2019.02.27 14:12:31 -0800</small> Date: 2/19/2019
Type of Submittal: <input checked="" type="checkbox"/> First <input type="checkbox"/> Re-Submittal	SDRL List Item No: 24
Submitted for: <input checked="" type="checkbox"/> Approval <input type="checkbox"/> Review <input type="checkbox"/> Information	Number of Copies Submitted: 1
Submitted By: RICK FORD	Rick Ford <small>Digitally signed by Rick Ford Date: 2019.02.19 13:31:27 -0800</small> PROJECT MANAGER
<small>(Name)</small>	<small>(Signature)</small> <small>(Title)</small>

ITEM NUMBER	DOCUMENT NUMBER	REVISION NUMBER	DOCUMENT DESCRIPTION	FS DISPOSITION
1	KAS 127		ATLAS CASK CAR CMS LASER DIMENSIONS FOR PIN BLOCK ATTACHMENT BLOCKS	<input type="checkbox"/> AP <input checked="" type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
2	KAS 128		FRA S-2044 INPSECTION FOR BUFFER CARS	<input checked="" type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
3	KAS 129		AAR S-488 BRAKE TEST CERTIFICATION	<input checked="" type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
4	KAS 130		TRACK SCALE CALIBRATION RECORDS	<input checked="" type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
5	KAS 131		TUV UT NDE REPORT CASK CAR	<input checked="" type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
6	KAS 132		TUV PT NDE REPORT CASK CAR	<input checked="" type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
7	KAS 133		TUV MT NDE REPORT CASK CAR	<input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input checked="" type="checkbox"/> DS <input type="checkbox"/> RSA
8	KAS 143 134		TUV VT NDE REPORT CASK CAR	<input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input checked="" type="checkbox"/> DS <input type="checkbox"/> RSA
				<input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA

Comments:
 1) NOTE: KAS 127 provides as-built railcar dimensions. Kasgro rework modified some of these. Kasgro to submit final dimensions separately.
 2) KAS 133 does not include the shear block or outer pin block weld MT.
 3) KAS 134 does not include VT of the shear block welds.

Technical Reviewer (i.e., RE, PTL, SME, QA, etc.)
KLEIN Slade Date: 2019.02.27 13:47:33 -08'00'
 Date **2/27/2019**

FS DISPOSITION CODES AND DEFINITIONS			
AP	Approved	Work may proceed.	Resubmittal is not required
AWC	Approved with Comment	Work may proceed; comments provided for Supplier's consideration only.	Resubmittal is not required
REV	Reviewed	Work may proceed, comments provided for Supplier's consideration only.	Resubmittal is not required
RWC	Reviewed with Comment	Work may proceed; subject to incorporation and compliance w/ Buyer comments.	Correct and resubmit
DS	Disapproved	Work may <u>not</u> proceed.	Correct and resubmit
RSA	Receipt Submittal Acknowledged	No other action required.	

If, in the judgment of the Supplier, the incorporation of FS' comments will result in a change to the Purchase Order/Subcontract, work shall not proceed and the Supplier shall immediately provide a written notice to FS' C&P Representative describing the change.

Project Manager (PM) / Engineering Manager (EM) or Designated Individual (DI) Approval

Mark A. Dector

Digitally signed by Mark A. Dector
 DN: cn=Mark A. Dector, o=Orano Federal Services, email=mark.dector@orano.gov, ou=US
 Date: 2019.02.27 17:04:02 -0800

Date: **02/27/2019**

FS-EN-FRM-023 Rev 02 (Effective March 1, 2018)
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Orano Federal Services
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High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
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Doc./Rev.: EIR-3021970-000
 Project: 00225.03.0050 DOE Atlas Project

	Orano Federal Services	
	SUPPLIER DOCUMENT SUBMITTAL REVIEW	
Supplier / PO No.:	KASGRO / 15C3011916	DTF No. / Rev: 038
Charge No:	00225.03.0050.02.00001	Due Date: 3/8/2019
Document(s):	See DTF No.: 038	
REVIEW INSTRUCTIONS: (List Supplier Doc. No. and Rev. FS Spec and Dwg. Codes, Stds, etc.)		
PE	Slade Klein	
REVIEWERS	Slade Klein, Bernie Counterman	
QA	Bernie Counterman	
Technical Review		
Comments/Markup Attached Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Technical Reviewer Comments:		
KAS 133 does not include the required MT inspection of the shear blocks and outer pin blocks. This was required by Kasgro drawing 1155-41.		
Technical Reviewer(s) (Sign/Date):		Date: 2019.02.26 07:23:43 -08'00'
KLEIN Slade		
Quality Assurance Review (As Applicable)		
Comments/Markup Attached Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Technical Reviewer Comments:		
Only potential question was regarding missing signature by the technician on the UT report. Discussed with TUV Rheinland Level III (Randy @ 616-818-8188). The technician signature is not required provided the report is signed by his supervisor. This report is signed by the individuals supervisor.		
QA Reviewer(s) (Sign/Date):		Digitally signed by COUNTERMAN Bernard Date: 2019.02.25 09:29:24 -08'00'
COMMENT DISPOSITION (If Applicable. Attached further comments and disposition correspondence as necessary)		

FS-EN-FRM-026 Rev 01 (Effective March 1, 2018)
 Refer to FS-EN-PRC-012



Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
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Grand Rapids, MI – Flint, MI – Pittsburgh, PA – Birmingham, AL – Decatur, AL
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ULTRASONIC INSPECTION AWS REPORT

Mr. Mark Zeigler
 Kasgro Rail Corporation
 121 Rundle Road
 New Castle, PA 16102

Report #: 8 Page 1 of 2
 P.O. #: K180079
 Work Order #: 468009
 Project: Cask Car #1

Date: July 24, 2018
 Description: Performed Ultrasonic Inspection on Full Penetration Welds on Cask Car #1

TRIS Procedure #: PA-WI-08-005 Rev.3		Length: 8" – 12"		Ultrasonic Unit: Sonatest 350													
Test Method Standard: AWS D15.1		Thickness: 1" – 1-1/4"		Serial #: 1002725													
Acceptance Standard: AWS D15.1		Location: New Castle, PA															
Weld Identification	Meets Code	Fails Code	Procedure Legend No.	Indication Number	Transducer Angle	From Face	Leg *	Decibels				Discontinuity Distance					
								Indication Level	Reference Level	Attenuation Factor	Indication Rating	Length	Angular Distance (Sound Path)	Depth From "A"	From X	From Y	
								a	B	c	d						
Weld #9	/		1		70°	A	I/II	36									
Weld #10	/		1		70°	A	I/II	36									
Weld #11	/		1		70°	A	I/II	36									
Weld #12	/		1		70°	A	I/II	36									
Weld #13	/		1		70°	A	I/II	36									
Weld #14	/		1		70°	A	I/II	36									
Weld #15	/		1		70°	A	I/II	36									
Weld #16	/		1		70°	A	I/II	36									
Couplant: Sonatrace 30		Frequency: 2.25 MHz															
Calibration Blocks: DSC		Surface Condition: As Welded															
Technician: Noah Holden		Level: II															
Interpreter: Noah Holden		Level: II															

Reviewed by: Date: 7/27/18
 Testing was performed in accordance with accepted industry practice as well as the test methods referenced TUV Rheinland Industrial Solutions, Inc. has no direct knowledge of the origin, sampling procedure, nor condition of the samples, and makes no claims as to the suitability nor final use of the material. This test report applies only to those items tested. This report shall not be reproduced except in full without the written consent of TUV Rheinland Industrial Solutions, Inc.



Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
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 Project: 00225.03.0050 DOE Atlas Project

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ULTRASONIC INSPECTION AWS REPORT

Mr. Mark Zeigler
 Kasgro Rail Corporation
 121 Rundle Road
 New Castle, PA 16102

Report #: 8
 P.O. #: K180079
 Work Order #: 468009
 Project: Cask Car #1

Page 2 of 2

Date: July 24, 2018
 Description: Performed Ultrasonic Inspection on Full Penetration Welds on Cask Car #1

TRIS Procedure#: PA-WI-08-005 Rev.3		Length: 14" – 48"		Ultrasonic Unit: Sonatest 350													
Test Method Standard: AWS D15.1		Thickness: 2" – 2 1/2"		Serial #: 1002725													
Acceptance Standard: AWS D15.1		Location: New Castle, PA															
Weld Identification	Meets Code	Fails Code	Procedure Legend No.	Indication Number	Transducer Angle	From Face	Leg *	Decibels				Discontinuity					
								Indication Level	Reference Level	Attenuation Factor	Indication Rating	Length	Angular Distance (Sound Path)	Depth From "A"	Distance		
															a	b	c
Weld #1	/		1		70°	A	I/II	36									
Weld #2	/		1		70°	A	I/II	36									
Weld #3	/		1		70°	A	I/II	36									
Weld #4	/		1		70°	A	I/II	36									
Weld #5	/		1		70°	A	I/II	36									
Weld #6	/		1		70°	A	I/II	36									
Weld #7	/		1		70°	A	I/II	36									
Weld #8	/		1		70°	A	I/II	36									
Couplant: Sonatrace 30		Frequency: 2.25 MHz															
Calibration Blocks: DSC		Surface Condition: Ground Flush															
Technician: Noah Holden		Level: II															
Interpreter: Noah Holden		Level: II															

Reviewed by: Date: 7/27/18
 Testing was performed in accordance with accepted industry practice as well as the test methods referenced TUV Rheinland Industrial Solutions, Inc. has no direct knowledge of the origin, sampling procedure, nor condition of the samples, and makes no claims as to the suitability nor final use of the material. This test report applies only to those items tested. This report shall not be reproduced except in full without the written consent of TUV Rheinland Industrial Solutions, Inc.



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LIQUID PENETRANT INSPECTION REPORT

Kasgro Rail Corporation
 Mr. Mark Zeigler
 121 Rundle Road
 New Castle, PA 16102

Report #: 14
 P.O. #: K180079
 Work Order #: 468009
 Project: Atlas Cask Car

Page 1 of 1

Date: September 5, 2018
 Description: Stainless Steel liners in Span Bolsters #1 and #2

TRIS Procedure: PT-WI-08-001 Rev.4	Surface Condition: Ground Smooth	Production Stage: <input checked="" type="checkbox"/> In Progress	PT Material Identification: Mfg. Sherwin
Test Method Standard: ASTM - 1417	Percent of Inspection: <u> X </u> %	<input type="checkbox"/> Final	Penetrant: BC#119-D2
Acceptance Standard: AWS D15.1		<input type="checkbox"/> Other	Developer: BC#314-Y6
Product Form: N/A		For Welds:	Cleaner: BC#39-E4
Type of Material: 304SS to A572 Gr. 50		<input type="checkbox"/> Root Pass	Emulsifier: N/A
		<input type="checkbox"/> Intermediate	
		<input checked="" type="checkbox"/> Final	(Indicate type number and batch number for each item used)

Product / Weld Identification	Accept	Reject	Linear	Rounded	Cracks	Undercut	Other	Defect Location or Remarks	Technique:	Visible
									Fluorescent	N/A
Bolster #2 (A-End)									Visible Dye	X
1-3 to 3-20	/							Weld #5	Water Washable	N/A
									Post Emulsified	N/A
									Solvent Removed	X
Bolster #1 (B-End)									UV Meter No.	N/A
1-3 to 3-20	/							Weld #5	WL Meter No.	N/A
									Meter Calibration	N/A
									Due Date	N/A
									Black Light Intensity	N/A
									White Light Intensity	N/A
Technician: Daniel S. Gjurich <i>Daniel S. Gjurich</i> Level: II										

Reviewed By: *[Signature]* Date: 9/5/18

Testing was performed in accordance with accepted industry practice as well as the test methods referenced TUV Rheinland Industrial Solutions, Inc. has no direct knowledge of the origin, sampling procedure, nor condition of the samples, and makes no claims as to the suitability nor final use of the material. This test report applies only to those items tested. This report shall not be reproduced except in full without the written consent of TUV Rheinland Industrial Solutions, Inc.

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MAGNETIC PARTICLE INSPECTION REPORT

Mr. Mark Zeigler
 Kasgro Rail Corporation
 121 Rundle Road
 New Castle, PA 16102

Report #: 2 Page 1 of 1
 P.O. #: K18-0079
 Work Order #: 468009
 Project: Atlas Cask Car

Date: May 7, 2018
 Description: Perform Magnetic Particle Inspections of Body Bolster Assemblies #1 & #2

TRIS Procedure:	WI-08-002 Rev. 5	Production Stage:	<input checked="" type="checkbox"/> In Progress	For Welds:	<input type="checkbox"/> Root Pass
Surface Condition:	As Welded		<input type="checkbox"/> Final		<input type="checkbox"/> Intermediate
Test Method Standard:	ASTM E709		<input type="checkbox"/> Other		<input checked="" type="checkbox"/> Final
Acceptance Standard:	AWS D15.1	Equipment Identification:			
Type of Material:	Carbon Steel	Model #:	Parker DA400		
		Gage #/Serial #:	P135/17999		
		Cal. Date Due:	6-19-18		

Product / Weld Identification	Accept	Reject	Linear	Rounded	Cracks	Undercut	Other	Defect Location or Remarks	Technique	
									Technique #:	N/A
Body Bolster 3-10 (1)									Method:	Wet <input type="checkbox"/> Dry <input checked="" type="checkbox"/>
3-14 to 3-10 (Inside)	/							Weld #2	Fluorescent <input type="checkbox"/> Visible <input checked="" type="checkbox"/>	
3-14 to 3-10 (Inside)	/							Weld #4		
3-14 to 3-10 (Outside)	/							Weld #1	Consumable Batch #:	09M014
3-14 to 3-10 (Outside)	/							Weld #3	Coil	N/A FWDC N/A
									Head Shot	N/A Prods N/A
Body Bolster 3-10 (2)									Amperage:	N/A
3-14 to 3-10 (Inside)	/							Weld #2	Yoke Current:	AC <input checked="" type="checkbox"/> DC <input type="checkbox"/>
3-14 to 3-10 (Inside)	/							Weld #4	UV Meter #:	N/A
3-14 to 3-10 (Outside)	/							Weld #1	UV Intensity verified at prescribed intervals?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
3-14 to 3-10 (Outside)	/							Weld #3	Quantity Tested 100%:	X
									Random:	N/A %

NOTE: The Recording of False, Fictitious or Fraudulent Statements or Entries on the Document may be Punishable as a Felony Under Federal Statutes.

SIGNED:		Kasgro Rail
Technician:	Daniel S. Gjurich <i>Daniel S. Gjurich</i>	Level: II

Reviewed By: *[Signature]* Date: 5/11/18
 Testing was performed in accordance with accepted industry practice as well as the test methods referenced. This test report applies only to those items tested. This report shall not be reproduced except in full without the written consent of Non-Destructive Testing Services, Inc.



Orano Federal Services
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MAGNETIC PARTICLE INSPECTION REPORT

Mr. Mark Zeigler
 Kasgro Rail Corporation
 121 Rundle Road
 New Castle, PA 16102

Report #: 4 Page 1 of 1
 P.O. #: K180079
 Work Order #: 468009
 Project: Cask Car

Date: April 10, 2018 thru July 3, 2018
 Description: Perform Magnetic Particle Inspections of Car Body Assembly

TRIS Procedure:	W1-08-002 Rev. 5	Production Stage:	<input checked="" type="checkbox"/> In Progress	For Welds:	<input type="checkbox"/> Root Pass
Surface Condition:	As Welded	<input type="checkbox"/> Final	<input type="checkbox"/> Other	<input type="checkbox"/> Intermediate	<input checked="" type="checkbox"/> Final
Test Method Standard:	ASTM E709	Equipment Identification:			
Acceptance Standard:	AWS D15.1	Model #:	Parker DA400		
Type of Material:	Carbon Steel	Gage#/Serial #:	P135/ 17999		
		Cal. Date Due:	12-18-18		

Product / Weld Identification	Accept	Reject	Linear	Rounded	Cracks	Undercut	Other	Defect Location or Remarks	Technique	
									Technique #:	N/A
Car Body Assembly									Technique #:	N/A
Left Side Sill to Deck									Method:	Wet <input type="checkbox"/> Dry <input checked="" type="checkbox"/>
Outside	/							Weld #29	Fluorescent <input type="checkbox"/> Visible <input checked="" type="checkbox"/>	
Inside	/							Weld #30		
Right Side Sill to Deck									Consumable Batch #:	09M014
Outside	/							Weld #33	Coil	N/A FWDC N/A
Inside	/							Weld #34	Head Shot	N/A Prods N/A
Left Center Sill to Deck									Amperage:	N/A
Outside	/							Weld #37	Yoke Current:	AC <input checked="" type="checkbox"/> DC <input type="checkbox"/>
Inside	/							Weld #38	UV Meter #:	N/A
Right Center Sill to Deck									UV Intensity verified at prescribed intervals?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
Outside	/							Weld #39	Quantity Tested 100%:	X
Inside	/							Weld #40	Random:	N/A %

SIGNED: Kasgro Rail

Technician: Daniel S. Gjurich *Daniel S. Gjurich* Level: II

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Reviewed By: *[Signature]* Date: 7/2/18
 Testing was performed in accordance with accepted industry practice as well as the test methods referenced TUV Rheinland Industrial Solutions. I, [Signature], have no direct knowledge of the origin, sampling procedure, nor condition of the samples, and makes no claims as to the suitability nor final use of the material. This test report applies only to those items tested. This report shall not be reproduced except in full without the written consent of TUV Rheinland Industrial Solutions, Inc.



Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
Appendix B

Doc./Rev.: EIR-3021970-000
 Project: 00225.03.0050 DOE Atlas Project

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MAGNETIC PARTICLE INSPECTION REPORT

Mr. Mark Zeigler
 Kasgro Rail Corporation
 121 Rundle Road
 New Castle, PA 16102
 Date: April 10, 2018 thru July 9, 2018
 Description: Perform Magnetic Particle Inspections of Car Body Assembly

Report #: 5 Page 1 of 4
 P.O. #: K180079
 Work Order #: 468009
 Project: Cask Car

TRIS Procedure:	W1-08-002 Rev. 5	Production Stage:	<input checked="" type="checkbox"/> In Progress	For Welds:	<input checked="" type="checkbox"/> Root Pass
Surface Condition:	As Welded		<input type="checkbox"/> Final		<input type="checkbox"/> Intermediate
Test Method Standard:	ASTM E709		<input type="checkbox"/> Other		<input checked="" type="checkbox"/> Final
Acceptance Standard:	AWS D15.1	Equipment Identification:			
Type of Material:	Carbon Steel	Model #:	Parker DA400		
		Gauge#/Serial #:	P135/17999		
		Cal. Date Due:	12-18-18		

Product / Weld Identification	Accept	Reject	Linear	Rounded	Cracks	Undercut	Other	Defect Location or Remarks	Technique	
									Technique #:	
Car Body Assembly									Technique #:	N/A
3-14 to 3-18	/							Weld #27	Method:	Wet _____ Dry <input checked="" type="checkbox"/>
3-14 to 3-18	/							Weld #28	Fluorescent _____ Visible <input checked="" type="checkbox"/>	
3-14 to 3-17	/							Weld #24		
3-28 to 3-37	/							Weld #43	Consumable Batch #:	08A078
3-30 to 3-37	/							Weld #45	Coil	N/A FWDC N/A
3-30 to 3-36	/							Weld #47	Head Shot	N/A Prods N/A
3-28 to 3-36	/							Weld #49	Amperage:	N/A
3-14 to 3-17	/							Weld #23 Root	Yoke Current:	AC <input checked="" type="checkbox"/> DC _____
3-14 to 3-17	/							Weld #23 Final	UV Meter #:	N/A
3-28 to 3-14	/							Weld #17	UV Intensity verified at prescribed intervals?	Yes _____ No _____ N/A <input checked="" type="checkbox"/>
3-27 to 3-14	/							Weld #18	Quantity Tested 100%:	<input checked="" type="checkbox"/>
3-27 to 3-14	/							Weld #19	Random:	N/A %
3-28 to 3-14	/							Weld #20	NOTE: The Recording of False, Fictitious or Fraudulent Statements or Entries on the Document may be Punishable as a Felony Under Federal Statutes.	

SIGNED: _____ Kasgro Rail
 Technician: Daniel S. Gjurich *Daniel Gjurich* Level: II

Reviewed By: *CA* Date: *7/10/18*

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Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
Appendix B

Doc./Rev.: EIR-3021970-000
 Project: 00225.03.0050 DOE Atlas Project

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MAGNETIC PARTICLE INSPECTION REPORT

Mr. Mark Zeigler Kasgro Rail Corporation 121 Rundle Road New Castle, PA 16102 Date: April 10, 2018 thru July 9, 2018 Description: Perform Magnetic Particle Inspections of Car Body Assembly	Report #: 5 Page 2 of 4 P.O. #: K180079 Work Order #: 468009 Project: Cask Car
---	--

TRIS Procedure: W1-08-002 Rev. 5 Surface Condition: As Welded Test Method Standard: ASTM E709 Acceptance Standard: AWS D15.1 Type of Material: Carbon Steel	Production Stage: <input checked="" type="checkbox"/> In Progress <input type="checkbox"/> Final <input type="checkbox"/> Other	For Welds: <input checked="" type="checkbox"/> Root Pass <input type="checkbox"/> Intermediate <input checked="" type="checkbox"/> Final Equipment Identification: Model #: Parker DA400 Gauge#/Serial #: P135/17999 Cal. Date Due: 12-18-18
--	---	---

Product / Weld Identification	Accept	Reject	Linear	Rounded	Cracks	Undercut	Other	Defect Location or Remarks	Technique	
									Technique #:	
Car Body Assembly									Technique #:	N/A
3-14 to 3-17	/							Weld #25	Method:	Wet _____ Dry <input checked="" type="checkbox"/>
3-14 to 3-17	/							Weld #26	Fluorescent _____ Visible <input checked="" type="checkbox"/>	
3-14 to 3-18	/							Weld #22		
3-27 to 3-36	/							Weld #44	Consumable Batch #:	08A078
3-30 to 3-36	/							Weld #46	Coil	N/A FWDC <input checked="" type="checkbox"/>
3-30 to 3-37	/							Weld #48	Head Shot	N/A Prods <input checked="" type="checkbox"/>
3-28 to 3-37	/							Weld #50	Amperage:	N/A
3-14 to 3-18	/							Weld #21 Root	Yoke Current:	AC <input checked="" type="checkbox"/> DC _____
3-14 to 3-18	/							Weld #21 Final	UV Meter #:	N/A
									UV Intensity verified at prescribed intervals?	Yes _____ No _____ N/A <input checked="" type="checkbox"/>
									Quantity Tested 100%:	<input checked="" type="checkbox"/>
									Random:	N/A %
NOTE: The Recording of False, Fictitious or Fraudulent Statements or Entries on the Document may be Punishable as a Felony Under Federal Statutes.										
SIGNED: _____ Kasgro Rail										
Technician:	Daniel S. Gjurich <i>Daniel S. Gjurich</i>						Level:	II		

Reviewed By: *[Signature]* Date: 7/13/18

Testing was performed in accordance with accepted industry practice as well as the test methods referenced TUV Rheinland Industrial Solutions, Inc. has no direct knowledge of the origin, sampling procedure, nor condition of the samples, and makes no claims as to the suitability nor final use of the material. This test report applies only to those items tested. This report shall not be reproduced except in full without the written consent of TUV Rheinland Industrial Solutions, Inc.



Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
Appendix B

Doc./Rev.: EIR-3021970-000
 Project: 00225.03.0050 DOE Atlas Project

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MAGNETIC PARTICLE INSPECTION REPORT

Mr. Mark Zeigler Kasgro Rail Corporation 121 Rundle Road New Castle, PA 16102 Date: April 10, 2018 thru July 9, 2018 Description: Perform Magnetic Particle Inspections of Car Body Assembly	Report #: 5 P.O. #: K180079 Work Order #: 468009 Project: Cask Car	Page 3 of 4
---	---	-------------

TRIS Procedure: W1-08-002 Rev. 5	Production Stage: <input checked="" type="checkbox"/> In Progress <input type="checkbox"/> Final <input type="checkbox"/> Other	For Welds: <input type="checkbox"/> Root Pass <input type="checkbox"/> Intermediate <input checked="" type="checkbox"/> Final
Surface Condition: As Welded	Equipment Identification:	
Test Method Standard: ASTM E709	Model #: Parker DA400	Gauge #/Serial #: P135/17999
Acceptance Standard: AWS D15.1	Cal. Date Due: 12-18-18	
Type of Material: Carbon Steel		

Product / Weld Identification	Accept	Reject	Linear	Rounded	Cracks	Undercut	Other	Defect Location or Remarks	Technique	
									Technique #:	N/A
Car Body Assembly									Method: Wet _____ Dry <input checked="" type="checkbox"/>	Fluorescent _____ Visible <input checked="" type="checkbox"/>
3-39 to 3-41	/								Consumable Batch #: 08A078	Coil N/A FWDC N/A
3-39 to 3-15	/								Head Shot N/A Prods N/A	
3-40 to 3-15	/								Amperage: N/A	
3-74 to 3-15	/								Yoke Current: AC <input checked="" type="checkbox"/> DC _____	
3-30 to 3-15	/								UV Meter #: N/A	
3-27 to 3-15	/								UV Intensity verified at prescribed intervals?	Yes _____ No _____ N/A <input checked="" type="checkbox"/>
3-28 to 3-15	/								Quantity Tested 100%: _____ X	
3-14 to 3-15	/								Random: N/A %	
3-30 to 3-15	/								NOTE: The Recording of False, Fictitious or Fraudulent Statements or Entries on the Document may be Punishable as a Felony Under Federal Statutes.	
3-29 to 3-15	/									
3-17 to 3-15	/									
3-68 to 3-15	/									
3-71 to 3-15	/									
3-32 to 3-15	/									

SIGNED: _____ Kasgro Rail
 Technician: Daniel S. Gjurich *Daniel S. Gjurich* Level: I I

Reviewed By: _____ Date: 7/13/18

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Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
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Appendix B

Doc./Rev.: EIR-3021970-000
 Project: 00225.03.0050 DOE Atlas Project

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MAGNETIC PARTICLE INSPECTION REPORT

Mr. Mark Zeigler
 Kasgro Rail Corporation
 121 Rundle Road
 New Castle, PA 16102
 Date: April 10, 2018 thru July 9, 2018
 Description: Perform Magnetic Particle Inspections of Car Body Assembly

Report #: 5 Page 4 of 4
 P.O. #: K180079
 Work Order #: 468009
 Project: Cask Car

TRIS Procedure:	WI-08-002 Rev.5	Production Stage:	<input type="checkbox"/> In Progress	For Welds:	<input type="checkbox"/> Root Pass
Surface Condition:	As Welded	<input checked="" type="checkbox"/> Final	<input type="checkbox"/> Other	<input type="checkbox"/> Intermediate	<input checked="" type="checkbox"/> Final
Test Method Standard:	ASTM E709	Equipment Identification:			
Acceptance Standard:	AWS D15.1	Model #:	Parker DA400		
Type of Material:	Carbon Steel	Gauge#/Serial #:	P135/17999		
		Cal. Date Due:	12-18-18		

Product / Weld Identification	Accept	Reject	Linear	Rounded	Cracks	Undercut	Other	Defect Location or Remarks	Technique	
									Technique #:	
Car Body Assembly									Technique #:	N/A
Center Plate "A" End									Method:	Wet <input type="checkbox"/> Dry <input checked="" type="checkbox"/>
3-11 to 3-10	/								Fluorescent	<input type="checkbox"/> Visible <input checked="" type="checkbox"/>
Center Plate "B" End									Consumable Batch #:	08A078
3-11 to 3-10	/								Coil	N/A FWDC N/A
									Head Shot	N/A Prods N/A
									Amperage:	N/A
									Yoke Current:	AC <input checked="" type="checkbox"/> DC <input type="checkbox"/>
									UV Meter #:	N/A
									UV Intensity verified at prescribed intervals?	
									Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>	
									Quantity Tested 100%:	<input checked="" type="checkbox"/>
									Random:	N/A %

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SIGNED: _____ Kasgro Rail
 Technician: Daniel S. Gjurich *Daniel S. Gjurich* Level: II

Reviewed By: *[Signature]* Date: 7/10/18
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Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
Appendix B

Doc./Rev.: EIR-3021970-000
 Project: 00225.03.0050 DOE Atlas Project

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MAGNETIC PARTICLE INSPECTION REPORT

Mr. Mark Zeigler
 Kasgro Rail Corporation
 121 Rundle Road
 New Castle, PA 16102

Report #: 6 Page 1 of 2
 P.O. #: K180079
 Work Order #: 468009
 Project: Atlas Cask Car

Date: July 11, 2018 thru August 29, 2018
 Description: Magnetic Particle Inspections on Piece #1 Span Bolster Assembly

TRIS Procedure: WI-08-002 Rev.5	Production Stage: <input checked="" type="checkbox"/> In Progress <input type="checkbox"/> Final <input type="checkbox"/> Other	For Welds: <input type="checkbox"/> Root Pass <input type="checkbox"/> Intermediate <input checked="" type="checkbox"/> Final
Surface Condition: As Welded	Equipment Identification:	
Test Method Standard: ASTM E709	Model #: Parker DA400	Gage #/Serial #: P135/17999
Acceptance Standard: AWS D15.1	Cal. Date Due: 12-18-18	
Type of Material: Carbon Steel		

Product / Weld Identification	Accept	Reject	Linear	Rounded	Cracks	Undercut	Other	Defect Location or Remarks	Technique		
									Method	Fluorescent	
Span Bolster Assembly									Technique #: N/A		
3-18 to 3-15 R-Side								Weld #3	Method: Wet _____ Dry <input checked="" type="checkbox"/>		
INSIDE	/								Fluorescent _____ Visible <input checked="" type="checkbox"/>		
OUTSIDE	/										
3-17 to 3-15 L-Side								Weld #4	Consumable Batch #: 08A078		
INSIDE	/								Coil <input checked="" type="checkbox"/> N/A FWDC <input checked="" type="checkbox"/> N/A		
OUTSIDE	/								Head Shot <input checked="" type="checkbox"/> N/A Prods <input checked="" type="checkbox"/> N/A		
3-12 to 3-15	/								Amperage: N/A		
3-9 to 3-15	/								Yoke Current: AC <input checked="" type="checkbox"/> DC _____		
3-8 to 3-15	/								UV Meter #: N/A		
									UV Intensity verified at prescribed intervals?		
									Yes _____ No _____ N/A <input checked="" type="checkbox"/>		
									Quantity Tested 100%: <input checked="" type="checkbox"/>		
									Random: N/A %		
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Technician:	Daniel S. Gjurich <i>Daniel S. Gjurich</i>							Level:	II		

Reviewed By: *[Signature]* Date: 12/11/18
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Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
Appendix B

Doc./Rev.: EIR-3021970-000
 Project: 00225.03.0050 DOE Atlas Project

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MAGNETIC PARTICLE INSPECTION REPORT

Mr. Mark Zeigler
 Kasgro Rail Corporation
 121 Rundle Road
 New Castle, PA 16102

Report #: 6 Page 2 of 2
 P.O. #: K180079
 Work Order #: 468009
 Project: Atlas Cask Car

Date: July 11, 2018 thru August 29, 2018
 Description: Magnetic Particle Inspections on Piece #1 Span Bolster Assembly

TRIS Procedure:	WI-08-002 Rev.5	Production Stage:	<input checked="" type="checkbox"/> In Progress	For Welds:	<input type="checkbox"/> Root Pass
Surface Condition:	As Welded		<input type="checkbox"/> Final		<input type="checkbox"/> Intermediate
Test Method Standard:	ASTM E709		<input type="checkbox"/> Other		<input checked="" type="checkbox"/> Final
Acceptance Standard:	AWS D15.1	Equipment Identification:			
Type of Material:	Carbon Steel	Model #:	Parker DA400		
		Gage #/Serial #:	P135/17999		
		Calibration :	12-18-18		

Product / Weld Identification	Accept	Reject	Linear	Rounded	Cracks	Undercut	Other	Defect Location or Remarks	Technique
Span Bolster Assembly									
3-14 to 3-17 L-Side	/							Weld #1	Technique #: N/A
3-14 to 3-18 R-Side	/							Weld #2	Method: Wet <input type="checkbox"/> Dry <input checked="" type="checkbox"/> Fluorescent <input type="checkbox"/> Visible <input checked="" type="checkbox"/>
3-27 to 3-14	/								Consumable Batch #: 08A078
3-27 to 3-2 Inside	/								Coil <input type="checkbox"/> N/A FWDC <input type="checkbox"/> N/A
3-27 to 3-2 Outside	/								Head Shot <input type="checkbox"/> N/A Prods <input type="checkbox"/> N/A
3-27 to 3-15 Inside	/								Amperage: N/A
3-27 to 3-15 Outside	/								Yoke Current: AC <input checked="" type="checkbox"/> DC <input type="checkbox"/>
3-27 to 3-15 Inside	/								UV Meter #: N/A
3-27 to 3-14 Outside	/								UV Intensity verified at prescribed intervals?
3-27 to 3-15 Outside	/								Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
3-33 to 3-2 Top	/								Quantity Tested 100%: X
3-33 to 3-27 Top	/								Random: N/A %
3-33 to 3-2 Underside	/								
3-33 to 3-27 Underside	/								

Technician: Daniel S. Gjurich *Daniel Gjurich* Level: II

Reviewed By: *[Signature]* Date: 12/11/18

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Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
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Appendix B

Doc./Rev.: EIR-3021970-000
 Project: 00225.03.0050 DOE Atlas Project

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MAGNETIC PARTICLE INSPECTION REPORT

Mr. Mark Zeigler
 Kasgro Rail Corporation
 121 Rundle Road
 New Castle, PA 16102

Report #: 9 Page 1 of 1
 P.O. #: K180079
 Work Order #: 468009
 Project: Cask Car

Date: July 24, 2018
 Description: Perform Magnetic Particle Inspections of Tie Down Lugs on Cask Car #1

TRIS Procedure: WI-08-002 Rev.5	Production Stage: <input checked="" type="checkbox"/> In Progress <input type="checkbox"/> Final <input type="checkbox"/> Other	For Welds: <input checked="" type="checkbox"/> Root Pass <input type="checkbox"/> Intermediate <input checked="" type="checkbox"/> Final
Surface Condition: As Welded		
Test Method Standard: ASTM E709		
Acceptance Standard: AWS D15.1	Equipment Identification:	
Type of Material: Carbon Steel	Model #: Parker DA400	
	Gage#/Serial #: P135/17999	
	Cal. Date Due: 12-18-18	

Product / Weld Identification Car Body Assembly	Accept	Reject	Linear	Rounded	Cracks	Undercut	Other	Defect Location or Remarks	Technique	
									Technique #:	N/A
Tie Down Lug									Method: Wet <input type="checkbox"/> Dry <input checked="" type="checkbox"/>	
3-138 to 3-16 Root	/								Fluorescent <input type="checkbox"/> Visible <input checked="" type="checkbox"/>	
3-138 to 3-16 Final	/									
Tie Down Lug									Consumable Batch #: 08A078	
3-138 to 3-16 Root	/								Coil <input type="checkbox"/> N/A FWDC <input type="checkbox"/> N/A	
3-138 to 3-16 Final	/								Head Shot <input type="checkbox"/> N/A Prods <input type="checkbox"/> N/A	
									Amperage: N/A	
Tie Down Lug									Yoke Current: AC <input checked="" type="checkbox"/> DC <input type="checkbox"/>	
3-138 to 3-140 Root	/								UV Meter #: N/A	
3-138 to 3-140 Final	/								UV Intensity verified at prescribed intervals?	
									Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>	
Tie Down Lug									Quantity Tested 100%: <input checked="" type="checkbox"/>	
3-138 to 3-139 Root	/								Random: N/A %	
3-138 to 3-139 Final	/									
SIGNED: Kasgro Rail									NOTE: The Recording of False, Fictitious or Fraudulent Statements or Entries on the Document may be Punishable as a Felony Under Federal Statutes.	
Technician:	Daniel S. Gjurich <i>Daniel S. Gjurich</i>							Level:		

Reviewed By: *[Signature]* Date: 7/27/18

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Appendix B

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MAGNETIC PARTICLE INSPECTION REPORT

Mr. Mark Zeigler
 Kasgro Rail Corporation
 121 Rundle Road
 New Castle, PA 16102

Report #: 10 Page 1 of 1
 P.O. #: K180079
 Work Order #: 468009
 Project: Atlas Cask Car

Date: July 25, 2018 thru August 21, 2018
 Description: Perform Magnetic Particle Inspections of Car Body Assembly of Cask car #1

TRIS Procedure: WI-08-002 Rev. 5	Production Stage: <input checked="" type="checkbox"/> In Progress <input type="checkbox"/> Final <input type="checkbox"/> Other	For Welds: <input type="checkbox"/> Root Pass <input type="checkbox"/> Intermediate <input checked="" type="checkbox"/> Final
Surface Condition: As Welded		
Test Method Standard: ASTM E709		
Acceptance Standard: AWS D15.1	Equipment Identification:	
Type of Material: Carbon Steel	Model #: Parker DA400	
	Gage #/Serial #: P135/17999	
	Cal. Date Due: 12-18-18	

Product / Weld Identification	Accept	Reject	Linear	Rounded	Cracks	Undercut	Other	Defect Location or Remarks	Technique		
									Technique #:	N/A	
Car Body Assembly									Technique #:	N/A	
Left Side Sill to Bot Flg									Method:	Wet <input type="checkbox"/> Dry <input checked="" type="checkbox"/>	
Inside	/							Weld #32	Fluorescent <input type="checkbox"/> Visible <input checked="" type="checkbox"/>		
Right Side Sill to Bot Flg									Consumable Batch #:	08A078	
Outside	/							Weld #35	Coil <input type="checkbox"/> FWDC <input checked="" type="checkbox"/>	N/A	
Left Cntr Sill to Bot Flg	/							Weld #41	Head Shot <input type="checkbox"/> Prods <input checked="" type="checkbox"/>	N/A	
									Amperage:	N/A	
Left Side Sill to Bot Flg									Yoke Current:	AC <input checked="" type="checkbox"/> DC <input type="checkbox"/>	
Outside	/							Weld #31	UV Meter #:	N/A	
Right Side Sill to Bot Flg									UV Intensity verified at prescribed intervals?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>	
Inside	/							Weld #36	Quantity Tested 100%:	X	
Right Cntr Sill to Bot Flg	/							Weld #42	Random:	N/A %	
SIGNED: Kasgro Rail											
Technician:	Daniel S. Gjurich <i>Daniel S. Gjurich</i>							Level: II			

Reviewed By: *[Signature]* Date: 8/26/18

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 Magnetic Particle Inspection
 RLK 5/15/09



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MAGNETIC PARTICLE INSPECTION REPORT

Mr. Mark Zeigler
 Kasgro Rail Corporation
 121 Rundle Road
 New Castle, PA 16102

Report #: 11 Page 1 of 1
 P.O. #: K180079
 Work Order #: 468009
 Project: Atlas Cask Car

Date: August 28, 2018
 Description: Perform Magnetic Particle Inspections of Cask Car Body Assembly

TRIS Procedure:	W1-08-002 Rev. 5	Production Stage:	<input checked="" type="checkbox"/> In Progress	For Welds:	<input type="checkbox"/> Root Pass
Surface Condition:	As Welded	<input type="checkbox"/> Final	<input type="checkbox"/> Other	<input type="checkbox"/> Intermediate	<input checked="" type="checkbox"/> Final
Test Method Standard:	ASTM E709	Equipment Identification:			
Acceptance Standard:	AWS D15.1	Model #:	Parker DA400		
Type of Material:	Carbon Steel	Gage//Serial #:	P135/17999		
		Cal. Date Due:	12-18-18		

Product / Weld Identification	Accept	Reject	Linear	Rounded	Cracks	Undercut	Other	Defect Location or Remarks	Technique
Car Body Assembly									
Tie Down Lug									Technique #: N/A
3-138 to 3-16 After Test	/								Method: Wet <input type="checkbox"/> Dry <input checked="" type="checkbox"/> Fluorescent <input type="checkbox"/> Visible <input checked="" type="checkbox"/>
Tie Down Lug									Consumable Batch #: 08A078
3-138 to 3-16 After Test	/								Coil <input type="checkbox"/> N/A FWDC <input type="checkbox"/> N/A Head Shot <input type="checkbox"/> N/A Prods <input type="checkbox"/> N/A
Tie Down Lug									Amperage: N/A
3-138 to 3-140 After Test	/								Yoke Current: AC <input checked="" type="checkbox"/> DC <input type="checkbox"/>
Tie Down Lug									UV Meter #: N/A
3-138 to 3-139 After Test	/								UV Intensity verified at prescribed intervals? Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
									Quantity Tested 100%: <input checked="" type="checkbox"/> X
									Random: N/A %
<p>NOTE: The Recording of False, Fictitious or Fraudulent Statements or Entries on the Document may be Punishable as a Felony Under Federal Statutes.</p>									
SIGNED:								Kasgro Rail	
Technician:	Daniel S. Gjurich	<i>Daniel S. Gjurich</i>					Level: II		

Reviewed By: *[Signature]* Date: 8/30/18

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Title: Design and Prototype Fabrication of Railcars for Transport of
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Appendix B

Doc./Rev.: EIR-3021970-000
 Project: 00225.03.0050 DOE Atlas Project

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MAGNETIC PARTICLE INSPECTION REPORT

Mr. Mark Zeigler
 Kasgro Rail Corporation
 121 Rundle Road
 New Castle, PA 16102

Report #: 12 Page 1 of 2
 P.O. #: K180079
 Work Order #: 468009
 Project: Atlas Cask Car

Date: July 11, 2018 thru September 5, 2018
 Description: Magnetic Particle Inspections on Piece #2 Span Bolster Assembly

TRIS Procedure:	WI-08-002 Rev.5	Production Stage:	<input checked="" type="checkbox"/> In Progress	For Welds:	<input type="checkbox"/> Root Pass
Surface Condition:	As Welded	<input type="checkbox"/> Final	<input type="checkbox"/> Other	<input type="checkbox"/> Intermediate	<input checked="" type="checkbox"/> Final
Test Method Standard:	ASTM E709	Equipment Identification:			
Acceptance Standard:	AWS D15.1	Model #:	Parker DA400		
Type of Material:	Carbon Steel	Gage #/Serial #:	P135/17999		
		Cal. Date Due:	12-18-18		

Product / Weld Identification	Accept	Reject	Linear	Rounded	Cracks	Undercut	Other	Defect Location or Remarks	Technique	
									Technique #:	
Span Bolster Assembly									Technique #:	N/A
3-18 to 3-15 R-Side								Weld #3	Method: Wet	<input type="checkbox"/> Dry <input checked="" type="checkbox"/>
INSIDE	/								Fluorescent	<input type="checkbox"/> Visible <input checked="" type="checkbox"/>
OUTSIDE	/								Consumable Batch #:	08A078
3-17 to 3-15 L-Side								Weld #4	Coil	N/A FWDC N/A
INSIDE	/								Head Shot	N/A Prods N/A
OUTSIDE	/								Amperage:	N/A
3-12 to 3-15	/								Yoke Current:	AC <input checked="" type="checkbox"/> DC <input type="checkbox"/>
3-9 to 3-15	/								UV Meter #:	N/A
3-8 to 3-15	/								UV Intensity verified at prescribed intervals?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/> X <input checked="" type="checkbox"/>
									Quantity Tested 100%:	X
									Random:	N/A %
									NOTE: The Recording of False, Fictitious or Fraudulent Statements or Entries on the Document may be Punishable as a Felony Under Federal Statutes.	
Technician:	Daniel S. Gjurich <i>Daniel S. Gjurich</i>							Level:	II	

Reviewed By: *[Signature]* Date: 9/11/18

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Doc./Rev.: EIR-3021970-000
 Project: 00225.03.0050 DOE Atlas Project

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MAGNETIC PARTICLE INSPECTION REPORT

Mr. Mark Zeigler
 Kasgro Rail Corporation
 121 Rundle Road
 New Castle, PA 16102

Report #: 12 Page 2 of 2
 P.O. #: K180079
 Work Order #: 468009
 Project: Atlas Cask Car

Date: July 11, 2018 thru September 5, 2018
 Description: Magnetic Particle Inspections on Piece #2 Span Bolster Assembly

TRIS Procedure:	WI-08-002 Rev.5	Production Stage:	<input checked="" type="checkbox"/> In Progress	For Welds:	
Surface Condition:	As Welded		<input type="checkbox"/> Final	<input type="checkbox"/> Root Pass	
Test Method Standard:	ASTM E709		<input type="checkbox"/> Other	<input checked="" type="checkbox"/> Intermediate	
Acceptance Standard:	AWS D15.1	Equipment Identification:			
Type of Material:	Carbon Steel	Model #:	Parker DA400		
		Gage #/Serial #:	P135/17999		
		Calibration :	12-18-18		

Product / Weld Identification	Accept	Reject	Linear	Rounded	Cracks	Undercut	Other	Defect Location or Remarks	Technique	
									Technique #:	N/A
Span Bolster Assembly									Technique #:	N/A
3-14 to 3-17 L-Side	/							Weld #1	Method: Wet	<input type="checkbox"/> Dry <input checked="" type="checkbox"/>
3-14 to 3-18 R-Side	/							Weld #2	Fluorescent	<input type="checkbox"/> Visible <input checked="" type="checkbox"/>
3-27 to 3-14	/								Consumable Batch #:	08A078
3-27 to 3-2 Inside	/								Coil	N/A FWDC N/A
3-27 to 3-2 Outside	/								Head Shot	N/A Prods N/A
3-27 to 3-15 Inside	/								Amperage:	N/A
3-27 to 3-15 Outside	/								Yoke Current:	AC <input checked="" type="checkbox"/> DC <input type="checkbox"/>
3-27 to 3-14 Outside	/								UV Meter #:	N/A
3-27 to 3-15 Outside	/								UV Intensity verified at prescribed intervals?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
3-33 to 3-2 Top	/								Quantity Tested 100%:	X
3-33 to 3-27 Top	/								Random:	N/A %
3-33 to 3-2 Underside	/								NOTE: The Recording of False, Fictitious or Fraudulent Statements or Entries on the Document may be Punishable as a Felony Under Federal Statutes.	
3-33 to 3-27 Underside	/									

Technician: Daniel S. Gjurich *Daniel S. Gjurich* Level: II

Reviewed By: *[Signature]* Date: 8/12/18

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Doc./Rev.: EIR-3021970-000
 Project: 00225.03.0050 DOE Atlas Project

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MAGNETIC PARTICLE INSPECTION REPORT

Mr. Mark Zeigler
 Kasgro Rail Corporation
 121 Rundle Road
 New Castle, PA 16102

Report #: 15 Page 1 of 1
 P.O. #: K180079
 Work Order #: 468009
 Project: Atlas Cask Car

Date: December 5, 2018
 Description: Perform Magnetic Particle Inspections of Deck Attachments for Cask car #1

TRIS Procedure:	WI-08-002 Rev. 5	Production Stage:	<input checked="" type="checkbox"/> In Progress	For Welds:	<input checked="" type="checkbox"/> Root Pass
Surface Condition:	As Welded		<input type="checkbox"/> Final		<input type="checkbox"/> Intermediate
Test Method Standard:	ASTM E709		<input type="checkbox"/> Other		<input type="checkbox"/> Final
Acceptance Standard:	AWS D15.1	Equipment Identification:			
Type of Material:	Carbon Steel	Model #:	Parker DA400		
		Gage #/Serial #:	P135/17999		
		Cal. Date Due:	12-18-18		

Product / Weld Identification	Accept	Reject	Linear	Rounded	Cracks	Undercut	Other	Defect Location or Remarks	Technique	
									Technique #:	N/A
Car Body Assembly										
Item #7 (4)								Outside Lugs	Method: Wet <input type="checkbox"/>	Dry <input checked="" type="checkbox"/>
Root	/								Fluorescent <input type="checkbox"/>	Visible <input checked="" type="checkbox"/>
Final								Not welded as of this report		
Item #8 (4)								Inside Lugs	Consumable Batch #: 08A078	
Root	/								Coil <input type="checkbox"/>	N/A FWDC <input type="checkbox"/>
Final								Not welded as of this report	Head Shot <input type="checkbox"/>	N/A Prods <input type="checkbox"/>
									Amperage: N/A	
									Yoke Current: AC <input checked="" type="checkbox"/>	DC <input type="checkbox"/>
									UV Meter #: N/A	
									UV Intensity verified at prescribed intervals?	
									Yes <input type="checkbox"/>	No <input type="checkbox"/>
									N/A <input type="checkbox"/>	X <input checked="" type="checkbox"/>
									Quantity Tested 100%: X	
									Random: N/A %	

SIGNED: _____ Kasgro Rail

Technician: Daniel S. Gjurich *Daniel S. Gjurich* Level: II

Reviewed By: _____ Date: 12/5/18

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MAGNETIC PARTICLE INSPECTION REPORT

Mr. Mark Zeigler
 Kasgro Rail Corporation
 121 Rundle Road
 New Castle, PA 16102

Report #: 17 Page 1 of 1
 P.O. #: K180079
 Work Order #: 473037
 Project: Atlas Cask Car

Date: January 10, 2019
 Description: Perform Magnetic Particle Inspections of Deok Attachments for Cask car #1

TRIS Procedure:	WI-08-002 Rev. 5	Production Stage:	<input checked="" type="checkbox"/> In Progress	For Welds:	<input checked="" type="checkbox"/> Root Pass
Surface Condition:	As Welded		<input type="checkbox"/> Final		<input type="checkbox"/> Intermediate
Test Method Standard:	ASTM E709		<input type="checkbox"/> Other		<input type="checkbox"/> Final
Acceptance Standard:	AWS D15.1	Equipment Identification:			
Type of Material:	Carbon Steel	Model #:	Parker DA400		
		Gage #/Serial #:	P135/17999		
		Cal. Date Due:	6-18-19		

Product / Weld Identification	Accept	Reject	Linear	Rounded	Cracks	Undercut	Other	Defect Location or Remarks	Technique
Car Body Assembly									
Item #7 (4)								Outside Lugs	Technique #: N/A
Root								See report #15	Method: Wet <input type="checkbox"/> Dry <input checked="" type="checkbox"/>
Final	/								Fluorescent <input type="checkbox"/> Visible <input checked="" type="checkbox"/>
Item #8 (4)								Inside Lugs	Consumable Batch #: 08A078
Root								See report #15	Coil <input checked="" type="checkbox"/> FWDC <input checked="" type="checkbox"/>
Final	/								Head Shot <input checked="" type="checkbox"/> Prods <input checked="" type="checkbox"/>
									Amperage: N/A
									Yoke Current: AC <input checked="" type="checkbox"/> DC <input type="checkbox"/>
									UV Meter #: N/A
									UV Intensity verified at prescribed intervals?
									Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
									Quantity Tested 100%: <input checked="" type="checkbox"/>
									Random: N/A %

SIGNED: _____ Kasgro Rail

Technician: Daniel S. Gjurich *Daniel S. Gjurich* Level: II

Reviewed By: *[Signature]* Date: 1/27/19

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VISUAL INSPECTION REPORT

Mr. Mark Zeigler
 Kasgro Rail Corporation
 121 Rundle Road
 New Castle, PA 16102

Report #: 1 Page 1 of 6
 P.O. #: K180079
 Work Order #: 468009
 Project: Atlas Cask Car

Date: April 10, 2018 thru January 21, 2019
 Description: Visual Inspections of Car Body Assembly #1

TRIS Procedure: NDE-VT-1	Surface Condition: As Welded	Production Stage: <input checked="" type="checkbox"/> In Progress	VT Gauge Identification: Mfg. G.A.L.
Test Method Standard: AWS D15.1	Percent of Inspection: <input checked="" type="checkbox"/> 100%	<input checked="" type="checkbox"/> Final	Weld Gauge 1/4", 3/8" and 1/2" Fillet
Acceptance Standard: AWS D15.1	_____ %	<input type="checkbox"/> Other	Model #269-465-5750
Product Form: N/A		For Welds: <input type="checkbox"/> Root Pass	Serial # Cert #F4858
Type of Material: Carbon Steel		<input type="checkbox"/> Intermediate	Other Cam Type Gage
		<input checked="" type="checkbox"/> Final	

Product / Weld Identification	Accept	Reject	Linear	Rounded	Cracks	Undercut	Lack Fusion	Incomplete Pen	Exceed Reinforcement	Weld	Undersized	Defect Location, Length
3-39 to 3-41	/											
3-39 to 3-42	/											
3-39 to 3-15	/											
3-40 to 3-15	/											
3-74 to 3-15	/											
3-30 to 3-15	/											
3-27 to 3-15	/											
3-28 to 3-15	/											
3-14 to 3-15	/											
3-30 to 3-15	/											
3-150 to 3-15	/											
3-151 to 3-15	/											
3-29 to 3-15	/											
3-17 to 3-15	/											
3-18 to 3-15	/											
3-68 to 3-15	/											
3-69 to 3-15	/											

SIGNED: _____ Kasgro Rail

Technician: Daniel S. Gjurich *Daniel S. Gjurich* Level: CWI #93041171

Reviewed By: _____ Date: 2/19/19
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 March 19, 2001
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VISUAL INSPECTION REPORT

Mr. Mark Zeigler
 Kasgro Rail Corporation
 121 Rundle Road
 New Castle, PA 16102

Report #: 1 Page 2 of 6
 P.O. #: K180079
 Work Order #: 468009
 Project: Atlas Cask Car

Date: April 10, 2018 thru January 21, 2019
 Description: Visual Inspections of Car Body Assembly #1

TRIS Procedure: NDE-VT-1	Surface Condition: As Welded	Production Stage: X In Progress	VT Gauge Identification: Mfg. G.A.L.
Test Method Standard: AWS D15.1	Percent of Inspection: X 100%	X Final	Weld Gauge 1/4", 3/8" and 1/2" Fillet
Acceptance Standard: AWS D15.1	_____ %	Other	Model #269-465-5750
Product Form: N/A		For Welds:	Serial # Cert #P4858
Type of Material: Carbon Steel		_____ Root Pass	Other Cam Type Gage
		_____ Intermediate	
		X Final	

Product / Weld Identification	Accept	Reject	Linear	Rounded	Cracks	Undercut	Lack Fusion	Incomplete Pen	Excess Reinforcement	Weld	Undersized	Defect Location, Length
3-70 to 3-15	/											
3-71 to 3-15	/											
3-144 to 3-15	/											
3-31 to 3-15	/											
3-32 to 3-15	/											
3-36 to 3-15	/											
3-37 to 3-15	/											
3-19 to 3-15	/											
3-20 to 3-15	/											
3-22 to 3-15	/											
3-33 to 3-15	/											
3-131 to 3-15	/											
3-141 to 3-15	/											

	Daniel S Gjurich CWI 93041171 QC1 EXP. 4/1/2020
--	---

SIGNED:	Kasgro Rail
Technician: Daniel S. Gjurich	Level: CWI #93041171

Reviewed By: Date: 2/19/19
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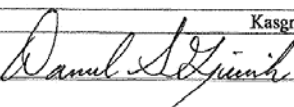
Mr. Mark Zeigler
 Kasgro Rail Corporation
 121 Rundle Road
 New Castle, PA 16102

Report #: 1 Page 3 of 6
 P.O. #: K180079
 Work Order #: 468009
 Project: Atlas Cask Car


Date: April 10, 2018 thru January 21, 2019
 Description: Visual Inspections of Car Body Assembly #1

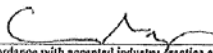
TRIS Procedure: NDE-VT-1	Surface Condition: As Welded	Production Stage: <input checked="" type="checkbox"/> In Progress	VT Gauge Identification: Mfg. G.A.L.
Test Method Standard: AWS D15.1	Percent of Inspection: <input checked="" type="checkbox"/> 100%	<input checked="" type="checkbox"/> Final	Weld Gauge 1/4", 3/8" and 1/2" Fillet
Acceptance Standard: AWS D15.1	_____ %	Other	Model #269-465-5750
Product Form: N/A		For Welds:	Serial # Cert #F4858
Type of Material: Carbon Steel		Root Pass	Other Cam Type Gage
		Intermediate	
		<input checked="" type="checkbox"/> Final	

Product / Weld Identification	Accept	Reject	Linear	Rounded	Cracks	Undercut	Lack Fusion	Incomplete Pen	Exceed Reinforcement	Weld Undersized	Defect Location, Length
3-14 to 3-18	/										
3-14 to 3-18	/										
3-29 to 3-31	/										
3-17 to 3-31	/										
3-18 to 3-32	/										
3-29 to 3-32	/										
3-14 to 3-17	/										
3-28 to 3-37	/										
3-30 to 3-37	/										
3-30 to 3-36	/										
3-28 to 3-36	/										
3-14 to 3-17	/										
3-28 to 3-14	/										
3-27 to 3-14	/										
3-27 to 3-14	/										
3-28 to 3-14	/										
3-18 to 3-75	/										
3-151 to 3-75	/										

SIGNED:  Kasgro Rail

Technician: Daniel S. Gjurich Level: CWI #93041171

 Daniel S. Gjurich
 CWI 93041171
 QCT EXP. 4/1/2020

Reviewed By:  Date: 2/10/19
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 March 19, 2004
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VISUAL INSPECTION REPORT



Mr. Mark Zeigler
 Kasgro Rail Corporation
 121 Rundle Road
 New Castle, PA 16102

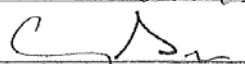
Report #: 1 Page 4 of 6
 P.O. #: K180079
 Work Order #: 468009
 Project: Atlas Cask Car

Date: April 10, 2018 thru January 21, 2019
 Description: Visual Inspections of Car Body Assembly #1

TRIS Procedure: NDE-VT-1	Surface Condition: As Welded	Production Stage: <input checked="" type="checkbox"/> In Progress	VT Gauge Identification: Mfg. G.A.L.
Test Method Standard: AWS D15.1	Percent of Inspection: <input checked="" type="checkbox"/> 100%	<input checked="" type="checkbox"/> Final	Weld Gauge $\frac{1}{4}$ " $\frac{3}{8}$ " and $\frac{1}{2}$ " Fillet
Acceptance Standard: AWS D15.1	_____ %	Other	Model #269-465-5750
Product Form: N/A		For Welds: Root Pass	Serial # Cert #F4858
Type of Material: Carbon Steel		Intermediate	Other Cam Type Gage
		<input checked="" type="checkbox"/> Final	

Product / Weld Identification	Accept	Reject	Linear	Rounded	Cracks	Undercut	Lack Fusion	Incomplete Pen	Exceed Reinforcement	Weld Undersized	Defect Location, Length
Car Body Assembly											
3-151 to 3-14	/										
3-71 to 3-18	/										
3-74 to 3-28	/										
3-71 to 3-27	/										
3-70 to 3-18	/										
3-70 to 3-27	/										
3-68 to 3-32	/										
3-74 to 3-37	/										
3-68 to 3-32	/										
3-39 to 3-29	/										
3-40 to 3-30	/										
3-39 to 3-30	/										
3-69 to 3-17	/										
3-74 to 3-37	/										
3-69 to 3-28	/										
3-71 to 3-17	/										
3-74 to 3-28	/										
3-71 to 3-27	/										

SIGNED:	 Daniel S. Gjurich Kasgro Rail	Daniel S. Gjurich CWI 93041171 QC1 EXP. 4/1/2020
Technician:	Daniel S. Gjurich 	Level: CWI #93041171

Reviewed By:  Date: 2/12/19
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Appendix B

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 Project: 00225.03.0050 DOE Atlas Project

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VISUAL INSPECTION REPORT


Mr. Mark Zeigler
 Kasgro Rail Corporation
 121 Rundle Road
 New Castle, PA 16102

Report #: 1 Page 5 of 6
 P.O. #: K180079
 Work Order #: 468009
 Project: Atlas Cask Car

Date: April 10, 2018 thru January 21, 2019
 Description: Visual Inspections of Car Body Assembly #1

TRIS Procedure: NDE-VT-1	Surface Condition: As Welded	Production Stage: <input checked="" type="checkbox"/> In Progress	VT Gauge Identification: Mfg. G.A.L.
Test Method Standard: AWS D15.1	Percent of Inspection: <input checked="" type="checkbox"/> 100%	<input type="checkbox"/> Final	Weld Gauge $\frac{1}{4}''$, $\frac{3}{8}''$ and $\frac{1}{2}''$ Fillet
Acceptance Standard: AWS D15.1	<input type="checkbox"/> %	<input type="checkbox"/> Other	Model #269-465-5750
Product Form: N/A		For Welds: <input type="checkbox"/> Root Pass	Serial # Cert #F4858
Type of Material: Carbon Steel		<input type="checkbox"/> Intermediate	Other Cam Type Gage
<input checked="" type="checkbox"/> Final			

Product / Weld Identification	Accept	Reject	Linear	Rounded	Cracks	Undercut	Lack Fusion	Incomplete Pen.	Exceed Reinforcement	Weld Undersized	Defect Location, Length
3-70 to 3-18	/										
3-70 to 3-27	/										
3-150 to 3-14	/										
3-153 to 3-14	/										
3-153 to 3-134	/										
3-134 to 3-17	/										
3-134 to 3-150	/										
3-75 to 3-17 & 3-137	/										
3-33 to 3-17 & 3-18	/										
3-20 to 3-31	/										
3-76 to 3-29	/										
3-22 to 3-29	/										
3-131 to 3-18	/										
3-141 to 3-18	/										

 Daniel S Gjurich
 CWI - 93041171
 QC1 - EXP. 4/1/2020

SIGNED: _____ Kasgro Rail

Technician: Daniel S. Gjurich *Daniel S Gjurich* Level: CWI #93041171

Reviewed By: *C. P.* Date: 2/10/19
 Testing was performed in accordance with accepted industry practice as well as the test methods referenced TUV Rheinland Industrial Solutions, Inc. has no direct knowledge of the origin, sampling procedure, nor condition of the samples, and makes no claims as to the suitability nor final use of the material. This test report applies only to those items tested. This report shall not be reproduced except in full without the written consent of TUV Rheinland Industrial Solutions, Inc.

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Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
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VISUAL INSPECTION REPORT

Mr. Mark Zeigler
 Kasgro Rail Corporation
 121 Rundle Road
 New Castle, PA 16102

Report #: 1
 P.O. #: K180079
 Work Order #: 468009
 Project: Atlas Cask Car

Page 6 of 6

Date: April 10, 2018 thru January 21, 2019
 Description: Visual Inspections of Car Body Assembly #1

TRIS Procedure: NDE-VT-1	Surface Condition: As Welded	Production Stage: <input checked="" type="checkbox"/> In Progress	VT Gauge Identification: Mfg. G.A.L.
Test Method Standard: AWS D15.1	Percent of Inspection: <input checked="" type="checkbox"/> 100%	<input checked="" type="checkbox"/> Final	Weld Gauge: 1/4", 3/8" and 1/2" Fillet
Acceptance Standard: AWS D15.1	<input type="checkbox"/> %	For Welds: <input type="checkbox"/> Root Pass	Model: #269-465-5750
Product Form: N/A		<input type="checkbox"/> Intermediate	Serial #: Cert #I4858
Type of Material: Carbon Steel		<input checked="" type="checkbox"/> Final	Other: Cam Type Gage

Product / Weld Identification	Accept	Reject	Linear	Rounded	Cracks	Undercut	Lack Fusion	Incomplete Pen	Exceed Reinforcement	Weld Undersized	Defect Location, Length
Tie Down Lug											
3-138 to 3-16 Root	/										
3-138 to 3-16 Final	/										
Tie Down Lug											
3-138 to 3-16 Root	/										
3-138 to 3-16 Final	/										
Tie Down Lug											
3-138 to 3-140 Root	/										
3-138 to 3-140 Final	/										
Tie Down Lug											
3-138 to 3-139 Root	/										
3-138 to 3-139 Final	/										

	Daniel S Gjurich CWI-93041171 QC1-EXP-4/1/2020
Technician: Daniel S. Gjurich	Level: CWI #93041171

Reviewed By: Date: 2/12/19
 Testing was performed in accordance with accepted industry practice as well as the test methods referenced TUV Rheinland Industrial Solutions, Inc. has no direct knowledge of the origin, sampling procedure, nor condition of the samples, and makes no claims as to the suitability nor final use of the material. This test report applies only to those items tested. This report shall not be reproduced except in full without the written consent of TUV Rheinland Industrial Solutions, Inc.

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Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
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VISUAL INSPECTION REPORT

Mr. Mark Zeigler
 Kasgro Rail Corporation
 121 Rundle Road
 New Castle, PA 16102


Report #: 3
 P.O. #: K18-0079
 Work Order #: 466505
 Project: Atlas Cask Car

Page 1 of 1

Date: May 7, 2018
 Description: Visual Inspections of Body Bolsters Assemblies #1 & #2

TRIS Procedure: NDE-VT-1	Surface Condition: As Welded	Production Stage: <input checked="" type="checkbox"/> In Progress	VT Gauge Identification: Mfg. Nasco
Test Method Standard: AWS D15.1	Percent of Inspection: <input checked="" type="checkbox"/> 100%	<input type="checkbox"/> Final	Weld Gauge: 1/4", 3/8" and 1/2" Fillet
Acceptance Standard: AWS D15.1	<input type="checkbox"/> %	<input type="checkbox"/> Other	Model: #NFG-7
Product Form: N/A		For Welds:	S/N: N/A
Type of Material: Carbon Steel		<input type="checkbox"/> Root Pass	Other: Cam Type Gauge
		<input type="checkbox"/> Intermediate	
		<input checked="" type="checkbox"/> Final	

Product / Weld Identification	Accept	Reject	Linear	Rounded	Cracks	Undercut	Lack Fusion	Incomplete Pen	Exceed Reinforcement	Weld Undersized	Defect Location, Length
	Body Bolster 3-10 (#1)										
3-14 to 3-10 (4)	/										
3-13 to 3-10 (4)	/										
3-12 to 3-10 (4)	/										
3-12 to 3-14 (8)	/										
3-13 to 3-14 (8)	/										
Body Bolster 3-10 (#2)											
3-14 to 3-10 (4)	/										
3-13 to 3-10 (4)	/										
3-12 to 3-10 (4)	/										
3-12 to 3-14 (8)	/										
3-13 to 3-14 (8)	/										


 Daniel S. Gjurich
 CWI #93041171
 QC1 EXP. 4/1/2020

SIGNED: Kasgro Rail

Technician: Daniel S. Gjurich *Daniel S. Gjurich* Level: CWI #93041171

Reviewed By: *[Signature]* Date: 5/11/18
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VISUAL INSPECTION REPORT

Mr. Mark Zeigler
 Kasgro Rail Corporation
 121 Rundle Road
 New Castle, PA 16102


Report #: 7
 P.O. #: K180079
 Work Order #: 468009
 Project: Atlas Cask Car

Page 1 of 4

Date: July 11, 2018 thru August 29, 2018
 Description: Visual Inspections on Piece #1 Span Bolster Assembly

TRIS Procedure: NDE-VT-5	Surface Condition: As Welded	Production Stage: X In Progress	VT Gauge Identification: Mfg. Nasco
Test Method Standard: AWS D15.1	Percent of Inspection: X 100%	Final *	Weld Gauge 1/4", 3/8" and 1/2" Fillet
Acceptance Standard: AWS D15.1	%	Other	Model #NFG-7
Product Form: N/A		For Welds: Root Pass	S/N N/A
Type of Material: Carbon Steel		Intermediate	Other Cam Type Gage
		X Final	

Product / Weld Identification	Accept	Reject	Linear	Rounded	Cracks	Undercut	Lack Fusion	Incomplete Pen	Exceed Reinforcement	Weld Undersized	Defect Location, Length
Span Bolster Assembly											
3-18 to 3-15 R-Side											Weld #3
INSIDE	/										
OUTSIDE	/										
3-17 to 3-15 L-Side											Weld #4
INSIDE	/										
OUTSIDE	/										
3-12 to 3-15	/										
3-11 to 3-15	/										
3-9 to 3-15	/										
3-8 to 3-15	/										
3-12 to 3-17 & 3-18	/										NOTE: The Recording of False, Fictitious or Fraudulent Statements or Entries on the Document may be Punishable as a Felony Under Federal Statutes.
3-11 to 3-17 & 3-18	/										
3-9 to 3-17 & 3-18	/										
3-8 to 3-17 & 3-18	/										
3-5 to 3-18	/										
3-7 to 3-17	/										
3-4 to 3-18	/										
3-6 to 3-17	/										

Technician: Daniel S. Gjurich *Daniel S. Gjurich* Level: CWI #93041171  Daniel S Gjurich
 CWI 93041171
 QC1 EXP. 4/1/2020

Reviewed By: *[Signature]* Date: 12/10/18

TÜVRHEINLAND INDUSTRIAL SOLUTIONS, INC.

These test results report our findings, of the items listed, at the time of inspection and shall be reviewed by the client for compliance to the project requirements. Due to the limitations of nondestructive testing in evaluating all of the factors that determine the overall component quality, no guarantee is made or liability assumed by TÜVRheinland Industrial Solutions, Inc. ("TRIS") for the component quality or serviceability. This report shall not be reproduced without the written consent of TÜVRheinland Industrial Solutions, Inc.

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VISUAL INSPECTION REPORT

Mr. Mark Zeigler
 Kasgro Rail Corporation
 121 Rundle Road
 New Castle, PA 16102

Report #: 7
 P.O. #: K180079
 Work Order #: 468009
 Project: Atlas Cask Car


Page 2 of 4

Date: July 11, 2018 thru August 29, 2018
 Description: Visual Inspections on Piece #1 Span Bolster Assembly

TRIS Procedure: NDE-VI-5	Surface Condition: As Welded	Production Stage: <input checked="" type="checkbox"/> In Progress <input type="checkbox"/> Final * <input type="checkbox"/> Other	VT Gauge Identification: Mfg. Nasco Weld Gauge 1/2", 3/8" and 1/2" Fillet Model #NFG-7 S/N N/A Other Cam Type Gage
Test Method Standard: AWS D15.1	Percent of Inspection: <input checked="" type="checkbox"/> 100% _____ %	For Welds: <input type="checkbox"/> Root Pass <input type="checkbox"/> Intermediate <input checked="" type="checkbox"/> Final	
Acceptance Standard: AWS D15.1			
Product Form: N/A			
Type of Material: Carbon Steel			

Product / Weld Identification	Accept	Reject	Linear	Rounded	Cracks	Undercut	Lack Fusion	Incomplete Pen	Exceed Reinforcement	Weld Undersized	Defect Location, Length
3-3 to 3-18	/										
3-1 to 3-17	/										
3-19 to 3-17 & 3-18	/										
3-19 to 3-9	/										
3-19 to 3-11	/										
3-14 to 3-17 & 3-18	/										
3-21 to 3-18	/										
3-26 to 3-18	/										
3-90 to 3-14 & 3-16	/										
3-20 to 3-14 & 3-19 Top	/										
3-20 to 3-14 & 3-19 Bot.	/										
3-22 to 3-16	/										
3-24 to 3-16	/										
3-21 to 3-14	/										
3-26 to 3-14	/										
3-6 to 3-21 & 3-14	/										
3-4 to 3-21 & 3-14	/										
3-7 to 3-26 & 3-14	/										

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Technician: Daniel S. Gjurich *Daniel S. Gjurich* Level: CWI #93041171  Daniel S Gjurich
 CWI 93041171
 QCT EXP. 4/17/2020

Reviewed By: *[Signature]*

Date: 12/15/18

TÜV RHEINLAND INDUSTRIAL SOLUTIONS, INC.

These test results report our findings, of the items listed, at the time of inspection and shall be reviewed by the client for compliance to the project requirements. Due to the limitations of nondestructive testing in evaluating all of the factors that determine the overall component quality, no guarantee is made or liability assumed by TÜV Rheinland Industrial Solutions, Inc. ("TRIS") for the component quality or serviceability. This report shall not be reproduced without the written consent of TÜV Rheinland Industrial Solutions, Inc.

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Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
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 Project: 00225.03.0050 DOE Atlas Project

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VISUAL INSPECTION REPORT

Mr. Mark Zeigler
 Kasgro Rail Corporation
 121 Rundle Road
 New Castle, PA 16102

Report #: 7
 P.O. #: K180079
 Work Order #: 468009
 Project: Atlas Cask Car


Page 3 of 4

Date: July 11, 2018 thru August 29, 2018
 Description: Visual Inspections on Piece #1 Span Bolster Assembly

TRIS Procedure: NDE-VT-5	Surface Condition: As Welded	Production Stage: <input checked="" type="checkbox"/> In Progress	VT Gauge Identification: Mfg. Nasco
Test Method Standard: AWS D15.1	Percent of Inspection: <input checked="" type="checkbox"/> 100%	<input type="checkbox"/> Final *	Weld Gauge $\frac{1}{8}$ " $\frac{3}{8}$ " and $\frac{1}{2}$ " Fillet
Acceptance Standard: AWS D15.1	<input type="checkbox"/> %	<input type="checkbox"/> Other	Model #NFG-7
Product Form: N/A		For Welds: <input type="checkbox"/> Root Pass <input type="checkbox"/> Intermediate <input checked="" type="checkbox"/> Final	S/N N/A
Type of Material: Carbon Steel			Other Cam Type Gage

Product / Weld Identification	Accept	Reject	Linear	Rounded	Cracks	Undercut	Lack Fusion	Incomplete Pen	Exceed Reinforcement	Weld	Undersized	Defect Location, Length
Span Bolster Assembly	/											
3-4 to 3-21 & 3-14	/											
3-1 to 3-14	/											
3-3 to 3-14	/											
3-2 to 3-14	/											
3-2 & 3-8 to 3-14	/											
3-12 to 3-14	/											
3-28 to 3-14	/											
3-28 to 3-2 Inside	/											
3-28 to 3-2 Outside	/											
3-28 to 3-15 Inside	/											
3-28 to 3-15 Outside	/											
3-28 to 3-15 Inside	/											
3-28 to 3-14 Outside	/											
3-28 to 3-16 Outside	/											
3-33 to 3-2 Top	/											
3-33 to 3-27 Top	/											

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Technician: Daniel S. Gjurich *Daniel S. Gjurich* Level: CWI #93041171  Daniel S Gjurich
 CWI 93041171
 QC1 EXP. 4/1/2020

Reviewed By: *[Signature]* Date: 12/10/18

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 These test results report our findings, of the items listed, at the time of inspection and shall be reviewed by the client for compliance to the project requirements. Due to the limitations of nondestructive testing in evaluating all of the factors that determine the overall component quality, no guarantee is made or liability assumed by TÜV Rheinland Industrial Solutions, Inc. ("TRIS") for the component quality or serviceability. This report shall not be reproduced without the written consent of TÜV Rheinland Industrial Solutions, Inc.

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Title: Design and Prototype Fabrication of Railcars for Transport of
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 Project: 00225.03.0050 DOE Atlas Project

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VISUAL INSPECTION REPORT

Mr. Mark Zeigler
 Kasgro Rail Corporation
 121 Rundt Road
 New Castle, PA 16102

Report #: 7
 P.O. #: K180079
 Work Order #: 468009
 Project: Atlas Cask Car

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Date: July 11, 2018 thru August 29, 2018
 Description: Visual Inspections on Piece #1 Span Bolster Assembly

TRIS Procedure: NDE-VT-5	Surface Condition: As Welded	Production Stage: <input checked="" type="checkbox"/> In Progress	VT Gauge Identification: Mfg. Nasco
Test Method Standard: AWS D15.1	Percent of Inspection: <input checked="" type="checkbox"/> 100%	<input type="checkbox"/> Final *	Weld Gauge $\frac{1}{4}$ " $\frac{3}{16}$ " and $\frac{1}{2}$ " Fillet
Acceptance Standard: AWS D15.1	<input type="checkbox"/> %	<input type="checkbox"/> Other	Model #NFG-7
Product Form: N/A		For Welds: <input type="checkbox"/> Root Pass <input type="checkbox"/> Intermediate <input checked="" type="checkbox"/> Final	S/N N/A Other Cam Type Gage
Type of Material: Carbon Steel			

Product / Weld Identification	Accept	Reject	Linear	Rounded	Cracks	Undercut	Lack Fusion	Incomplete Pen	Exceed Reinforcement	Weld Undersized	Defect Location, Length
Span Bolster Assembly											
3-33 to 3-2 Underside	/										
3-33 to 3-27 Underside	/										
3-14 to 3-17 & 3-18 L-Side	/										Weld #2
3-14 to 3-17 & 3-18 R-Side	/										Weld #1
3-16 to 3-15 Inboard	/										
3-16 to 3-15 Outboard	/										
3-16 to 3-17	/										
3-6 to 3-16	/										
3-4 to 3-15	/										
3-7 to 3-16	/										
3-5 to 3-15	/										
3-1 to 3-16 & 3-15	/										
3-3 to 3-15	/										
3-2 to 3-15	/										
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Technician: Daniel S. Gjurich *Daniel S. Gjurich* Level: CWI #93041171
 Reviewed By: *[Signature]* Date: 12/15/18
 TÜVRHEINLAND INDUSTRIAL SOLUTIONS, INC.
 Daniel S Gjurich
 GWI-93041171
 QC1 EXP. 4/1/2020

These test results report our findings, of the items listed, at the time of inspection and shall be reviewed by the client for compliance to the project requirements. Due to the limitations of non-destructive testing in evaluating all of the factors that determine the overall component quality, no guarantee is made or liability assumed by TÜV Rheinland Industrial Solutions, Inc. ("TRIS") for the component quality or serviceability. This report shall not be reproduced without the written consent of TÜV Rheinland Industrial Solutions, Inc.

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VISUAL INSPECTION REPORT

Mr. Mark Zeigler
 Kasgro Rail Corporation
 121 Rundle Road
 New Castle, PA 16102

Report #: 13
 P.O. #: K180079
 Work Order #: 468009
 Project: Atlas Cask Car

Page 1 of 4

Date: July 11, 2018 thru September 5, 2018
 Description: Visual Inspections on Piece #2 Span Bolster Assembly

TRIS Procedure: NDE-VT-5	Surface Condition: As Welded	Production Stage: <input checked="" type="checkbox"/> In Progress	VT Gauge Identification: Mfg. Nasco
Test Method Standard: AWS D15.1	Percent of Inspection: <input checked="" type="checkbox"/> 100%	<input type="checkbox"/> Final *	Weld Gauge $\frac{1}{4}$ " $\frac{3}{8}$ " and $\frac{1}{2}$ " Fillet
Acceptance Standard: AWS D15.1	<input type="checkbox"/> %	<input type="checkbox"/> Other	Model #NFG-7
Product Form: N/A		For Welds: <input type="checkbox"/> Root Pass	S/N N/A
Type of Material: Carbon Steel		<input type="checkbox"/> Intermediate	Other Cam Type Gage
		<input checked="" type="checkbox"/> Final	

Product / Weld Identification	Accept	Reject	Linear	Rounded	Cracks	Undercut	Lack Fusion	Incomplete Pen	Exceed Reinforcement	Weld	Undersized	Defect Location, Length
Span Bolster Assembly												
3-18 to 3-15 R-Side												Weld #3
INSIDE	/											
OUTSIDE	/											
3-17 to 3-15 L-Side												Weld #4
INSIDE	/											
OUTSIDE	/											
3-12 to 3-15	/											
3-11 to 3-15	/											
3-9 to 3-15	/											
3-8 to 3-15	/											
3-12 to 3-17 & 3-18	/											
3-11 to 3-17 & 3-18	/											
3-9 to 3-17 & 3-18	/											
3-8 to 3-17 & 3-18	/											
3-5 to 3-18	/											
3-7 to 3-17	/											
3-4 to 3-18	/											
3-6 to 3-17	/											

Technician: Daniel S. Gjurich		Level: CWI #93041171
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Reviewed By: Date: 8/11/18

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VISUAL INSPECTION REPORT

Mr. Mark Zeigler
 Kasgro Rail Corporation
 121 Rundle Road
 New Castle, PA 16102

Report #: 13
 P.O. #: K180079
 Work Order #: 468009
 Project: Atlas Cask Car

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Date: July 11, 2018 thru September 5, 2018
 Description: Visual Inspections on Piece #2 Span Bolster Assembly

TRIS Procedure: NDE-VT-5	Surface Condition: As Welded	Production Stage: <input checked="" type="checkbox"/> In Progress	VT Gauge Identification: Mfg. Nasco
Test Method Standard: AWS D15.1	Percent of Inspection: <input checked="" type="checkbox"/> 100%	<input type="checkbox"/> Final *	Weld Gauge 1/4", 3/8" and 1/2" Fillet
Acceptance Standard: AWS D15.1	<input type="checkbox"/> %	<input type="checkbox"/> Other	Model #NFG-7
Product Form: N/A		For Welds: <input type="checkbox"/> Root Pass	S/N N/A
Type of Material: Carbon Steel		<input type="checkbox"/> Intermediate	Other Cam Type Gage
		<input checked="" type="checkbox"/> Final	

Product / Weld Identification	Accept	Reject	Linear	Rounded	Cracks	Undercut	Lack Fusion	Incomplete Pen	Exceed Reinforcement	Weld Undersized	Defect Location, Length
Span Bolster Assembly	/										
3-3 to 3-18	/										
3-1 to 3-17	/										
3-19 to 3-17 & 3-18	/										
3-19 to 3-9	/										
3-19 to 3-11	/										
3-14 to 3-17 & 3-18	/										
3-21 to 3-18	/										
3-26 to 3-18	/										
3-90 to 3-14 & 3-16	/										
3-20 to 3-14 & 3-19 Top	/										
3-20 to 3-14 & 3-19 Bot.	/										
3-22 to 3-16	/										
3-24 to 3-16	/										
3-21 to 3-14	/										NOTE: The Recording of False, Fictitious or Fraudulent Statements or Entries on the Document may be Punishable as a Felony Under Federal Statutes.
3-26 to 3-14	/										
3-6 to 3-21 & 3-14	/										
3-4 to 3-21 & 3-14	/										
3-7 to 3-26 & 3-14	/										

Technician: Daniel S. Gjurich <i>Daniel S. Gjurich</i>	Level: CWI #93041171
--	----------------------

Reviewed By: *[Signature]* Date: 8/11/18
 TÜVRHEINLAND INDUSTRIAL SOLUTIONS, INC.

These test results report our findings, of the items listed, at the time of inspection and shall be reviewed by the client for compliance to the project requirements. Due to the limitations of nondestructive testing in evaluating all of the factors that determine the overall component quality, no guarantee is made or liability assumed by TÜVRheinland Industrial Solutions, Inc. ("TRIS") for the competent quality or serviceability. This report shall not be reproduced without the written consent of TÜVRheinland Industrial Solutions, Inc.

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Title: Design and Prototype Fabrication of Railcars for Transport of
High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
Appendix B

Doc./Rev.: EIR-3021970-000
 Project: 00225.03.0050 DOE Atlas Project

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VISUAL INSPECTION REPORT

Mr. Mark Zeigler
 Kasgro Rail Corporation
 121 Rundle Road
 New Castle, PA 16102

Report #: 13
 P.O. #: K180079
 Work Order #: 468009
 Project: Atlas Cask Car

Page 3 of 4

Date: July 11, 2018 thru September 5, 2018
 Description: Visual Inspections on Piece #2 Span Bolster Assembly

TRIS Procedure: NDE-VT-5	Surface Condition: As Welded	Production Stage: <input checked="" type="checkbox"/> In Progress	VT Gauge Identification: Mfg. Nasco
Test Method Standard: AWS D15.1	Percent of Inspection: <input checked="" type="checkbox"/> 100%	<input type="checkbox"/> Final *	Weld Gauge $\frac{1}{8}$ " $\frac{3}{8}$ " and $\frac{1}{2}$ " Fillet
Acceptance Standard: AWS D15.1	<input type="checkbox"/> %	Other For Welds: <input type="checkbox"/> Root Pass	Model #NFG-7
Product Form: N/A		<input type="checkbox"/> Intermediate	S/N N/A
Type of Material: Carbon Steel		<input checked="" type="checkbox"/> Final	Other Cam Type Gage

Product / Weld Identification	Accept	Reject	Linear	Rounded	Cracks	Undercut	Lack Fusion	Incomplete Pen	Exceed Reinforcement	Weld Undersized	Defect Location, Length
3-4 to 3-21 & 3-14	/										
3-1 to 3-14	/										
3-3 to 3-14	/										
3-2 to 3-14	/										
3-2 & 3-8 to 3-14	/										
3-12 to 3-14	/										
3-28 to 3-14	/										
3-28 to 3-2 Inside	/										
3-28 to 3-2 Outside	/										
3-28 to 3-15 Inside	/										
3-28 to 3-15 Outside	/										
3-28 to 3-15 Inside	/										
3-28 to 3-14 Outside	/										
3-28 to 3-16 Outside	/										
3-33 to 3-2 Top	/										
3-33 to 3-27 Top	/										

Technician: Daniel S. Gjurich	Level: CWI #93041171
-------------------------------	----------------------

Reviewed By: Date: 9/11/18

Daniel S. Gjurich
 CWI 93041171
 QC1 EXP. 4/1/2020

NOTE: The Recording of False, Fictitious or Fraudulent Statements or Entries on the Document may be Punishable as a Felony Under Federal Statutes.

These test results report our findings, of the items listed, at the time of inspection and shall be reviewed by the client for compliance to the project requirements. Due to the limitations of nondestructive testing in evaluating all of the factors that determine the overall component quality, no guarantee is made or liability assumed by TÜV Rheinland Industrial Solutions, Inc. ("TRIS") for the competence quality or serviceability. This report shall not be reproduced without the written consent of TÜV Rheinland Industrial Solutions, Inc.

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 March 19, 2004
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Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
Appendix B

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 Project: 00225.03.0050 DOE Atlas Project

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VISUAL INSPECTION REPORT

Mr. Mark Zeigler
 Kasgro Rail Corporation
 121 Rundle Road
 New Castle, PA 16102


Report #: 13
 P.O. #: K180079
 Work Order #: 468009
 Project: Atlas Cask Car

Page 4 of 4

Date: July 11, 2018 thru September 5, 2018
 Description: Visual Inspections on Piece #2 Span Bolster Assembly

TRIS Procedure: NDE-VT-5	Surface Condition: As Welded	Production Stage: <input checked="" type="checkbox"/> In Progress	VT Gauge Identification: Mfg. Nasco
Test Method Standard: AWS D15.1	Percent of Inspection: <input checked="" type="checkbox"/> 100%	<input type="checkbox"/> Final *	Weld Gauge 1/4", 3/8" and 1/2" Fillet
Acceptance Standard: AWS D15.1	<input type="checkbox"/> %	<input type="checkbox"/> Other	Model #NFG-7
Product Form: N/A		For Welds: <input type="checkbox"/> Root Pass	S/N N/A
Type of Material: Carbon Steel		<input type="checkbox"/> Intermediate	Other Cam Type Gage
		<input checked="" type="checkbox"/> Final	

Product / Weld Identification	Accept	Reject	Linear	Rounded	Cracks	Undercut	Lack Fusion	Incomplete Pen	Exceed Reinforcement	Weld Undersized	Defect Location, Length
Span Bolster Assembly											
3-33 to 3-2 Underside	/										
3-33 to 3-27 Underside	/										
3-14 to 3-17 & 3-18 L-Side	/										Weld #2
3-14 to 3-17 & 3-18 R-Side	/										Weld #1
3-16 to 3-15 Inboard	/										
3-16 to 3-15 Outboard	/										
3-16 to 3-17	/										
3-6 to 3-16	/										
3-4 to 3-15	/										
3-7 to 3-16	/										
3-5 to 3-15	/										
3-1 to 3-16 & 3-15	/										
3-3 to 3-15	/										
3-2 to 3-15	/										

 Daniel S Gjurich
 CWI #93041171
 QC1 EXP. 4/1/2020

NOTE: The Recording of False, Fictitious or Fraudulent Statements or Entries on the Document may be Punishable as a Felony Under Federal Statutes.

Technician: Daniel S. Gjurich *Daniel S Gjurich* Level: CWI #93041171

Reviewed By: *[Signature]* Date: 9/10/18

TÜV RHEINLAND INDUSTRIAL SOLUTIONS, INC.

These test results report our findings, of the items listed, at the time of inspection and shall be reviewed by the client for compliance to the project requirements. Due to the limitations of non-destructive testing in evaluating all of the factors that determine the overall component quality, no guarantee is made or liability assumed by TÜV Rheinland Industrial Solutions, Inc. ("TRIS") for the component quality or serviceability. This report shall not be reproduced without the written consent of TÜV Rheinland Industrial Solutions, Inc.

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Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
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Project: 00225.03.0050 DOE Atlas Project

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VISUAL INSPECTION REPORT


Mr. Mark Zeigler
 Kasgro Rail Corporation
 121 Rundle Road
 New Castle, PA 16102

Report #: 16 Page 1 of 3
 P.O. #: K180079
 Work Order #: 473037
 Project: Atlas

Date: December 3,, 2018 thru January 10, 2019
 Description: Perform Visual Inspections of Deck Attachments for Cask car #1

TRIS Procedure: NDE-VT-1	Surface Condition: As Welded	Production Stage: <input checked="" type="checkbox"/> In Progress	VT Gauge Identification: Mfg. G.A.L.
Test Method Standard: AWS D15.1	Percent of Inspection: <input checked="" type="checkbox"/> 100%	<input type="checkbox"/> Final	Weld Gauge: 1/4", 3/8" and 1/2" Fillet
Acceptance Standard: AWS D15.1	<input type="checkbox"/> %	<input type="checkbox"/> Other	Model: #269-465-5750
Product Form: N/A		For Welds: <input checked="" type="checkbox"/> Root Pass	Serial #: Cert #F4858
Type of Material: Carbon Steel		<input type="checkbox"/> Intermediate	Other: Cam Type Gage
<input checked="" type="checkbox"/> Final		<input checked="" type="checkbox"/> Final	

Product / Weld Identification	Accept	Reject	Linear	Rounded	Cracks	Undercut	Lack Fusion	Incomplete Pen	Exceed Reinforcement	Weld Undersized	Defect Location, Length
Item #7 to 3-10 (4)											
Root	/										
Final	/										
Item #8 to 3-10 (4)											
Root	/										
Final	/										
Item #11 to 3-10											
"A" End											
Root	/										
Final	/										
"B" End											
Root	/										
Final	/										

SIGNED:	Kasgro Rail		Daniel S Gjurich CWI 93041171 QC1 EXP. 4/1/20.
Technician: Daniel S. Gjurich	<i>Daniel S Gjurich</i>		Level: CWI #93041171

Reviewed By: *[Signature]* Date: 1/22/19
 Testing was performed in accordance with accepted industry practice as well as the test methods referenced TUV Rheinland Industrial Solutions, Inc. has no direct knowledge of the origin, sampling procedure, nor condition of the samples, and makes no claims as to the suitability for final use of the material. This test report applies only to those items tested. This report shall not be reproduced except in full without the written consent of TUV Rheinland Industrial Solutions, Inc.

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Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
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VISUAL INSPECTION REPORT

Mr. Mark Zeigler
 Kasgro Rail Corporation
 121 Rundle Road
 New Castle, PA 16102

Report #: 16 Page 2 of 3
 P.O. #: K180079
 Work Order #: 473037
 Project: Atlas

Date: December 3,, 2018 thru January 10, 2019
 Description: Perform Visual Inspections of Deck Attachments for Cask car #1

TRIS Procedure: NDE-VT-1	Surface Condition: As Welded	Production Stage: <input checked="" type="checkbox"/> In Progress	VT Gauge Identification: Mfg. G.A.L.
Test Method Standard: AWS D15.1	Percent of Inspection: <input checked="" type="checkbox"/> 100%	<input type="checkbox"/> Final	Weld Gauge ¼", ⅜" and ½" Fillet
Acceptance Standard: AWS D15.1	<input type="checkbox"/> %	<input type="checkbox"/> Other	Model #269-465-5750
Product Form: N/A		For Welds: <input checked="" type="checkbox"/> Root Pass	Serial # Cert #F4858
Type of Material: Carbon Steel		<input type="checkbox"/> Intermediate	Other Cam Type Gage
<input checked="" type="checkbox"/> Final			

Product / Weld Identification	Accept	Reject	Linear	Rounded	Cracks	Undercut	Lack Fusion	Incomplete Pen	Exceed Reinforcement	Weld Undersized	Defect Location, Length
Item #10 to 3-10											
"A" End (2)											
Root	/										
Final	/										
"B" End (2)											
Root	/										
Final	/										
Item #12 to 3-10											
"A" End											
Root	/										
Final	/										
"B" End											
Root	/										
Final	/										

SIGNED:	Kasgro Rail
Technician: Daniel S. Gjurich <i>Daniel S. Gjurich</i>	Level: CWI #93041171

Reviewed By: *[Signature]* Date: 1/22/19
Testing was performed in accordance with accepted industry practice as well as the test methods referenced TUV Rheinland Industrial Solutions, Inc. has no direct knowledge of the origin, sampling procedure, nor condition of the samples, and makes no claims as to the suitability per final use of the material. This test report applies only to those items tested. This report shall not be reproduced except in full without the written consent of TUV Rheinland Industrial Solutions, Inc.

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VISUAL INSPECTION REPORT

Mr. Mark Zeigler
 Kasgro Rail Corporation
 121 Rundle Road
 New Castle, PA 16102

Report #: 16 Page 3 of 3
 P.O. #: K180079
 Work Order #: 473037
 Project: Atlas

Date: December 3,, 2018 thru January 10, 2019
 Description: Perform Visual Inspections of Deck Attachments for Cask car #1

TRIS Procedure: NDE-VT-1	Surface Condition: As Welded	Production Stage: <input checked="" type="checkbox"/> In Progress	VT Gauge Identification: Mfg. G.A.L.
Test Method Standard: AWS D15.1	Percent of Inspection: <input checked="" type="checkbox"/> 100%	<input type="checkbox"/> Final	Weld Gauge 1/4", 3/8" and 1/2" Fillet
Acceptance Standard: AWS D15.1	<input type="checkbox"/> %	<input type="checkbox"/> Other	Model #269-465-5750
Product Form: N/A		For Welds:	Serial # Cert #F4858
Type of Material: Carbon Steel		<input type="checkbox"/> Root Pass	Other Cam Type Gage
		<input type="checkbox"/> Intermediate	
		<input checked="" type="checkbox"/> Final	

Product / Weld Identification	Accept	Reject	Linear	Rounded	Cracks	Undercut	Lack Fusion	Incomplete Pen	Exceed Reinforcement	Weld Undersized	Defect Location, Length
Item #5 to 3-10											
"A" Side of Center											Not welded as of this report
"B" Side of Center											Not welded as of this report
Item #6 to 3-10 (4)											
"A" Side of Center (Left)											Not welded as of this report
"A" Side of Center (Right)											Not welded as of this report
"B" Side of Center (Left)											Not welded as of this report
"B" Side of Center (Right)											Not welded as of this report
SIGNED:											
Technician: Daniel S. Gjurich											Level: CWI #93041171

Reviewed By: *[Signature]* Date: 1/22/19
 Testing was performed in accordance with accepted industry practice as well as the test methods referenced TUV Rheinland Industrial Solutions, Inc. has no direct knowledge of the origin, sampling procedure, nor condition of the samples, and makes no claims as to the suitability nor final use of the material. This test report applies only to those items tested. This report shall not be reproduced except in full without the written consent of TUV Rheinland Industrial Solutions, Inc.

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Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
Appendix B

Doc./Rev.: EIR-3021970-000
 Project: 00225.03.0050 DOE Atlas Project

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VISUAL INSPECTION REPORT

Mr. Mark Zeigler
 Kasgro Rail Corporation
 121 Rundle Road
 New Castle, PA 16102

Report #: 18 Page 1 of 3
 P.O. #: K180079
 Work Order #: 473037
 Project: Atlas

Date: January 14, 2019
 Description: Perform Visual Inspections of Deck Attachments for Cask car #1

TRIS Procedure: NDE-VT-1	Surface Condition: As Welded	Production Stage: X In Progress	VT Gauge Identification: Mfg. G.A.L.
Test Method Standard: AWS D15.1	Percent of Inspection: X 100%	Final	Weld Gauge 1/4", 3/8" and 1/2" Fillet
Acceptance Standard: AWS D15.1	%	Other	Model #269-465-5750
Product Form: N/A		For Welds: X Root Pass	Serial # Cert #F4858
Type of Material: Carbon Steel		Intermediate	Other Cam Type Gage
		X Final	

Product / Weld Identification	Accept	Reject	Linear	Rounded	Cracks	Undercut	Lack Fusion	Incomplete Pen	Exceed Reinforcement	Weld	Undersized	Defect Location, Length
Item #7 to 3-10 (4)												
Root												See Report #16
Final												See Report #16
Item #8 to 3-10 (4)												
Root												See Report #16
Final												See Report #16
Item #11 to 3-10												
"A" End												
Root												See Report #16
Final												See Report #16
"B" End												
Root												See Report #16
Final												See Report #16

SIGNED:	Kasgro Rail		Daniel S. Gjurich CWI 93041171 QC EXP #12020 Level: CWI #93041171
Technician: Daniel S. Gjurich	<i>Daniel S. Gjurich</i>		

Reviewed By: *[Signature]* Date: 1/22/18
 Testing was performed in accordance with accepted industry practice as well as the test methods referenced TUV Rheinland Industrial Solutions, Inc. is no direct knowledge of the origin, sampling procedure, or condition of the samples, and makes no claims as to the suitability or final use of the material. This test report applies only to those items tested. This report shall not be reproduced except in full without the written consent of TUV Rheinland Industrial Solutions, Inc.

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High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
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VISUAL INSPECTION REPORT


Mr. Mark Zeigler
 Kasgro Rail Corporation
 121 Rundle Road
 New Castle, PA 16102

Report #: 18 Page 2 of 3
 P.O. #: K180079
 Work Order #: 473037
 Project: Atlas

Date: January 14, 2019
 Description: Perform Visual Inspections of Deck Attachments for Cask car #1

TRIS Procedure: NDE-VT-1	Surface Condition: As Welded	Production Stage: <input checked="" type="checkbox"/> In Progress	VT Gauge Identification: Mfg. G.A.L.
Test Method Standard: AWS D15.1	Percent of Inspection: <input checked="" type="checkbox"/> 100%	<input type="checkbox"/> Final	Weld Gauge: ¼", ⅜" and ½" Fillet
Acceptance Standard: AWS D15.1	<input type="checkbox"/> %	<input type="checkbox"/> Other	Model: #269-465-5750
Product Form: N/A		For Welds: <input checked="" type="checkbox"/> Root Pass	Serial #: Cert #P4858
Type of Material: Carbon Steel		<input type="checkbox"/> Intermediate	Other: Cam Type Gage
		<input checked="" type="checkbox"/> Final	

Product / Weld Identification	Accept	Reject	Linear	Rounded	Cracks	Undercut	Lack Fusion	Incomplete Pen	Exceed Reinforcement	Weld Undersized	Defect Location, Length
Item #10 to 3-10											
"A" End (2)											
Root											See Report #16
Final											See Report #16
"B" End (2)											
Root											See Report #16
Final											See Report #16
Item #12 to 3-10											
"A" End											
Root											See Report #16
Final											See Report #16
"B" End											
Root											See Report #16
Final											See Report #16

SIGNED:	Kasgro Rail		Daniel S Gjurich CWI 93041171 QC1 EXP: 4/17/2020 Level: CWI #93041171
Technician: Daniel S. Gjurich	<i>Daniel S Gjurich</i>		

Reviewed By: *[Signature]* Date: 1/22/19
 Testing was performed in accordance with accepted industry practice as well as the test methods referenced TUV Rheinland Industrial Solutions, Inc. I/s no direct knowledge of the origin, sampling procedure, nor condition of the samples, and makes no claims as to the suitability nor final use of the material. This test report applies only to those items tested. This report shall not be reproduced except in full without the written consent of TUV Rheinland Industrial Solutions, Inc.

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Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
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Doc./Rev.: EIR-3021970-000
 Project: 00225.03.0050 DOE Atlas Project

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VISUAL INSPECTION REPORT

Mr. Mark Zeigler
 Kasgro Rail Corporation
 121 Rundle Road
 New Castle, PA 16102

Report #: 18 Page 3 of 3
 P.O. #: K180079
 Work Order #: 473037
 Project: Atlas

Date: January 14, 2019
 Description: Perform Visual Inspections of Deck Attachments for Cask car #1

TRIS Procedure: NDE-VT-1	Surface Condition: As Welded	Production Stage: <input checked="" type="checkbox"/> In Progress	VT Gauge Identification: Mfg. G.A.L.
Test Method Standard: AWS D15.1	Percent of Inspection: <input checked="" type="checkbox"/> 100%	<input type="checkbox"/> Final	Weld Gauge: ¼", 3/8" and ½" Fillet
Acceptance Standard: AWS D15.1	<input type="checkbox"/> %	<input type="checkbox"/> Other	Model: #269-465-5750
Product Form: N/A		For Welds: <input type="checkbox"/> Root Pass	Serial #: Cert #F4858
Type of Material: Carbon Steel		<input type="checkbox"/> Intermediate	Other: Cam Type Gage
		<input checked="" type="checkbox"/> Final	

Product / Weld Identification	Accept	Reject	Linear	Rounded	Cracks	Undercut	Lack Fusion	Incomplete Pen	Exceed Reinforcement	Weld	Undersized	Defect Location, Length
Item #5 to 3-10												
"A" Side of Center	/											
"B" Side of Center	/											
Item #6 to 3-10 (4)												
"A" Side of Center (Left)	/											
"A" Side of Center (Right)	/											
"B" Side of Center (Left)	/											
"B" Side of Center (Right)	/											
												 Daniel S Gjurich CWI 93041171 QC1 EXP. 4/1/2020
SIGNED:												
Technician: Daniel S. Gjurich <i>Daniel S Gjurich</i>												Kasgro Rail Level: CWI #93041171

Reviewed By: *CS* Date: 1/22/19
 Testing was performed in accordance with accepted industry practice as well as the test methods referenced TUV Rheinland Industrial Solutions, Inc. for no direct knowledge of the origin, sampling procedure, nor condition of the samples, and makes no claims as to the suitability nor final use of the material. This test report applies only to those items tested. This report shall not be reproduced except in full without the written consent of TUV Rheinland Industrial Solutions, Inc.

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Orano Federal Services
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VISUAL INSPECTION REPORT

Mr. Mark Zeigler
 Kasgro Rail Corporation
 121 Rundle Road
 New Castle, PA 16102

Report #: 19
 P.O. #: K180079
 Work Order #: 473037
 Project: Atlas

Page 1 of 2

Date: January 23, 2019 thru January 24, 2019
 Description: Visual Inspections of Span Center Plates on Cask Car #1

TRIS Procedure: NDE-VT-1 Test Method Standard: AWS D15.1 Acceptance Standard: AWS D15.1 Product Form: N/A Type of Material: Carbon Steel	Surface Condition: As Welded Percent of Inspection: X 100% _____ %	Production Stage: <input checked="" type="checkbox"/> In Progress <input checked="" type="checkbox"/> Final _____ Other For Welds: _____ Root Pass _____ Intermediate <input checked="" type="checkbox"/> Final	VT Gauge Identification: Mfg. G.A.L. Weld Gauge $\frac{1}{4}$ ", $\frac{3}{8}$ " and $\frac{1}{2}$ " Fillet Model #269-465-5750 Serial # Cert #P4857 Other Cam Type Gage
---	--	--	--

Product / Weld Identification	Accept	Reject	Linear	Rounded	Cracks	Undercut	Lack Fusion	Incomplete Pen	Exceed Reinforcement	Weld	Undersized	Defect Location, Length
Bolster Span Assembly												
Center Plate "A" End												
1-1 to 3-15 (Outboard)	/											
Center Plate "A" End												
1-1 to 3-15 (Middle)	/											
Center Plate "A" End												
1-1 to 3-15 (Inboard)	/											
Daniel S Gjurich CWI 93041171 QC1 EXP. 4/1/2020												
Technician:	Daniel S. Gjurich											
	Level: CWI #93041171											

Reviewed By: Date: 1/24/19

Testing was performed in accordance with accepted industry practice as well as the test methods referenced TUV Rheinland Industrial Solutions, Inc. has no direct knowledge of the origin, sampling procedure, nor condition of the samples, and makes no claims as to the suitability nor final use of the material. This test report applies only to those items tested. This report shall not be reproduced except in full without the written consent of TUV Rheinland Industrial Solutions, Inc.

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Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
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VISUAL INSPECTION REPORT


Mr. Mark Zeigler
 Kasgro Rail Corporation
 121 Rundle Road
 New Castle, PA 16102

Report #: 20 Page 1 of 1
 P.O. #: K180079
 Work Order #: 473037
 Project: Atlas

Date: February 12, 2019
 Description: Perform Visual Inspections of Deck Attachments for Cask car #1

TRIS Procedure: NDE-VT-1	Surface Condition: As Welded	Production Stage: <input checked="" type="checkbox"/> In Progress	VT Gauge Identification: Mfg. G.A.L.
Test Method Standard: AWS D15.1	Percent of Inspection: <input checked="" type="checkbox"/> 100%	<input type="checkbox"/> Final	Weld Gauge: 1/4", 3/8" and 1/2" Fillet
Acceptance Standard: AWS D15.1	<input type="checkbox"/> %	<input type="checkbox"/> Other	Model: #269-465-5750
Product Form: N/A		For Welds: <input type="checkbox"/> Root Pass	Serial #: Cert #F4858
Type of Material: Stainless Steel to Carbon Steel		<input type="checkbox"/> Intermediate	Other: Cam Type Gage
		<input checked="" type="checkbox"/> Final	

Product / Weld Identification	Accept	Reject	Linear	Rounded	Cracks	Undercut	Lack Fusion	Incomplete Pen	Excess Reinforcement	Weld Undersized	Defect Location, Length
"A" End											
Item #2 to Item #10 (4)											
Final	/										
"B" End											
Item #2 to Item #10 (4)											
Final	/										
Item #2 to Item #8 (4)											
Final	/										

 Daniel S Gjurich
 CWI #3041171
 QC1 EXP: 4/1/2020

SIGNED: _____ Kasgro Rail

Technician: Daniel S. Gjurich *Daniel S Gjurich* Level: CWI #93041171

Reviewed By: *[Signature]* Date: 2/12/19
 Testing was performed in accordance with accepted industry practice as well as the test methods referenced TUV Rheinland Industrial Solutions, Inc. has no direct knowledge of the origin, sampling procedure, nor condition of the samples, and makes no claims as to the suitability nor final use of the material. This test report applies only to those items tested. This report shall not be reproduced except in full without the written consent of TUV Rheinland Industrial Solutions, Inc.

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Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
Appendix B

Doc./Rev.: EIR-3021970-000
 Project: 00225.03.0050 DOE Atlas Project

		Orano Federal Services	
DATA TRANSMITTAL FORM			
Supplier:	KASGRO RAIL CORP., INC.	DTF No:	038A
P.O./SC No:	15C3011916	Date:	3/13/2019
Type of Submittal:	<input type="checkbox"/> First <input checked="" type="checkbox"/> Re-Submittal	SDRL List Item No:	24
Submitted for:	<input checked="" type="checkbox"/> Approval <input type="checkbox"/> Review <input type="checkbox"/> Information	Number of Copies Submitted:	1
Submitted By:	RICK FORD	Rick Ford	PROJECT MANAGER
	<small>(Name)</small>	<small>(Signature)</small>	<small>(Title)</small>

ITEM NUMBER	DOCUMENT NUMBER	REVISION NUMBER	DOCUMENT DESCRIPTION	FS DISPOSITION
1	KAS 133		TUV MT NDE REPORT CASK CAR	<input checked="" type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
2	KAS 134		TUV VT NDE REPORT CASK CAR	<input checked="" type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
				<input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
				<input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
				<input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
				<input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
				<input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
				<input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
				<input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
				<input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA

Comments:	Technical Reviewer (i.e., RE, PTL, SME, QA, etc.)
No comments	KLEIN Slade Date: 2019.03.14 15:23:05 -07'00'
	Date: 3/14/2019

FS DISPOSITION CODES AND DEFINITIONS			
AP	Approved	Work may proceed.	Resubmittal is not required
AWC	Approved with Comment	Work may proceed; comments provided for Supplier's consideration only.	Resubmittal is not required
REV	Reviewed	Work may proceed; comments provided for Supplier's consideration only.	Resubmittal is not required
RWC	Reviewed with Comment	Work may proceed; subject to incorporation and compliance w/ Buyer comments.	Correct and resubmit
DS	Disapproved	Work may <u>not</u> proceed.	Correct and resubmit
RSA	Receipt Submittal Acknowledged	No other action required.	

If, in the judgment of the Supplier, the incorporation of FS' comments will result in a change to the Purchase Order/Subcontract, work shall not proceed and the Supplier shall immediately provide a written notice to FS' C&P Representative describing the change.

Project Manager (PM) / Engineering Manager (EM) or Designated Individual (DI) Approval		Digitally signed by Mark A. Denton DN: cn=Mark A. Denton, o=Orano Federal Services, email=mark.denton@orano-group.com, c=US Date: 2019.03.14 16:46:30 -0400	Date: 03/14/2019
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FS-EN-FRM-023 Rev 02 (Effective March 1, 2018)
 Refer to FS-EN-PRC-012



Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
Appendix B

Doc./Rev.: EIR-3021970-000
 Project: 00225.03.0050 DOE Atlas Project

	Orano Federal Services	
	SUPPLIER DOCUMENT SUBMITTAL REVIEW	
Supplier / PO No.:	KASGRO / 15C3011916	DTF No. / Rev: 038A
Charge No:	00225.03.0050.02.00001	Due Date: 3/18/2019
Document(s):	See DTF No.: 038A	
REVIEW INSTRUCTIONS: (List Supplier Doc. No. and Rev. FS Spec and Dwg. Codes, Stds, etc.)		
PE	Slade Klein	
REVIEWERS	Slade Klein, Bernie Counterman	
QA	Bernie Counterman	
Technical Review		
Comments/Markup Attached Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Technical Reviewer Comments:		
No comments		
Technical Reviewer(s) (Sign/Date): KLEIN Slade Date: 2019.03.13 15:02:41 -07'00'		
Quality Assurance Review (As Applicable)		
Comments/Markup Attached Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Technical Reviewer Comments:		
No Comments		
QA Reviewer(s) (Sign/Date): Digitally signed by COUNTERMAN Bernard Date: 2019.03.14 07:44:38 -07'00'		
COMMENT DISPOSITION (If Applicable. Attached further comments and disposition correspondence as necessary)		

FS-EN-FRM-026 Rev 01 (Effective March 1, 2018)
 Refer to FS-EN-PRC-012



Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
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Doc./Rev.: EIR-3021970-000
 Project: 00225.03.0050 DOE Atlas Project

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MAGNETIC PARTICLE INSPECTION REPORT

Mr. Mark Zeigler
 Kasgro Rail Corporation
 121 Rundle Road
 New Castle, PA 16102

Report #: 23 Page 1 of 2
 P.O. #: K180079
 Work Order #: 473037
 Project: Atlas Cask Car

Date: March 4, 2019
 Description: Perform Magnetic Particle Inspections of Deck Attachments for Cask car #1

TRIS Procedure: WI-08-002 Rev. 5	Production Stage: <input checked="" type="checkbox"/> In Progress <input type="checkbox"/> Final <input type="checkbox"/> Other	For Welds: <input checked="" type="checkbox"/> Root Pass <input type="checkbox"/> Intermediate <input type="checkbox"/> Final
Surface Condition: As Welded		
Test Method Standard: ASTM E709		
Acceptance Standard: AWS D15.1		Equipment Identification:
Type of Material: Carbon Steel		Model #: Parker DA400 Gage #/Serial #: P135/17999 Cal. Date Due: 6-18-19

Product / Weld Identification	Accept	Reject	Linear	Rounded	Cracks	Undercut	Other	Defect Location or Remarks	Technique		
									Technique #:	N/A	
Car Body Assembly									Technique #:	N/A	
Item #7 (4)								Outside Lugs	Method: Wet	Dry <input checked="" type="checkbox"/>	
Root								See report #15	Fluorescent	Visible <input checked="" type="checkbox"/>	
Final								See report #17			
Item #8 (4)								Inside Lugs	Consumable Batch #: 08A078		
Root								See report #15	Coil	N/A FWDC <input checked="" type="checkbox"/>	
Final								See report #17	Head Shot	N/A Prods <input checked="" type="checkbox"/>	
Item #11 to 3-10									Amperage:	N/A	
"A" End									Yoke Current:	AC <input checked="" type="checkbox"/> DC <input type="checkbox"/>	
Final	/								UV Meter #:	N/A	
"B" End									UV Intensity verified at prescribed intervals?		
Final	/								Yes	No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>	
Item #10 to 3-10									Quantity Tested 100%:	<input checked="" type="checkbox"/>	
"A" End (2)									Random:	N/A %	
Final	/										
"B" End (2)											
Final	/										
SIGNED: Kasgro Rail											
Technician:	Daniel S. Gjurich <i>Daniel S. Gjurich</i>							Level: II			

Reviewed By: *[Signature]* Date: 3/5/19

Testing was performed in accordance with accepted industry practice as well as the test methods referenced TUV Rheinland Industrial Solutions, Inc. has no direct knowledge of the origin, sampling procedure, nor condition of the samples, and makes no claims as to the suitability nor final use of the material. This test report applies only to those items tested. This report shall not be reproduced except in full without the written consent of TUV Rheinland Industrial Solutions, Inc.



Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
Appendix B

Doc./Rev.: EIR-3021970-000
 Project: 00225.03.0050 DOE Atlas Project

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MAGNETIC PARTICLE INSPECTION REPORT

Mr. Mark Zeigler
 Kasgro Rail Corporation
 121 Rundle Road
 New Castle, PA 16102

Report #: 23 Page 2 of 2
 P.O. #: K180079
 Work Order #: 473037
 Project: Atlas Cask Car

Date: March 4, 2019
 Description: Perform Magnetic Particle Inspections of Deck Attachments for Cask car #1

TRIS Procedure:	WI-08-002 Rev. 5	Production Stage:	<input checked="" type="checkbox"/> In Progress <input type="checkbox"/> Final <input type="checkbox"/> Other	For Welds:	<input checked="" type="checkbox"/> Root Pass <input type="checkbox"/> Intermediate <input type="checkbox"/> Final
Surface Condition:	As Welded	Equipment Identification:			
Test Method Standard:	ASTM E709	Model #:	Parker DA400		
Acceptance Standard:	AWS D15.1	Gage #/Serial #:	P135/17999		
Type of Material:	Carbon Steel	Cal. Date Due:	6-18-19		

Product / Weld Identification	Accept	Reject	Linear	Rounded	Cracks	Undercut	Other	Defect Location or Remarks	Technique				
									Technique #:	Wet	Dry	Fluorescent	
Car Body Assembly									Technique #:	N/A			
Item #12 to 3-10									Method:				<input checked="" type="checkbox"/>
"A" End									Fluorescent		Visible		<input checked="" type="checkbox"/>
Final	/								Consumable Batch #: 08A078				
"B" End									Coil	N/A	FWDC		N/A
Final	/								Head Shot	N/A	Prods		N/A
Item #9 to 3-10									Amperage:	N/A			
"A" Side of Center	/								Yoke Current:	AC	<input checked="" type="checkbox"/>	DC	
"B" Side of Center	/								UV Meter #:	N/A			
									UV Intensity verified at prescribed intervals?	Yes	No	N/A	<input checked="" type="checkbox"/>
									Quantity Tested 100%:	<input checked="" type="checkbox"/>			
									Random:	N/A %			

SIGNED: Kasgro Rail
 Technician: Daniel S. Gjurich *Daniel S. Gjurich* Level: II

Reviewed By: *[Signature]* Date: 3/5/19

Testing was performed in accordance with accepted industry practice as well as the test methods referenced TUV Rheinland Industrial Solutions, Inc. has no direct knowledge of the origin, sampling procedure, nor condition of the samples, and makes no claims as to the suitability nor final use of the material. This test report applies only to those items tested. This report shall not be reproduced except in full without the written consent of TUV Rheinland Industrial Solutions, Inc.



Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
Appendix B

Doc./Rev.: EIR-3021970-000
 Project: 00225.03.0050 DOE Atlas Project

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VISUAL INSPECTION REPORT

Mr. Mark Zeigler
 Kasgro Rail Corporation
 121 Rundle Road
 New Castle, PA 16102

Report #: 22 Page 1 of 3
 P.O. #: K180079
 Work Order #: 473037
 Project: Atlas

Date: March 4, 2019
 Description: Perform Visual Inspections of Deck Attachments for Cask car #1

TRIS Procedure: NDE-VT-1	Surface Condition: As Welded	Production Stage: <input checked="" type="checkbox"/> In Progress <input type="checkbox"/> Final <input type="checkbox"/> Other	VT Gauge Identification: Mfg. G.A.L. Weld Gauge 1/4", 3/8" and 1/2" Fillet Model #269-465-5750 Serial # Cert #F4858 Other Cam Type Gage
Test Method Standard: AWS D15.1	Percent of Inspection: <input checked="" type="checkbox"/> 100% <input type="checkbox"/> %	For Welds: <input checked="" type="checkbox"/> Root Pass <input type="checkbox"/> Intermediate <input checked="" type="checkbox"/> Final	
Acceptance Standard: AWS D15.1			
Product Form: N/A			
Type of Material: Carbon Steel			

Product / Weld Identification	Accept	Reject	Linear	Rounded	Cracks	Undercut	Lack Fusion	Incomplete Pen.	Exceed Reinforcement	Weld	Undersized	Defect Location, Length
Item #7 to 3-10 (4)												
Root												See Report #16
Final												See Report #16
Item #8 to 3-10 (4)												
Root												See Report #16
Final												See Report #16
Item #11 to 3-10												
"A" End												
Root												See Report #16
Final												See Report #16
"B" End												
Root												See Report #16
Final												See Report #16
 Daniel S Gjurich CWI 93041171 004 EXP. 4/1/2020												
SIGNED: Kasgro Rail												
Technician:	Daniel S. Gjurich <i>Daniel S Gjurich</i>										Level: CWI #93041171	

Reviewed By: _____ Date: 3/5/19
 Testing was performed in accordance with accepted industry practice as well as the test methods referenced TUV Rheinland Industrial Solutions, Inc. has no direct knowledge of the origin, sampling procedure, nor condition of the samples, and makes no claims as to the suitability nor final use of the material. This test report applies only to those items tested. This report shall not be reproduced except in full without the written consent of TUV Rheinland Industrial Solutions, Inc.

NDTG-0100
 March 19, 2004
 6/8



Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
Appendix B

Doc./Rev.: EIR-3021970-000
 Project: 00225.03.0050 DOE Atlas Project

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VISUAL INSPECTION REPORT


Mr. Mark Zeigler
 Kasgro Rail Corporation
 121 Rundle Road
 New Castle, PA 16102

Report #: 22
 P.O. #: K180079
 Work Order #: 473037
 Project: Atlas

Page 2 of 3

Date: March 4, 2019
 Description: Perform Visual Inspections of Deck Attachments for Cask car #1

TRIS Procedure: NDE-VT-1	Surface Condition: As Welded	Production Stage: <input checked="" type="checkbox"/> In Progress	VT Gauge Identification: Mfg. G.A.L.
Test Method Standard: AWS D15.1	Percent of Inspection: <input checked="" type="checkbox"/> 100%	<input type="checkbox"/> Final	Weld Gauge 1/4", 3/8" and 1/2" Fillet
Acceptance Standard: AWS D15.1	<input type="checkbox"/> %	<input type="checkbox"/> Other	Model #269-465-5750
Product Form: N/A		For Welds: <input checked="" type="checkbox"/> Root Pass	Serial # Cert #F4858
Type of Material: Carbon Steel		<input type="checkbox"/> Intermediate	Other Cam Type Gage
		<input checked="" type="checkbox"/> Final	

Product / Weld Identification	Accept	Reject	Linear	Rounded	Cracks	Undercut	Lack Fusion	Incomplete Pen	Exceed Reinforcement	Weld Undersized	Defect Location, Length
Item #10 to 3-10											
"A" End (2)											
Root											See Report #16
Final											See Report #16
"B" End (2)											
Root											See Report #16
Final											See Report #16
Item #12 to 3-10											
"A" End											
Root											See Report #16
Final											See Report #16
"B" End											
Root											See Report #16
Final											See Report #16
<div style="display: flex; justify-content: space-between; align-items: center;"> <div style="text-align: center;">  <p>Daniel S Gjurich CWI 93041171 QC1 EXP. 4/1/2020</p> </div> <div style="text-align: right;"> <p>SIGNED: _____ Kasgro Rail</p> <p>Technician: Daniel S. Gjurich <i>Daniel S Gjurich</i> Level: CWI #93041171</p> </div> </div>											

Reviewed By: _____ Date: 3/5/19
 Testing was performed in accordance with accepted industry practice as well as the test methods referenced TUV Rheinland Industrial Solutions, Inc. I, as no direct knowledge of the origin, sampling procedure, nor condition of the samples, and makes no claims as to the suitability nor final use of the material. This test report applies only to those items tested. This report shall not be reproduced except in full without the written consent of TUV Rheinland Industrial Solutions, Inc.

NDTG 0100
 March 19, 2004
 dsk



Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
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Doc./Rev.: EIR-3021970-000
 Project: 00225.03.0050 DOE Atlas Project

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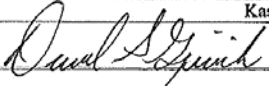
VISUAL INSPECTION REPORT


Mr. Mark Zeigler
 Kasgro Rail Corporation
 121 Rundle Road
 New Castle, PA 16102

Report #: 22 Page 3 of 3
 P.O. #: K180079
 Work Order #: 473037
 Project: Atlas

Date: March 4, 2019
 Description: Perform Visual Inspections of Deck Attachments for Cask car #1

TRIS Procedure: NDE-VT-1	Surface Condition: As Welded	Production Stage: In Progress	VT Gauge Identification: Mfg. G.A.L.
Test Method Standard: AWS D15.1	Percent of Inspection: X 100%	<input checked="" type="checkbox"/> Final	Weld Gauge: 1/4", 3/8" and 1/2" Fillet
Acceptance Standard: AWS D15.1	_____ %	Other	Model: #269-465-5750
Product Form: N/A		For Welds: Root Pass	Serial #: Cert #F4858
Type of Material: Carbon Steel		Intermediate	Other: Cam Type Gage
		<input checked="" type="checkbox"/> Final	

Product / Weld Identification	Accept	Reject	Linear	Rounded	Cracks	Undercut	Lack Fusion	Incomplete Pen.	Excess Reinforcement	Weld	Undersized	Defect Location, Length
Car Body Assembly												
Item #5 to 3-10												
"A" Side of Center												See Report #18
"B" Side of Center												See Report #18
Item #6 to 3-10 (4)												
"A" Side of Center (Left)												See Report #18
"A" Side of Center (Right)												See Report #18
"B" Side of Center (Left)												See Report #18
"B" Side of Center (Right)												See Report #18
Item #9 to 3-10												
"A" Side of Center												/
"B" Side of Center												/
 Daniel S. Gjurich CWI #93041171 CC-1 EXP. 4/1/2020												
SIGNED: _____ Kasgro Rail												
Technician:	Daniel S. Gjurich 										Level: CWI #93041171	

Reviewed By:  Date: 3/5/19
 Testing was performed in accordance with accepted industry practice as well as the test methods referenced TUV Rheinland Industrial Solutions, Inc. / s/n no direct knowledge of the origin, sampling procedure, nor condition of the samples, and makes no claims as to the suitability nor final use of the material. This test report applies only to those items tested. This report shall not be reproduced except in full without the written consent of TUV Rheinland Industrial Solutions, Inc.

NDTG-0100
 March 19, 2004
 JS



Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
Appendix B

Doc./Rev.: EIR-3021970-000
 Project: 00225.03.0050 DOE Atlas Project

Orano Federal Services	
DATA TRANSMITTAL FORM	
Supplier:	KASGRO RAIL CORP., INC. DTF No: 042A Page 1 of 1
P.O./SC No:	15C3011916 Date: 4/02/2019
Type of Submittal:	<input type="checkbox"/> First <input checked="" type="checkbox"/> Re-Submittal SDRL List Item No: 24
Submitted for:	<input type="checkbox"/> Approval <input type="checkbox"/> Review <input type="checkbox"/> Information Number of Copies Submitted: 1
Submitted By:	RICK FORD Rick Ford Digitally signed by Rick Ford Date: 2019.04.02 09:03:40 -0400 PROJECT MANAGER (Name) (Signature) (Title)

ITEM NUMBER	DOCUMENT NUMBER	REVISION NUMBER	DOCUMENT DESCRIPTION	FS DISPOSITION
1	KAS 154 Rev 1		TO PROVIDE UT OF ATLAS DECK ATTACHMENT PARTS WITH NOTES ADDED TO CLARIFY REPORT	<input checked="" type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA <input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA <input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA <input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA <input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA <input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA <input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA <input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA

Comments: No comments	Technical Reviewer (i.e., RE, PTL, SME, QA, etc.) KLEIN Slade Date: 2019.04.03 13:54:21 -07'00' Date: 4/3/2019
--------------------------	---

FS DISPOSITION CODES AND DEFINITIONS			
AP	Approved	Work may proceed.	Resubmittal is not required
AWC	Approved with Comment	Work may proceed; comments provided for Supplier's consideration only.	Resubmittal is not required
REV	Reviewed	Work may proceed; comments provided for Supplier's consideration only.	Resubmittal is not required
RWC	Reviewed with Comment	Work may proceed; subject to incorporation and compliance w/ Buyer comments.	Correct and resubmit.
DS	Disapproved	Work may not proceed.	Correct and resubmit.
RSA	Receipt Submittal Acknowledged	No other action required.	

If, in the judgment of the Supplier, the incorporation of FS' comments will result in a change to the Purchase Order/Subcontract, work shall not proceed and the Supplier shall immediately provide a written notice to FS' C&P Representative describing the change.

Project Manager (PM) / Engineering Manager (EM) or Designated Individual (DI) Approval 	Digitally signed by Mark A. Ginter DN: cn=AREVA GROUP, o=AREVA GROUP, ou=IDENTICA Mark Date: 2019.04.02 17:31:54 -0400	Date: 04/03/2019
--	--	------------------

FS-EN-FRM-023 Rev 02 (Effective March 1, 2018)
 Refer to FS-EN-PRC-012



Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
Appendix B

Doc./Rev.: EIR-3021970-000
Project: 00225.03.0050 DOE Atlas Project

	Orano Federal Services	
	SUPPLIER DOCUMENT SUBMITTAL REVIEW	
Supplier / PO No.:	KASGRO / 15C3011916	DTF No. / Rev: 042A
Charge No:	00225.03.0050.02.00001	Due Date: 4/2/2019
Document(s):	See DTF No.: 042A	
REVIEW INSTRUCTIONS: (List Supplier Doc. No. and Rev: FS Spec and Dwg, Codes, Stds, etc.)		
PE	Slade Klein	
REVIEWERS	Slade Klein, Bernie Counterman	
QA	Bernie Counterman	
Technical Review		
Comments/Markup Attached Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Technical Reviewer Comments:		
No comments.		
Technical Reviewer(s) (Sign/Date): KLEIN Slade Date: 2019.04.02 10:08:42 -07'00'		
Quality Assurance Review (As Applicable)		
Comments/Markup Attached Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Technical Reviewer Comments:		
No Comments		
QA Reviewer(s) (Sign/Date):		Digitally signed by COUNTERMAN Bernard Date: 2019.04.03 08:18:41 -07'00'
COMMENT DISPOSITION (If Applicable. Attached further comments and disposition correspondence as necessary)		

FS-EN-FRM-026 Rev 01 (Effective March 1, 2018)
Refer to FS-EN-PRC-012



Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
Appendix B

Doc./Rev.: EIR-3021970-000
Project: 00225.03.0050 DOE Atlas Project

KAS 154 Rev. 1

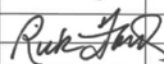
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Reported To: Mr. Josh Leavitt
 Frontier Steel Company
 4990 Grand Ave
 Pittsburgh PA 15225

Date: October 11, 2018
 Sales Order Number: 471640
 P/O Number: G2202
 Report Number: UT-1 REV 3
 Project: 8 Steel Blocks
 Project Location: Pittsburgh PA

ULTRASONIC PLATE TEST REPORT

Equipment ID: USM GO 11075434		Material Specification: See Below	
Transducer: Straight		Test Method Standard: ASTM A435	
Couplant: Sonotrace 40		Inspection Method: TRIS-NDE-UT-5	
		Scanning Pattern: 100%	
Plate	Top	Bottom	Test Results
Block 1	No Indications	No Indications	N/A
Block 2	10% SH @ 1 1/4" Depth 3" Diameter	No Indications	N/A
Block 3	No Indications	20% SH @ 3 7/8" Depth 2" Diameter	N/A
Block 4	No Indications	No Indications	N/A
Block 5	25% SH @ 3 3/4" Depth 2" Diameter, 10% SH @ 3" Depth 3" Width x 9" Length	No indications	N/A
Block 6	No indications	No Indications	N/A
Block 7	15% SH @ 1" Depth 1 1/2" Diameter	20% SH @ 2" Depth 2 1/2" Diameter	N/A
Block 8	10% SH @ 1" Depth 1" Diameter	No Indications	N/A
All indication areas were circled with paint on plate			
All indications detected did not exhibit a total loss of back reflection. Indications found during this examination are not to be classified as laminations and are identified as defects with variable orientation and size within the plate			
The (8) Blocks listed on this page are all Outboard Attachment Blocks that were UT'd to verify material was acceptable and the UT process was performed on two different dates to get the actual inclusion details of size & location.			
		Rick Ford, Kasgro Rail, 4/2/2019	

Notes: SH=Screen Height, During the Scan of the Blocks the backwall was set at 100% SH then added 6 db to scan, any indications were found during the inspection were only recorded above 10% SH.

Inspector: Noah Holden Level: II Assistant: _____

Interpreter: Noah Holden Level: II Date: 10/11/2018

Reviewer's Signature:  Date: 10/20/18

TÜV RHEINLAND INDUSTRIAL SOLUTIONS, INC.

These test results report our findings at the time of inspection and shall be reviewed by the client for compliance to the project requirements. Due to the limitations of nondestructive testing in evaluating all of the factors that determine the overall component quality, no guarantee is made or liability assumed by TÜV Rheinland Industrial Solutions, Inc. ("TRIS") for the component quality or serviceability.

Revision: 03/05/2012
 TRIS Report – Plate

100 INDUSTRIAL BLVD • ALIQUIPPA, PA 15001 • TELEPHONE 724-378-3900 • FAX 724-378-3940



Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
Appendix B

Doc./Rev.: EIR-3021970-000
 Project: 00225.03.0050 DOE Atlas Project

KAS 154 Rev. 1

Grand Rapids, MI – Flint, MI – Pittsburgh, PA – Birmingham, AL – Decatur, AL
 NDE • MECHANICAL LAB
 www.tuvris.com



Reported To: Mr. Josh Leavitt
 Frontier Steel Company
 4990 Grand Ave
 Pittsburgh PA 15225

Date: October 22, 2018
 Sales Order Number: 471640
 P/O Number: G2202
 Report Number: UT-2
 Project: 10 Steel Blocks
 Project Location: New Castle PA

ULTRASONIC PLATE TEST REPORT

Equipment ID: USM GO 11075434	Material Specification: See Below	
Transducer: Straight	Test Method Standard: ASTM SA-435	
Couplant: Sonotrace 40	Inspection Method: TRIS-NDE-UT-5	
	Scanning Pattern: 100%	
Plate	Inboard Attachments 18" x 12" x 4"	Test Results
Block 1	No Indications	Acceptable
Block 2	No Indications	Acceptable
Block 3	No Indications	Acceptable
Block 4	No Indications	Acceptable
Block 5	No Indications	Acceptable
Block 6	No indications	Acceptable
Block 7	No Indications	Acceptable
Block 8	No Indications	Acceptable
Shear Blocks 90" x 21" x 4"		
Block 1	No Indications	Acceptable
Block 2	No Indications	Acceptable

Inspector: Noah Holden Level: II Assistant: _____
 Interpreter: Noah Holden Level: II Date: 10/22/2018

Reviewer's Signature: Date: 10/22/18

TÜV RHEINLAND INDUSTRIAL SOLUTIONS, INC.

These test results report our findings at the time of inspection and shall be reviewed by the client for compliance to the project requirements. Due to the limitations of nondestructive testing in evaluating all of the factors that determine the overall component quality, no guarantee is made or liability assumed by TÜV Rheinland Industrial Solutions, Inc. ("TRIS") for the component quality or serviceability.

Revision: 03/05/2012
 TRIS Report – Plate



Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
Appendix B

Doc./Rev.: EIR-3021970-000
Project: 00225.03.0050 DOE Atlas Project

KAS 154 Rev. 1

Grand Rapids, MI – Flint, MI – Pittsburgh, PA – Birmingham, AL – Decatur, AL
 NDE • MECHANICAL LAB www.tuvris.com



Reported To: Mr. Josh Leavitt
 Frontier Steel Company
 4990 Grand Ave
 Pittsburgh PA 15225

Date: October 22, 2018
 Sales Order Number: 471640
 P/O Number: G2202
 Report Number: UT-2
 Project: 13 Steel Pins
 Project Location: New Castle PA

ULTRASONIC PLATE TEST REPORT

Equipment ID: USM GO 11075434		Material Specification: See Below	
Transducer: Straight		Test Method Standard: ASTM SA-435	
Couplant: Sonotrace 40		Inspection Method: TRIS-NDE-UT-5	
		Scanning Pattern: 100%	
Plate	Pin 37" x 4"	Pin 20" x 4"	Test Results
Pin 1	No Indications	No Indications	Acceptable
Pin 2	No Indications	No Indications	Acceptable
Pin 3	No Indications	No Indications	Acceptable
Pin 4	No Indications	No Indications	Acceptable
Pin 5	No Indications	No indications	Acceptable
Pin 6	No indications		Acceptable
Pin 7	No Indications		Acceptable
Pin 8	No Indications		Acceptable

Inspector: Noah Holden Level: II Assistant: _____
 Interpreter: Noah Holden Level: II Date: 10/22/2018
 Reviewer's Signature: *[Signature]* Date: 10/22/18

TÜV RHEINLAND INDUSTRIAL SOLUTIONS, INC.

These test results report our findings at the time of inspection and shall be reviewed by the client for compliance to the project requirements. Due to the limitations of nondestructive testing in evaluating all of the factors that determine the overall component quality, no guarantee is made or liability assumed by TÜV Rheinland Industrial Solutions, Inc. ("TRIS") for the component quality or serviceability.

Revision: 03/05/2012
 TRIS Report – Plate

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Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
Appendix B

Doc./Rev.: EIR-3021970-000
Project: 00225.03.0050 DOE Atlas Project

APPENDIX B.3 – OTHER INSPECTION DOCUMENTATION

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Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
Appendix B

Doc./Rev.: EIR-3021970-000
 Project: 00225.03.0050 DOE Atlas Project

Appendix B.3.1 – CMS Laser Dimensions Report

		Orano Federal Services				
		DATA TRANSMITTAL FORM				
Supplier:	KASGRO RAIL CORP., INC.	DTF No:	038	Page	1 of 1	
P.O./SC No:	15C3011916	KLEIN Slade <small>Date: 2019.02.27 14:12:31 -08'00'</small>	Date:	2/19/2019		
Type of Submittal:	<input checked="" type="checkbox"/> First <input type="checkbox"/> Re-Submittal	SDRL List Item No: 24				
Submitted for:	<input checked="" type="checkbox"/> Approval <input type="checkbox"/> Review <input type="checkbox"/> Information	Number of Copies Submitted: 1				
Submitted By:	RICK FORD	Rick Ford <small>Digitally signed by Rick Ford Date: 2019.02.19 13:31:27 -08'00'</small>	PROJECT MANAGER			
	<small>(Name)</small>	<small>(Signature)</small>	<small>(Title)</small>			
ITEM NUMBER	DOCUMENT NUMBER	REVISION NUMBER	DOCUMENT DESCRIPTION	FS DISPOSITION		
1	KAS 127		ATLAS CASK CAR CMS LASER DIMENSIONS FOR PIN BLOCK ATTACHMENT BLOCKS	<input type="checkbox"/> AP	<input checked="" type="checkbox"/> AWC	<input type="checkbox"/> REV
				<input type="checkbox"/> RWC	<input type="checkbox"/> DS	<input type="checkbox"/> RSA
2	KAS 128		FRA S-2044 INSPECTION FOR BUFFER CARS	<input checked="" type="checkbox"/> AP	<input type="checkbox"/> AWC	<input type="checkbox"/> REV
				<input type="checkbox"/> RWC	<input type="checkbox"/> DS	<input type="checkbox"/> RSA
3	KAS 129		AAR S-486 BRAKE TEST CERTIFICATION	<input checked="" type="checkbox"/> AP	<input type="checkbox"/> AWC	<input type="checkbox"/> REV
				<input type="checkbox"/> RWC	<input type="checkbox"/> DS	<input type="checkbox"/> RSA
4	KAS 130		TRACK SCALE CALIBRATION RECORDS	<input checked="" type="checkbox"/> AP	<input type="checkbox"/> AWC	<input type="checkbox"/> REV
				<input type="checkbox"/> RWC	<input type="checkbox"/> DS	<input type="checkbox"/> RSA
5	KAS 131		TUV UT NDE REPORT CASK CAR	<input checked="" type="checkbox"/> AP	<input type="checkbox"/> AWC	<input type="checkbox"/> REV
				<input type="checkbox"/> RWC	<input type="checkbox"/> DS	<input type="checkbox"/> RSA
6	KAS 132		TUV PT NDE REPORT CASK CAR	<input checked="" type="checkbox"/> AP	<input type="checkbox"/> AWC	<input type="checkbox"/> REV
				<input type="checkbox"/> RWC	<input type="checkbox"/> DS	<input type="checkbox"/> RSA
7	KAS 133		TUV MT NDE REPORT CASK CAR	<input type="checkbox"/> AP	<input type="checkbox"/> AWC	<input type="checkbox"/> REV
				<input type="checkbox"/> RWC	<input checked="" type="checkbox"/> DS	<input type="checkbox"/> RSA
8	KAS 143 134		TUV VT NDE REPORT CASK CAR	<input type="checkbox"/> AP	<input type="checkbox"/> AWC	<input type="checkbox"/> REV
				<input type="checkbox"/> RWC	<input checked="" type="checkbox"/> DS	<input type="checkbox"/> RSA
				<input type="checkbox"/> AP	<input type="checkbox"/> AWC	<input type="checkbox"/> REV
				<input type="checkbox"/> RWC	<input type="checkbox"/> DS	<input type="checkbox"/> RSA
Comments:			Technical Reviewer (i.e., RE, PTL, SME, QA, etc.)			
1) NOTE: KAS 127 provides as-built railcar dimensions. Kasgro rework modified some of these. Kasgro to submit final dimensions separately.			KLEIN Slade <small>Date: 2019.02.27 13:47:33 -08'00'</small>			
2) KAS 133 does not include the shear block or outer pin block weld MT.			Date: 2/27/2019			
3) KAS 134 does not include VT of the shear block welds.						
FS DISPOSITION CODES AND DEFINITIONS						
AP	Approved	Work may proceed.	Resubmittal is not required			
AWC	Approved with Comment	Work may proceed; comments provided for Supplier's consideration only.	Resubmittal is not required			
REV	Reviewed	Work may proceed; comments provided for Supplier's consideration only.	Resubmittal is not required			
RWC	Reviewed with Comment	Work may proceed; subject to incorporation and compliance w/ Buyer comments.	Correct and resubmit			
DS	Disapproved	Work may <u>not</u> proceed.	Correct and resubmit			
RSA	Receipt Submittal Acknowledged	No other action required.				
If, in the judgment of the Supplier, the incorporation of FS' comments will result in a change to the Purchase Order/Subcontract, work shall not proceed and the Supplier shall immediately provide a written notice to FS' C&P Representative describing the change.						
Project Manager (PM) / Engineering Manager (EM) or Designated Individual (DI) Approval			Date: 02/27/2019			
			<small>Digitally signed by Mark A. Denton Date: 2019.02.27 17:54:03 -08'00'</small>			

FS-EN-FRM-023 Rev 02 (Effective March 1, 2018)
 Refer to FS-EN-PRC-012



Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
Appendix B

Doc./Rev.: EIR-3021970-000
 Project: 00225.03.0050 DOE Atlas Project

	Orano Federal Services	
	SUPPLIER DOCUMENT SUBMITTAL REVIEW	
Supplier / PO No.:	KASGRO / 15C3011916	DTF No. / Rev: 038
Charge No:	00225.03.0050.02.00001	Due Date: 3/8/2019
Document(s):	See DTF No.: 038	
REVIEW INSTRUCTIONS: (List Supplier Doc. No. and Rev. FS Spec and Dwg. Codes, Stds, etc.)		
PE	Slade Klein	
REVIEWERS	Slade Klein, Bernie Counterman	
QA	Bernie Counterman	
Technical Review		
Comments/Markup Attached Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Technical Reviewer Comments:		
KAS 133 does not include the required MT inspection of the shear blocks and outer pin blocks. This was required by Kasgro drawing 1155-41.		
Technical Reviewer(s) (Sign/Date): KLEIN Slade		Date: 2019.02.26 07:23:43 -08'00'
Quality Assurance Review (As Applicable)		
Comments/Markup Attached Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Technical Reviewer Comments:		
Only potential question was regarding missing signature by the technician on the UT report. Discussed with TUV Rheinland Level III (Randy @ 616-818-8188). The technician signature is not required provided the report is signed by his supervisor. This report is signed by the individuals supervisor.		
QA Reviewer(s) (Sign/Date):		Digitally signed by COUNTERMAN Bernard Date: 2019.02.25 09:29:24 -08'00'
COMMENT DISPOSITION (If Applicable. Attached further comments and disposition correspondence as necessary)		

FS-EN-FRM-026 Rev 01 (Effective March 1, 2018)
 Refer to FS-EN-PRC-012



Orano Federal Services
 Title: Design and Prototype Fabrication of Railcars for Transport of
 High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
 Appendix B

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 Project: 00225.03.0050 DOE Atlas Project



Atlas Cask Car Pin Block Attachment Inspection Plan Record

Form 79
 01/31/2015

Railcar # 1DOX010001			Kasgro PO 15C3011916		Notes:	Traveler
Drawing: 3018956			Sheet: 3		Revision:	0
Feature Number	Drawing Zone	Drawing Requirements OUTER 4 ITEMS 11 & 12	Insp. Freq.	Code	Inspection Method (If Required)	
1	D-7 IT 11	// 1/16" B	100%	A-1	LASER TRACKER	
2	D-7 IT 11	⊥ 1/16" A	100%	A-1	LASER TRACKER	
3	D-1 IT 12	// 1/16" B	100%	A-1	LASER TRACKER	
4	D-1 IT 12	⊥ 1/16" A	100%	A-1	LASER TRACKER	
5	C-1 IT 11	// 1/16" B	100%	A-1	LASER TRACKER	
6	C-1 IT 11	⊥ 1/16" A	100%	A-1	LASER TRACKER	
7	C-7 IT 12	// 1/16" B	100%	A-1	LASER TRACKER	
8	C-7 IT 12	⊥ 1/16" A	100%	A-1	LASER TRACKER	

Feature Number	Tool Number	Actual Results	OOT Conditions	Deficiency Number	Inspector/Date	Temperature (F)
1	4674	.025	N/A	N/A	<i>[Signature]</i> 1/17/19	47
2	4674	.009	N/A	N/A	<i>[Signature]</i> 1/17/19	47
3	4674	.015	N/A	N/A	<i>[Signature]</i> 1/17/19	47
4	4674	.042	N/A	N/A	<i>[Signature]</i> 1/17/19	47
5	4674	.042	N/A	N/A	<i>[Signature]</i> 1/17/19	47
6	4674	.062	N/A	N/A	<i>[Signature]</i> 1/17/19	47
7	4674	.014	N/A	N/A	<i>[Signature]</i> 1/17/19	47
8	4674	.059	N/A	N/A	<i>[Signature]</i> 1/17/19	47

* 4674 IS THE LAST FOUR DIGITS OF THE S/N OF THE LASER TRACKER

CODES: A-1 = Actual Recorded dimension(s) for each occurrence: A-2 = Actual recorded range (high/low) for each occurrence:
 Δ = Actual recorded range (high/low) for each occurrence to be submitted to customer: B = Record as "accept": C = Record as
 "OK to gage" (for go/no go functional gauging): Out of Tolerance dimensions-Record actual dimension and the applicable NCR #
 in the deficiency No. box.

Note: THE PERSON DESIGNATED TO SIGN FOR SUCH AN ACTION VERIFIES BASED ON PERSONAL OBSERVATION OR CERTIFIED RECORDS, AND CERTIFIES BY THIS SIGNATURE THAT THE ACTION HAS ACTUALLY BEEN PERFORMED IN ACCORDANCE WITH THE SPECIFIED REQUIREMENT.

THE RECORDING OF FALSE, FICTITIOUS OR FRAUDULENT STATEMENTS OR ENTRIES ON THIS DOCUMENT MAY BE PUNISHED AS A FELONY UNDER FEDERAL STATUTES, INCLUDING TITLE 18, CHAPTER 47.

Kasgro_IPP_01



Orano Federal Services
 Title: Design and Prototype Fabrication of Railcars for Transport of
 High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
 Appendix B

Doc./Rev.: EIR-3021970-000
 Project: 00225.03.0050 DOE Atlas Project



Atlas Cask Car Pin Block Attachment Inspection Plan Record

Form 79
 01/31/2015

Railcar # 1DOX010001			Kasgro PO 15C3011916		Notes:	Traveler
Drawing: 3018956			Sheet: 3		Revision:	0
Feature Number	Drawing Zone	Drawing Requirements INNER 4 ITEM 10	Insp. Freq.	Code	Inspection Method (if Required)	
9	D-7 IT 10	// 1/16" B	100%	A-1	LASER TRACKER	
10	D-7 IT 10	⊥ 1/16" A	100%	A-1	LASER TRACKER	
11	D-1 IT 10	// 1/16" B	100%	A-1	LASER TRACKER	
12	D-1 IT 10	⊥ 1/16" A	100%	A-1	LASER TRACKER	
13	C-1 IT 10	// 1/16" B	100%	A-1	LASER TRACKER	
14	C-1 IT 10	⊥ 1/16" A	100%	A-1	LASER TRACKER	
15	C-7 IT 10	// 1/16" B	100%	A-1	LASER TRACKER	
16	C-7 IT 10	⊥ 1/16" A	100%	A-1	LASER TRACKER	

Feature Number	Tool Number	Actual Results	OOT Conditions	Deficiency Number	Inspector/Date	Temperature (F)
9	4674	.015	N/A	N/A	<i>[Signature]</i> 1/17/19	47
10	4674	.047	N/A	N/A	<i>[Signature]</i> 1/17/19	47
11	4674	.010	N/A	N/A	<i>[Signature]</i> 1/17/19	47
12	4674	.027	N/A	N/A	<i>[Signature]</i> 1/17/19	47
13	4674	.027	N/A	N/A	<i>[Signature]</i> 1/17/19	47
14	4674	.029	N/A	N/A	<i>[Signature]</i> 1/17/19	47
15	4674	.006	N/A	N/A	<i>[Signature]</i> 1/17/19	47
16	4674	.027	N/A	N/A	<i>[Signature]</i> 1/17/19	47

* 4674 IS THE LAST FOUR DIGITS OF THE S/N OF THE LASER TRACKER

CODES: A-1 = Actual Recorded dimension(s) for each occurrence: A-2 = Actual recorded range (high/low) for each occurrence:
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 "OK to gage" (for go/no go functional gauging): Out of Tolerance dimensions-Record actual dimension and the applicable NCR #
 in the deficiency No. box.

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Orano Federal Services
**Title: Design and Prototype Fabrication of Railcars for Transport of
 High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
 Appendix B**

Doc./Rev.: EIR-3021970-000
 Project: 00225.03.0050 DOE Atlas Project



Atlas Cask Car Pin Block Attachment Inspection Plan Record

Form 79
 01/31/2015

Railcar # 1DOX010001			Kasgro PO 15C3011916		Notes:	Traveler
Drawing: 3018956			Sheet: 3		Revision:	0
Feature Number	Drawing Zone	Drawing Requirements	Insp. Freq.	Code	Inspection Method (If Required)	
17	D-5 IT 9	$\oplus 1/16''$ C-D	100%	A-1	LASER TRACKER	
18	D-5 IT 9	$\perp 1/16''$ A	100%	A-1	LASER TRACKER	
19	D-5 IT 9	$\oplus 1/16''$ C-D	100%	A-1	LASER TRACKER	
20	D-5 IT 9	$\perp 1/16''$ A	100%	A-1	LASER TRACKER	
21	C-6 IT 7	$\perp 1/16''$ A	100%	A-1	LASER TRACKER	
22	C-6 IT 7	$\perp 1/16''$ A	100%	A-1	LASER TRACKER	
23	C-6 IT 7	$\perp 1/16''$ A	100%	A-1	LASER TRACKER	
24	C-6 IT 7	$\perp 1/16''$ A	100%	A-1	LASER TRACKER	

Feature Number	Tool Number	Actual Results	OOT Conditions	Deficiency Number	Inspector/Date	Temperature (F)
17	4674	.051	N/A	N/A	<i>[Signature]</i> 1/17/19	47
18	4674	.018	N/A	N/A	<i>[Signature]</i> 1/17/19	47
19	4674	.004	N/A	N/A	<i>[Signature]</i> 1/17/19	47
20	4674	.014	N/A	N/A	<i>[Signature]</i> 1/17/19	47
21	4674	.007	N/A	N/A	<i>[Signature]</i> 1/17/19	47
22	4674	.007	N/A	N/A	<i>[Signature]</i> 1/17/19	47
23	4674	.016	N/A	N/A	<i>[Signature]</i> 1/17/19	47
24	4674	.004	N/A	N/A	<i>[Signature]</i> 1/17/19	47

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Orano Federal Services
**Title: Design and Prototype Fabrication of Railcars for Transport of
 High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
 Appendix B**

Doc./Rev.: EIR-3021970-000
 Project: 00225.03.0050 DOE Atlas Project



Atlas Cask Car Pin Block Attachment Inspection Plan Record

Form 79
 01/31/2015

Railcar # 1DOX010001			Kasgro PO 15C3011916		Notes:	Traveler
Drawing: 3018956			Sheet: 3		Revision:	0
Feature Number	Drawing Zone	Drawing Requirements	Insp. Freq.	Code	Inspection Method (if Required)	
25	C-6 IT 8	⊥ 1/16" A	100%	A-1	LASER TRACKER	
26	C-6 IT 8	⊥ 1/16" A	100%	A-1	LASER TRACKER	
27	C-6 IT 8	⊥ 1/16" A	100%	A-1	LASER TRACKER	
28	C-6 IT 8	⊥ 1/16" A	100%	A-1	LASER TRACKER	
29	B-5 IT 7	⊕ 1/16" A E B	100%	A-1	LASER TRACKER	
30	B-5 IT 8	⊕ 1/16" A E B	100%	A-1	LASER TRACKER	
31	B-5 IT 8	⊕ 1/16" A E B	100%	A-1	LASER TRACKER	
32	B-5 IT 7	⊕ 1/16" A E B	100%	A-1	LASER TRACKER	

Feature Number	Tool Number	Actual Results	OOT Conditions	Deficiency Number	Inspector/Date	Temperature (F)
25	4674	.012	N/A	N/A	<i>[Signature]</i> 1/17/19	47
26	4674	.002	N/A	N/A	<i>[Signature]</i> 1/17/19	47
27	4674	.008	N/A	N/A	<i>[Signature]</i> 1/17/19	47
28	4674	.002	N/A	N/A	<i>[Signature]</i> 1/17/19	47
29	4674	.296	.234		<i>[Signature]</i> 1/17/19	47
30	4674	.275	.213		<i>[Signature]</i> 1/17/19	47
31	4674	.435	.372		<i>[Signature]</i> 1/17/19	47
32	4674	.421	.358		<i>[Signature]</i> 1/17/19	47

* 4674 IS THE LAST FOUR DIGITS OF THE S/N OF THE LASER TRACKER

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 "OK to gage" (for go/no go functional gauging): Out of Tolerance dimensions-Record actual dimension and the applicable NCR
 # in the deficiency No. box.

Note: THE PERSON DESIGNATED TO SIGN FOR SUCH AN ACTION VERIFIES BASED ON PERSONAL OBSERVATION OR CERTIFIED RECORDS, AND CERTIFIES BY THIS SIGNATURE THAT THE ACTION HAS ACTUALLY BEEN PERFORMED IN ACCORDANCE WITH THE SPECIFIED REQUIREMENT.

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Orano Federal Services
 Title: Design and Prototype Fabrication of Railcars for Transport of
 High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
 Appendix B

Doc./Rev.: EIR-3021970-000
 Project: 00225.03.0050 DOE Atlas Project



Atlas Cask Car Pin Block Attachment Inspection Plan Record

Form 79
 01/31/2015

Railcar # 1DOX010001			Kasgro PO 15C3011916		Notes:	Traveler
Drawing: 3018956			Sheet: 3		Revision:	0
Feature Number	Drawing Zone	Drawing Requirements	Insp. Freq.	Code	Inspection Method (if Required)	
33	B-6 IT 7	$\phi 1/16" \text{ (M)} \text{ C-D}$	100%	A-1	LASER TRACKER	
34	B-6 IT 8	$\phi 1/16" \text{ (M)} \text{ C-D}$	100%	A-1	LASER TRACKER	
35	B-6 IT 8	$\phi 1/16" \text{ (M)} \text{ C-D}$	100%	A-1	LASER TRACKER	
36	B-6 IT 7	$\phi 1/16" \text{ (M)} \text{ C-D}$	100%	A-1	LASER TRACKER	
37	B-6	$148.5" \pm .06"$	100%	A-1	LASER TRACKER	
38	B-3	$148.5" \pm .06"$	100%	A-1	LASER TRACKER	
39	D-5	$45.0" \pm .50" \text{ TYP}$	100%	A-2	LASER / TAPE MEASURE	
40	D-1	4X 18.05	100%	A-2	LASER TRACKER	
41	C-1	4X 25.20	100%	A-2	LASER TRACKER	

Feature Number	Tool Number	Actual Results	OOT Conditions	Deficiency Number	Inspector/Date	Temperature (F)
33	4674	.414	.351		<i>[Signature]</i> 1/17/19	47
34	4674	.334	.271		<i>[Signature]</i> 1/17/19	47
35	4674	.511	.448		<i>[Signature]</i> 1/17/19	47
36	4674	.412	.350		<i>[Signature]</i> 1/17/19	47
37	4674	148.441	N/A	N/A	<i>[Signature]</i> 1/17/19	47
38	4674	148.445	N/A	N/A	<i>[Signature]</i> 1/17/19	47
39	TAPE	45.00	N/A	N/A	<i>[Signature]</i> 1/17/19	47
40	4674	18.062-18.029	N/A	N/A	<i>[Signature]</i> 1/17/19	47
41	4674	25.214-25.182	N/A	N/A	<i>[Signature]</i> 1/17/19	47

* 4674 IS THE LAST FOUR DIGITS OF THE S/N OF THE LASER TRACKER

CODES: A-1 = Actual Recorded dimension(s) for each occurrence; A-2 = Actual recorded range (high/low) for each occurrence; Δ = Actual recorded range (high/low) for each occurrence to be submitted to customer; B = Record as "accept"; C = Record as "OK to gage" (for go/no go functional gauging); Out of Tolerance dimensions-Record actual dimension and the applicable NCR # in the deficiency No. box.

Note: THE PERSON DESIGNATED TO SIGN FOR SUCH AN ACTION VERIFIES BASED ON PERSONAL OBSERVATION OR CERTIFIED RECORDS, AND CERTIFIES BY THIS SIGNATURE THAT THE ACTION HAS ACTUALLY BEEN PERFORMED IN ACCORDANCE WITH THE SPECIFIED REQUIREMENT.

THE RECORDING OF FALSE, FICTITIOUS OR FRAUDULENT STATEMENTS OR ENTRIES ON THIS DOCUMENT MAY BE PUNISHED AS A FELONY UNDER FEDERAL STATUTES, INCLUDING TITLE 18, CHAPTER 47.

Kasgro_IPP_01



Orano Federal Services
**Title: Design and Prototype Fabrication of Railcars for Transport of
 High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
 Appendix B**

Doc./Rev.: EIR-3021970-000
 Project: 00225.03.0050 DOE Atlas Project



Atlas Cask Car Pin Block Attachment Inspection Plan Record

Form 79
 01/31/2015

Railcar #			Kasgro PO 15C3011916	Notes:	Traveler
Drawing: 3018956			Sheet: 4	Revision:	0
Feature Number	Drawing Zone	Drawing Requirements	Insp. Freq.	Code	Inspection Method (if Required)
42	C-8	⊕ 1/16" F G	100%	A-1	LASER TRACKER
43	B-6	⊕ 1/16" M J	100%	A-1	LASER TRACKER
44	A-4	⊕ 1/16" N H	100%	A-1	LASER TRACKER
45	A-3	⊕ 1/16" L K	100%	A-1	LASER TRACKER

Feature Number	Tool Number	Actual Results	OOT Conditions	Deficiency Number	Inspector/Date	Temperature (F)
42	4674	.002	N/A	N/A	<i>[Signature]</i> 1/17/19	47
43	4674	.057	N/A	N/A	<i>[Signature]</i> 1/17/19	47
44	4674	.034	N/A	N/A	<i>[Signature]</i> 1/17/19	47
45	4674	.059	N/A	N/A	<i>[Signature]</i> 1/17/19	47

* 4674 IS THE LAST FOUR DIGITS OF THE S/N OF THE LASER TRACKER

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 Δ = Actual recorded range (high/low) for each occurrence to be submitted to customer: B = Record as "accept": C= Record as
 "OK to gage" (for go/no go functional gauging): Out of Tolerance dimensions-Record actual dimension and the applicable NCR #
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Orano Federal Services
**Title: Design and Prototype Fabrication of Railcars for Transport of
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Doc./Rev.: EIR-3021970-000
 Project: 00225.03.0050 DOE Atlas Project



Atlas Cask Car Pin Block Attachment Inspection Plan Record

Form 79
 01/31/2015

Railcar # 1DOX010001			Kasgro PO 15C3011916		Notes:	Traveler
Drawing: 3018956			Sheet: 3&4		Revision:	0
Feature Number	Drawing Zone	Drawing Requirements	Insp. Freq.	Code	Inspection Method (If Required)	
46	C-6	46.50"	100%	A-2	LASER TRACKER	
47	C-3	11.75"	100%	A-2	LASER TRACKER	

Feature Number	Tool Number	Actual Results	OOT Conditions	Deficiency Number	Inspector/Date	Temperature (F)
46	4674	46.482"-46.520"	N/A	N/A	<i>[Signature]</i> 1/17/19	47
47	4674	11.720"-11.729"	N/A	N/A	<i>[Signature]</i> 1/17/19	47

* 4674 IS THE LAST FOUR DIGITS OF THE S/N OF THE LASER TRACKER

CODES: A-1 = Actual Recorded dimension(s) for each occurrence: A-2 = Actual recorded range (high/low) for each occurrence:
 Δ = Actual recorded range (high/low) for each occurrence to be submitted to customer: B = Record as "accept": C= Record as
 "OK to gage" (for go/no go functional gauging): Out of Tolerance dimensions-Record actual dimension and the applicable NCR #
 in the deficiency No. box.

Note: THE PERSON DESIGNATED TO SIGN FOR SUCH AN ACTION VERIFIES BASED ON PERSONAL OBSERVATION OR CERTIFIED RECORDS, AND CERTIFIES BY THIS SIGNATURE THAT THE ACTION HAS ACTUALLY BEEN PERFORMED IN ACCORDANCE WITH THE SPECIFIED REQUIREMENT.

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Kasgro_IPP_01



Orano Federal Services
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High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
Appendix B

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Project: 00225.03.0050 DOE Atlas Project

contract measurement services

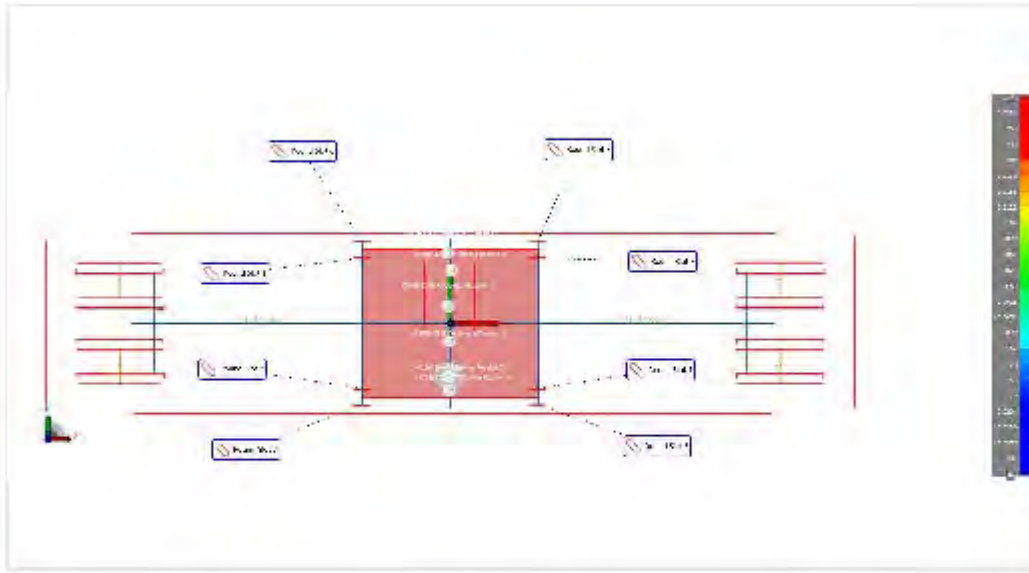
P.O. Box 540784	jason@cmsllc1.com
Grand Prairie, TX 75054	http://www.cmsllc1.com
972-322-3615	17 Jan 2019 08:51 PM

Session Information	
File Name of FCD	Areva Atlas Railcar.fcd
Operator	MATTHEW DILLE
Company Name	KASGRO
Date	1/17/2019
Time	8:51 PM
Ambient Temperature	47°F
Active Alignment Error	
Active Device	V01001304674
P08-05-11-09017 Current Device Error	
V01001304674 -> Device Position 1 Device Error	
V01001304674 -> Device Position 2 Device Error	
V01001304674 -> Device Position 3 Device Error	
V01001304674 -> Device Position 4 Device Error	
V01001304674 -> Device Position 5 Device Error	
V01001304674 -> Device Position 6 Device Error	0.0017In



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Round Slot 2		Readings: 9				
	actual	nominal	dev	- tol	+tol	oot
Center.x	-62.5042in	-62.5000in	-0.0042in	-0.0300in	0.0300in	0.0000in
Center.z	9.3332in	9.5000in	-0.1668in	-0.0300in	0.0300in	-0.1368in
Length	5.2987in	5.3700in	-0.0713in	0.0000in	0.0600in	-0.0713in
Width	4.3452in	4.3700in	-0.0248in	0.0000in	0.0600in	-0.0248in
Form	0.0202in		0.0202in	0.0000in	0.0204in	0.0000in
→ Position	0.3335in		0.3335in	0.0000in	0.0625in	0.2710in

Round Slot 3		Readings: 8				
	actual	nominal	dev	- tol	+tol	oot
Center.x	-62.5039in	-62.5000in	-0.0039in	-0.0300in	0.0300in	0.0000in
Center.z	9.2931in	9.5000in	-0.2069in	-0.0300in	0.0300in	-0.1769in
Length	5.3243in	5.3700in	-0.0457in	0.0000in	0.0600in	-0.0457in
Width	4.3531in	4.3700in	-0.0169in	0.0000in	0.0600in	-0.0169in
Form	0.0134in		0.0134in	0.0000in	0.0204in	0.0000in
→ Position	0.4135in		0.4135in	0.0000in	0.0625in	0.3510in



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Round Slot 4		Readings: 0				
	actual	nominal	dev	-tol	+tol	oof
Center.x	62.4720in	62.5000in	-0.0280in	-0.0300in	0.0300in	0.0000in
Center.z	9.3627in	9.5000in	-0.1373in	-0.0300in	0.0300in	-0.1073in
Length	5.3442in	5.3700in	-0.0258in	0.0000in	0.0600in	-0.0258in
Width	4.3354in	4.3700in	-0.0346in	0.0000in	0.0600in	-0.0346in
Form	0.0167in		0.0167in	0.0000in	0.0204in	0.0000in
↔ Position	0.2750in		0.2750in	0.0000in	0.0625in	0.2125in

Round Slot 5		Readings: 8				
	actual	nominal	dev	-tol	+tol	oof
Center.x	62.5069in	62.5000in	0.0069in	-0.0300in	0.0300in	0.0000in
Center.z	9.3517in	9.5000in	-0.1483in	-0.0300in	0.0300in	-0.1183in
Length	5.3301in	5.3700in	-0.0399in	0.0000in	0.0600in	-0.0399in
Width	4.3476in	4.3700in	-0.0224in	0.0000in	0.0600in	-0.0224in
Form	0.0118in		0.0118in	0.0000in	0.0204in	0.0000in
↔ Position	0.2961in		0.2961in	0.0000in	0.0625in	0.2336in

Round Slot 1		Readings: 8				
	actual	nominal	dev	-tol	+tol	oof
Center.x	-62.4972in	-62.5000in	0.0028in	-0.0300in	0.0300in	0.0000in
Center.z	9.2446in	9.5000in	-0.2554in	-0.0300in	0.0300in	-0.2254in
Length	5.3350in	5.3700in	-0.0350in	0.0000in	0.0600in	-0.0350in
Width	4.3376in	4.3700in	-0.0324in	0.0000in	0.0600in	-0.0324in
Form	0.0067in		0.0067in	0.0000in	0.0204in	0.0000in
↔ Position	0.5108in		0.5108in	0.0000in	0.0625in	0.4483in

Round Slot 6		Readings: 8				
	actual	nominal	dev	-tol	+tol	oof
Center.x	-62.5059in	-62.5000in	-0.0059in	-0.0300in	0.0300in	0.0000in
Center.z	9.2939in	9.5000in	-0.2061in	-0.0300in	0.0300in	-0.1761in
Length	5.3539in	5.3700in	-0.0161in	0.0000in	0.0600in	-0.0161in
Width	4.3576in	4.3700in	-0.0124in	0.0000in	0.0600in	-0.0124in
Form	0.0091in		0.0091in	0.0000in	0.0204in	0.0000in
↔ Position	0.4120in		0.4120in	0.0000in	0.0625in	0.3495in

Round Slot 7		Readings: 7				
	actual	nominal	dev	-tol	+tol	oof
Center.x	62.4711in	62.5000in	-0.0289in	-0.0300in	0.0300in	0.0000in
Center.z	9.2830in	9.5000in	-0.2170in	-0.0300in	0.0300in	-0.1870in
Length	5.3304in	5.3700in	-0.0396in	0.0000in	0.0600in	-0.0396in
Width	4.3380in	4.3700in	-0.0320in	0.0000in	0.0600in	-0.0320in
Form	0.0014in		0.0014in	0.0000in	0.0204in	0.0000in
↔ Position	0.4346in		0.4346in	0.0000in	0.0625in	0.3721in



Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
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Round Slot 8		Readings:8				
	actual	nominal	dev	-tol	+tol	oot
Center.x	62.4706in	62.5000in	-0.0295in	-0.0300in	0.0300in	0.0000in
Center.z	9.2896in	9.5000in	-0.2104in	-0.0300in	0.0300in	-0.1804in
Length	5.3402in	5.3700in	-0.0298in	0.0000in	0.0600in	-0.0298in
Width	4.3643in	4.3700in	-0.0057in	0.0000in	0.0600in	-0.0057in
Form	0.0109in		0.0109in	0.0000in	0.0204in	0.0000in
∴ Position	0.4208in		0.4208in	0.0000in	0.0625in	0.3583in



Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
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Appendix B.3.2 – Federal Services Dimensional Inspection Worksheet

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Orano Federal Services
 Title: Design and Prototype Fabrication of Railcars for Transport of
 High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
 Appendix B

Doc./Rev.: EIR-3021970-000
 Project: 00225.03.0050 DOE Atlas Project

Atlas Railcar - As-Built Dimensional Inspection report
 Drawing: DWG-300.856-000 Atlas Railcar, Cradle Attachment

Page 1 of 8

Item/Description	Sheet/Zone or detail	Required Dimension	Tolerance	Actual Dimension	Accept	Reject	Inspection Reference	Comments
A1								
outer pin blocks P13-P17								
Item 11	3/D-7	// 1/16 B	1/16	-	X		DTP-038, KAS 127, Laser Tracker FN 1	
Item 11	3/D-7	⊥ 1/16 A	1/16	-	X		DTP-038, KAS 127, Laser Tracker FN 2	
Item 10	3/D-7	// 1/16 B	1/16	-	X		DTP-038, KAS 127, Laser Tracker FN 9	
Item 10	3/D-7	⊥ 1/16 A	1/16	-	X		DTP-038, KAS 127, Laser Tracker FN 10	
Item 10	3/C-7	// 1/16 B	1/16	-	X		DTP-038, KAS 127, Laser Tracker FN 15	
Item 10	3/C-7	⊥ 1/16 A	1/16	-	X		DTP-038, KAS 127, Laser Tracker FN 16	
Item 11	3/C-7	// 1/16 B	1/16	-	X		DTP-038, KAS 127, Laser Tracker FN 7	
Item 11	3/C-7	⊥ 1/16 A	1/16	-	X		DTP-038, KAS 127, Laser Tracker FN 8	
outer pin blocks P5-P12								
Item 11	3/D-1	// 1/16 B	1/16	-	X		DTP-038, KAS 127, Laser Tracker FN 3	
Item 11	3/D-1	⊥ 1/16 A	1/16	-	X		DTP-038, KAS 127, Laser Tracker FN 4	
Item 10	3/D-1	// 1/16 B	1/16	-	X		DTP-038, KAS 127, Laser Tracker FN 11	
Item 10	3/D-1	⊥ 1/16 A	1/16	-	X		DTP-038, KAS 127, Laser Tracker FN 12	
Item 10	3/C-1	// 1/16 B	1/16	-	X		DTP-038, KAS 127, Laser Tracker FN 13	
Item 10	3/C-1	⊥ 1/16 A	1/16	-	X		DTP-038, KAS 127, Laser Tracker FN 14	
Item 11	3/C-1	// 1/16 B	1/16	-	X		DTP-038, KAS 127, Laser Tracker FN 5	
Item 11	3/C-1	⊥ 1/16 A	1/16	-	X		DTP-038, KAS 127, Laser Tracker FN 6	
Outer pin block location								
Item 30 face	3/D-1	4X 18.05	±0.05*	-	X		DTP-038, KAS 127, Laser Tracker FN 40	
Item 11/12 face	3/C-1	4X 25.20	±0.05*	-	X		DTP-038, KAS 127, Laser Tracker FN 41	
Item 10/11/12 edge	3/B-6	148.5	±0.06	-	X		DTP-038, KAS 127, Laser Tracker FN 37	
Item 10/11/12 edge	3/B-3	148.5	±0.05	-	X		DTP-038, KAS 127, Laser Tracker FN 38	
Item 10 (P11/P6)	4/C-8	⊙ 1/16 F G	1/16	-	X		DTP-038, KAS 127, Laser Tracker FN 42	
Item 10 (P13-P14)	4/B-6	⊙ 1/16 M J	1/16	-	X		DTP-038, KAS 127, Laser Tracker FN 43	
Item 10 (P10-P7)	4/A-4	⊙ 1/16 H I	1/16	-	X		DTP-038, KAS 127, Laser Tracker FN 44	
Item 10 (P18-P15)	4/A-3	⊙ 1/16 L K	1/16	-	X		DTP-038, KAS 127, Laser Tracker FN 45	
center pin block location								
width from centerline	3/D-6	2X 98*	-	-	-	-	-	CMS chose to measure from the railcar centerline (datum B). CMS chose a tolerance of ±0.05 on the 46.50 dimension to meet the intent of the drawing. This 2(±0.05) = ±0.06 tolerance matches the conceptual attachment drawing.
width from centerline	3/C-6	2X 46.50	±0.05*	-	X		DTP-038, KAS 127, Laser Tracker FN 46	
width between	4/C-3	4X 11.75	±0.05*	-	X		DTP-038, KAS 127, Laser Tracker FN 47	
Item 7	3/C-6	⊥ 1/16 A	1/16	-	X		DTP-038, KAS 127, Laser Tracker 21	
Item 7	3/C-6	⊥ 1/16 A	1/16	-	X		DTP-038, KAS 127, Laser Tracker 22	
Item 7	3/C-6	⊥ 1/16 A	1/16	-	X		DTP-038, KAS 127, Laser Tracker 23	
Item 7	3/C-6	⊥ 1/16 A	1/16	-	X		DTP-038, KAS 127, Laser Tracker 24	
Item 8	3/C-6	⊥ 1/16 A	1/16	-	X		DTP-038, KAS 127, Laser Tracker 25	
Item 8	3/C-6	⊥ 1/16 A	1/16	-	X		DTP-038, KAS 127, Laser Tracker 26	
Item 8	3/C-6	⊥ 1/16 A	1/16	-	X		DTP-038, KAS 127, Laser Tracker 27	
Item 8	3/C-6	⊥ 1/16 A	1/16	-	X		DTP-038, KAS 127, Laser Tracker 28	



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 Title: Design and Prototype Fabrication of Railcars for Transport of
 High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
 Appendix B

Doc./Rev.: EIR-3021970-000
 Project: 00225.03.0050 DOE Atlas Project

Atlas Railcar - As-Built Dimensional Inspection report
 Drawing: DWG-3018556-000 Atlas Railcar, Cradle Attachment

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Item/Description	Sheet/Zone or detail	Required Dimension	Tolerance	Actual Dimension	Accept	Reject	Inspection Reference	Comments
Item 7 (3/C-4)	3/B-5	1/16 A E B	1/16 (.0625)	.296 Reworked to .045	X		DTF-038, KAS 127, Laser Tracker 29 and CMS deviation report and Kasgro Cradle Attachment Inspection, 5. Stainless Pad Dimensions	Slot 5 on CMS Deviation Report longitudinal, (.0060) Height, (-.1483) Total Positional = .2963 Minimum Worst Case Condition KAS inspected height = 7.311 min (any pad) minimum slot height from CMS Deviation Report = 4.3354 (any slot) Total = 4.3354/2 + 7.311 = 9.4767 Maximum Worst Case Condition KAS inspected height = 7.343 max (any pad) maximum slot height from CMS Deviation Report = 4.3643 (any slot) Total = 4.3643/2 + 7.343 = 9.534 Final condition following rework: max deviation = .024 (using worst case) updated positional longitudinal, (.0060) Height, (.024) Total Positional = .045 < .0625 OK
Item 8 (3/C-4)	3/B-5	1/16 A E B	1/16 (.0625)	.275 Reworked to .056	X		DTF-038, KAS 127, Laser Tracker 30 and CMS deviation report and Kasgro Cradle Attachment Inspection, 5. Stainless Pad Dimensions	Slot 4 on CMS Deviation Report longitudinal, (-.0280) Height, (-.1373) Total Positional = .2750 Final condition following rework: max deviation = .024 (using worst case) updated positional longitudinal, (-.0280) Height, (.024) Total Positional = .024 > .0625 NOT OK Actual Reworked Condition KAS inspected height = 7.329 min (A-end lower) slot height from CMS Deviation Report = 4.3476 (slot 5) = 4.3354 (slot 4) Min total = 4.3354/2 + 7.329 = 9.4967 Max total = 4.3476/2 + 7.329 = 9.503 max deviation = .023 updated positional longitudinal, (-.0280) Height, (.023) Total Positional = .056 < .0625 OK



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 Project: 00225.03.0050 DOE Atlas Project

Atlas Railcar - As-Built Dimensional Inspection report
 Drawing: DWG-3003256-000 Atlas Railcar, Cradle Attachment

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Item/Description	Sheet/Zone or detail	Required Dimension	Tolerance	Actual Dimension	Accept	Reject	Inspection Reference	Comments
Item 6 (3/D-4)	3/B-5	⊕ 1/16 A & B	1/16 (.0625)	0.435 Reworked to .061	X		DTI-038, KAS 127, Laser Tracker 31 and CMS deviation report and Kasgro Cradle Attachment Inspection, 5. Stainless Pad Dimensions	Slot 7 on CMS Deviation Report longitudinal, (-.0289) Height, (-.2170) Total Positional = .4346 Final condition following rework: max deviation = .034 updated positional longitudinal, (-.0289) Height, (.024) Total Positional = .075 > .0625 NOT OK Actual Reworked Condition: KAS inspected height = 7.321 min (A-end upper) slot height from CMS Deviation Report = 4.338 (slot 7) = 4.3643 (slot 8) Min total = 4.338/2 + 7.321 = 5.48 Max total = 4.3643/2 + 7.321 = 5.503 max deviation = .01 updated positional longitudinal, (-.0289) Height, (.01) Total Positional = .061 < .0625 OK
Item 7 (3/D-4)	3/B-5	⊕ 1/16 A & B	1/16 (.0625)	0.431 Reworked to .062	X		DTI-038, KAS 127, Laser Tracker 32 and CMS deviation report and Kasgro Cradle Attachment Inspection, 5. Stainless Pad Dimensions	Slot 8 on CMS Deviation Report longitudinal, (-.0293) Height, (-.2104) Total Positional = .4308 Final condition following rework: max deviation = .034 updated positional longitudinal, (-.0293) Height, (.024) Total Positional = .075 > .0625 NOT OK Actual Reworked Condition: KAS inspected height = 7.321 min (A-end upper) slot height from CMS Deviation Report = 4.338 (slot 7) = 4.3643 (slot 8) Min total = 4.338/2 + 7.321 = 5.48 Max total = 4.3643/2 + 7.321 = 5.503 max deviation = .01 updated positional longitudinal, (-.0293) Height, (.01) Total Positional = .0623 < .0625 OK



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 Title: Design and Prototype Fabrication of Railcars for Transport of
 High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
 Appendix B

Doc./Rev.: EIR-3021970-000
 Project: 00225.03.0050 DOE Atlas Project

Atlas Railcar - As-Built Dimensional Inspection report
 Drawing: DWG-3018956-000 Atlas Railcar, Credle Attachment

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Item/Description	Sheet/Zone or detail	Required Dimension	Tolerance	Actual Dimension	Accept	Reject	Inspection Reference	Comments
Item 7 (3/C-5)	3/B-5	⊕ 1/16 C-D	1/16 (.0625)	0.414 Reworked to .049	X		DTP-038, KAS 127, Laser Tracker 33 and CMS deviation report and Kasgro Credle Attachment Inspection, 5. Stainless Pad Dimensions	Slot 3 on CMS Deviation Report longitudinal, (-.0039) Height, (-.2060) Total Positional = .4135 Final condition following rework: max deviation = .024 (using worst case) updated positional longitudinal, (-.0039) Height, (.024) Total Positional = .0485 < .0625 OK
Item 8 (3/C-5)	3/B-5	⊕ 1/16 C-D	1/16 (.0625)	0.334 Reworked to .049	X		DTP-038, KAS 127, Laser Tracker 34 and CMS deviation report and Kasgro Credle Attachment Inspection, 5. Stainless Pad Dimensions	Slot 2 on CMS Deviation Report longitudinal, (-.0042) Height, (-.1868) Total Positional = .3335 Final condition following rework: max deviation = .024 (using worst case) updated positional longitudinal, (-.0042) Height, (.024) Total Positional = .0487 < .0625 OK
Item 8 (3/D-5)	3/B-5	⊕ 1/16 C-D	1/16 (.0625)	0.511 Reworked to .049	X		DTP-038, KAS 127, Laser Tracker 35 and CMS deviation report and Kasgro Credle Attachment Inspection, 5. Stainless Pad Dimensions	Slot 1 on CMS Deviation Report longitudinal, (.0028) Height, (-.2954) Total Positional = .5108 Final condition following rework: max deviation = .024 (using worst case) updated positional longitudinal, (.0028) Height, (.024) Total Positional = .0483 < .0625 OK
Item 7 (3/D-5)	3/B-5	⊕ 1/16 C-D	1/16 (.0625)	0.412 Reworked to .049	X		DTP-038, KAS 127, Laser Tracker 36 and CMS deviation report and Kasgro Credle Attachment Inspection, 5. Stainless Pad Dimensions	Slot 6 on CMS Deviation Report longitudinal, (-.0059) Height, (-.2061) Total Positional = .4120 Final condition following rework: max deviation = .024 (using worst case) updated positional longitudinal, (-.0059) Height, (.024) Total Positional = .0484 < .0625 OK
shear block location	-	-	-	-	-	-	-	-
Item 9 edge to B	3/D-5	45.00	±1/2		X		DTP-038, KAS 127, Laser Tracker FN 39	Tracker and tape measure
	3/D-5	⊕ 1/16 C-D	1/16		X		DTP-038, KAS 127, Laser Tracker FN 17	
	3/D-5	⊥ 1/16 A	1/16		X		DTP-038, KAS 127, Laser Tracker FN 18	
	3/D-5	⊕ 1/16 C-D	1/16		X		DTP-038, KAS 127, Laser Tracker FN 19	
	3/D-5	⊥ 1/16 A	1/16		X		DTP-038, KAS 127, Laser Tracker FN 20	



Orano Federal Services
 Title: Design and Prototype Fabrication of Railcars for Transport of
 High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
 Appendix B

Doc./Rev.: EIR-3021970-000
 Project: 00225.03.0050 DOE Atlas Project

Atlas Railcar - As-Built Dimensional Inspection report
 Drawing: DWG-3018556-000 Atlas Railcar, Cradle Attachment

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Item/Description	Sheet/Zone or detail	Required Dimension	Tolerance	Actual Dimension	Accept	Reject	Inspection Reference	Comments
Item 6 size / location	-	-	-	-	-	-	-	-
	3/C-4	4X 9.0	±1		X		Keagro Cradle Attachment Inspection, 1. Keagro Measurements	
	3/3-C	4X 12.0	±1		X		Keagro Cradle Attachment Inspection, 1. Keagro Measurements	
	3/4-C	6.00 TYP	±.06		X		Keagro Cradle Attachment Inspection, 1. Keagro Measurements	
	3/4-C	4.50 TYP	±.06		X		Keagro Cradle Attachment Inspection, 1. Keagro Measurements	
	3/4-C	1.38 TYP	±.06		X		Keagro Cradle Attachment Inspection, 1. Keagro Measurements	
Item 6 size / location	-	-	-	-	-	-	-	-
	3/D-4	2X 12.0	±1		X		Keagro Cradle Attachment Inspection, 1. Keagro Measurements	
	3/D-4	6.00 TYP	±.06		X		Keagro Cradle Attachment Inspection, 1. Keagro Measurements	
	3/C-4	2X 12.0	±1		X		Keagro Cradle Attachment Inspection, 1. Keagro Measurements	
	3/D-3	2X 1/8	+0/-1/16		X		Keagro Cradle Attachment Inspection, 6. Keagro Item 5 Email	
Item 7 hole locations	-	-	-	-	-	-	-	-
	3/Detail 7	5.50	±.06		X		Keagro Cradle Attachment Inspection, 1. Keagro Measurements	
	3/Detail 7	6.50	±.06		X		Keagro Cradle Attachment Inspection, 1. Keagro Measurements	
	3/Detail 7	3.25	±.06		X		Keagro Cradle Attachment Inspection, 1. Keagro Measurements	
	3/Detail 7	2.60	±.06		X		Keagro Cradle Attachment Inspection, 1. Keagro Measurements	
	3/Detail 7	3X 5/8-11 UNC-2B -J-1.5			X		Keagro Cradle Attachment Inspection, 1. Keagro Measurements	
Item 7/8 size	-	-	-	-	-	-	-	-
	3/Detail 8	2X 10"	1"		X		Keagro Cradle Attachment Inspection, 1. Keagro Measurements	
	3/Detail 8	6.00	±.06		X		Keagro Cradle Attachment Inspection, 2. Inboard Attachment drawing	
	3/Detail 8	2X 11.0	±1		X		Keagro Cradle Attachment Inspection, 1. Keagro Measurements	
	3/Detail 8	2X 8	±1		X		Keagro Cradle Attachment Inspection, 1. Keagro Measurements	
	3/Detail 8	6.0	±1		X		Keagro Cradle Attachment Inspection, 1. Keagro Measurements	
	3/Detail 8	12.0	±1		X		Keagro Cradle Attachment Inspection, 2. Inboard Attachment drawing	
	3/Detail 8	5.37	+06/-00	5.2987-5.3539		X	DTP-038, KAS 127, CMS Deviation Report	See Keagro NC RS
	3/Detail 8	4.37	+06/-00	4.3354-4.3643		X	DTP-038, KAS 127, CMS Deviation Report	See Keagro NC RS
	3/Detail 8	2X 6.5	±1		X		DTP-038, KAS 127, CMS Deviation Report	
	3/Detail 8	3.75	±.06		X		Keagro Cradle Attachment Inspection, 2. Inboard Attachment drawing	



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Doc./Rev.: EIR-3021970-000
 Project: 00225.03.0050 DOE Atlas Project

Atlas Railcar - As-Built Dimensional Inspection report
 Drawing: DWG-3021896-000 Atlas Railcar, Cradle Attachment

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Item/Description	Sheet/Zone or detail	Required Dimension	Tolerance	Actual Dimension	Accept	Reject	Inspection Reference	Comments
	5/Detail 8	30"	±1"		X		Kaigro Cradle Attachment Inspection, 1. Kaigro Measurements	
	5/Detail 8	18.0	±1		X		Kaigro Cradle Attachment Inspection, 2. Inboard Attachment drawing	
	5/Detail 8	16.0	±1	16.1875-16.75		X	Kaigro Cradle Attachment Inspection, 2. Inboard Attachment drawing	See Kaigro NC #0
	5/Detail 8	4.0	±1		X		Kaigro Cradle Attachment Inspection, 2. Inboard Attachment drawing	
	5/Detail 8	2.0	±1		X		Kaigro Cradle Attachment Inspection, 2. Inboard Attachment drawing	
Item 2 size	-	-	-	-	-	-	-	-
	5/Detail 2	6.00	±.06		X		Kaigro Cradle Attachment Inspection, 1. Kaigro Measurements	
	5/Detail 2	1.50	±.06		X		Kaigro Cradle Attachment Inspection, 1. Kaigro Measurements	
	5/Detail 2	2X R.25	±.06		X		Kaigro Cradle Attachment Inspection, 1. Kaigro Measurements	
	5/Detail 2	1.50	±.06		X		Kaigro Cradle Attachment Inspection, 1. Kaigro Measurements	
Item 13/14 size	-	-	-	-	-	-	-	-
	5/Detail 13/14	2X .50 x 45°	±.06 / 1°		X		Kaigro Cradle Attachment Inspection, 1. Kaigro Measurements	
Item 13	5/Detail 13/14	20.70	±.06		X		Kaigro Cradle Attachment Inspection, 1. Kaigro Measurements	
Item 14	5/Detail 13/14	37.20	±.06		X		Kaigro Cradle Attachment Inspection, 1. Kaigro Measurements	
	5/Detail 13/14	Ø4.000	±.002		X		Kaigro Cradle Attachment Inspection, 1. Kaigro Measurements	
	5/Detail 13/14	5/8-11 UNC-2B ↓2.0			X		Kaigro Cradle Attachment Inspection, 1. Kaigro Measurements	
Item 15 size	-	-	-	-	-	-	-	-
	5/Detail 15	5.56	±.06	5.5	X		Kaigro Cradle Attachment Inspection, 1. Kaigro Measurements	
	5/Detail 15	2X R1.00	±.06		X		Kaigro Cradle Attachment Inspection, 1. Kaigro Measurements	
	5/Detail 15	40.0	±1		X		Kaigro Cradle Attachment Inspection, 1. Kaigro Measurements	
Item 10/11/12 size	-	-	-	-	-	-	-	-
	6/Detail 10	18.0	±1	17.75-18.125		X	Kaigro Cradle Attachment Inspection, 3a. Outboard Attachment, Rev A	Dimension "D", See Kaigro NC #4
	6/Detail 10	2X 16.0	±1	16.1875 max		X	Kaigro Cradle Attachment Inspection, 1. Kaigro Measurements	See Kaigro NC #4
	6/Detail 10	5.5	±1		X		Kaigro Cradle Attachment Inspection, 1. Kaigro Measurements	
	6/Detail 10	11.0	±1	11-11.25		X	Kaigro Cradle Attachment Inspection, 1. Kaigro Measurements	See Kaigro NC #4
	6/Detail 10	2.0	±1		X		Kaigro Cradle Attachment Inspection, 3a. Outboard Attachment, Rev A	Dimension "F"
	6/Detail 10	3.00	±.06	3.25		X	Kaigro Cradle Attachment Inspection, 3a. Outboard Attachment, Rev A	Dimension "A", See Kaigro NC #4
	6/Detail 10	1.50	±.06	1.625		X	Kaigro Cradle Attachment Inspection, 1. Kaigro Measurements	See Kaigro NC #4
	6/Detail 10	2X 30°	1°		X		Kaigro Cradle Attachment Inspection, 1. Kaigro Measurements	



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 Appendix B

Doc./Rev.: EIR-3021970-000
 Project: 00225.03.0050 DOE Atlas Project

Atlas Railcar - As-Built Dimensional Inspection report
 Drawing: DWG-3018956-000 Atlas Railcar, Cradle Attachment

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Item/Description	Sheet/Zone or detail	Required Dimension	Tolerance	Actual Dimension	Accept	Reject	Inspection Reference	Comments
	6/Detail 10	4X 15"	1"		X		Kaigro Cradle Attachment Inspection, 1. Kaigro Measurements	
	6/Detail 10	2X 8.0	±1	7.91-8.00	X		Kaigro Cradle Attachment Inspection, 3b. Outboard Attachment Item 10	dimensions "1"/2"-8"
	6/Detail 10	4X 11.0	±1		X		Kaigro Cradle Attachment Inspection, 1. Kaigro Measurements	
	6/Detail 10	2X 64.00	±.06		X		Kaigro Cradle Attachment Inspection, 3b. Outboard Attachment Item 10	dimension "F"
	6/C-5	2X 4.37	+0.06/-0.00	4.361 - 4.4001		X	CMS email 2/14/2019	See Kaigro NC #4
hole	6/C-5	± 1/16 T 5 (8.00 ±.03)	1/16	7.875 - 8.075		X	Kaigro Cradle Attachment Inspection, 3b. Outboard Attachment Item 10, Rev B DTI-008, KAS 127, CMS Laser Report CMS email 2/14/2019 and CMS email 3/7/2019	OUTBOARD ATTACHMENT ITEM 10, Rev B drawing. See Kaigro NC #4 Additional measurements taken from top to edge of hole provided on Outboard Attachment Item 10, Rev B, Dimension "C" and "I" with a range of 5.6875 (part 8) to 5.875 without (part 8) the range is 5.75 to 5.875 From the CMS email the range for the hole height (all parts) is 4.323 to 4.4401 From the CMS email 2 the range for the hole height (part 8) is 4.375 to 4.4001 and (all others) 4.323 to 4.4401 The max and min for the additional measurements is: 5.875+4.4001/2 = 8.075 maximum 5.6875+4.375/2 = 7.875 minimum 5.75+4.323/2 = 7.512 minimum
	6/Detail 10	4X 8.5	±1		X		Kaigro Cradle Attachment Inspection, 1. Kaigro Measurements	
	6/C-1	2X 4.37	+0.06/-0.00	4.323-4.43		X	CMS email 2/14/2019	See Kaigro NC #4
slot	6/B-1	± 1/16 R T (8.00 ±.03) (48.00 ±.03)	1/16	7.875 - 8.075 48-48.125		X	Kaigro Cradle Attachment Inspection, 3b. Outboard Attachment Item 10, Rev B DTI-008, KAS 127, CMS Laser Report CMS email 2/14/2019 and CMS email 3/7/2019	OUTBOARD ATTACHMENT ITEM 10, Rev B drawing. See Kaigro NC #4 Range for top of part to hole = 7.875-8.075
	6/Detail 10	1 1/32 S	1/32				Kaigro Cradle Attachment Inspection, 1. Kaigro Measurements	See Kaigro NC #4
	6/Detail 10	2X 5.37	+0.06/-0.00	5.340-5.43		X	CMS 2/14/2019	See Kaigro NC #4
Item 9 size	-	-	-	-	-	-	-	-
	6/Detail 9	90.0	±1	90.1875 max		X	Kaigro Cradle Attachment Inspection, 1. Kaigro Measurements	See Kaigro NC #6
	6/Detail 9	21.0	±1	21.125 max		X	Kaigro Cradle Attachment Inspection, 1. Kaigro Measurements	See Kaigro NC #6
	6/Detail 9	4X .5 x 45°	±1 / 1°		X		Kaigro Cradle Attachment Inspection, 1. Kaigro Measurements	
Item 11/12 hole sizes	-	-	-	-	-	-	-	-
	7/Detail 11/12	2X 5.50	±.06		X		Kaigro Cradle Attachment Inspection, 1. Kaigro Measurements	



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Atlas Railcar - As-Built Dimensional Inspection report
 Drawing: DWG-3018958-000 Atlas Railcar, Cradle Attachment

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Item/Description	Sheet/Zone or detail	Required Dimension	Tolerance	Actual Dimension	Accept	Reject	Inspection Reference	Comments
	7/Detail 11/12	2X 6.50	±.06		X		Kaigo Cradle Attachment Inspection, 1. Kaigo Measurements	
	7/Detail 11/12	2X 3.25	±.06		X		Kaigo Cradle Attachment Inspection, 1. Kaigo Measurements	
	7/Detail 11/12	3.00	±.06		X		Kaigo Cradle Attachment Inspection, 1. Kaigo Measurements	
	7/Detail 11/12	2X 8.0	±.1		X		Kaigo Cradle Attachment Inspection, 1. Kaigo Measurements	
	7/Detail 11/12	6X 5/8-11 UNC-2B \pm 1.5			X		Kaigo Cradle Attachment Inspection, 1. Kaigo Measurements	
Item 3 size	-	-	-	-	-	-	-	
	8/Detail 3	6.50	±.06		X		Kaigo Cradle Attachment Inspection, 1. Kaigo Measurements	
		3.25	±.06		X		Kaigo Cradle Attachment Inspection, 1. Kaigo Measurements	
		\varnothing 1.50	±.06		X		Kaigo Cradle Attachment Inspection, 1. Kaigo Measurements	
		2X \varnothing 6.63	±.03		X		Kaigo Cradle Attachment Inspection, 1. Kaigo Measurements	
		\varnothing 5.63	±.06		X		Kaigo Cradle Attachment Inspection, 1. Kaigo Measurements	
		8.00	±.06		X		Kaigo Cradle Attachment Inspection, 1. Kaigo Measurements	
		4.00	±.06		X		Kaigo Cradle Attachment Inspection, 1. Kaigo Measurements	
		4X .19 X 45°	±.06 / 1°		X		Kaigo Cradle Attachment Inspection, 1. Kaigo Measurements	
		5.10	±.06		X		Kaigo Cradle Attachment Inspection, 1. Kaigo Measurements	
		2.60	±.06		X		Kaigo Cradle Attachment Inspection, 1. Kaigo Measurements	
Item 4 size	-	-	-	-	-	-	-	
	8/Detail 4	4X 8.5	±.1		X		Kaigo Cradle Attachment Inspection, 1. Kaigo Measurements	
		2X 15°	±1°		X		Kaigo Cradle Attachment Inspection, 1. Kaigo Measurements	
		2X 5.0	±.1		X		Kaigo Cradle Attachment Inspection, 1. Kaigo Measurements	
		4.0	±.1		X		Kaigo Cradle Attachment Inspection, 1. Kaigo Measurements	
		2.0	±.1		X		Kaigo Cradle Attachment Inspection, 1. Kaigo Measurements	
		10.0	±.1		X		Kaigo Cradle Attachment Inspection, 1. Kaigo Measurements	
		\varnothing 6.63	±.03		X		Kaigo Cradle Attachment Inspection, 1. Kaigo Measurements	
		2.13	±.06		X		Kaigo Cradle Attachment Inspection, 1. Kaigo Measurements	



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Appendix B

Doc./Rev.: EIR-3021970-000
 Project: 00225.03.0050 DOE Atlas Project

Appendix B.3.3 – Atlas Cask Car Loaded Deck Height Document

		Orano Federal Services	
DATA TRANSMITTAL FORM			
Supplier:	KASGRO RAIL CORP., INC.	DTF No:	041
P.O./SC No:	15C3011916	Date:	2/26/2019
Type of Submittal:	<input checked="" type="checkbox"/> First <input type="checkbox"/> Re-Submittal	SDRL List Item No:	24
Submitted for:	<input checked="" type="checkbox"/> Approval <input checked="" type="checkbox"/> Review <input type="checkbox"/> Information	Number of Copies Submitted:	1
Submitted By:	RICK FORD	Rick Ford	PROJECT MANAGER
	<small>(Name)</small>	<small>(Signature)</small>	<small>(Title)</small>

ITEM NUMBER	DOCUMENT NUMBER	REVISION NUMBER	DOCUMENT DESCRIPTION	FS DISPOSITION
1	KAS 147		KASGRO CERTIFICATE OF CONFORMANCE ATLAS BUFFER CAR IDOX 20001	<input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
2	KAS 148		KASGRO CERTIFICATE OF CONFORMANCE ATLAS BUFFER CAR IDOX 20002	<input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
3	KAS 149		FORMS 9Z-A, ATLAS BUFFER CARS	<input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
4	KAS 150		FORMS 9Z-A, ATLAS CASK CAR	<input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
5	KAS 151		ATLAS CASK CAR LOADED DECK HEIGHT	<input checked="" type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
				<input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
				<input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
				<input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
				<input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA

Comments:	Technical Reviewer (I.e., RE, PTL, SME, QA, etc.)
KAS 147, 148, 149 and 150 must be resubmitted. KAS 147 and 148, correct CoC date. KAS 149 and 150, complete "Mill Reports Received" and "Reports Correct"	KLEIN Slade Date: 2019.03.12 11:12:01 -07'00'
	Date 3/12/2019

FS DISPOSITION CODES AND DEFINITIONS			
AP	Approved	Work may proceed.	Resubmittal is not required
AWC	Approved with Comment	Work may proceed; comments provided for Supplier's consideration only.	Resubmittal is not required
REV	Reviewed	Work may proceed; comments provided for Supplier's consideration only.	Resubmittal is not required
RWC	Reviewed with Comment	Work may proceed; subject to incorporation and compliance w/ Buyer comments.	Correct and resubmit
DS	Disapproved	Work may <u>not</u> proceed.	Correct and resubmit
RSA	Receipt Submittal Acknowledged	No other action required.	

If, in the judgment of the Supplier, the incorporation of FS' comments will result in a change to the Purchase Order/Subcontract, work shall not proceed and the Supplier shall immediately provide a written notice to FS' C&P Representative describing the change.

Project Manager (PM) / Engineering Manager (EM) or Designated Individual (DI) Approval		Digitally signed by Mark A. Denton DN: cn=Mark A. Denton, o=Orano Federal Services, email=mark.denton@orano.gov, ou=US Date: 2019.03.12 15:03:28 -0600	Date: 03/12/2019
--	--	--	------------------

FS-EN-FRM-023 Rev 02 (Effective March 1, 2018)
 Refer to FS-EN-PRC-012



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	Orano Federal Services	
	SUPPLIER DOCUMENT SUBMITTAL REVIEW	
Supplier / PO No.:	KASGRO / 15C3011916	DTF No. / Rev: 041
Charge No:	00225.03.0050.02.00001	Due Date: 3/8/2019
Document(s):	See DTF No.: 041	
REVIEW INSTRUCTIONS: (List Supplier Doc. No. and Rev. FS Spec and Dwg. Codes, Stds, etc.)		
PE	Slade Klein	
REVIEWERS	Slade Klein, Bernie Counterman	
QA	Bernie Counterman	
Technical Review		
Comments/Markup Attached Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Technical Reviewer Comments:		
KAS 147 and 148 need to be updated once the car paperwork is accepted.		
Technical Reviewer(s) (Sign/Date): KLEIN Slade		Date: 2019.03.04 18:58:29 -08'00'
Quality Assurance Review (As Applicable)		
Comments/Markup Attached Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Technical Reviewer Comments:		
KAS 149 & 150. Why are the two areas on the form "Mill Reports Received" and "Reports Correct" not completed?		
QA Reviewer(s) (Sign/Date):		Digitally signed by COUNTERMAN Bernard Date: 2019.03.12 08:12:30 -07'00'
COMMENT DISPOSITION (If Applicable. Attached further comments and disposition correspondence as necessary)		

FS-EN-FRM-026 Rev 01 (Effective March 1, 2018)
 Refer to FS-EN-PRC-012



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Project: 00225.03.0050 DOE Atlas Project

Kasgro Rail Corporation
121 Rundle Road • New Castle, PA 16102
724-658-9061 • 724-658-7856 FAX • www.KASGRO.com

KASGRO



February 25, 2019

Mark A. Denton
ORANO Federal Services LLC
10101 David Taylor Drive, Suite 200
Charlotte, NC 28262

Subject: Atlas Cask Car Deck Height Dimensions
Reference: ATLAS HLRM Railcar Project, AFS PO 15C3011916

Mark,

On 1/29/2019 OFS witnessed the railcar deck loaded to approximately 215,240 ±1000 pounds. Weights for each component of the load used are listed below:

- Frame: 850 pounds
- Plate: 15,000 pounds
- Stack 1: 107,100 pounds
- Stack 2: 43,250 pounds
- Stack 3: 43,250 pounds
- Stack 4: 5790 pounds

The weights were added sequentially and placed on a frame that distributed the weight to the center four pin locations. The deck height at the location of the cradle support pad was measured to the shop floor using a straight edge and tape measure. This measurement method is typical for Kasgro deck height measurements and is considered the official deck height to rail verification. The results of the deck height measurements taken by Kasgro are listed below.

- Right, B end: 56 3/4 inches
- Right, A end: 56 7/8 inches
- Left, B end: 56 9/16 inches
- Left, A end: 56 5/8 inches

If there are any questions or if further clarification is needed regarding this information, please contact me to discuss.

Sincerely,

Rick Ford
Project Manager

Cc: Mark Zeigler

Specialty Rail Car Solutions



Orano Federal Services
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Appendix B.3.4 – Spring Retention Bosses Replacement, Amsted Weld Inspection Report



Corrective Action Report




#GC-J490, February 08, 2019, (Rev C)
 GRANITE CITY PLANT

Product	SWING MOTION BOLSTER	P/N	519A	Customer	KASGRO
Source	IDOX 10001	Reported By	RICK FORD		CCA-19-045A
Assigned To	JUSTIN ECKSTEIN / BOB LYONS			Issued Date	13 FEB 2019
Facilitator	JOHN ABBOTT		Estimated Completion Date	01 MAR 2019	
1 PROBLEM IDENTIFICATION (Clearly define the nonconformance that led to the rejection)					DATE:
<p>Background: Kasgro's 12- HLRM flatcars are equipped with 100-ton Swing-Motion trucks per Amsted Rail Drawings AS-517-1 (end trucks) and AS-518-1 (middle trucks). The truck bolsters are modified per Amsted Rail Drawing 2-9529 to add special bosses for restraining the spring groups.</p> <p>Problem Initially Reported: During the Preventative Maintenance Examination of another Kasgro 12- HLRM flatcar on January 15, 2019. The Servicing Facility reported that one of the spring retaining bosses on the left side of Truck B was no longer attached to the truck bolster. The boss had been secured with two small tack welds (180-degrees apart) and had broken free. The Servicing Facility re-tacked the boss in place prior to reassembly and departure of the railcar.</p> <p>Amsted Rail Drawing 78276-3 requires the bosses to be secured to the truck bolster using a 0.25-inch fillet weld around the circumference of the inside diameter of the boss per Drawing 2-9529. The Servicing Facility was not aware of the requirement, and therefore, the repair did not comply with Amsted's drawing and no other bosses were inspected to confirm compliance with the drawing.</p>					25 Jan 2019
Improper welds on Kasgro 519A spring restraint bosses.					
2 SHORT TERM CONTAINMENT PLAN (What steps were taken to fix or deal with the immediate problem or condition?)					DATE:
Upon notification of the subject issue, Kasgro attempted to inspect the IDOX 10001 railcar but was unable to view the spring retainer bosses. Kasgro requested Amsted support to inspect using a borescope.					1/29/2019
Amsted Rail sent a Field Service Engineer onsite to inspect IDOX 10001. The spring restraint bosses were welded, but not to Amsted drawing requirements and showed lack-of-fusion. See Appendix A: 2019-02-04 Kasgro - inspection of spring retainer welds IDOX 10001					2/4/2019
At the Granite City Facility, all bolsters in work in progress and finished goods were inspected. Two bolsters required rework to the bosses to remove the plug weld and apply the ¼" fillet weld per drawing 2-9529.					2/6/2019



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3 ROOT CAUSE IDENTIFICATION <small>(Identify the root cause(s) which, when corrected, will solve the problem)</small>		DATE:
Check each of the factors below that were significant contributors to the Root Cause: MANPOWER <input checked="" type="checkbox"/> / METHOD <input checked="" type="checkbox"/> / MEASUREMENT <input type="checkbox"/> / MACHINE/MATERIAL <input type="checkbox"/> / MANAGEMENT <input checked="" type="checkbox"/> / ENVIRONMENT <input type="checkbox"/> List details of each significant contributor:		2/8/2019
<ol style="list-style-type: none"> Management: When the bolsters were inspected and accepted by QA the spring restraint were not attached. The welding of the spring restraint bosses was performed in the Test Lab by production welders. Our welders are certified to AWS D15.1 and are trained to inspect their own welds, see Appendix E: Basis for Welder Qualification (Amsted Rail Granite City). There were 2 welders, ID 4740 & 7931, that performed the welding of the spring restraint bosses. Appendix F: SMAW Welder Certifications – ID 4740 & 7931. No independent QA inspector inspected these welds prior to truck break-in at the Test Lab. Method: Shielded Metal Arc Welding (SMAW) was employed for the attachment of these spring restraint bosses. Due to the geometry of the boss and the tight joint configuration it was difficult to complete a 1/4" fillet weld using a SMAW electrode. Welder tried to execute a 360° weld without changing their position, hand/wrist movement or electrode manipulation during the weld. Welds were applied with an electrode angle that was almost straight down throughout the entire inner circumference (no angular manipulation and electrode was likely too large, thereby forcing weld pool away from attachment). 		
4 LONG TERM PREVENTIVE ACTION <small>(State the specific actions planned/taken to assure that each Root Cause is eliminated or minimized)</small>		DATE:
<ol style="list-style-type: none"> Management: Starting in January 2019, we changed the welding practice from SMAW to GMAW. The test lab does not have the capability to perform GMAW, so these spring restraint bosses are attached in the final finishing area prior to final QA acceptance. Our internal CWI will be responsible to complete the final spring restraint boss weld acceptance. The CWI will document the spring boss welds with photographs and associate these photographs to the serial number of the bolster. These reports will be distributed with each shipment. Method: Assigned a single welder that has been trained to the new WPS for GMAW for this process. Appendix G: ASF-WPS-073, Training & GMAW Welder Certification - ID 7473 		2/8/2019
5 FOLLOW-UP & VERIFICATION <small>(Verify that the corrective actions stated above have been taken and that they are effective)</small>		
Verifier	 for JW	Completion Date 8 FEB 2019



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Amsted Rail Company, Inc
1700 Walnut Street
Granite City, IL 62040
Tel: 618-402-9666

Trip Report – Inspection of Welds on Spring Retainers (Kasgro)

To: Rick Ford
From: Doug Compton – Field Service Engineer, Amsted Rail
Date: 02-15-19
Subject: Inspection of welds on springs retainers on cars IDOX 10001
CC: Jennifer Novak, Nathan Reese, Joe Halford, Pete Goyer, Mike Watts, Tim O'Donnell

Customer: Kasgro Rail Corp
Location: Kasgro Rail Corp, 121 Rundle Road, New Castle, PA 16102
Date of Visit: 02-04-19 thru 02-05-19
Personnel Contacted: Rick Ford and Dave Stull of Kasgro
Purpose of Visit: To inspect the welds on the welded on spring retainers

Inspections:

I was on site to inspect the welds using a borescope and a flashlight. In order to gain access with the borescope probe, the cars had to be partially jacked to relieve the load on the outer coils. Each car has six (6) bolsters and each bolster spring seat had four (4) welded on spring retainers for a total of eight (8) spring retainers per bolster.

On February 4, 2019, I along with Dave Stull of Kasgro inspected car IDOX 10001. Some of the welds observed were plug welds, which are acceptable to Amsted Rail. All other welds had welds that were intact at least 25% of the circumference of the retainer. No tack welds were observed.

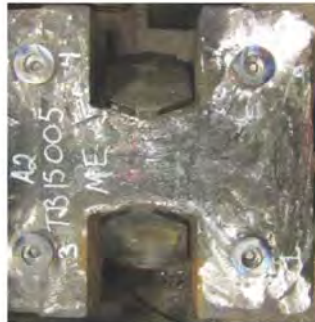


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TB15005
ME





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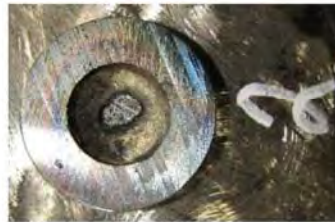
TB15005
OME





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TE04002
ME

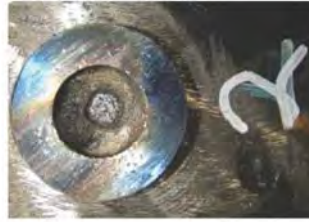




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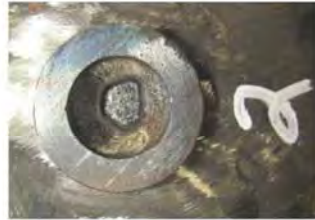
TE04002
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TE04006
ME





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TE04006
OME



Joshua T. Callahan
CWI 18010751
CC1 EXP. 11/2021

Handwritten signature and date:
2/21/19





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TE04008
ME





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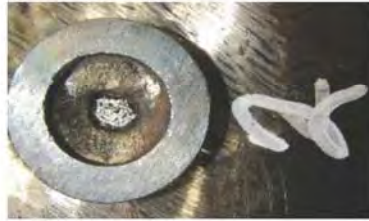
TE04008
OME





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TE04010
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TE04010
OME





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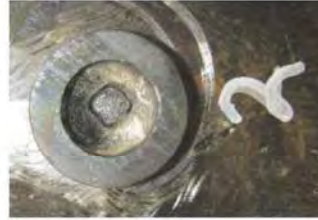
TE04015
OME



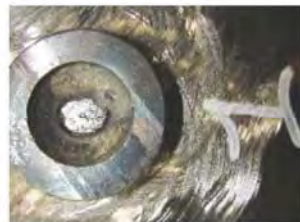


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TE04015
ME





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Appendix B.3.5 – Spring Retention Bosses Replacement, Kasgro Weld Inspection Report

Grand Rapids, MI Pittsburgh, PA – Birmingham, AL
 NDE • MECHANICAL LAB • ENVIRONMENTAL www.tuvris.com



VISUAL INSPECTION REPORT

Mr. Mark Zeigler
 Kasgro Rail Corporation
 121 Rundle Road
 New Castle, PA 16102


Report #: 21
 P.O. #: K180079
 Work Order #: 473037
 Project: Atlas

Page 1 of 1

Date: February 25, 2019
 Description: Visual Inspections of Bolster Boss Welds for Cask Car #1

TRIS Procedure: NDE-VT-1	Surface Condition: As Welded	Production Stage: In Progress	VT Gauge Identification: Mfg. G.A.L.
Test Method Standard: AWS D15.1	Percent of Inspection: X 100%	X Final	Weld Gauge 1/2" Fillet Gauge
Acceptance Standard: AWS D15.1	%	Other	Model #269-465-5750
Product Form: N/A		For Welds: Root Pass	Serial # Cert #F4857
Type of Material: Carbon Steel		Intermediate	Other Cam Type Gauge
		X Final	

Product / Weld Identification	Accept	Reject	Linear	Rounded	Cracks	Undercut	Lack Fusion	Incomplete Pen	Exceed Reinforcement	Weld Undersized	Defect Location, Length
TE04002 Bolster											
OEM side 1 thru 4	/										
ME Side 1 thru 4	/										
TE04006 Bolster											
OEM side 1 thru 4	/										
ME Side 1 thru 4	/										
TE04008 Bolster											
OEM side 1 thru 4	/										
ME Side 1 thru 4	/										
TE04010 Bolster											
OEM side 1 thru 4	/										
ME Side 1 thru 4	/										
TE04015 Bolster											
OEM side 1 thru 4	/										
ME Side 1 thru 4	/										
TB15005 Bolster											
OEM side 1 thru 4	/										
ME Side 1 thru 4	/										

Technician: Daniel S. Gjurich *Daniel S. Gjurich*  Daniel S Gjurich Level: CWI #93041171
 CWI 93041171
 QC1 EXP. 4/1/2020
 Date: 2/25/19

Reviewed By: *[Signature]*
 Testing was performed in accordance with accepted industry practice as well as the test methods referenced TUV Rheinland Industrial Solutions, Inc. as no direct knowledge of the origin, sampling procedure, nor condition of the samples, and makes no claims as to the suitability nor final use of the material. This test report applies only to those items tested. This report shall not be reproduced except in full without the written consent of TUV Rheinland Industrial Solutions, Inc.

NDE-0160
 March 19, 2004
 dsk



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Appendix B.3.6 – AAR Nonconformance Reports

Print Date: 2/21/2019

THE WELD FILLET SIZE WAS INCORRECTLY LISTED BY KASGRO UNDER SECTIONS: 7.2.4.2.9, 7.4.2.7, AND 7.4.2.8 AS .025 INCH. THESE SECTIONS HAVE BEEN CORRECTED TO READ .25 INCH.

QA-7.1

Association of American Railroads
 Quality Assurance Nonconformance Report Form

IT IS NOTED THAT AMSTED RESPONSES UNDER SECTIONS 7.4.2.9 AND 7.4.2.10 LISTED THE CORRECT .25 INCH FILLET WELD.

Rick Johnson 2/26/2019
 PROJECT MANAGER KASGRO RAIL

7.2.4.1 Serial No.	2019000065
7.2.4.2.1 Date	February 19, 2019 4:32 pm

<p>7.2.4.2.1 Initiator: Kasgro Rail Corporation - New Castle</p> <p>7.2.4.2.2 Contractor: Amsted Rail Company, Inc. - Granite City</p> <p>7.2.4.2.3 Item Description: A9 - Manufacturer of Freight Side Frames and Bolsters</p>	<p>7.2.4.2.1 Initiator Location: New Castle, PA 16102</p> <p>7.2.4.2.2 Contractor Plant Location: Granite City, IL 62040</p> <p>7.2.4.2.3 AAR Spec. Code or Standard No.: S-2034</p>
<p>7.2.4.2.4 Contractor's part number, pattern numbers, drawing numbers, RMA#, PO#, and/or other: B9N-714N-HJ</p>	<p>7.2.4.2.7 Material Condition: New <input checked="" type="checkbox"/> Reconditioned <input type="checkbox"/> Requalified <input type="checkbox"/></p>
<p>7.2.4.2.5 Quantity Received: 12</p> <p>7.2.4.2.5 Quantity Rejected: 12</p> <p>7.2.4.2.5 Quantity Inspected: 12</p>	<p>7.2.4.2.6 Material Inspected By Contractor? Yes</p> <p>7.2.4.2.6 If inspected by contractor, date of inspection: 2/19/2019</p>
<p>7.2.4.2.9 Nonconformance Description: Manufacturing Defects SPRING RETAINING BOSSES DO NOT HAVE A 0.25 INCH FILLET WELD AROUND THE CIRCUMFERENCE OF THE INSIDE DIAMETER OF THE BOSS. AMSTED RAIL DRAWING 78276-3 REQUIRES THE BOSSES TO BE SECURED TO THE TRUCK BOLSTER USING A 0.25 INCH FILLET WELD AROUND THE CIRCUMFERENCE OF THE INSIDE DIAMETER OF THE BOSS.</p>	
<p>7.2.4.2.10 Disposition of item (Return, Repaired, Scrapped, Other): Repair / Rework</p> <p>7.2.4.2.8 Serial Number, Identification Mark, or Car No.: BTE04001, TE04003, TE04011, TE04013, TE04009, TE04007</p>	
<p>7.2.4.3 Verify copy sent to contractor: 4/15/2019 4:32:22PM</p>	<p>Contractor Information: Name & Title: John Abbott Email: jabbott@amstedrail.com Company Name: Amsted Rail Company, Inc. - Granite City Street: 1700 Walnut Street City, State, Zip: Granite City, IL 62040</p>
<p>MARK ZEIGLER DIRECTOR OF QUALITY CONTROL</p>	<p>Name: Mark Ziegler Address: 121 Rundle Road City, State, Zip: New Castle, PA 16102 Phone: 724-658-9061 ext. 26 Email: mark@kasgro.com</p>



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QA-7.2

Print Date: 2/21/2019

Association of American Railroads
Quality Assurance Nonconformance Response Form

		7.4.2.1 Serial No.	2019000055
		7.4.2.2 Date	02/21/2019
7.4.2.3 Contractor	Amsted Rail Company, Inc. - Granite City	7.4.2.4 Initiator	Kasgro Rail Corporation - New Castle
7.4.2.3 Location	Granite City, IL 62040	7.4.2.4 Initiator Location	New Castle PA, 16102
7.4.2.5 Date QA-7.1 was filed	02/19/2019	7.4.2.6 Quantity Rejected	12
7.4.2.7 Description of non-conformance (from QA-7.1)	SPRING RETAINING BOSSES DO NOT HAVE A 0.25 INCH FILLET WELD AROUND THE CIRCUMFERENCE OF THE INSIDE DIAMETER OF THE BOSS. AMSTED RAIL DRAWING 78276-3 REQUIRES THE BOSSES TO BE SECURED TO THE TRUCK BOLSTER USING A 0.25 INCH FILLET WELD AROUND THE CIRCUMFERENCE OF THE INSIDE DIAMETER OF THE BOSS.		
Action Required	Description of Action Taken	Date	
7.4.2.8 Clearly define the non-conformance which led to the rejection:	SPRING RETAINING BOSSES DO NOT HAVE A 0.25 INCH FILLET WELD AROUND THE CIRCUMFERENCE OF THE INSIDE DIAMETER OF THE BOSS. AMSTED RAIL DRAWING 78276-3 REQUIRES THE BOSSES TO BE SECURED TO THE TRUCK BOLSTER USING A 0.25 INCH FILLET WELD AROUND THE CIRCUMFERENCE OF THE INSIDE DIAMETER OF THE BOSS.	01/25/2019	



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<p>7.4.2.9 Clearly define the actions taken for disposition:</p>	<p>Upon notification of the subject issue, Kasgro examined the truck assemblies received from Amsted Rail for assembly. The spring restraint boss welds were complete, but failed visual inspection and showed lack-of-fusion. These six trucks were returned to Amsted Rail – Granite City Facility for further analysis and testing. Amsted Rail sent a Field Service Engineer onsite to inspect assembled cars. The spring restraint bosses were complete, but failed visual inspection and showed lack-of-fusion. At the Granite City Facility, all bolsters in work in progress and finished goods were inspected. Two bolsters required rework to the bosses to remove the plug weld and apply the 1/4" fillet weld per drawing 2-9529. Amsted Rail Product Engineering used dynamic modeling to determine the maximum lateral load that could be applied to the spring restraint boss to be 2,500 lbs. This means that a weld that is about 20% of the ID circumference will be sufficient to hold the static load of the lateral spring shear. Granite City Laboratory designed a tabletop fixture to measure load required to shear the spring restraint boss. We simulated 5 different boss weld conditions 1) bad weld replication attempt #1, 2) 25% good weld at 6 o'clock position, 3) tack welded at 6 and 12 o'clock positions, 4) 25% good weld at 12 o'clock position and 5) bad weld replication attempt #2. Loads ranged from 2,640 lbs. to 16,800 lbs. Granite City designed a test fixture to measure the load required to shear 4 spring restraint bosses on a returned bolster. Bolster serial number TE04006 was selected and loads ranged from 12,990 - 15,350 lbs.</p>	<p>02/20/2019</p>
<p>7.4.2.10 Clearly define the root cause(s) which resulted in the nonconformance:</p>	<p>1. Management: When the bolsters were inspected and accepted by QA the spring restraint were not attached. The welding of the spring restraint bosses was performed in the Test Lab by production welders. Our welders are certified to AWS D15.1 and are trained to inspect their own welds. There were 2 welders, ID 4740 & 7931, that performed the welding of the spring restraint bosses. No independent QA inspector inspected these welds prior to truck break-in at the Test Lab.</p> <p>2. Method: Shielded Metal Arc Welding (SMAW) was employed for the attachment of these spring restraint bosses. Due to the geometry of the boss and the tight joint configuration it was difficult to complete a 1/4" fillet weld using a SMAW electrode. Welder tried to execute a 360° weld without changing their position, hand/wrist movement or electrode manipulation during the weld. Welds were applied with an electrode angle that was almost straight down throughout the entire inner circumference (no angular manipulation and electrode was likely too large, thereby forcing weld pool away from attachment).</p>	<p>02/08/2019</p>
<p>7.4.2.11 Clearly define the corrective action(s) taken which will eliminate the root cause(s):</p>	<p>1. Management: Starting in January 2019, we changed the welding practice from SMAW to GMAW. The test lab does not have the capability to perform GMAW, so these spring restraint bosses are attached in the final finishing area prior to final QA acceptance. Our internal CWI will be responsible to complete the final spring restraint boss weld acceptance. The CWI will document the spring boss welds with photographs and associate these photographs to the serial number of the bolster. These reports will be distributed with each shipment.</p> <p>2. Method: Assigned a single welder that has been trained to the new WPS for GMAW for this process.</p>	<p>02/08/2019</p>
<p>7.4.2.12 Clearly define the follow-up plan(s) which will ensure the effectiveness of the corrective action(s) taken and its/permanence</p>	<p>A CWI will inspect and document the spring boss welds with photographs and associate these photographs to the serial number of the bolster. These reports will be distributed with each shipment.</p>	<p>02/21/2019</p>



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QA-7.3

Print Date: 2/21/2019

Association of American Railroads

Quality Assurance Nonconformance Response Evaluation Form

Date: 02/19/2019		QA 7.1/QA 7.2 Serial No. 2019000055	
Reporting Company Kasgro Rail Corporation - New Castle		Contractor Amsted Rail Company, Inc. - Granite City	
Location: New Castle PA, 16102		Location: Granite City, IL	
Person Performing Review Mark Zeigler			
QA-7.2 received per 7.4.1 requirements?	Yes	If no, response was received after how many days?	0

The above listed QA 7.2 has been reviewed and, in the opinion of the reviewer, the proposed corrective action, has been found to be proper and adequate. As such the QA 7.1 is considered closed.

OR

The above listed QA 7.2 has been reviewed and, in the opinion of the reviewer, the proposed corrective action:

Does NOT adequately identify the root cause:

Comments:

Does NOT propose a corrective action that will eliminate the identified Root Cause.

Verify Copy sent to Contractor:	Contractor Information	
	Name and Title	John Abbott
	Contractor Email	jabbott@amstedrail.com
	Company Name	Amsted Rail Company, Inc. - Granite City
	Street	1700 Walnut Street
	Location	Granite City, IL 62040



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Appendix B.3.7 – FRA Safety Appliance Compliance Letter

AREVA		AREVA Federal Services LLC	
DATA TRANSMITTAL FORM			
Supplier:	KASGRO RAIL CORP., INC.	DTF No:	049
P.O./SC No:	15C3011916	Date:	3/11/2019
Type of Submittal:	<input checked="" type="checkbox"/> First <input type="checkbox"/> Re-Submittal	SDRL List Item No:	24
Submitted for:	<input checked="" type="checkbox"/> Approval <input checked="" type="checkbox"/> Review <input type="checkbox"/> Information	Number of Copies Submitted:	1
Submitted By:	RICK FORD	Rick Ford	PROJECT MANAGER
	<small>(Name)</small>	<small>(Signature)</small>	<small>(Title)</small>

ITEM NUMBER	DOCUMENT NUMBER	REVISION NUMBER	DOCUMENT DESCRIPTION	AFS DISPOSITION
1	KAS 182		FRA S-2044 ATLAS CASK CAR ACCEPTANCE	<input checked="" type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA <input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA <input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA <input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA <input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA <input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA <input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA <input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA

Comments: No comments	Technical Reviewer (i.e., RE, PTL, SME, QA, etc.) KLEIN Slade Date: 2019.03.13 15:07:48 -07'00' Date 3/13/2019
--------------------------	--

AFS DISPOSITION CODES AND DEFINITIONS			
AP	Approved	Work may proceed.	Resubmittal is not required
AWC	Approved with Comment	Work may proceed; comments provided for Supplier's consideration only.	Resubmittal is not required
REV	Reviewed	Work may proceed; comments provided for Supplier's consideration only.	Resubmittal is not required
RWC	Reviewed with Comment	Work may proceed; subject to incorporation and compliance w/ Buyer comments.	Correct and resubmit
DS	Disapproved	Work may <u>not</u> proceed.	Correct and resubmit
RSA	Receipt Submittal Acknowledged	No other action required.	

If, in the judgment of the Supplier, the incorporation of AFS' comments will result in a change to the Purchase Order/Subcontract, work shall not proceed and the Supplier shall immediately provide a written notice to AFS' C&P Representative describing the change.

Project Manager (PM) / Engineering Manager (EM) or Designated Individual (DI) Approval 	Digitally signed by Mark A. Denton DN: cn=Mark A. Denton, o=Orano Federal Services, email=mark.denton@orano.gov, ou=ORF Date: 03/13/2019 Date: 2019.03.13 15:17:55 -0400
--	---

AFS-EN-FRM-023 Rev 01 (Effective August 18, 2014)
 Refer to AFS-EN-PRC-012



Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
Appendix B

Doc./Rev.: EIR-3021970-000
 Project: 00225.03.0050 DOE Atlas Project

	Orano Federal Services	
	SUPPLIER DOCUMENT SUBMITTAL REVIEW	
Supplier / PO No.:	KASGRO / 15C3011916	DTF No. / Rev: 049
Charge No:	00225.03.0050.02.00001	Due Date: 3/21/2019
Document(s):	See DTF No.: 049	
REVIEW INSTRUCTIONS: (List Supplier Doc. No. and Rev. FS Spec and Dwg. Codes, Stds, etc.)		
PE	Slade Klein	
REVIEWERS	Slade Klein, Bernie Counterman	
QA	Bernie Counterman	
Technical Review		
Comments/Markup Attached Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Technical Reviewer Comments:		
No comments		
Technical Reviewer(s) (Sign/Date): KLEIN Slade		Date: 2019.03.12 15:12:55 -07'00'
Quality Assurance Review (As Applicable)		
Comments/Markup Attached Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Technical Reviewer Comments:		
No Comments		
QA Reviewer(s) (Sign/Date):		Digitally signed by COUNTERMAN Bernard Date: 2019.03.13 13:49:36 -07'00'
COMMENT DISPOSITION (If Applicable. Attached further comments and disposition correspondence as necessary)		

FS-EN-FRM-026 Rev 01 (Effective March 1, 2018)
 Refer to FS-EN-PRC-012



Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
Appendix B

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Project: 00225.03.0050 DOE Atlas Project



U.S. Department
of Transportation
**Federal Railroad
Administration**

1200 New Jersey Avenue, SE
Washington, DC 20590

FEB 28 2019

Mr. Mark Zeigler
Director of Quality Control
Kasgro Rail Corporation
121 Rundle Road
New Castle, PA 16102

Re: Kasgro Order, One New 12 Axle, 48' Ton Flat Car, III RM Cask Car IDOX 010001

Dear Mr. Zeigler:

This reply is in reference to Kasgro Rail Corporation's (Kasgro) January 8, 2019, letter advising the Federal Railroad Administration (FRA) of the availability for review of a new car type. In this case, Kasgro tendered the following drawings for the above referenced order:

1. 1155-40 Handbrake Arrangement
2. 1155-1 General Arrangement
3. 1155-3 Stencil Arrangement
4. 1155-4 Platform Arrangement

This flat car is being built to meet the requirements of Association of American Railroads Standard S-2044, Appendix D1, *Safety Appliances for Flatcars with Full Decks*, Title 49 Code of Federal Regulations (CFR) Part 224, ReflectORIZATION of Rail Freight Rolling Stock, and CFR Section 231.18, *Cars of special construction*.

On February 12, 2019, FRA Region 2 Motive Power and Equipment (MP&E) inspectors made a Sample Car Inspection of flat car IDOX 010001 at the Kasgro plant in New Castle, Pennsylvania. This inspection found the car to be compliant with applicable regulations.

Based on the sample car inspection and a review of the above referenced drawings, FRA finds the safety appliance arrangement, the handbrake arrangement, and reflectORIZATION application for the above car acceptable as submitted. FRA's inspection revealed no other apparent hazards in the safety appliance arrangement. However, FRA's response should in no way be construed as certification or approval that the equipment complies with all Federal requirements. The drawings provided will serve as a reference for all cars built to this configuration, unless a revision takes place that affects the location, dimension, or manner of application of the safety appliances. If any such revision occurs, the FRA's letter of acceptability would no longer apply.



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Should you have any question or concern, the FRA point of contact for this issue is
Dr. Tom Blankenship, Mechanical Engineer at 202-493-6446 or tom.blankenship@dot.gov.

Sincerely,

A handwritten signature in black ink, appearing to read "Gary G. Fairbanks". The signature is fluid and cursive, with a large, sweeping flourish at the end.

Gary G. Fairbanks
Staff Director, MP&E Division



Orano Federal Services
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Appendix B.3.8 – Amsted / TCI Supplier Certification Letters

	Orano Federal Services		
DATA TRANSMITTAL FORM			
Supplier:	KASGRO RAIL CORP., INC.	DTF No:	39
P.O./SC No:	15C3011916	Date:	2/22/2019
Type of Submittal:	<input checked="" type="checkbox"/> First <input type="checkbox"/> Re-Submittal	SDRL List Item No:	24
Submitted for:	<input checked="" type="checkbox"/> Approval <input type="checkbox"/> Review <input type="checkbox"/> Information	Number of Copies Submitted:	1
Submitted By:	RICK FORD	Rick Ford	PROJECT MANAGER
	(Name)	(Signature)	(Title)

ITEM NUMBER	DOCUMENT NUMBER	REVISION NUMBER	DOCUMENT DESCRIPTION	FS DISPOSITION
1	KAS 138		ATLAS CASK/BUFFER CARB LAYDOWN INSTALLATION AND TEST DATA	<input checked="" type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
2	KAS 139		ATLAS CASK BODY MATERIAL HEAT IDENTIFICATION, FORMS 42, 40A, 44B	<input checked="" type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
3	KAS 140		ATLAS BUFFER IDOX 20001 BODY MATERIAL HEAT IDENTIFICATION, FORM 44B	<input checked="" type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
4	KAS 141		ATLAS BUFFER IDOX 20002 BODY MATERIAL HEAT IDENTIFICATION, FORM	<input checked="" type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
5	KAS 142		ATLAS CASK CAR FORM 36 STATIC FORCE BRAKE TEST	<input checked="" type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
6	KAS 143		ATLAS CASK CAR IDOX 10001, FORM 5-13-B NEW CAR INSPECTION	<input checked="" type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
7	KAS 144		ATLAS CASK IDOX 10001 SUPPLIER CERTIFICATION/ AMSTED RAIL SEDARSHO / MCCABE	<input checked="" type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
				<input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
				<input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA

Comments: No comments	Technical Reviewer (I.e., RE, PTL, SME, QA, etc.) KLEIN Slade Date: 2019.02.26 07:33:08 -08'00' Date: 2/26/2019
--------------------------	---

FS DISPOSITION CODES AND DEFINITIONS			
AP	Approved	Work may proceed.	Resubmittal is not required
AWC	Approved with Comment	Work may proceed; comments provided for Supplier's consideration only.	Resubmittal is not required
REV	Reviewed	Work may proceed; comments provided for Supplier's consideration only.	Resubmittal is not required
RWC	Reviewed with Comment	Work may proceed; subject to incorporation and compliance w/ Buyer comments.	Correct and resubmit
DS	Disapproved	Work may <u>not</u> proceed.	Correct and resubmit
RSA	Receipt Submittal Acknowledged	No other action required.	

If, in the judgment of the Supplier, the incorporation of FS' comments will result in a change to the Purchase Order/Subcontract, work shall not proceed and the Supplier shall immediately provide a written notice to FS' C&P Representative describing the change.

Project Manager (PM) / Engineering Manager (EM) or Designated Individual (DI) Approval 	Digitally signed by Mark A. Denton DN: cn=Mark A. Denton, o=Orano Federal Services, email=mark.denton@orano.com, ou=US Date: 2019.02.26 10:28:54 -0500	Date: 02/26/2019
--	--	------------------

FS-EN-FRM-023 Rev 02 (Effective March 1, 2018)
 Refer to FS-EN-PRC-012



Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
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 Project: 00225.03.0050 DOE Atlas Project

	Orano Federal Services	
	SUPPLIER DOCUMENT SUBMITTAL REVIEW	
Supplier / PO No.:	KASGRO / 15C3011916	DTF No. / Rev: 039
Charge No:	00225.03.0050.02.00001	Due Date: 3/8/2019
Document(s):	See DTF No.: 039	
REVIEW INSTRUCTIONS: (List Supplier Doc. No. and Rev. FS Spec and Dwg. Codes, Stds, etc.)		
PE	Slade Klein	
REVIEWERS	Slade Klein, Bernie Counterman	
QA	Bernie Counterman	
Technical Review		
Comments/Markup Attached Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Technical Reviewer Comments:		
No comments		
Technical Reviewer(s) (Sign/Date): KLEIN Slade		Date: 2019.02.25 15:52:04 -08'00'
Quality Assurance Review (As Applicable)		
Comments/Markup Attached Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Technical Reviewer Comments:		
KAS 142 Cask Car Form 36 Brake Test - Why is the Gross Shoe Force = 0		
QA Reviewer(s) (Sign/Date):		Digitally signed by COUNTERMAN Bernard Date: 2019.02.25 10:22:16 -08'00'
COMMENT DISPOSITION (If Applicable. Attached further comments and disposition correspondence as necessary)		

FS-EN-FRM-026 Rev 01 (Effective March 1, 2018)
 Refer to FS-EN-PRC-012



Orano Federal Services
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High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
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Project: 00225.03.0050 DOE Atlas Project

Kasgro Rail Corporation
 121 Rundle Rd. • New Castle, PA 16102
 724-898-8861 • 724-858-7639 Fax • www.kasgro.com



KASGRO

Car Number(s): IDOX 010001 _____

SUPPLIER CERTIFICATION

I have inspected at Kasgro Rail Corp., located at 121 Rundle rd., New Castle, PA 16102,
12 Axle Atlas Cask Car(s)

The equipment is applied to car: _____

This equipment has been applied in accordance with our recommended practices and is operating to our satisfaction.
 Application and workmanship has been approved by me for our Company.

Representative: Matt DeGeorge _____

Title: Senior Engineer _____

Company: TICCI _____

Date: 02/12/19 _____

Car met criteria for S-401 & S-406

Specially Rail Car Solutions



Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
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Kasgro Rail Corporation
 121 Rundle Rd. • New Castle, PA 16102
 724-858-9061 • 724-658-7326 Fax • www.kasgro.com



KASGRO

Car Number(s): IDOX 010001

SUPPLIER CERTIFICATION

I have inspected at Kasgro Rail Corp., located at 121 Rundle rd., New Castle, PA 16102.
 12 Axle Atlas Cask Car(s)

The equipment is applied to car:

This equipment has been applied in accordance with our recommended practices and is operating to our satisfaction.
 Application and workmanship has been approved by me for our Company.

Representative: KATH Mc CABE

Date: _____

Title: GENERAL SERVICE ENGINEER

Company: ARISTO RAIL

TOM BEDARSKI
DIRECTOR - SERVICE ENGINEERING
ARISTO RAIL

Specialty Rail Car Solutions



Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
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Project: 00225.03.0050 DOE Atlas Project

APPENDIX B.4 – COMMON INSPECTION DOCUMENTATION


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Appendix B.4.1 – Weld Procedure Qualification Records (PQR)

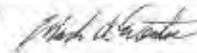
AREVA Federal Services LLC				
DATA TRANSMITTAL FORM				
Supplier:	KASPRO RAIL CORP., INC.	DTF No.:	00	Page 1 of 2
P.O./SC No.:	15C3011916	Date:	08/30/17	
Type of Submittal:	<input checked="" type="checkbox"/> First <input type="checkbox"/> Re-Submittal	SDRL List Item No.:	9,10	
Submitted for:	<input checked="" type="checkbox"/> Approval <input type="checkbox"/> Review <input type="checkbox"/> Information		Number of Copies Submitted: 1	
Submitted By:	RICK FORD (Name)	 (Signature)	PROJECT MANAGER (Title)	

ITEM NUMBER	DOCUMENT NUMBER	REVISION NUMBER	DOCUMENT DESCRIPTION	AFS DISPOSITION
1	KAS001	0	ATLAS PROJECT PHASE 2 DOCUMENT SUBMITTAL (SEE ATTACHED)	<input type="checkbox"/> AP <input checked="" type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
The enclosed document submittals are accepted with comment for continued use on the Atlas railcar project. Resubmittal is not required, however consideration of AFS comments should be included in future work with the ultimate validation of Atlas project phase two documents being the receipt of the AAR EECs notice-to-proceed with test phase for the Atlas and buffer railcars.				<input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
				<input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
				<input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
				<input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
				<input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
				<input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
				<input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA

Comments: See above statement and attached comments.	Technical Reviewer (i.e., RE, PT, SME, QA, etc.) KLEIN Slade <small>Digitally signed by KLEIN Slade Date: 2017.08.01 09:54:31 -0700</small> Date: 8/1/2017
---	--

AFS DISPOSITION CODES AND DEFINITIONS			
AP	Approved	Work may proceed.	Resubmittal is not required.
AWC	Approved with Comment	Work may proceed; comments provided for Supplier's consideration only.	Resubmittal is not required.
REV	Reviewed	Work may proceed; comments provided for Supplier's consideration only.	Resubmittal is not required.
RWC	Reviewed with Comment	Work may proceed, subject to incorporation and compliance w/ Buyer comments.	Correct and resubmit.
DS	Disapproved	Work may <u>not</u> proceed.	Correct and resubmit.
RSA	Receipt Submittal Acknowledged	No other action required.	

If, in the judgment of the Supplier, the incorporation of AFS' comments will result in a change to the Purchase Order/Subcontract, work shall not proceed and the Supplier shall immediately provide a written notice to AFS' C&P Representative describing the change.

Project Manager (PM) / Engineering Manager (EM) or Designated Individual (DI) Approval 	<small>Digitally signed by [Name] Date: 2017.08.31 14:15:00 -0700</small> Date: 08/31/2017
---	---

AFS-FN-FRM-023 Rev 01 (Effective August 18, 2014)
 Refer to AFS-EN-PRC-012



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	AREVA Federal Services LLC	
	SUPPLIER DOCUMENT SUBMITTAL REVIEW	
Supplier / PO No.:	Kasgro Rail / 15C3011916	DTF No. / Rev: 001
Charge No:	00225.03.0050.02.00001	Due Date: 7/14/2017
Document(s):	See DTF No.:001	
REVIEW INSTRUCTIONS: (List Supplier Doc. No. and Rev. AFS Spec and Dwg. Codes, Stds, etc.)		
PE	Slade Klein	
REVIEWERS	Slade Klein, Bernie Counterman	
QA	Bernie Counterman	
Technical Review		
Comments/Markup Attached Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Technical Reviewer Comments:		
1) WPS F002, Material specification should be: A572 Grade 50 and A572 Grade 60 2) Multiple documents have been provided as an example based on the M290 these documents will need to be updated or reproduced for the Atlas railcar. 3) The track scale test is an annual test and was last performed May 2016. 4) TUV UT Reference section 2.0 lists AWS D15.2, it should be AWS D15.1.		
Technical Reviewer(s) (Sign/Date): KLEIN Slade		Digitally signed by KLEIN Slade Date: 2017.07.11 10:26:14 -07'00'
Quality Assurance Review (As Applicable)		
Comments/Markup Attached Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Technical Reviewer Comments:		
See attached comments.		
QA Reviewer(s) (Sign/Date): COUNTERMAN Bernard		Digitally signed by COUNTERMAN Bernard Date: 2017.07.31 15:33:14 -07'00'
COMMENT DISPOSITION (If Applicable. Attached further comments and disposition correspondence as necessary)		



Orano Federal Services
**Title: Design and Prototype Fabrication of Railcars for Transport of
 High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
 Appendix B**

Doc./Rev.: EIR-3021970-000

Project: 00225.03.0050 DOE Atlas Project

#01	<ul style="list-style-type: none"> Joint detail states "See Attached" no joint detail attached.
#02	<ul style="list-style-type: none"> ASTM A52, Grade 60 is not listed in AWS D15.1, Table 8.1 for prequalified materials. ASTM A52 was withdrawn in 1925 and replaced by ASTM A83 (which is also not prequalified material). Preheat and interpass temperatures are identified as "See Attached Report". The attached report contains joint geometry and does not contain preheat or interpass temperatures.
#03	<ul style="list-style-type: none"> No Comments
#04	<ul style="list-style-type: none"> Tensile Test Results state "See Attached Report". Report is not attached. Need to include UT report #23.
#05	<ul style="list-style-type: none"> No Comments
#06	<ul style="list-style-type: none"> It is assumed (not stated) that the values are the pulling force. Therefore the test pressure should be changed to 2860 PSI +185 PSI -0 PSI and the test load would be 68826 LBS +4345 LBS - 0 LBS
#07	<ul style="list-style-type: none"> No Comments
#08	<ul style="list-style-type: none"> No Comments
#09-10	<ul style="list-style-type: none"> Need to identify the ID of trucks A through F on Exhibit F. Also, might be good to identify front or rear (A end or B end).
#11	<ul style="list-style-type: none"> No Comments
#12	<ul style="list-style-type: none"> No Comments
#13	<ul style="list-style-type: none"> No Comments
#14	<ul style="list-style-type: none"> No Comments
#15	<ul style="list-style-type: none"> No Comments
#16	<ul style="list-style-type: none"> No Comments
#17	<ul style="list-style-type: none"> No Comments
#18	<ul style="list-style-type: none"> No Comments
#19	<ul style="list-style-type: none"> Originator signature not legible. Also, is he a Level III? Need TÜV document NDTG-CTP-1 Need TÜV document NDTG-UTQC-1
#20	<ul style="list-style-type: none"> No Comments
#21	<ul style="list-style-type: none"> No Comments
#22	<ul style="list-style-type: none"> No Comments
#23	<ul style="list-style-type: none"> No Comments
#23	<ul style="list-style-type: none"> No Comments
#23	<ul style="list-style-type: none"> No Comments
#24	<ul style="list-style-type: none"> No Comments
#25	<ul style="list-style-type: none"> No Comments
#26	<ul style="list-style-type: none"> No Comments
#27	<ul style="list-style-type: none"> No Comments
#28	<ul style="list-style-type: none"> No Comments
#29	<ul style="list-style-type: none"> No Comments
#30	<ul style="list-style-type: none"> No Comments
#31	<ul style="list-style-type: none"> No Comments
#32	<ul style="list-style-type: none"> No Comments
#33	<ul style="list-style-type: none"> No Comments
#34	<ul style="list-style-type: none"> No Comments
#35	<ul style="list-style-type: none"> No Comments
#36	<ul style="list-style-type: none"> No Comments
#37	<ul style="list-style-type: none"> No Comments
#38	<ul style="list-style-type: none"> No Comments
#39	<ul style="list-style-type: none"> Need to add a statement similar to "Except as noted on NCR Nos.:" if any NCRs are generated
#40	<ul style="list-style-type: none"> No Comments
#41	<ul style="list-style-type: none"> No Comments
#42	<ul style="list-style-type: none"> No Comments
#43	<ul style="list-style-type: none"> No Comments
WPS F001	<ul style="list-style-type: none"> No Comments
WPS F004	<ul style="list-style-type: none"> Preheat and interpass temperature states "See attached report". Report is not attached



Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
Appendix B

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 Project: 00225.03.0050 DOE Atlas Project

AWS D16.1/D15.1M:2012

ANNEX D

PROCEDURE QUALIFICATION RECORD (PQR)

PROCEDURE SPECIFICATION

Material specification A572 Grade 50
 Welding process FCAW
 Manual or machine Both (Semi-Automatic)
 Position of welding Vertical
 Filler metal specification AWS A5.20
 Filler metal classification E71T-1
 Weld metal grade*
 Shielding gas CO2 Flow rate 35 cfm
 Single or multiple pass Multiple
 Single or multiple arc Single
 Welding current DCEP
 Welding progression Uphill
 Preheat temperature 70 deg.
 Postheat treatment N/A
 Welder's name Triston Mills - Clock #821
 *Applicable when filler metal has no AWS classification.

VISUAL INSPECTION

Appearance Acceptable
 Undercut NONE
 Piping porosity NONE
 Test date July 10, 2014
 Witnessed by Daniel S. Gjurich

GROOVE WELD TEST RESULTS

Tensile strength, psi
 1. (A) 78026
 2. (B) 77322
 Guided-bend tests (2 root-, 2 face-, or 4 side-bend)

Root		Face	
1. Side-Pass	1. Side-Pass	1. Side-Pass	1. Side-Pass
2. Side-Pass	2. Side-Pass	2. Side-Pass	2. Side-Pass

 Radiographic-ultrasonic examination
 RT report no. N/A
 UT report no. #256

FILLET WELD TEST RESULTS

Minimum size multiple pass	Maximum size single pass
Macroetch	
1. <u>N/A</u> 2. <u>N/A</u>	1. <u>N/A</u> 3. <u>N/A</u>
3. <u>N/A</u>	2. <u>N/A</u>

All-weld-metal tension test
 Tensile strength, psi N/A
 Yield point/strength, psi N/A
 Elongation in 2 in, % N/A
 Laboratory test no. N/A

WELDING PROCEDURE

Pass No.	Electrode Size	Electrical Characteristics		Travel Speed	Joint Detail
		Amperes	Volts		
All	1/16"	255	26	4 ipm	See Attached: Thickness of weld layers not to exceed 1/4"

We, the undersigned, certify that the statements in this record are correct and that the test welds were prepared, welded, and tested in accordance with the requirements of AWS D16.1: (2012) Railroad Welding Specification for Cars and Locomotives (year)

Procedure no. F-001 Manufacturer or Contractor Kasgro Rail Corp.
 Revision no. 3 Authorized by [Signature]
 Form D-2 Date 7-10-14



Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
Appendix B

Doc./Rev.: EIR-3021970-000
 Project: 00225.03.0050 DOE Atlas Project

ANNEX D

PROCEDURE QUALIFICATION RECORD (PQR)

PROCEDURE SPECIFICATION

Material specification A656 gr 80 to A572 gr 60
 Welding process E.C.A.W.
 Manual or machine Manual
 Position of welding 2F
 Filler metal specification A5.29
 Filler metal classification E81T1-Ni-TCU H8
 Weld metal grade N/A
 Shielding gas CO2 Flow rate 35 CFH
 Single or multiple pass Single
 Single or multiple arc Single
 Welding current Direct
 Welding progression Forehand
 Preheat temperature 250° F
 Postheat treatment None
 Welder's name RICHARD BUCCIARELLI (0798)
*Applicable when filler metal has no AWS classification.

GROOVE WELD TEST RESULTS

Tensile strength, psi
 1. N/A
 2. N/A
 Guided bend tests (2 root, 2 face, or 4 side-bend)
 Root Face
 1. N/A 1. N/A
 2. N/A 2. N/A
 Radiographic-ultrasonic examination
 RT report no. _____
 UT report no. _____

FILLET WELD TEST RESULTS

Minimum size multiple pass Maximum size single pass
 Macroetch Macroetch
 1. _____ 2. _____ 1. 250" 3. 250"
 4. _____ 2. 250"

VISUAL INSPECTION

Appearance Acceptable
 Undercut Minor
 Piping porosity None
 Test date 3/10/2008
 Witnessed by KASGRO RAIL

All-weld-metal tension test

Tensile strength, psi N/A
 Yield point/strength, psi N/A
 Elongation in 2 in., % N/A
 Laboratory test no. _____

WELDING PROCEDURE

Pass No.	Electrode Size	Welding Current		Travel Speed	Joint Detail
		Amperes	Volts		
1	1/16"	300	31	8-11 ipm	

We, the undersigned, certify that the statements in this record are correct and that the test welds were prepared, welded, and tested in accordance with the requirements of AWS D16.1, (2012) Railroad Welding Specification—Cars and Locomotives.
 (year)

Procedure no. E-003
 Revision no. 1
 Form D-2

Manufacturer or Contractor KASGRO RAIL CORPORATION
 Authorized by [Signature]
 Date 11/25/13



Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
Appendix B

Doc./Rev.: EIR-3021970-000
 Project: 00225.03.0050 DOE Atlas Project

AWS D15.1/D15.1M:2007

ANNEX D

PROCEDURE QUALIFICATION RECORD (PQR)

PROCEDURE SPECIFICATION

Material specification A572 gr 60 to A240 gr 304
 Welding process F.C.A.W.
 Manual or machine Manual
 Position of welding 1G Flat
 Filler metal specification A5.22
 Filler metal classification DW-309L
 Weld metal grade* _____
 Shielding gas CO2 Flow rate 45 CFH
 Single or multiple pass Multiple
 Single or multiple arc Single
 Welding current ICRP
 Welding progression Forehand
 Preheat temperature 50° F
 Postheat treatment None
 Welder's name MICHAEL J. PENZERRO
 *Applicable when filler metal has no AWS classification.

GROOVE WELD TEST RESULTS

Tensile strength, psi
 1. 79,000 (See attached report)
 2. 77,500 (See attached report)

Guided-bend tests (2 root-, 2 face-, or 4 side-bend)

Root		Face	
1. <u>1/32" tear</u>	1. <u>NO DEFECTS</u>	2. <u>1/16" tear</u>	2. <u>NO DEFECTS</u>

Radiographic-ultrasonic examination

RT report no. _____
 UT report no. 23

FILLET WELD TEST RESULTS

Minimum size multiple pass	Maximum size single pass
Macroetch	Macroetch
1. _____ 2. _____	1. _____ 3. _____
3. _____	2. _____

All-weld-metal tension test

Tensile strength, psi N/A
 Yield point/strength, psi N/A
 Elongation in 2 in, % N/A
 Laboratory test no. _____

VISUAL INSPECTION

Appearance Acceptable
 Undercut None
 Piping porosity None
 Test date 6/18/2008
 Witnessed by KASGRO RAIL CORP.

WELDING PROCEDURE

Pass No.	Electrode Size	Welding Current		Travel Speed	Joint Detail
		Amperes	Volts		
ALL	.062"	250	32	18 ipm	

We, the undersigned, certify that the statements in this record are correct and that the test welds were prepared, welded, and tested in accordance with the requirements of AWS D15.1, (2007) Railroad Welding Specification for Cars and Locomotives.
 (year)

Procedure no. 08KR-F1087
 Revision no. _____
 Form D-2

Manufacturer or Contractor KASGRO RAIL CORP.
 Authorized by [Signature]
 Date 6-30-08



Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
Appendix B

Doc./Rev.: EIR-3021970-000
 Project: 00225.03.0050 DOE Atlas Project

AWS D15.1/D15.1M:2012

ANNEX D

PROCEDURE QUALIFICATION RECORD (PQR)

PROCEDURE SPECIFICATION

Material specification A572 Gr. 65 to A240 Gr. 304
 Welding process FCAW
 Manual or machine Both (Semi-Automatic)
 Position of welding 2G - Horizontal
 Filler metal specification AWS A5.22
 Filler metal classification DW-309L
 Weld metal grade* N/A
 Shielding gas CO2 Flow rate 35 cfh
 Single or multiple pass Multiple
 Single or multiple arc Single
 Welding current DCEP
 Welding progression Horizontal
 Preheat temperature 70 deg.
 Postheat treatment N/A
 Welder's name Al Williams #131
 *Applicable when filler metal has no AWS classification.

VISUAL INSPECTION

Appearance Acceptable
 Undercut NONE
 Piping porosity NONE
 Test date January 14, 2015
 Witnessed by Daniel S. Gjurich

GROOVE WELD TEST RESULTS

Tensile strength, psi
 1. (1) 88,000
 2. (2) 86,000
 Guided-bend tests (2 root-, 2 face-, or 4 side-bend)

Root	Face
1. <u>No Defects - Pass</u>	1. <u>No Defects - Pass</u>
2. <u>No Defects - Pass</u>	2. <u>No Defects - Pass</u>

 Radiographic-ultrasonic examination
 RT report no. N/A
 UT report no. Lab #158009 - Report #1

FILLET WELD TEST RESULTS

Minimum size multiple pass	Maximum size single pass
Macroetch	Macroetch
1. <u>Acceptable</u>	1. <u>N/A</u>
2. <u>Acceptable</u>	2. <u>N/A</u>
3. <u>Acceptable</u>	3. <u>N/A</u>

All-weld-metal tension test

Tensile strength, psi N/A
 Yield point/strength, psi N/A
 Elongation in 2 in, % N/A
 Laboratory test no. N/A

WELDING PROCEDURE

Pass No.	Electrode Size	Electrical Characteristics		Travel Speed	Joint Detail
		Amps	Volts		
All	1/16"	255	28	11 IPM	See Attached: Thickness of weld layers not to exceed 1/4"

We, the undersigned, certify that the statements in this record are correct and that the test welds were prepared, welded, and tested in accordance with the requirements of AWS D15.1: (2012) Railroad Welding Specification for Cars and Locomotives.

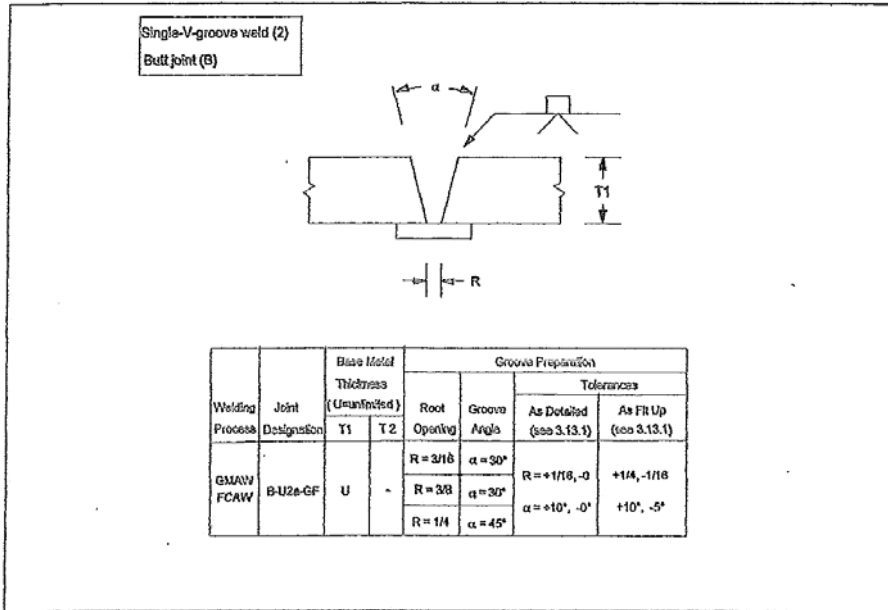
Procedure no. 15KR-F1087 Manufacturer or Contractor Kasgro Rail Corp.
 Revision no. 2 Authorized by [Signature]
 Form D-2 Date 1-14-15



Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
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Doc./Rev.: EIR-3021970-000

Project: 00225.03.0050 DOE Atlas Project



b-u2a-gf.gfl

Preheat

Less than or = to 3/4"	50 deg.
Over 3/4" thru 1-12"	150 deg.
Over 1-1/2" thru 2-1/2"	225 deg.
Over 2-1/2"	300 deg.



Orano Federal Services
**Title: Design and Prototype Fabrication of Railcars for Transport of
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Doc./Rev.: EIR-3021970-000
 Project: 00225.03.0050 DOE Atlas Project

AREVA		AREVA Federal Services LLC	
DATA TRANSMITTAL FORM			
Supplier:	KASGRO RAIL CORP., INC.	DTF No:	012A
P.O./SC No: 15C3011916		Date:	04/05/2018
Type of Submittal:	<input checked="" type="checkbox"/> First <input type="checkbox"/> Re-Submittal	SDRL List Item No:	9
Submitted for:	<input type="checkbox"/> Approval <input checked="" type="checkbox"/> Review <input type="checkbox"/> Information	Number of Copies Submitted:	1
Submitted By:	RICK FORD	Rick Ford <small>Digitally signed by Rick Ford Date: 2018.04.05 21:22:28 -0402</small>	PROJECT MANAGER
	<small>(Name)</small>	<small>(Signature)</small>	<small>(Title)</small>

ITEM NUMBER	DOCUMENT NUMBER	REVISION NUMBER	DOCUMENT DESCRIPTION	AFS DISPOSITION
1	KAS 030		PQR 09KRC-1092	<input type="checkbox"/> AP <input type="checkbox"/> AWC <input checked="" type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA <input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA <input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA <input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA <input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA <input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA <input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA <input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA

Comments: No comments	Technical Reviewer (i.e., RE, PTL, SME, QA, etc.) KLEIN Slade KLEIN Slade <small>2018.04.10 10:24:52 -0700</small> Date: 4/10/2018
--------------------------	--

AFS DISPOSITION CODES AND DEFINITIONS			
AP	Approved	Work may proceed.	Resubmittal is not required
AWC	Approved with Comment	Work may proceed; comments provided for Supplier's consideration only.	Resubmittal is not required
REV	Reviewed	Work may proceed; comments provided for Supplier's consideration only.	Resubmittal is not required
RWC	Reviewed with Comment	Work may proceed; subject to incorporation and compliance w/ Buyer comments.	Correct and resubmit
DS	Disapproved	Work may <u>not</u> proceed.	Correct and resubmit
RSA	Receipt Submittal Acknowledged	No other action required.	

If, in the judgment of the Supplier, the incorporation of AFS' comments will result in a change to the Purchase Order/Subcontract, work shall not proceed and the Supplier shall immediately provide a written notice to AFS' C&P Representative describing the change.

Project Manager (PM) / Engineering Manager (EM) or Designated Individual (DI) Approval 	<small>Digitally signed by DENTON Mark DN: c=AREVA GROUP, 2.5.4.49=187A37C1280410E2D2170D, cn=DENTON Mark Date: 2018.04.10 13:46:32 -0400</small>	Date: 04/10/2018
--	---	------------------

AFS-EN-FRM-023 Rev 01 (Effective August 18, 2014)
 Refer to AFS-EN-PRC-012



Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
Appendix B

Doc./Rev.: EIR-3021970-000
 Project: 00225.03.0050 DOE Atlas Project

	AREVA Federal Services LLC	
	SUPPLIER DOCUMENT SUBMITTAL REVIEW	
Supplier / PO No.:	Kasgro Rail / 15C3011916	DTF No. / Rev: 012A
Charge No:	00225.03.0050.02.00001	Due Date: 4/19/2018
Document(s):	See DTF No.: 012A	
REVIEW INSTRUCTIONS: (List Supplier Doc. No. and Rev. AFS Spec and Dwg. Codes, Stds, etc.)		
PE	Slade Klein	
REVIEWERS	Slade Klein, Bernie Counterman	
QA	Bernie Counterman	
Technical Review		
Comments/Markup Attached Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Technical Reviewer Comments:		
No comments.		
Technical Reviewer(s) (Sign/Date): KLEIN Slade		KLEIN Slade 2018.04.10 05:22:50 -07'00'
Quality Assurance Review (As Applicable)		
Comments/Markup Attached Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Technical Reviewer Comments:		
No Comments		
QA Reviewer(s) (Sign/Date): Bernard Counterman		Digitally signed by Bernard Counterman Date: 2018.04.10 08:02:44 -07'00'
COMMENT DISPOSITION (If Applicable. Attached further comments and disposition correspondence as necessary)		



Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
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 Project: 00225.03.0050 DOE Atlas Project

ANNEX D

PROCEDURE QUALIFICATION RECORD (PQR)

PROCEDURE SPECIFICATION

Material specification A514M to A572 gr 60
 Welding process Flux Cored Arc Welding
 Manual or machine Manual
 Position of welding Vertical
 Filler metal specification A5.29
 Filler metal classification E11T1-K3
 Weld metal grade* _____
 Shielding gas 75 Ar 25CO₂ Flow rate 40 CFH
 Single or multiple pass Multiple
 Single or multiple arc Single
 Welding current Direct (DCRP)
 Welding progression Uphill
 Preheat temperature 125° F
 Postheat treatment None
 Welder's name ALBIN WILLIAMS 7875
 *Applicable when filler metal has no AWS classification.

VISUAL INSPECTION

Appearance ACCEPTABLE
 Undercut None
 Piping porosity None
 Test date _____
 Witnessed by _____

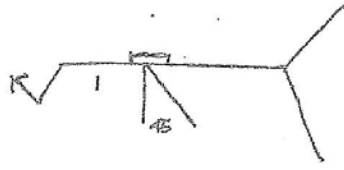
GROOVE WELD TEST RESULTS

Tensile strength, psi
 1. See attached report
 2. _____
 Guided-bend tests (2 root, 2 face-, or 4 side-bend)
 Root Face
 1. SIDE - NO DEFECTS 1. SIDE - NO DEFECTS
 2. SIDE - NO DEFECTS 2. SIDE - NO DEFECTS
 Radiographic-ultrasonic examination
 RT report no. _____
 UT report no. See attached report #F3517

FILLET WELD TEST RESULTS

Minimum size multiple pass Maximum size single pass
 Macroetch Macroetch
 1. _____ 2. _____ 1. _____ 3. _____
 3. _____ 2. _____
 All-weld-metal tension test
 Tensile strength, psi _____
 Yield point/strength, psi _____
 Elongation in 2 in, % _____
 Laboratory test no. _____

WELDING PROCEDURE

Pass No.	Electrode Size	Welding Current		Travel Speed	Joint Detail
		Amperes	Volts		
ALL	.062"	203	27	8-11 ipm	

We, the undersigned, certify that the statements in this record are correct and that the test welds were prepared, welded, and tested in accordance with the requirements of AWS D15.1, (2012) Railroad Welding Specification for Cars and Locomotives. (year)

Procedure no. 09XRC-1092
 Revision no. 1
 Form D-2

Manufacturer or Contractor KASPRO RAIL CORPORATION
 Authorized by [Signature]
 Date 11/25/13



Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
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 Project: 00225.03.0050 DOE Atlas Project

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ULTRASONIC INSPECTION AWS REPORT

Kasgro Rail Inc.
 121 Rundle Rd.
 New Castle, PA 16104

Report #: _____ Page _____ of _____
 P.O. #: K08-0315
 Work Order #: F3517
 Project: Mitsubishi

Date: Dec. 22, 2008
 Description: UT weld qualification plate (A514 - A572 Gd.60)

Client Order #:	Length: 15"	Ultrasonic Unit: KP-MS 350
Test Method Standard: AWS 15.1	Thickness: 1"	Serial #:
Acceptance Standard: AWS 15.1	Location: Kasgro shop #1	

Weld Identification	Falls Code	Indication Number	From Face	Decibels			Discontinuity Distance		
				Indication Level	Attenuation Factor	Indication Length	Length	Depth From "A"	From "Y"
R-7875	X		A	52					

Complant: Sonotek	Frequency: 2.25 MHz
Calibration Blocks: DSC	Surface Condition: flush weld.
Technician: R. Nichol	Level: II
Interpreter: R. Nichol	Level: II

Reviewed by: _____ Date: _____
 was performed in accordance with accepted industry practice as well as the test methods referenced. This test report applies only to those items tested. This report shall not be used except in full without the written consent of Non-Destructive Testing Group, Inc.

Quality by Integrity and Knowledge
 DOMESTIC & INTERNATIONAL LOCATIONS

NDTG-0004
 August 20, 2003
 mbc



Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
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 Project: 00225.03.0050 DOE Atlas Project

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Spectrochemical Testing, Inc.
 179 State Street • Struthers, Ohio 44471 • (330) 755-7373

January 5, 2009

Test Report:

Kail Testing Laboratories, Inc.
 R.D. #5 Box 419
 New Castle, PA 16105

Phone (724) 946-3104
 Fax (724) 946-3104

Attn: Mr. Paul Kail

(2) Welded steel test specimens of grade A514-TI to A572 Grade 60— sample identified as A and B – rec'd 12-23-08 for mechanical testing per AWS D 15.1M2007 Railroad Specifications for Kasgro Rail.

Page 1 of 1

Welder: Albin Williams, #133
 Base Metal: A514-TI to A572 Grade 60
 Filler: AWS A5.29; E111TI-K3
 Filler Size: .0625"
 Position: 3G Vertical
 Processes: Flux Cored Arc Welding
 Gas: 75 % Argon, 25% CO² at 40 CFH

Mechanical Test Results: (ASTM A 370-08a)

Job #	Sample #	Outside Diameter Inches	Area Sq. In.	Ultimate Load lbs	Ultimate Stress psi	Type & Location of Failure
63698	A	.502	.1979	19,620	99,000	Ductile / Base Metal
63699	B	.504	.1995	19,630	98,500	Ductile / Base Metal

Frank L. Galletta
 Frank L. Galletta, Mgr.

Q9A



The results reported are limited to the sample tested and constitute data only with respect to the sample tested. Information and data in this report are correct and reliable to the best of our knowledge; however, results are not guaranteed and no responsibility is assumed. This report may not be reproduced, copied, in full, modified, or otherwise used without the written permission of Spectrochemical Testing, Inc.



Orano Federal Services
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 Project: 00225.03.0050 DOE Atlas Project

Appendix B.4.2 – Weld Procedure Specification (WPS) Records

	AREVA Federal Services LLC			
DATA TRANSMITTAL FORM				
Supplier:	KASGRO RAIL CORP., INC.	DTF No:	012	
P.O./SC No:	15C3011916	Date:	03/20/2018	
Type of Submittal:	<input checked="" type="checkbox"/> First <input type="checkbox"/> Re-Submittal	SDRL List Item No:	9	
Submitted for:	<input type="checkbox"/> Approval <input checked="" type="checkbox"/> Review <input type="checkbox"/> Information	Number of Copies Submitted: 1		
Submitted By:	RICK FORD (Name)	 (Signature)	PROJECT MANAGER (Title)	
ITEM NUMBER	DOCUMENT NUMBER	REVISION NUMBER	DOCUMENT DESCRIPTION	AFS DISPOSITION
1	KAS 027		WPS F001, REV 3	<input type="checkbox"/> AP <input type="checkbox"/> AWC <input checked="" type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
2	KAS 028		WPS F002, REV 5	<input type="checkbox"/> AP <input type="checkbox"/> AWC <input checked="" type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
3	KAS 029		WPS 08KR-F1087, REV. 2	<input type="checkbox"/> AP <input type="checkbox"/> AWC <input checked="" type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
4	KAS 030		WPS F004, REV. 1	<input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input checked="" type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
5	KAS 031		WPS KRC-F-004A-514	<input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input checked="" type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
6	KAS 032		WPS F003, REV. 1	<input type="checkbox"/> AP <input type="checkbox"/> AWC <input checked="" type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
7	KAS 033		WPS 15KR F1087, REV. 2	<input type="checkbox"/> AP <input type="checkbox"/> AWC <input checked="" type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
				<input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
				<input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
Comments:			Technical Reviewer (i.e., RE, PTL, SME, QA, etc.)	
KAS 030 is an incomplete duplicate of KAS 031. KAS 030 will be disregarded. Re-submit KAS 030 to include PQR 09KRC-1092.			KLEIN Slade <small>digital signature from slade.klein@areva.com</small>	
			Date 4/5/2018	
AFS DISPOSITION CODES AND DEFINITIONS				
AP	Approved	Work may proceed.	Resubmittal is not required	
AWC	Approved with Comment	Work may proceed; comments provided for Supplier's consideration only.	Resubmittal is not required	
REV	Reviewed	Work may proceed; comments provided for Supplier's consideration only.	Resubmittal is not required	
RWC	Reviewed with Comment	Work may proceed; subject to incorporation and compliance w/ Buyer comments.	Correct and resubmit	
DS	Disapproved	Work may <u>not</u> proceed.	Correct and resubmit	
RSA	Receipt Submittal Acknowledged	No other action required.		
If, in the judgment of the Supplier, the incorporation of AFS' comments will result in a change to the Purchase Order/Subcontract, work shall not proceed and the Supplier shall immediately provide a written notice to AFS' C&P Representative describing the change.				
Project Manager (PM) / Engineering Manager (EM) or Designated Individual (DI) Approval			Date: 04/05/2018	

AFS-EN-FRM-023 Rev 01 (Effective August 18, 2014)
 Refer to AFS-EN-PRC-012



Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
Appendix B

Doc./Rev.: EIR-3021970-000
 Project: 00225.03.0050 DOE Atlas Project

	AREVA Federal Services LLC	
	SUPPLIER DOCUMENT SUBMITTAL REVIEW	
Supplier / PO No.:	Kasgro Rail / 15C3011916	DTF No. / Rev: 012
Charge No:	00225.03.0050.02.00001	Due Date: 3/20/2018
Document(s):	See DTF No.: 012	
REVIEW INSTRUCTIONS: (List Supplier Doc. No. and Rev. AFS Spec and Dwg. Codes, Stds, etc.)		
PE	Slade Klein	
REVIEWERS	Slade Klein, Bernie Counterman	
QA	Bernie Counterman	
Technical Review		
Comments/Markup Attached Yes <input type="checkbox"/> No <input type="checkbox"/>		
Technical Reviewer Comments:		
KAS 30 and KAS 31 are duplicates.		
Technical Reviewer(s) (Sign/Date): KLEIN Slade		Digitally signed by KLEIN Slade Date: 2018.04.05 07:53:47 -07'00'
Quality Assurance Review (As Applicable)		
Comments/Markup Attached Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Technical Reviewer Comments:		
delete KAS 030 - incomplete and all required information is contained in KAS 031. KAS 031 - need PQR 09KRC-1092		
QA Reviewer(s) (Sign/Date): Bernard Counterman		Digitally signed by Bernard Counterman Date: 2018.04.04 11:14:13 -07'00'
COMMENT DISPOSITION (If Applicable. Attached further comments and disposition correspondence as necessary)		



Orano Federal Services
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Appendix B

Doc./Rev.: EIR-3021970-000
 Project: 00225.03.0050 DOE Atlas Project

ANNEX D

TEST QUALIFIED WELDING PROCEDURE SPECIFICATION (WPS)

Qualified by procedure qualification no. F-001
 Material specification Class 182 (A387, A572/grd 2&60, A500, A600/gr B, A210/gr WCC, etc)
 Welding process FCAW
 Manual or machine Both
 Position of welding Flat, Horizontal, Vertical, Overhead
 Filler metal specification A6.20
 Filler metal classification E71T-1
 Flux N/A
 Weld metal grade N/A
 Shielding gas CO2 Flow rate 35-60 cfm
 Single or multiple pass Both
 Single or multiple arc Single
 Welding current Direct
 Polarity DCEP
 Welding progression Vertical (30) - Uphill
 Root treatment Clean to sound metal
 Preheat and interpass temperature See attached report
 Postweld Heat Treatment None
 Applicable only when filler metal has no AWS classification.

WELDING PROCEDURE

Pass No.	Electrode Size	Welding Current		Travel Speed	Joint Detail
		Amperes	Volts		
As required					See attached reports Thickness of weld layers not to exceed 1/4"
F 1/8	3/16"	180-280	27-32	8-13 ipm	
	1/16"	200-400	25-31	8-13 ipm	
	3/32"	250-400	17-32	6-13 ipm	
H-20	1/16"	200-400	25-31	8-13 ipm	
	3/32"	250-400	17-32	6-13 ipm	
V-30	3/16"	160-210	24-39	4-9 ipm	
	1/16"	180-250	25-30	6-11 ipm	
O-40	3/16"	180-240	24-29	8-13 ipm	
	1/16"	200-270	28-30	8-13 ipm	

This procedure may vary due to fabrication sequences; fitup; pass size; etc., within the limitation of variables given in AWS D16.1, (2012) Railroad Welding Specification for Cars and Locomotives, (year)

Procedure no. F-001 Manufacturer or Contractor KANSAS RAIL CORP.
 Revision no. 3 Authorized by [Signature]
 Form 0-3 Date 11/25/13



Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
Appendix B

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 Project: 00225.03.0050 DOE Atlas Project

ANNEX D

AWS D15.1/D15.1M:2012

PREQUALIFIED WELDING PROCEDURE SPECIFICATION (WPS)

Material specification A 572 Grade 50 and A 572 Grade 60
 Welding process F.C.A.W.
 Manual or machine Manual
 Position of welding Flat, Horizontal, Vertical and Overhead
 Filler metal specification A5.29
 Filler metal classification E81T-1-Ni1C-JH8
 Flux N/A
 Weld metal grade* N/A
 Shielding gas CO2 Flow rate 35 - 50 CFH
 Single or multiple pass Single/Multiple
 Single or multiple arc Single
 Welding current Direct
 Polarity Reverse
 Welding progression Vertical (3G)- Uphill
 Root treatment Clean to sound metal
 Preheat and interpass temperature See attached report
 Postweld Heat Treatment None None X
 *Applicable only when filler metal has no AWS classification.

WELDING PROCEDURE

Pass No.	Electrode Size	Electrical Characteristics		Travel Speed	Joint Detail
		Amperes	Volts		
As	Required				*See Attached Report Thickness of weld layers not to exceed 1/4"
F-1G	1/16"	200-400	25-31	8-13 IPM	
H-2G	1/16"	180-250	24-39	8-13 IPM	
V-3G	1/16"	180-250	24-39	6-11 IPM	
O-4G	1/16"	200-270	26-30	8-13 IPM	

This procedure may vary due to fabrication sequence, fit-up, pass size, etc., within the limitation of variables given in AWS D15.1: (2012) Railroad Welding Specification for Cars and Locomotives.
 (year)

Procedure no. F-002
 Revision no. 5
 Form D-1

Manufacturer or Contractor Kasgro Rail Corp.
 Authorized by [Signature]
 Date 11-2-17



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-AWS D15.1: 2012

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RAILROAD WELDING SPECIFICATION

PREQUALIFIED WELDING PROCEDURE SPECIFICATION (WPS) F.C.A.W.

Notes*

1. Preheat and interpass temperatures:
Less than or equal to $3/4''$ - 50° F minimum
Over $3/4''$ thru $1\frac{1}{8}''$ - 150° F minimum
Over $1\frac{1}{8}''$ thru $2\frac{1}{8}''$ - 225° F minimum
Over $2\frac{1}{8}''$ - 300° F minimum
2. When the width of the layer of groove weld in the flat, horizontal or overhead position is $5/8''$ or greater, a split layer technique is used for the next layer. In vertical, a split layer is used when the width of the layer exceeds $1''$.

Orano Federal Services
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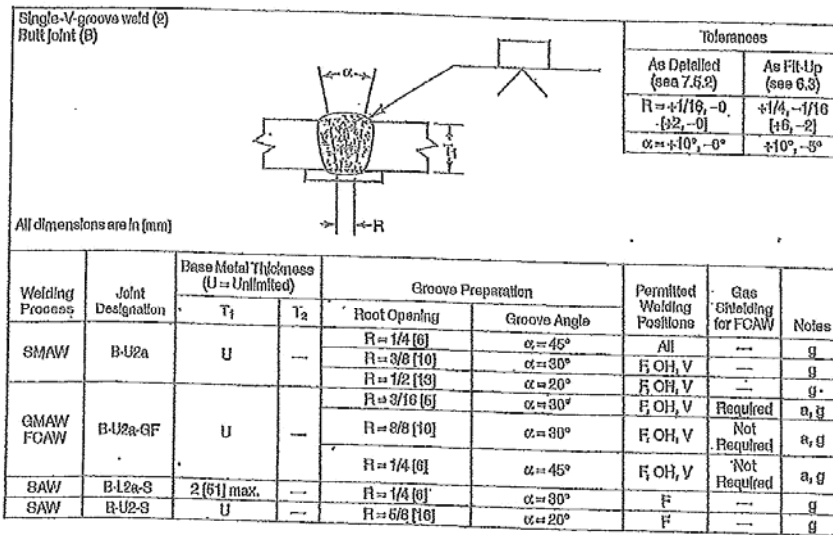


Figure 7.1B—Prequalified Complete Joint Penetration (CJP) Groove Welded Joint Details



Orano Federal Services
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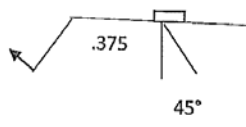
ANNEX D

TEST QUALIFIED WELDING PROCEDURE SPECIFICATIONS (WPS)

AWS D15.1/D15.1M:2012

Qualified by procedure qualification no. 08KRF-1087-6/30/08/ AND 15KR-F1087-1/14/15.
 Material specification A572 GRADE 60 TO A240 GRADE 304
 Welding process E,C,A,W.
 Manual or machine Manual
 Position of welding 1G Flat
 Filler metal specification 5.22
 Filler metal classification DW-309L
 Flux _____
 Weld metal grade* _____
 Shielding gas CO2 Flow rate 40 – 50 CFH
 Single or multiple pass Multiple
 Single or multiple arc Single
 Welding current DCEP
 Polarity Reverse
 Welding progression Forehand
 Root treatment Clean to sound metal
 Preheat and interpass temperature 50°F
 Post weld Heat Treatment None None x
 *Applicable only when filler metal has no aws classification.

WELDING PROCEDURE

Pass No.	Electrode Size	Welding Current		Travel Speed	Joint Detail
		Amperes	Volts		
ALL	.062"	240-280	29-33	15-18 imp	

This procedure may vary due to fabrication sequence, fit-up, pass size, etc., within the limitation of variables given in AWS D15.1, [2012] Railroad Welding Specification for Cars and Locomotives.
 (Year)

Procedure no. 08KR-F1087 Manufacturer or Contractor KASGRO RAIL CORP.
 Revision no. 2 Authorized by [Signature]
 Date 07/27/15



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TEST QUALIFIED WELDING PROCEDURE SPECIFICATION (WPS)

Qualified by procedure qualification # 09KRC-1092
 Material specification A514T1 to A572 Grade 60
 Welding process F.C.A.W.
 Manual or machine Manual
 Position of welding Vertical
 Filler metal specification A5.29
 Filler metal classification E111T1-K3
 Flux _____
 Weld metal grade* _____
 Shielding gas 75% Argon 25% CO2 Flow rate 40 CFH
 Single or multiple pass Multiple
 Single or multiple arc Single
 Welding current Direct
 Polarity Reverse
 Welding progression Uphill
 Root treatment Clean to sound metal
 Preheat and interpass temperature See attached report
 Postweld Heat Treatment None

*Applicable only when filler metal has no AWS classification.

WELDING PROCEDURE

Pass no.	Electrode size	Welding current		Travel speed	Joint detail
		Amps	Volts		
ALL	.062"	190-300	27-30	8-11 ipm	

This procedure may vary due to fabrication sequence, fit-up, pass size, etc., within the limitation of variables given in AWS D15.1, (2012 year).

Procedure no. R-004 Manufacturer or contractor KASCRO RAIL CORP.
 Revision no. 1 Authorized by [Signature]
 Form D-3 Date 11/25/13



Orano Federal Services
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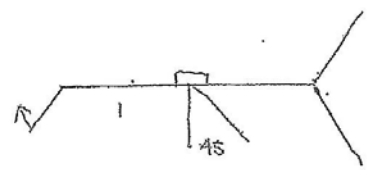
Doc./Rev.: EIR-3021970-000
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TEST QUALIFIED WELDING PROCEDURE SPECIFICATION (WPS)

Qualified by procedure qualification # 09KRC-1092
 Material specification A514T1 to A572 Grade 60
 Welding process F.C.A.W.
 Manual or machine Manual
 Position of welding Vertical
 Filler metal specification A5.29
 Filler metal classification E111T1-K3
 Flux _____
 Weld metal grade* _____
 Shielding gas 75% Argon 25% CO2 Flow rate 40 CFH
 Single or multiple pass Multiple
 Single or multiple arc Single
 Welding current Direct
 Polarity Reverse
 Welding progression Uphill
 Root treatment Clean to sound metal
 Preheat and interpass temperature See attached report
 Postweld Heat Treatment None

*Applicable only when filler metal has no AWS classification.

WELDING PROCEDURE

Pass no.	Electrode size	Welding current		Travel speed	Joint detail
		Amperes	Volts		
ALL	.062"	190-300	27-30	8-11 ipm	

This procedure may vary due to fabrication sequence, fit-up, pass size, etc., within the limitation of variables given in AWS D15.1, (2012 year).

Procedure no. E-004 Manufacturer or contractor KASCRO RAIL CORP.
 Revision no. 1 Authorized by [Signature]
 Form D-3 Date 11/25/13



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RAILROAD WELDING SPECIFICATION

PREQUALIFIED WELDING PROCEDURE SPECIFICATION (WPS) F.C.A.W.

Notes*

1. Preheat and interpass temperatures:
Less than or equal to $3/4$ " - 50° F minimum
Over $3/4$ " thru $1\frac{1}{2}$ " - 150° F minimum
Over $1\frac{1}{2}$ " thru $2\frac{1}{2}$ " - 225° F minimum
Over $2\frac{1}{2}$ " - 300° F minimum
2. When the width of the layer of groove weld in the flat, horizontal or overhead position is $5/8$ " or greater, a split layer technique is used for the next layer. In vertical, a split layer is used when the width of the layer exceeds 1".



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TEST QUALIFIED WELDING PROCEDURE SPECIFICATION (WPS)

Material specification A572 grade 60 to A656 grade 80
 Welding process F.C.A.M.
 Manual or machine Manual
 Position of welding Flat, Horizontal, Vertical, Overhead
 Filler metal specification A5.29
 Filler metal classification E81T1-NiCu 88
 Flux N/A
 Weld metal grade? N/A
 Shielding gas CO2 Flow rate 35 to 50 CFH
 Single or multiple pass Single/Multiple
 Single or multiple arc Single
 Welding current Direct
 Polarity Reverse
 Welding progression Vertical - Uphill
 Root treatment Clean to sound metal
 Preheat and Interpass temperature 250° F
 Postweld Heat Treatment None None X
 *Applicable only when filler metal has no AWS classification.

WELDING PROCEDURE

Pass no.	Electrode size	Welding current		Travel speed	Joint detail
		Amperes	Volts		
ALL	1/16"	See attached report		8-11 ipm	

This procedure may vary due to fabrication sequence, fit-up, pass size, etc., within the limitation of variables given in AWS D16.1, (2012).

Procedure no. E-003 Manufacturer or contractor Kasco Rail Corp
 Revision no. 1 Authorized by [Signature]
 Form D-1 Date 11/25/13



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TEST QUALIFIED WELDING PROCEDURE SPECIFICATION (WPS)

Material specification A572 grade 60 to A556 grade 80
 Welding process F.C.A.W.
 Manual or machine Manual
 Position of welding Flat, Horizontal, Vertical, Overhead
 Filler metal specification A5.29
 Filler metal classification E81T1-NiCr H8
 Flux N/A
 Weld metal grade N/A
 Shielding gas CO2
 Single or multiple pass Single/Multiple Flow rate 35 to 50 CFH
 Single or multiple arc Single
 Welding current Direct
 Polarity Reverse
 Welding progression Vertical - Uphill
 Root treatment Clean to sound metal
 Preheat and Interpass temperature 250° F
 Postweld Heat Treatment None None X
 *Applicable only when filler metal has no AWS classification.

WELDING PROCEDURE

Pass no.	Electrode size	Welding current		Travel speed	Joint detail
		Amps	Volts		
ALL	1/16"	See attached report		8-11 ipm	

This procedure may vary due to fabrication sequence, fit-up, pass size, etc., within the limitation of variables given in AWS D18.1, (2012) Year.

Procedure no. E-003 Manufacturer or contractor Baspro Rail Corp
 Revision no. _____ Authorized by [Signature]
 Form D-1 Date 11/25/13



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AWS D15.1/D15.1M:2012

TEST QUALIFIED WELDING PROCEDURE SPECIFICATION (WPS)

Qualified by procedure qualification no. 15KR-F1087
 Material specification A572 Gr. 65 to A240 Gr. 304
 Welding process FCAW
 Manual or machine Both (Semi-Automatic)
 Position of welding Flat, Horizontal,
 Filler metal specification AWS A5.22
 Filler metal classification DW-309L
 Flux N/A
 Weld metal grade* N/A
 Shielding gas CO2 - Welding Grade Flow rate 30 to 50
 Single or multiple pass Multiple
 Single or multiple arc DCEP
 Welding current DCEP
 Polarity DCEP
 Welding progression N/A
 Root treatment Grind, chip and wire brush
 Preheat and interpass temperature See Attached
 Postweld Heat Treatment N/A
 *Applicable only when filler metal has no AWS classification.

WELDING PROCEDURE

Pass No.	Electrode Size	Electrical Characteristics		Travel Speed	Joint Detail
		Amperes	Volts		
All	1/16"	229-281	26-30	Various	See Attached: Thickness of weld layers not to exceed 1/4"

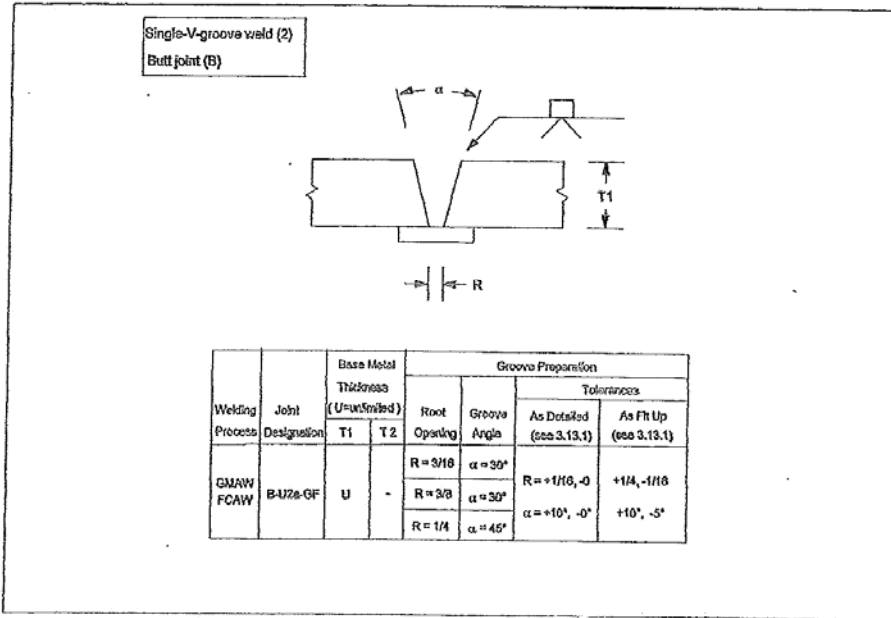
This procedure may vary due to fabrication sequence, fit-up, pass size, etc., within the limitation of variables given in AWS D15.1: (2012) Railroad Welding Specification for Cars and Locomotives.
 (year)

Procedure no. 15KR-F1087 Manufacturer or Contractor Kasgro Rail Car
 Revision no. 2 Authorized by [Signature]
 Form D-3 Date 1-14-15

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b-u2a-gf.gfl

Preheat

Less than or = to 3/4"	50 deg.
Over 3/4" thru 1-1/2"	150 deg.
Over 1-1/2" thru 2-1/2"	225 deg.
Over 2-1/2"	300 deg.



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Appendix B.4.3 – Kasgro Welder Qualifications Records

	AREVA Federal Services LLC		
DATA TRANSMITTAL FORM			
Supplier:	KASGRO RAIL CORP., INC.	DTF No:	018
P.O./SC No:	15C3011916	Date:	03/27/18
Type of Submittal:	<input checked="" type="checkbox"/> First <input type="checkbox"/> Re-Submittal	SDRL List Item No:	20
Submitted for:	<input checked="" type="checkbox"/> Approval <input type="checkbox"/> Review <input type="checkbox"/> Information	Number of Copies Submitted:	1
Submitted By:	RICK FORD	Rick Ford	PROJECT MANAGER
	(Name)	(Signature)	(Title)

ITEM NUMBER	DOCUMENT NUMBER	REVISION NUMBER	DOCUMENT DESCRIPTION	AFS DISPOSITION
1	KAS W1		Clock #157 Adam Durst Welding Qualifications	<input checked="" type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
2	KAS W2		Clock #131 Albin Williams Welding Qualifications	<input checked="" type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
3	KAS W3		Clock #819 Bill Flory Welding Qualifications	<input checked="" type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
4	KAS W4		Clock #837 Bret Shepard Welding Qualifications	<input checked="" type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
5	KAS W5		Clock #109 Charles Klutnski Welding Qualifications	<input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input checked="" type="checkbox"/> DS <input type="checkbox"/> RSA
6	KAS W6		Clock #822 Charles Spaulding Welding Qualifications	<input checked="" type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
7	KAS W7		Clock #15 Darryl Beachem Welding Qualifications	<input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input checked="" type="checkbox"/> DS <input type="checkbox"/> RSA
8	KAS W8		Clock #817 Donald Keller Welding Qualifications	<input checked="" type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
9	KAS W9		Clock #825 George Sepesie Welding Qualifications	<input type="checkbox"/> AP <input checked="" type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA

Comments: Please see comments on DTF-018 FRM-026. Re-submit W5 and W7. For W9, George Sepesie please provide ID # clarification.	Technical Reviewer (i.e., RE, PTL, SME, QA, etc.) KLEIN Slade 2018.04.10 07:01:23 -0700 Date: 4/10/2018
--	---

AFS DISPOSITION CODES AND DEFINITIONS			
AP	Approved	Work may proceed.	Resubmittal is not required
AWC	Approved with Comment	Work may proceed; comments provided for Supplier's consideration only.	Resubmittal is not required
REV	Reviewed	Work may proceed; comments provided for Supplier's consideration only.	Resubmittal is not required
RWC	Reviewed with Comment	Work may proceed; subject to incorporation and compliance w/ Buyer comments.	Correct and resubmit
DS	Disapproved	Work may <u>not</u> proceed.	Correct and resubmit
RSA	Receipt Submittal Acknowledged	No other action required.	

If, in the judgment of the Supplier, the incorporation of AFS' comments will result in a change to the Purchase Order/Subcontract, work shall not proceed and the Supplier shall immediately provide a written notice to AFS' C&P Representative describing the change.

Project Manager (PM) / Engineering Manager (EM) or Designated Individual (DI) Approval 	Digitally signed by Mark A. Ginter DN: cn=MARK A. GINTER, o=ORANO FEDERAL SERVICES, ou=ORANO FEDERAL SERVICES, email=mark.ginter@orano.com, c=US Date: 2018.04.10 15:22:50 -0400 Date: 04/10/2018
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AFS-EN-FRM-023 Rev 01 (Effective August 18, 2014)
 Refer to AFS-EN-PRC-012



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	AREVA Federal Services LLC	
	SUPPLIER DOCUMENT SUBMITTAL REVIEW	
Supplier / PO No.:	Kasgro Rail / 15C3011916	DTF No. / Rev: 018
Charge No:	00225.03.0050.02.00001	Due Date: 4/10/2018
Document(s):	See DTF No.: 018	
REVIEW INSTRUCTIONS: (List Supplier Doc. No. and Rev. AFS Spec and Dwg. Codes, Stds, etc.)		
PE	Slade Klein	
REVIEWERS	Slade Klein, Bernie Counterman	
QA	Bernie Counterman	
Technical Review		
Comments/Markup Attached Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Technical Reviewer Comments:		
No additional comments.		
Technical Reviewer(s) (Sign/Date): KLEIN Slade		KLEIN Slade 2018.04.10 05:01:37 -07'00'
Quality Assurance Review (As Applicable)		
Comments/Markup Attached Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Technical Reviewer Comments:		
<ol style="list-style-type: none"> 1. Charles Kulinski - 4G Groove weld had 1-face and 1-root bend. Should be 2 side bends. 2. Darryl Beachem - qualification for .375 and 3G were performed for Miner Rail Services. Need qualifications to Kasgro. (Ref. D15.1, Section 9.4 Qualification Responsibility). 4G Groove weld had 1-face and 1-root bend. Should be 2 side bends. 3. George Sepesie - qualification for 1G and 3G use ID #7031. Qualification for 4G uses ID #631. 		
QA Reviewer(s) (Sign/Date): Bernard Counterman		Digitally signed by Bernard Counterman Date: 2018.04.04 14:18:14 -07'00'
COMMENT DISPOSITION (If Applicable. Attached further comments and disposition correspondence as necessary)		



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WELDER AND WELDING OPERATOR QUALIFICATION RECORD

Welder or welding operators name ADAM F. DURSI Identification no. 157
 Welding process A.C.A.M. Manual Semiautomatic Machine
 Position 3H Vertical Up
 (Flat, horizontal, overhead or vertical — if vertical, state whether upward or downward)
 In accordance with procedure specification no. PS-001 or no. 01B
 Material specification A-36
 Diameter and wall thickness (if pipe) — otherwise, joint thickness: 1.0"
 In cross range this qualifies UNLIMITED

FILLER METAL

Specification no. 5.20 Classification F71T-1 F no. 6
 Describe filler metal (if not covered by AWS specification) _____
 Is backing strip used? Yes
 Filler metal diameter and trade name 1/2.5" Lincoln Flux for submerged arc or gas for gas metal arc or flux
 covered arc welding 100% CO2

VISUAL INSPECTION

Appearance Satisfactory Undercut None Pitting porosity None

Guided Bend Test Results

Type	Result	Type	Result
SIDE BEND	NO DEFECTS		
SIDE BEND	NO DEFECTS		

Test conducted by KATI TESTING LABORATORY Laboratory test no. 99V30 1961
 and [Signature] Test date 12/10/99

Fillet Test Results

Appearance _____ Fillet size _____
 Fracture test (not bend or lap) _____ Marbetch _____
 (Describe the location, nature, and size of any crack or tearing of the specimen.)
 Test conducted by _____ Laboratory test no. _____
 and _____ Test date _____

RADIOGRAPHIC TEST RESULTS

Film Identification	Results	Remarks	Film Identification	Results	Remarks

Test witnessed by _____ Test no. _____
 per _____

We, the undersigned, certify that the statements in this record are correct and that the results were prepared and tested in accordance with the requirements of the American Welding Society AWS D 9.1, (____ 99____) year.

Manufacturer or contractor KASPRO RAIL CORP.
 Authorized by [Signature]
 Date 12-10-99

FORM B-4



Orano Federal Services
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Date of Qualification

9/11/2000

Date of Expiration

INDEFINITE
 AS PER CODE

Lab. No. 20543 2047

Paul J. Kail
 Authorized Signatory



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WELDER AND WELDING OPERATOR QUALIFICATION TEST RECORD

Welder or welding operator's name ADAM DUBST Identification no. 157
 Welding process E.C.A.N. Manual Semiautomatic Machine
 Position 4C Overhead Groove Weld
 (Flat, horizontal, overhead or vertical - If vertical, state whether upward or downward)
 In accordance with procedure specification no. Prequalified joint fig no. C18
 Material specification A-36
 Diameter and wall thickness (if pipe) - otherwise, joint thickness 1.0"
 Thickness range this qualifies UNLIMITED

FILLER METAL

Specification no. 5.20 Classification E71T-1 F no. 6
 Describe filler metal (if not covered by AWS specification) _____
 Is backing strip used? Yes
 Filler metal diameter and trade name 1/16" Lincoln Flux for submerged arc or gas for gas metal arc or flux cored arc welding 100% CO2

VISUAL INSPECTION

Appearance Satisfactory Undercut None Flipping porosity None

Guided Bent Test Results

Type	Result	Type	Result
SIDE BEND	NO DEFECTS		
SIDE BEND	NO DEFECTS		

Test conducted by KATI TESTING LABORATORY Laboratory test no. 20845-2047
 per [Signature] Test date 9/11/2000

Fillet Test Results

Appearance _____ Fillet size _____
 Fracture test root penetration _____ Marcoetch _____
 (Describe the location, nature, and size of any crack or tearing of the specimen.)
 Test conducted by _____ Laboratory test no. _____
 per _____ Test date _____

RADIOGRAPHIC TEST RESULTS

Film identification	Results	Remarks	Film identification	Results	Remarks

Test witnessed by _____ Test no. _____
 per _____

We, the undersigned, certify that the statements in this record are correct and that the welds were prepared and tested in accordance with the requirements of the American Welding Society AWS D15.1, (93) year.

Manufacturer or contractor KASCDO RAIL CORP.
 Authorized by [Signature]
 Date 9/1/00

Form D-4



Orano Federal Services
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QW-484 SUGGESTED FORMAT FOR WELDER/WELDING OPERATOR
PERFORMANCE QUALIFICATIONS (WPO)
 (See QW-301, Section IX, ASME Boiler and Pressure Vessel Code)

Welder's name: ADAM LORETT _____ Clock number _____ Stamp no. 157 _____
 Welding process(es) used: S.M.A.W. _____ Type Manual _____
 Identification of WPS followed by welder during welding of test coupon _____
 Base material(s) welded: SA106-B to SA106-B _____ Thickness: 432" _____

Manual or Semiautomatic Variables for Each Process (QW-380)

Backing (metal, weld metal, welded from both sides, flux, etc.) (QW-402)
 ASME P-No. E-1 _____ to ASME P-No. (QW-403)
 () Plate () Pipe (enter diameter, if piped)
 Filler metal specification (SFA): 5.5 & 5.5 Classification (QW-104)
 Filler metal P-No. _____
 Filler metal variety for GTAW, PAW (QW-404)
 Consumable insert for GTAW or PAW _____
 Weld deposit thickness for each welding process _____
 Welding position (1G, 5G, etc.) (QW-405)
 Progression (uphill/downhill)
 Backing gas for GTAW, PAW, or GMAW; fuel gas for OFW (QW-406)
 GMAW transfer mode (QW-409)
 GTAW welding current type/polarity _____

Actual Values	Range Qualified
Name _____	With or without _____
P-1 _____	P-1 to P-11 & P-4X _____
<u>5.625" OD</u>	<u>2.875" & over</u>
F-6010 E-7018	
3 4	P-1 thru P-4
N/A	N/A
N/A	N/A
<u>.532"</u>	<u>1.064"</u>
<u>6G</u>	<u>All positions</u>
<u>Uphill</u>	<u>Uphill</u>
N/A	N/A
N/A	N/A
N/A	N/A

Machine Welding Variables for the Process Used (QW-380)

Direct/remote visual control _____
 Automatic voltage control (GTAW) _____
 Automatic joint tracking _____
 Welding position (1G, 5G, etc.) _____
 Consumable insert _____
 Backing (metal, weld metal, welded from both sides, flux, etc.) _____

Actual Values	Range Qualified
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Guided Bend Test Results

Guided Bend Test Type	QW-462.2 (SFA) Results	QW-462.3(a) (Trans. T.C.F.) Type	QW-462.3(b) (Long. R.O.F.) Results
<u>SIDE BEND 1</u>	<u>1/32" tear/PASSED</u>	<u>SIDE BEND 3</u>	<u>Minor check/PASSED</u>
<u>SIDE BEND 2</u>	<u>1/64" tear/PASSED</u>	<u>SIDE BEND 4</u>	<u>3/64" tear/PASSED</u>

Visual examination results (QW-382.1) Satisfactory _____
 Radiographic test results (QW-384 and QW-385) _____
 (For alternative qualification of groove welds by radiography)
 Fillet Weld — Fracture test _____ Length and percent of defects _____ in.
 Macro test fusion _____ Fillet leg size _____ in. Convexity/concavity _____ in.
 Welding test conducted by K&L TESTING LABORATORY _____
 Mechanical tests conducted by K&L TESTING LABORATORY Laboratory test no. 20P-1030 _____
 We certify that the statements in this record are correct and that the test coupons were prepared, welded, and tested in accordance with the requirements of Section IX of the ASME Code.

Organization: KANSAS RAIL CORP. _____

Date: 9/11/2000 _____

By: [Signature] _____

1298 The form (E90008) may be obtained from the Order Dept., ASME, 22 Law Drive, Box 2300, Fairfield, NJ 07004-2300.





Orano Federal Services
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WELDER AND WELDING OPERATOR QUALIFICATION RECORD

Welder or welding operator's name: AMELIA WILLIAMS Identification no. 131
 Welding process: F.C.C.A.W. Manual _____ Semi-automatic: X Machine _____
 Position: 1C FLAT
 (Flat, horizontal, overhead or vertical - if vert. test, state whether upward or downward)
 In accordance with procedure specification no. 01KRC-3129
 Material specification: A-36
 Diameter and wall thickness (if pipe) - otherwise, joint thickness: 1.5"
 Thickness range this applies: UNLIMITED

FILLER METAL

Specification no. 3.20 Classification: E701-1 F no. 6
 Describe filler metal (if not covered by AWS specification): _____
 Is backing strip used? Yes
 Filler metal diameter and trade name: 3/32" Lincoln Flux for submerged arc or gas for gas metal arc or flux cored arc welding: 100% CO₂

VISUAL INSPECTION

Appearance: Satisfactory Undercut: None Piping density: None

Guided Bent Test Results

Type	Result	Type	Result
EDGE BEND	3/32" tear/PASSED		
STICH BEND	NO DEFECTS		

Test conducted by: KATHY TESTING LABORATORY Laboratory test no. 01FIG-2215
 per: [Signature] Test date: 11/30/01

Fillet Test Results

Appearance: _____ Fillet size: _____
 Fracture test root penetration: _____ Macroetch: _____
 (Describe the location, nature, and size of any crack or tearing of the specimen.)
 Test conducted by: _____ Laboratory test no. _____
 per: _____ Test date: _____

RADIOGRAPHIC TEST RESULTS

Film identification	Results	Remarks	Film identification	Results	Remarks

Test witnessed by: _____ Test no. _____
 per: _____

We, the undersigned, certify that the statements in this record are correct and that the welds were prepared and tested in accordance with the requirements of the American Welding Society AWS D11.1, (93)
 year

Manufacturer or contractor: KASCO RAIL CORPORATION
 Authorized by: [Signature]
 Date: 11-30-01

Form D-4



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WELDER AND WELDING OPERATOR QUALIFICATION RECORD

Welder or welding operator's name: ALLEN WILLIAMS Identification no.: 131
 Welding process: SMAW Manual X Semi-automatic _____ Machine _____
 Position: AS Vertical Up
 (Flat, horizontal, overhead or vertical — if vertical, state whether upward or downward)
 In accordance with procedure specification no. Unqualified joint sig. no. G1B
 Material specification: A-36
 Diameter and wall thickness (if pipe) — otherwise, joint thickness: 0.50"
 Thickness range this qualifies: 1.0"

FILLER METAL

Specification: E1 & E5 Classification: E7018 F no.: 4
 Describe filler metal (if not covered by AWS specification): _____
 Is backing strip used? Yes
 If, or metal diameter and trade name: 1/8" E7018 Flux for submerged arc or gas for gas metal arc or flux
 covered arc welding: _____

VISUAL INSPECTION

Appearance: Satisfactory Undercut: None Pitting porosity: None

Guided Bend Test Results

Type	Result	Type	Result
<u>SIDE BEND</u>	<u>NO DEFECTS</u>		
<u>SIDE BEND</u>	<u>1/64" tear/CRASED</u>		

Test conducted by: MAIL TESTING LABORATORY Laboratory test no.: 20520-1626
 per: [Signature] Test date: 4/28/99

Filet Test Results

Appearance: _____ Fillet size: _____
 Fracture test and penetration: _____ Macroetch: _____
 (Describe the location, nature, and size of any crack or tearing of the specimen.)
 Test conducted by: _____ Laboratory test no.: _____
 per: _____ Test date: _____

RADIOGRAPHIC TEST RESULTS

Film identification	Expos	Remarks	Film identification	Results	Remarks

Test witnessed by: _____ Test no.: _____
 per: _____

We, the undersigned, certify that the statements in this record are correct and that all welds were prepared and tested in accordance with the requirements of the American Welding Society AWS D1.1, (_____ year)

Manufacturer or contractor: KUMERO EAST COEE
 Authorized by: [Signature]
 Date: 5-25-99

Form D-4



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WELDER AND WELDING OPERATOR QUALIFICATION RECORD

Welder or welding operator's name ALBIN WILLIAMS Identification no. 131
 Welding process F.C.A.W. Manual Semiautomatic X Machine
 Position OC Vertical Up
 (Flat, horizontal, overhead or vertical. If vertical, state whether upward or downward)
 In accordance with procedure specification no. 05KRC-0136
 Material specification A 36
 Diameter and wall thickness (if pipe) - otherwise, joint thickness 1.0
 Thickness range this qualifies UNL (P1) 32

FILLER METAL

Specification no. 5.29 Classification E111T-1 F no. 6
 Describe filler metal (if not covered by AWS specification)
 Is backing strip used? Yes
 Filler metal diameter and trade name 1/16" BSAE Flux for submerged arc or gas for gas metal arc or flux cored arc welding 100% CO₂

VISUAL INSPECTION

Appearance Satisfactory Undercut None Piping porosity None

Guided Bend Test Results

Type	Result	Type	Result
SIDE BEND	3/8" tear/PASSED		
SIDE BEND	1/32" tear/PASSED		

Test conducted by RAIL TESTING LABORATORY Laboratory test no. 05390-2476
 per [Signature] Test date 12/29/2005

Fitup Test Results

Appearance Fillet size
 Fracture test root penetration Marcotch
 (Describe the location, nature, and size of any crack or tearing of the specimen)
 Test conducted by Laboratory test no.
 per Test date

RADIOGRAPHIC TEST RESULTS

Film identification	Results	Remarks	Film identification	Results	Remarks

Test witnessed by Test no.
 per

We, the undersigned, certify that the statements in this record are correct and that the welds were prepared and tested in accordance with the requirements of the American Welding Society AWS D15.1, (2001) year .

Manufacturer or contractor K2SERO RAIL CORP.
 Authorized by [Signature]
 Date 12/29/05

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WELDER AND WELDING OPERATOR QUALIFICATION RECORD

Welder or welding operator's name: ADITHYAN 131
 Welding process: MIG Shielded Metal Arc Semi-automatic Machine
 Position: Vertical up
 (Flat, horizontal, overhead or vertical — if vertical, state whether upward or downward)
 In accordance with procedure specification no. Qualification Joint, Fig. no. 010
 Material specification: A-86
 Diameter and wall thickness (if pipe) — otherwise, joint thickness: 1.0"
 Thickness range (if applicable): UNLIMITED

FILLER METAL

Specification no.: 3.32 Classification: ER70S-7 Flux: 6
 Describe filler metal (if not covered by AWS specification):
 Is backing strip used: Yes
 Filler metal diameter and trade name: 1/16" LINCOLN Flux for submerged arc or gas for gas metal arc or flux cored arc welding: 100% CO₂

VISUAL INSPECTION

Appearance: Satisfactory Internal: None Piping porosity: None

Guided Bend Test Results

Type	Result	Type	Result
<u>SLIDE BEND</u>	<u>NO DEFECTS</u>		
<u>SLIDE PENL</u>	<u>1/16" Pass/PASSED</u>		

Test conducted by: KATE TRATING LABORATORY Laboratory test no.: WFS-2318
 or: Mark York Test date: 5/25/00

Filet Test Results

Appearance: Filet size
 fracture test root penetration: Microetch
 (Describe the location, nature, and size of any crack or tearing of the specimen.)
 Test conducted by: _____ Laboratory test no.: _____
 or: _____ Test date: _____

RADIOGRAPHIC TEST RESULTS

Filet identification	Results		Filet identification	Results	
	Results	Remarks		Results	Remarks

Test witnessed by: _____ Test no.: _____
 or: _____

We, the undersigned, certify that the information in this record is correct and that the welds were prepared and tested in accordance with the requirements of the American Welding Society AWS D16.1, _____ year.

Manufacturer or contractor: KARGO RAIL CORP.
 Authorized by: Mark York
 Date: 5/25/00

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ANNEX D

WELDER AND WELDING OPERATOR QUALIFICATION RECORD

Welder or welding operator's name ARTHUR WILLIAMS Identification no. 131
 Welding process E.C.A.W. Manual _____ Semiautomatic X Machine _____
 (Flat, horizontal, overhead, or vertical—if vertical, state whether upward or downward.) 3G Vertical up
 In accordance with procedure specification no. P-004
 Material specification A51411 to A572 grade 60
 Diameter and wall thickness (if pipe) — otherwise, joint thickness 1.0"
 Thickness range this qualifies UNLIMITED

FILLER METAL

Specification no. A5.29 Classification E11TT1-K3 F.no. 6
 Describe filler metal (if not covered by AWS specification) _____
 Is backing strip used? Yes
 Filler metal diameter and trade name E11TT1-K3 ESAB Flux for submerged arc or gas for gas metal arc or flux
 cored arc welding 75% Argon 25% CO2

VISUAL INSPECTION

Appearance Acceptable Undercut None Piping porosity None

Guided Bent Test Results

Type	Result	Type	Result
SIDE BEND 1	NO DEFECTS	SIDE BEND 3	NO DEFECTS
SIDE BEND 2	NO DEFECTS	SIDE BEND 4	NO DEFECTS

Test conducted by KALDI TESTING LABORATORY Laboratory test no. 09130-7883
for full plate Test date 1/14/2009

Fillet Test Results

Appearance _____ Filled size _____
 Fracture test root penetration _____ Macroetch _____
 (Describe the location, nature, and size of any crack or tearing of the specimen.)
 Test conducted by _____ Laboratory test no. _____
 per _____ Test date _____

RADIOGRAPHIC TEST RESULTS

Film Identification	Results	Remarks	Film Identification	Results	Remarks

Test witnessed by _____ Laboratory test no. _____
 per _____ Test date _____

We, the undersigned, certify that the statements in this record are correct and that the test welds were prepared and tested in accordance with the requirements of AWS 1115.1, (2007) Railroad Welding Specification—Cars and Locomotives.
 (year)

Manufacturer or Contractor KASCO RAIL CORP.
 Authorized by [Signature]
 Date 1/25/09

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WELDER AND WELDING OPERATOR QUALIFICATION TEST RECORD

Welder or welding operator's name ALBIN D. WILLEAMS Identification no. 131
 Welding process E.C.A.W. Manual Semiautomatic X Machine
 Position 4E Overhead Groove Weld
 (Flat, horizontal, overhead or vertical — if vertical, state whether upward or downward)
 In accordance with procedure specification no. Prequalified joint fig. no. Q18
 Material specification A-36
 Diameter and wall thickness (if pipe) — otherwise, joint thickness .500"
 Thickness range this qualifies 1.0"

FILLER METAL

Specification no. 5.20 Classification E71T-1 F no. 6
 Describe filler metal (if not covered by AWS specification)
 Is backing strip used? Yes
 Filler metal diameter and trade name 1/16" Lincoln Flux for submerged arc or gas for gas metal arc or flux
 cored arc welding 100% CO₂

VISUAL INSPECTION

Appearance Satisfactory Undercut None Piping porosity None

Guided Bend Test Results

Type	Result	Type	Result
SIDE BEND	1/32" tear/PASSED		
SIDE BEND	1/64" tear/PASSED		

Test conducted by KALL TESTING LABORATORY Laboratory test no. 20R12-2016
 per Paul J. Kahl Test date 9/11/2000

Fillet Test Results

Appearance Fillet size
 Fracture test root penetration Macroetch
 (Describe the location, nature, and size of any crack or tearing of the specimen.)
 Test conducted by Laboratory test no.
 per Test date

RADIOGRAPHIC TEST RESULTS

Film identification	Results	Remarks	Film identification	Results	Remarks

Test witnessed by Test no.
 per

We, the undersigned, certify that the statements in this report are correct and that the welds were prepared and tested in accordance with the requirements of the American Welding Society AWS D16.1, (93 year).

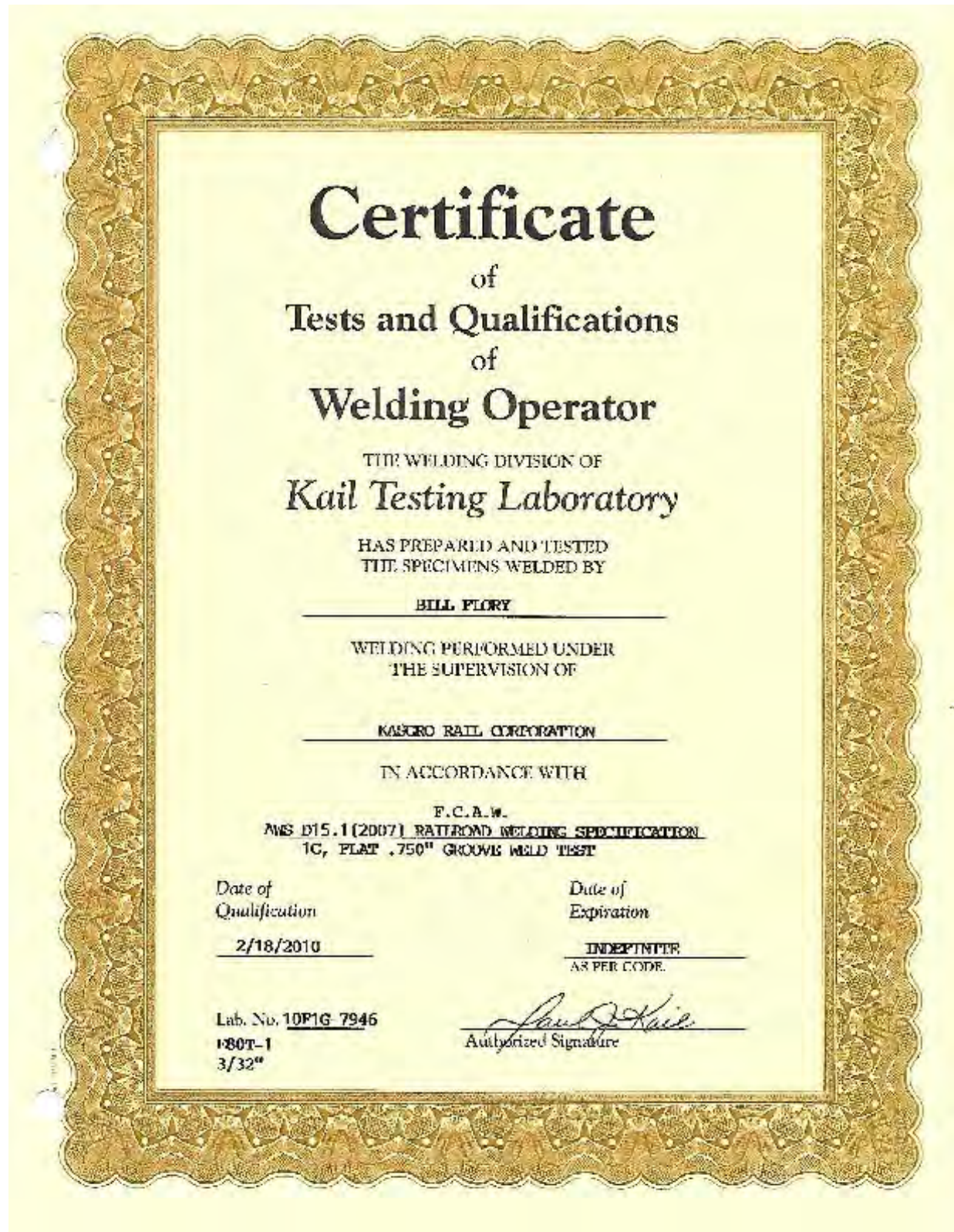
Manufacturer or contractor RASERO RAIL, COMP.
 Authorized by Paul J. Kahl
 Date 9-11-00

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AWS D16.10/15.1M 2007

ANNEX D

WELDER AND WELDING OPERATOR QUALIFICATION RECORD

Welder or welding operator's name: BILL FLORY Identification no. 8175
 Welding process: FCM Manual Semicautomatic Machine
 (Flat, horizontal, overhead, or vertical. If vertical, state whether upward or downward.) 1C, Flat
 In accordance with procedure specification no. P-005
 Material specification: A-36
 Diameter and wall thickness (if pipe)—otherwise, joint thickness: .750"
 Thickness range this qualifies: UNLIMITED

FILLER METAL

Specification no. E-29 Classification E80C-1 F-no. 6
 Describe filler metal (if not covered by AWS specification):
 Is backing strip used? Yes
 Filler metal diameter and trade name: 3/32" Lincoln Flux for submerged arc or gas for gas metal arc or flux
 cored arc welding: 100% CO2

VISUAL INSPECTION

Appearance: Satisfactory Undercut: None Piping porosity: None

Guided Bend Test Results

Type	Result	Type	Result
SIDE BEND	NO DEFECTS		
SIDE BEND	NO DEFECTS		

Test conducted by: KRISTY TESSELL'S LABORATORY Laboratory test no. 10F1G-7946
 per: [Signature] Test date: 2/18/2010

Fillet Test Results

Appearance: _____ Fillet size: _____
 Fracture test root penetration: _____ Macroetch: _____
 (Describe the location, nature, and size of any crack or tearing of the specimen)
 Test conducted by: _____ Laboratory test no.: _____
 per: _____ Test date: _____

RADIOGRAPHIC TEST RESULTS

Film Identification	Results	Remarks	Film Identification	Results	Remarks

Test witnessed by: _____ Laboratory test no.: _____
 per: _____ Test date: _____

We, the undersigned, certify that the statements in this record are correct and that the test welds were prepared and tested in accordance with the requirements of AWS D16.1, (2007) Standard Welding Specification for Gases and Locomotives (98.2)

Manufacturer or Contractor: KANSAS RAIL CORP.
 Authorized by: [Signature]
 Date: 2/18/10

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AWS D15.10 (Rev. 06/2007)

ANNEX D

WELDER AND WELDING OPERATOR QUALIFICATION RECORD

Welder or welding operator's name: BILL FLORY Identification no. 819
 Welding process: FCM Manual Semi-automatic Machine
 (Flat, horizontal, overhead, or vertical—if vertical, state whether upward or downward.) 3C Vertical Dip
 In accordance with procedure specification no. W-001
 Material specification A-36
 Diameter and wall thickness (if pipe) otherwise, joint thickness .750"
 Thickness range this qualifies ONE TIME

FILLER METAL

Specification no. 5.20 Classification GT-T-1 F-number 6
 Describe filler metal (if not covered by AWS specification) _____
 Is backing strip used? YES
 Filler metal diameter and trade name 1/16" Lincoln Flux for submerged arc or gas for gas metal arc or flux
 cored arc welding 100% CO2

VISUAL INSPECTION

Appearance Satisfactory Undercut None Peening possibility None

Guided Bend Test Results

Type	Result	Type	Result
<u>SIDE BEND</u>	<u>NO DEFECTS</u>		
<u>SIDE BEND</u>	<u>NO DEFECTS</u>		

Test conducted by KATE MUSKIE LABORATORY Laboratory test no. 10P36-7933
 per [Signature] Test date 2/12/2010

Fillet Test Results

Appearance _____ Fillet size _____
 Fracture test root penetration _____ Macroetch _____
 (Describe the location, nature, and size of any crack or tearing of the specimen.)
 Test conducted by _____ Laboratory test no. _____
 per _____ Test date _____

RADIOGRAPHIC TEST RESULTS

Item Identification	Results	Remarks	Item Identification	Results	Remarks

Test witnessed by _____ Laboratory test no. _____
 per _____ Test date _____

We, the undersigned, certify that the statements in this record are correct and that the test welds were prepared and tested in accordance with the requirements of AWS D15.1 (2007) ; *Manual Welding Specification for Gas and Locomotives* (yes) _____

Manufacturer or Contractor KASCRO RAIL CORPORATION

Authorized by [Signature]
 Date: 2/12/10



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Grand Rapids, MI – Flint, MI – Pittsburgh, PA – Birmingham, AL – Decatur, AL
 NDE • MECHANICAL LAB www.tuvris.com



Reported To: Mr. Dave Stahl
 Kugro Rail Corp
 121 Rundle Road
 New Castle, PA 16102

Date: March 25, 2015
 P/O Number: QAF
 Report Number: 1
 Project: Welder Qualification

AWS - WELDER, WELDING OPERATOR OR TACK WELDER QUALIFICATION TEST RECORD

Name: Brett Sheppard Welding Code: AWS D15.1/015.1M-2012
 Type of Welder: Semi Automatic Identification Number: 837
 Welding Procedure Specification No. F-001 Rev: II Date: 3/25/15

Variables	Record	Actual Values	Qualification Range
Process/Type		FCAW	FCAW
Electrode (single/multiple)		Single	Single
Current/Polarity		DC/EP	
Position		3G	Flat, Vertical Fillet & Groove
Weld Progression		Uphill	Uphill
Backing (With or Without)		With	With
Material/Spec	A36	to A36	All AWS Prequalified Material
Base Metal			
Thickness: (Plate)			
Groove		1"	1/8" to Unlimited
Fillet		N/A	1/8" to Unlimited
Thickness: (Pipe/tube)			
Groove		N/A	1/8" to Unlimited
Fillet		N/A	1/8" to Unlimited
Diameter: (Pipe)			
Groove		N/A	24" OD and Over
Fillet		N/A	Any Diameter
Filler Metal			
Spec. No.		A5.20	
Class		E71T-1	
F-No.		6	F6
Gas/Flux Type		100% CO ₂	
Other		N/A	N/A

VISUAL INSPECTION Acceptable: Yes No Date coupon welded: 3/25/15

Guided Bead Test Results

Type	Result	Type	Result
Side Bend	No Defects - PASS		
Side Bend	No Defects - PASS		

Fillet Test Results
 Appearance: N/A Fillet Size: _____
 Fracture Test Root: _____ Macromatch: _____

(Describe the location, nature, and size of any crack or tearing of the specimen): _____

Radiographic Test Results

Film ID	Results	Remarks	Film ID	Results	Remarks
N/A					

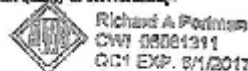
Film evaluated by: N/A Company: _____
 Mechanical tests conducted by: Chris Nichol / Rich Portman Laboratory Test Number: 150383
 Welding supervised by: Dan Giurici Company: TUV Rheinland Industrial Solutions

The welder identified above PASSES, FAILS based on the requirements of the code listed above.

Reviewer's Signature: [Signature] Date: 4/1/2015
 Client Approval: [Signature] Date: 4/2/2015

TUV RHEINLAND INDUSTRIAL SOLUTIONS, INC.

These test results report our findings at the time of inspection and shall be reviewed by the client for compliance to the project requirements. Due to the limitations of nondestructive testing in evaluating all of the factors that determine the overall component quality, no guarantee is made or liability assumed by TUV Rheinland Industrial Solutions, Inc. ("TRIS") for the component quality or serviceability.



Richard A Portman
 CWN 08861391
 CC# EXP. 04/2017

Revision 7/19/2013
 AWS Welder Qualification Page 1 of 1

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Grand Rapids, MI – Flint, MI – Pittsburgh, PA – Birmingham, AL – Decatur, AL
 METAL MECHANICAL LAB www.tuvris.com



Reported To: Mr. Dave Stahl
 Kaysro Rail Corp
 121 Rundle Road
 New Castle, PA 16102

Date: March 25, 2015
 WO Number: QAP
 Report Number: 1
 Project: Welder Qualification

AWS - WELDER, WELDING OPERATOR OR TACK WELDER QUALIFICATION TEST RECORD

Name: Brett Shepard Welding Code: AWS D15.1/D15.1M-2012
 Type of Welder: Semi Automatic Identification Number: 337
 Welding Procedure Specification No. E-001 Rev: 0 Date: 3/25/15

Variables	Record Annual Values	Qualification Range
Process Type	FCAW	FCAW
Electrode (single/multiple)	Single	Single
Current/Polarity	DCEP	
Position	3G	Flat, Vertical Fillet & Groove
Weld Progression	Uphill	Uphill
Backing (With or Without)	With	With
Material/Spec	A36 to A36	All AWS Prequalified Material
Base Metal		
Thickness (Plate)		
Groove	1"	1/8" to Unlimited
Fillet	N/A	1/8" to Unlimited
Thickness (Pipe/Tube)		
Groove	N/A	1/8" to Unlimited
Fillet	N/A	1/8" to Unlimited
Diameter (Pipe)		
Groove	N/A	24" OD and Over
Fillet	N/A	Any Diameter
Filler Metal		
Spec. No.	A5.20	
Class	E71T-1	
F.No.	6	TS
Gas/Flux Type	100% CO ₂	
Other	N/A	N/A

VISUAL INSPECTION Acceptable: Yes No Date coupon welded: 3/25/15

Coupled Bend Test Results

Type	Result	Type	Result
Side Bend	No Defects - PASS		
Side Bend	No Defects - PASS		

Fillet Test Results
 Appearance: N/A Fillet Size: _____
 Fracture Test Root: _____
 (Describe the location, nature, and size of any crack or tearing of the specimen): _____

Radiographic Test Results

Film ID	Results	Remarks	Film ID	Results	Remarks
N/A					

Film evaluated by: N/A Company: _____
 Mechanical tests conducted by: Chris Nichol / Rich Portman Laboratory Test Number: 150383
 Welding supervised by: Don Gjurch Company: TUV Rheinland Industrial Solutions

The welder identified above PASSES FAILS based on the requirements of the code listed above.

Reviewer's Signature: [Signature] Date: 4/1/2015
 Client Approval: [Signature] Date: 4/2/2015

TUV RHEINLAND INDUSTRIAL SOLUTIONS, INC.

These test results report our findings at the time of inspection and shall be reviewed by the client for compliance to the project requirements. Due to the limitations of manufacturing testing in ascertaining all of the factors that determine the overall occupational quality, no guarantee is made or liability assumed by TUV Rheinland Industrial Solutions, Inc. ("TRIS") for the competence, quality or serviceability.



Richard A. Portman
 CWI 33081311
 CC1 EXP. 6/1/2017

Revision 11/02/2013
 AWS Welder Qualification Page 1 of 1

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Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
Appendix B

Doc./Rev.: EIR-3021970-000
 Project: 00225.03.0050 DOE Atlas Project

Grand Rapids, MI – Flint, MI – Pittsburgh, PA – Birmingham, AL – Decatur, AL
 TBE • MECHANICAL LAB www.tbe.com



Reported To: Mr. Dave Stahl
 Kasgro Rail Corp
 121 Rundlo Road
 New Castle, PA 16102

Date: March 25, 2015
 WO Number: QAF
 Report Number: 1
 Project: Welder Qualification

AWS - WELDER, WELDING OPERATOR OR TACK WELDER QUALIFICATION TEST RECORD

Name: Ernst Shepard Welding Code: AWS D15.1/D15.1M-2012
 Type of Welder: Semi Automatic Identification Number: 837
 Welding Procedure Specification No. F-001 Rev: 0 Date: 3/25/15

Variables	Record Actual Values		Qualification Range
Process/Type	FCAW		FCAW
Electrode (single/multiple)	Single		Single
Current/Polarity	DCEP		
Position	3G		Flat, Vertical Fillet & Groove
Weld Progression	Uphill		Uphill
Bending (With or Without)	With		With
Base Metal	A36	to A56	All AWS Prequalified Material
Thickness (Flat)			
Groove	1"		1/8" to Unlimited
Fillet	N/A		1/8" to Unlimited
Thickness (Pipe/tube)			
Groove	N/A		1/8" to Unlimited
Fillet	N/A		1/8" to Unlimited
Diameter (Pipe)			
Groove	N/A		24" OD and Over
Fillet	N/A		Any Diameter
Fillet Metal			
Spec. No.	A5.20		
Class	E71T-1		
F-No.	6		F6
Gas/Flux Type	100% O ₂		
Other	N/A		N/A

VISUAL INSPECTION Acceptable: Yes No Date coupon welded: 3/25/15

Guided Bend Test Results

Type	Result	Type	Result
Side Bend	No Defects - PASS		
Side Bend	No Defects - PASS		

Millet Test Results
 Appearance: N/A Fillet Size:
 Fracture Test Result: Manufacture
 (Describe the location, nature, and size of any crack or tearing of the specimen):

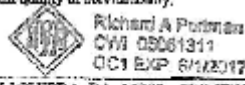
Radiographic Test Results

Film ID	Results	Remarks	Film ID	Results	Remarks
N/A					

Film evaluated by: N/A Company:
 Mechanical tests conducted by: Chris Nichol / Rich Portman Laboratory Test Number: 150353
 Welding supervised by: Don Gjauch Company: TUV Rheinland Industrial Solutions

The welder identified above: PASSES, FAILS based on the requirements of the code listed above.
 Reviewer's Signature: [Signature] Date: 4/1/2015
 Client Approval: [Signature] Date: 4/2/2015

TUV RHEINLAND INDUSTRIAL SOLUTIONS, INC.
 These test results report our findings at the time of inspection and shall be reviewed by the client for compliance to the project requirements. Due to the limitations of nondestructive testing in evaluating all of the factors that determine the overall component quality, no guarantee is made or liability assumed by TUV Rheinland Industrial Solutions, Inc. ("TRIS") for the component quality or serviceability.



Revision 7/10/2013
 AWS Welder Qualification Page 7 of 7

Richard A Portman
 CWA 08061311
 CC1 EXP 6/1/2017
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Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
Appendix B

Doc./Rev.: EIR-3021970-000
 Project: 00225.03.0050 DOE Atlas Project

Grand Rapids, MI – Flint, MI – Pittsburgh, PA – Birmingham, AL – Decatur, AL
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Reported To: Mr. Dave Stahl
 Kasgro Rail Corp
 121 Rundle Road
 New Castle, PA 16102

Date: March 25, 2015
 P/O Number: QAP
 Report Number: 1
 Project: Welder Qualification

AWS - WELDER, WELDING OPERATOR OR TACK WELDER QUALIFICATION TEST RECORD

Name: Scott Shepard Welding Code: AWS D15.1M15.1M-2012
 Type of Welds: ESM Automatic Identification Number: 837
 Welding Procedure Specification No. R-001 Rev: 0 Date: 3/25/15

Variables	Record Actual Values	Qualification Range
Process / type	FCAW	FCAW
Electrode (single/multi) (in)	Single	Single
Current/Polarity	DCEP	
Position	3G	Flat, Vertical Fillet & Groove
Weld Preparation	Uphill	Uphill
Backing (With or Without)	With	With
Matrix/Spec	A36 to A36	All AWS Prequalified Material
Base Metal		
Thickness (Plate)		
Groove	1"	1/8" to Unlimited
Fillet	N/A	1/8" to Unlimited
Thickness (Pipe/Tube)		
Groove	N/A	1/8" to Unlimited
Fillet	N/A	1/8" to Unlimited
Diameter (Pipe)		
Groove	N/A	24" OD and Over
Fillet	N/A	Any Diameter
Filler Metal		
Spec. No.	A5.20	
Class	E71T-1	
F-No.	6	F6
Gas/Flux Type	100% CO ₂	
Other	N/A	N/A

VISUAL INSPECTION Acceptable: Yes No Date coupon welded: 3/25/15

Qualified Bond Test Results

Type	Result	Type	Result
Side Bond	No Defects - PASS		
Side Bond	No Defects - PASS		

Fillet Test Results
 Appearance: N/A Fillet Size: _____
 Fracture Test Root: _____ Metaltech: _____

(Describe the location, nature, and size of any crack or testing of the specimen):
 Macrographic Test Results

Film ID	Results	Remarks	Film ID	Results	Remarks
N/A					

Film evaluated by: N/A Company: _____

Mechanical tests conducted by: Chris Nichol / Rich Portman Laboratory Test Number: 1503E3

Welding supervised by: Dan Gjurch Company: TUV Rheinland Industrial Solutions

The welder identified above PASSES, FAILS based on the requirements of the code listed above.

Reviewer's Signature: _____ Date: 3/1/2015

Client Approval: _____ Date: 4/2/2015

TUV RHEINLAND INDUSTRIAL SOLUTIONS, INC.

These test results report our findings at the time of inspection and shall be reviewed by the client for compliance to the project requirements. Due to the limitations of nondestructive testing in controlling all of the factors that determine the overall component quality, no guarantee is made or liability assumed by TUV Rheinland Industrial Solutions, Inc. ("TRIS") for the component quality or serviceability.



Richard A Portman
 QWR 08061311
 QCI EXP. 6/1/2017

Revision 1/16/2013
 AWS Welder Qualification Page 1 of 1

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Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
Appendix B

Doc./Rev.: EIR-3021970-000
 Project: 00225.03.0050 DOE Atlas Project

Grand Rapids, MI – Flint, MI – Pittsburgh, PA – Birmingham, AL – Escator, AL

MFG & MECHANICAL LAB

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Reported To: Mr. Dave Stahl
 Kuegro Rail Corp
 121 Round Road
 New Castle, PA 16102

Date: March 25, 2015
 P/O Number: QAF
 Report Number: J
 Project: Welder Qualification

AWS - WELDER, WELDING OPERATOR OR TACK WELDER QUALIFICATION TEST RECORD

Name: Steve Vignard Welding Code: AWS D15.1Q15.1M-2012
 Type of Welder: Shielded Metal Arc Identification Number: 637
 Welding Procedure Specification No. E-091 Rev: 0 Date: 3/25/15

Variables	Record	Actual Values	Qualification Range
Process/Type	PCAW	PCAW	PCAW
Electrode (single/multiple)	Single	Single	Single
Current/Polarity	DCRP	DCRP	
Position	3G	3G	Flat, Vertical Fillet & Groove
Weld Progression	UpHill	UpHill	UpHill
Backing (With or Without)	With	With	With
Material/Spec	A36	A36	All AWS Prequalified Material
Base Metal			
Thickness (Plate)			
Groove		1"	1/8" to Unlimited
Fillet		N/A	1/8" to Unlimited
Thickness (Pipe/Tube)			
Groove		N/A	1/8" to Unlimited
Fillet		N/A	1/8" to Unlimited
Diameter (Pipe)			
Groove		N/A	24" OD and Over
Fillet		N/A	Any Diameter
Filler Metal			
Spec. No.		A5.20	
Class		E71T-1	
F-No.		6	F6
Gas/Flux Type		100% CO ₂	
Other		N/A	N/A

VISUAL INSPECTION Acceptable: Yes No Date coupon welded: 3/25/15

Guided Bend Test Results

Type	Result	Type	Result
Side Bend	No Defects - PASS		
Side Bend	No Defects - PASS		

Fillet Test Results

Appearance: N/A Fillet Size: _____

Fracture Test Root

Macroetch: _____

(Describe the location, nature, and size of any crack or tearing of the specimen):

Radiographic Test Results

Film ID	Results	Remarks	Film ID	Results	Remarks
N/A					

Film evaluated by: N/A

Mechanical tests conducted by: Chris Nicol / Rich Portman Company: TUV Rheinland Industrial Solutions Laboratory Test Number: 150335

Welding supervised by: Dan Giurch Company: TUV Rheinland Industrial Solutions

The welder identified above PASSES, FAILS based on the requirements of the code listed above.

Reviewer's Signature: [Signature] Date: 4/1/2015

Client Approval: [Signature] Date: 4/2/2015

TUV RHEINLAND INDUSTRIAL SOLUTIONS, INC.

These test results report our findings at the time of inspection and shall be reviewed by the client for compliance to the project requirements. Due to the limitations of non-destructive testing in evaluating all of the factors that determine the overall component quality, no guarantee is made or liability assumed by TUV Rheinland Industrial Solutions, Inc. ("TRIN") as to the component quality or serviceability.



Richard A. Portman
 CWI 00221311
 DCI EXP. 6/1/2017

Revision: 0000015
 AWS Welder Qualification (Page 1 of 1)

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Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
Appendix B

Doc./Rev.: EIR-3021970-000
 Project: 00225.03.0050 DOE Atlas Project

Grand Rapids, MI – Flint, MI – Pittsburgh, PA – Birmingham, AL – Doerster, AL
 NAME MECHANICAL LAB www.tuvrh.com



Reported To: Mr. Dave Stolt
 Kasco Rail Corp
 121 Rundles Road
 New Castle, PA 16102

Date: March 25, 2015
 P/O Number: QAF
 Report Number: 1
 Project: Welder Qualification

AWS - WELDER, WELDING OPERATOR OR TACK WELDER QUALIFICATION TEST RECORD

Name: Eric Shepard Welding Code: AWS D15.1/D15.1M-2012
 Type of Welder: Semi Automatic Identification Number: 837
 Welding Procedure Specification No. F-001 Rev: 0 Date: 3/25/15

Variables	Record Actual Value	Qualification Range
Process/Type	FCAW	FCAW
Electrode (single/multiple)	Single	Single
Current/Polarity	DCEP	
Position	3G	Flat, Vertical Fillet & Groove
Weld Progression	Upkill	Upkill
Backing (With or Without)	With	With
Material/Spec	A36	All AWS Prequalified Material
Base Metal		
Thickness: (Plate)		
Groove	1"	1/8" to Unlimited
Fillet	N/A	1/8" to Unlimited
Thickness: (Pipe/tube)		
Groove	N/A	1/8" to Unlimited
Fillet	N/A	1/8" to Unlimited
Thickness: (Pipe)		
Groove	N/A	24° OD and Over
Fillet	N/A	Any Diameter
Welder Metal		
Spec. No.	A3.20	
Class	E71T-1	
E-No.	6	F5
Gas/shield Type	100% CO ₂	
Other	N/A	N/A

VISUAL INSPECTION Acceptable: Yes No Date coupon welded: 3/25/15

Guided Bend Test Results

Type	Result	Type	Result
Side Bend	No Defects - PASS		
Side Bend	No Defects - PASS		

Weld Test Results
 Appearance: N/A Fillet Size:
 Fracture Test Root: Macroetch:
 (Describe the location, nature, and size of any crack or tearing of the specimen):

Macrographic Test Results

Film ID	Results	Remarks	Film ID	Results	Remarks
N/A					

Film evaluated by: N/A Company:
 Mechanical tests conducted by: Chris Nichol / Rich Portman Laboratory Test Number: 150383
 Welding supervised by: Dan Gjerch Company: TUV Rheinland Industrial Solutions

The welder identified above: 1 PASSES, 0 FAILS based on the requirements of the code listed above.

Reviewer's Signature: [Signature] Date: 4/1/2015
 Client Approval: [Signature] Date: 4/2/2015

TUV RHEINLAND INDUSTRIAL SOLUTIONS, INC.
 These test results report our findings at the time of inspection and shall be reviewed by the client for compliance to the project requirements. Due to the limitations of nondestructive testing in evaluating all of the factors that determine the overall component quality, no guarantee is made or liability assumed by TUV Rheinland Industrial Solutions, Inc. ("TRIS") for the component quality or serviceability.



Richard A Portman
 CWI 05081511
 OCT EXP. 6/1/2017

Revision 7/01/2013
 AWS Welder Qualification Page 1 of 1

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Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
Appendix B

Doc./Rev.: EIR-3021970-000
 Project: 00225.03.0050 DOE Atlas Project

Grand Rapids, MI – Flint, MI – Pittsburgh, PA – Birmingham, AL – Decatur, AL
 NDE & MECHANICAL LAB www.tuv.com



Reported To: Mr. Dave Stahl
 Knagro Rail Corp
 121 Rundle Road
 New Castle, PA 16102

Date: March 25, 2015
 P/O Number: QAF
 Report Number: 1
 Project: Welder Qualification

AWS - WELDER, WELDING OPERATOR OR TACK WELDER QUALIFICATION TEST RECORD

Name: Brett Shepard Welding Code: AWS D15.1/D15.1R-2012
 Type of Welder: Semi Automatic Identification Number: 937
 Welding Procedure Specification No. (7-04) Rev: 0 Date: 3/25/15

Variable	Record Actual Values	Qualification Range
Process/Type	FCAW	FCAW
Electrode (single/multi)	Single	Single
Current/Polarity	DCEP	
Position	3G	Flat, Vertical Fillet & Groove
Weld Progression	Uphill	Uphill
Backing (With or Without)	With	With
Material/Spec	A36 to A36	All AWS Prequalified Materials
Base Metal		
Thickness: (Plate)		
Groove	1"	1/8" to Unlimited
Fillet	N/A	1/8" to Unlimited
Thickness: (Pipe/tube)		
Groove	N/A	1/8" to Unlimited
Fillet	N/A	1/8" to Unlimited
Diameter: (Pipe)		
Groove	N/A	24" OD and Over
Fillet	N/A	Any Diameter
Filler Metal		
Spec. No.	A5.20	
Class	E71T-1	
F-No.	6	F6
Gas/flux Type	100% O ₂	
Other	N/A	N/A

VISUAL INSPECTION Acceptable: Yes No Date coupon welded: 3/25/15

Guided Bend Test Results

Type	Result	Type	Result
Side Bend	No Defects - PASS		
Side Bend	No Defects - PASS		

Fillet Test Results

Appearance: N/A Fillet Size:

Fracture Test Root:

(Describe the location, nature, and size of any crack or tearing of the specimen):

Radiographic Test Results

Film ID	Results	Remarks	Film ID	Results	Remarks
N/A					

Film evaluated by: N/A

Mechanical tests conducted by: Chris Nichol / Rich Portman Laboratory Test Number: 150383

Welding supervised by: Don Gjurch Company: TUV Rheinland Industrial Solutions

The welder identified above **PASSES** **FAILS** based on the requirements of the code listed above.

Reviewer's Signature: [Signature] Date: 4/1/2015

Client Approval: [Signature] Date: 4/2/2015

TUV RHEINLAND INDUSTRIAL SOLUTIONS, INC.

These test results report our findings at the time of inspection and shall be reviewed by the client for compliance to his project requirements. Due to the limitations of nondestructive testing in evaluating all of the factors that determine the overall component quality, no guarantee is made or liability assumed by TUV Rheinland Industrial Solutions, Inc. ("TRIS") for the component quality or serviceability.



Richard A. Portman
 CWI 35001311
 OC1 EXP 6/1/2017

Revision 7/20/2013
 AWS Welder Qualification Page 1 of 1

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Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
Appendix B

Doc./Rev.: EIR-3021970-000
 Project: 00225.03.0050 DOE Atlas Project

Grand Rapids, MI – Flint, MI – Pittsburgh, PA – Birmingham, AL – Decatur, AL
 NOT A MECHANICAL LAB www.tivr.com



Reported To: Mr. Dave Stahl
 Kresgo Rail Corp
 121 Knuckle Road
 New Castle, PA 16102

Date: March 25, 2015
 PAO Number: QAT
 Report Number: 1
 Project: Welder Qualification

AWS - WELDER, WELDING OPERATOR OR TACK WELDER QUALIFICATION TEST RECORD

Name: Walt Sheppard Welding Code: AWS D15, D15.1M-2012
 Type of Welder: Shielded Metal Arc Identification Number: 837
 Welding Procedure Specification No. F-001 Rev: 1 Date: 3/25/15

Variables	Record	Annual Values	Qualification Range
Process/Type		FCAW	FCAW
Electrode (single/multiple)		Single	Single
Current/Polarity		DCRP	
Position		3G	Flat, Vertical Fills & Grooves
Weld Progression		UpHill	UpHill
Beading (With or Without)		With	With
Material/Spec	A36	to A36	All AWS Prequalified Material
Base Metal			
Thickness: (Plate)			
Groove		1"	1/8" to Unlimited
Fillet		N/A	1/8" to Unlimited
Thickness: (Pipe/tube)			
Groove		N/A	1/8" to Unlimited
Fillet		N/A	1/8" to Unlimited
Diameter: (Pipe)			
Groove		N/A	24" OD and Over
Fillet		N/A	Any Diameter
Filler Metal			
Spec. No.		E5.20	
Class		E71F-1	
F-No.		6	E6
Gas/Flux Type		100% CO ₂	
Other		N/A	N/A

VISUAL INSPECTION Acceptable: Yes No Date coupon welded: 3/25/15

Guided Bend Test Results

Type	Result	Type	Result
Side Bend	No Defects - PASS		
Side Bend	No Defects - PASS		

Fillet Test Results
 Appearance: N/A Fillet Size:
 Fracture Test Root: _____ Macroscopic:
 (Describe the location, nature, and size of any crack or tearing of the specimen):

Radiographic Test Results

Film ID	Results	Remarks	Film ID	Results	Remarks
N/A					

Film evaluated by: N/A Company:
 Mechanical tests conducted by: Chris Nichol / Rich Portman Laboratory Test Number: 15W333
 Welding supervised by: Don Church Company: TIVR Rheinland Industrial Solutions

The welder identified above PASSES, FAILS based on the requirements of the code listed above.
 Reviewer's Signature: _____ Date: 4/1/2015
 Client Approval: _____ Date: 4/2/2015

TIVR RHEINLAND INDUSTRIAL SOLUTIONS, INC.
 These test results report our findings at the time of inspection and shall be reviewed by the client for compliance to the project requirements. Due to the limitations of non-destructive testing in evaluating all of the factors that determine the overall component quality, no guarantee is made or liability assumed by TIVR Rheinland Industrial Solutions, Inc. ("TIVR") for the component quality or serviceability.



Richard A. Portman
 GWI 00091311
 OG1 EXP. 8/1/2017

Revision: 01/07/2015
 AWS Welding Qualification Page 1 of 1

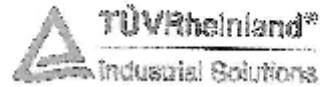
160 INDUSTRIAL BOULEVARD • ALIQUIPPA, PA 15001 • TELEPHONE (724) 378-3900 • FAX (724) 378-3990



Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
Appendix B

Doc./Rev.: EIR-3021970-000
 Project: 00225.03.0050 DOE Atlas Project

Grand Rapids, MI – Flint, MI – Pitsburgh, PA – Birmingham, AL – Decatur, AL
 NDE & MECHANICAL LAB
 www.tuvris.com



Reported To: Mr. Dave Smith
 Kasgro Rail Corp
 121 Rundle Road
 New Castle, PA 16102

Date: March 25, 2015
 P/O Number: QAF
 Report Number: 1
 Project: Welder Qualification

AWS - WELDER, WELDING OPERATOR OR TACK WELDER QUALIFICATION TEST RECORD

Name: Brett Shepard Welding Code: AWS D15.1M-2012
 Type of Welder: Semi Automatic Identification Number: 837
 Welding Procedure Specification No.: F-001 Rev: 0 Date: 3/25/15

Variables	Record Actual Values	Qualification Range
Process/Type	FCAW	FCAW
Electrode (single/multiple)	Single	Single
Current/Polarity	DCEP	DCEP
Position	3G	Flat, Vertical Fillet & Groove
Weld Preparation	Uphill	Uphill
Beckling (With or Without)	With	With
Material(s)	A36 to A36	All AWS Prequalified Material
Base Metal		
Thickness (Plate)		
Groove	1"	1/8" to Unlimited
Fillet	N/A	1/8" to Unlimited
Thickness (Pipe/tube)		
Groove	N/A	1/8" to Unlimited
Fillet	N/A	1/8" to Unlimited
Diameter (Pipe)		
Groove	N/A	24" OD and Over
Fillet	N/A	Any Diameter
Filler Metal		
Spec. No.	A5.20	
Class	E71T-1	
P-No.	6	F6
Gas/Flux Type	100% CO ₂	
Other	N/A	N/A

VISUAL INSPECTION Acceptable: Yes No Date coupon welded: 3/25/15

Grinded Bead Test Results

Type	Result	Type	Result
Side Bend	No Defects - PASS		
Side Bend	No Defects - PASS		

Fillet Test Results
 Appearance: N/A Fillet Size: _____
 Procedure Test Root: _____ Macroetch: _____

(Describe the location, nature, and size of any crack or tearing of the specimen):
 Metallographic Test Results

Film ID	Results	Dynamics	Film ID	Results	Remarks
N/A					

Film evaluated by: N/A Company: _____

Mechanical tests conducted by: Chris Nichol / Rich Portman Laboratory Test Number: 150383

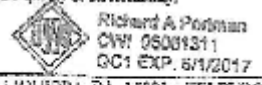
Welding supervised by: Dan Gjerch Company: TUV Rheinland Industrial Solutions

The welder identified above 1 PASSES , FAILS based on the requirements of the code listed above.

Reviewer's Signature: _____ Date: 4/1/2015

Client Approval: _____ Date: 4/2/2015

TUV RHEINLAND INDUSTRIAL SOLUTIONS, INC.
 These test results report our findings at the time of inspection and shall be reviewed by the client for compliance to the project requirements. Due to the limitations of non-destructive testing in evaluating all of the factors that determine the overall component quality, no guarantee is made or liability assumed by TUV Rheinland Industrial Solutions, Inc. ("TRIS") for the component quality or serviceability.



Revision 7/10/2013
 AWS Welder Qualification Page 1 of 1

Richard A. Portman
 CWI 06081311
 QC1 EXP. 6/1/2017

180 INDUSTRIAL BOULEVARD • ALMQUIPPA, PA 15001 • TELEPHONE (724) 378-3500 • FAX (724) 378-3540



Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
Appendix B

Doc./Rev.: EIR-3021970-000
Project: 00225.03.0050 DOE Atlas Project

Grand Rapids, MI – Flint, MI – Pittsburgh, PA – Birmingham, AL – Decatur, AL
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Reported To: Mr. Dave Stahl
 Kasego Rail Corp
 121 Rundle Road
 New Castle, PA 16102
Date: March 25, 2015
P/O Number: QAD
Report Number: 1
Project: Welder Qualification

AWS - WELDER, WELDING OPERATOR OR TACK WELDER QUALIFICATION TEST RECORD

Name: Drew Shepard **Welding Code:** AWS D15.UD15.UM-2012
Type of Welder: Semi Automatic **Identification Number:** 837
Welding Procedure Specification No.: F401 **Rev:** 0 **Date:** 3/25/15

Variables	Record Actual Values		Qualification Range
Process Type	FCAW		FCAW
Electrode (single/multiple)	Single		Single
Current Polarity	DCSP		
Position	SC1		Flat, Vertical Fillet & Groove
Weld Progression	Upfill		Upfill
Backing (With or Without)	With		With
Material/Spec	A36	to	A36
Base Metal			All AWS Prequalified Material
Thickness: (Plate)			
Groove	1"		1/8" to Unlimited
Fillet	N/A		1/8" to Unlimited
Thickness: (Pipe/tube)			
Groove	N/A		1/8" to Unlimited
Fillet	N/A		1/8" to Unlimited
Diameter: (Pipe)			
Groove	N/A		24" OD and Over
Fillet	N/A		Any Diameter
Filler Metal			
Spec. No.	A5.20		
Class	E71T-1		
P-No.	6		F6
Gas/Flux Type	100% CO ₂		
Other	N/A		N/A

VISUAL INSPECTION Acceptable: Yes No **Date coupon welded:** 3/25/15

Guided Bend Test Results

Type	Result	Type	Result
Side Bend	No Defects - PASS		
Side Bend	No Defects - PASS		

Fillet Test Results
 Appearance: N/A **Fillet Size:**
Fusion Test Result: N/A **Mismatch:**

(Describe the location, nature, and size of any crack or tearing of the specimen):
Radiographic Test Results

Film ID	Results	Remarks	Film ID	Results	Remarks
N/A					

Film evaluated by: N/A **Company:**
 Mechanical tests conducted by: Chris Nichol / Rich Portman **Laboratory Test Number:** 150383
 Welding supervised by: Dan Gjurch **Company:** TUV Rheinland Industrial Solutions

The welder identified above **PASSES** **FAILS** based on the requirements of the code listed above.

Reviewer's Signature: [Signature] **Date:** 4/1/2015

Client Approval: [Signature] **Date:** 4/2/2015

TUV RHEINLAND INDUSTRIAL SOLUTIONS, INC.
 These test results report our findings at the time of inspection and shall be reviewed by the client for compliance to the project requirements. Due to the limitations of non-destructive testing in evaluating all of the factors that determine the overall component quality, no guarantee is made or liability assumed by TUV Rheinland Industrial Solutions, Inc. ("TRIS") for the component quality or serviceability.



Richard A Portman
 CWN 00081311
 DCI EXP. 6/1/2017

Revised 7/10/2013
 AWS Welder Qualification Page 1 of 1

100 INDUSTRIAL BOULEVARD • ALIQUIPPA, PA 15001 • TELEPHONE (724) 378-3900 • FAX (724) 378-3940



Orano Federal Services
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Date of Qualification
 9/06/01

Date of Expiration
 INDEFINITE
 AS PER CODE.

Lab. No. 01F1G-2176

Paul J. Kail
 Authorized Signature



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WELDER AND WELDING OPERATOR QUALIFICATION RECORD

Welder or welding operator's name CHUCK RULINSKI Identification no. 109
 Welding process E-C-A-W Manual Semi-automatic Machine
 Position 1G Flat
 (Flat, horizontal, overhead or vertical. If vertical, state whether upward or downward)
 In accordance with procedure qualification no. 0-KRC-0129
 Material specification A-36
 Diameter and wall thickness (if pipe) — otherwise, joint thickness 1.0"
 Thickness range this qualifies UNLIMITED

FILLET METAL

Specification no. Q-20 Classification E70T-1 Pipe Plate 6
 Describe fillet metal (if not covered by AWS specification) _____
 Is backing used? Yes No
 Fillet metal diameter and trade name 3/16" Lincoln Flux for submerged arc or gas for gas metal arc or flux cored arc welding 100% CO2

VISUAL INSPECTION

Appearance Satisfactory Undercut None Piping porosity None

Guided Bend Test Results

Type	Result	Type	Result
SIDE BEND	NO DEFECTS		
SIDE BEND	NO DEFECTS		

Test conducted by WAT TESTING LABORATORY Laboratory test no. 01F10-2176
 per Paul J. Keel Test date 9/06/01

Fillet Test Results

Appearance _____ Fillet size _____
 Fracture test root penetration _____ Match _____
 (Describe the location, nature and size of any crack or tearing of the specimen.)
 Test conducted by _____ Laboratory test no. _____
 per _____ Test date _____

RADIOGRAPHIC TEST RESULTS

Film identification	Results	Remarks	Film identification	Results	Remarks

Test witnessed by _____ Test no. _____
 per _____

We, the undersigned, certify that the statements in this record are correct and that the welds were prepared and tested in accordance with the requirements of the American Welding Society AWS D15.1 (93).
 per _____

Manufacturer or contractor KASCRO RAIL CORP.
 Authorized by Mark Zepf
 Date 9-6-01

Form 2-4



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WELDER AND WELDING OPERATOR QUALIFICATION RECORD

Welder or welding operator's name CHUCK KULINSKI Identification no. 109
 Welding process C.K.A.W. Manual Semiautomatic Machine
 Position 3G Vertical Up
 (Flat, horizontal, overhead or vertical — if vertical, state whether upward or downward)
 In accordance with procedure specification in QIRRC-0131
 Material specification 506
 Diameter and wall thickness (if pipe) otherwise, joint thickness .500"
 Thickness range this qualifies 1-0"

FILLER METAL

Specification no. 5-10 Classification 5356 I no. 6
 Describe filler metal (if not covered by AWS specification) _____
 Is packaging ship name? No
 Filler metal diameter and trade name 3/64" Lincoln Flux for submerged arc or gas for gas metal arc or flux
 core or welding 100% AF

VISUAL INSPECTION

Appearance Satisfactory Undercut None Piping porosity None

Guided Bend Test Results

Type	Result	Type	Result
<u>SIDE BEND</u>	<u>1/16" tear/PASS</u>		
<u>SIDE BEND</u>	<u>1/16" tear/PASS</u>		

Test conducted by KALC TESTING LABORATORY Laboratory test no. Q1433-1434
 per Chuck Kulinski Test date 10/16/01

Filet Test Results

Appearance _____ Fillet size _____
 Fracture test root penetration _____ Marcellite _____
 (Describe the location, nature, and size of any crack or tearing of the specimen.)
 Test conducted by _____ Laboratory test no. _____
 per _____ Test date _____

RADIOGRAPHIC TEST RESULTS

Film Identification	Results	Remarks	Film Identification	Results	Remarks

Test witnessed by _____ Test no. _____
 per _____

We, the undersigned, certify that the statements in this record are correct and that the welds were prepared and tested in accordance with the requirements of the American Welding Society AWS D 15.1 (53)
 year

Manufacturer or contractor KALC RAIL CORP.

Authorized by Chuck Kulinski

Date 10-16-01

Form 0-4



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WELDER AND WELDING OPERATOR QUALIFICATION RECORD

Welder or welding operators name WYANDRO KULINSKI Identification no. 109
 Welding process E.C.A.W. Manual _____ Semiautomatic X Machine _____
 Position 3G Vertical Up
 (Flat, horizontal, overhead or vertical - if vertical, state whether downward or downweild)
 in accordance with procedure specification no. Prequalified joint fig. no. 611
 Material specification A-78
 Diameter and wall thickness (if pipe) - otherwise, cm thickness 500"
 Thickness range this qualifies 7, 9"

FILLER METAL

Specification no. E.20 Classification K972-3 F no. E
 Describe filler metal (if not covered by AWS specification) _____
 Is capping strip used? Yes
 Filler metal diameter and trade name 1/16" MINARON Flux for submerged arc or gas for gas metal arc or flux
 cored arc welding 100% CO2

VISUAL INSPECTION

Appearance Satisfactory Undercut None Piping priority None

Guided Bend Test Results

Type	Result	Type	Result
<u>SIDE BEND</u>	<u>NO DEFECTS</u>		
<u>SIDE BEND</u>	<u>NO DEFECTS</u>		

Test conducted by KALL TESTING LABORATORY Laboratory test no. 2020-1882
 per [Signature] Test date 3/21/20

fillet Test Results

Appearance _____ Fillet size _____
 Fracture test root penetration _____ Macroetch _____
 (Describe the location, nature, and size of any crack or tearing of the specimen.)
 Test conducted by _____ Laboratory test no. _____
 per _____ Test date _____

RADIOGRAPHIC TEST RESULTS

Film identification	Results	Remarks	Film identification	Results	Remarks

Test witnessed by _____ Test no. _____
 per _____

We, the undersigned, certify that the statements in this record are correct and that the welds were prepared and tested in accordance with the requirements of the American Welding Society AWS D15.1, _____ year.

Manufacturer or contractor YASUKI RAIL CORP.
 Authorized by [Signature]
 Date 5-21-19

Form D-4



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WELDER AND WELDING OPERATOR QUALIFICATION RECORD

Welder or welding operator's name CHARLES KULLINANT Identification no. 109
 Welding process G.W.A. W Manual Semi-automatic _____ Machine _____
 Position CG Vertical and hp
 (Flat, horizontal, overhead or vertical — if vertical, state whether upward or downward)
 In accordance with procedure specification no. Personal lead joint, 3/8", 90, 310
 Material specification A-56
 Diameter and wall thickness (if pipe) otherwise, joint thickness .312"
 Thickness range this qualifies 1.0"

FILLER METAL

Specification no. E.2 & 5.5 Classification E 70TB F no. 4
 Describe filler metal (if not covered by AWS specification) _____
 Is backing strip used? Yes
 Filler metal diameter and trade name 3/16" Gasshield Flux for submerged arc or gas for gas metal arc or flux cored arc welding _____

VISUAL INSPECTION

Appearance Good Factory Uncoupled None Piling possible None

Guided Bent Test Results

Type	Result	Type	Result
<u>SIDE BEND</u>	<u>NO DEFECTS</u>		
<u>STON BEND</u>	<u>NO DEFECTS</u>		

Test conducted by WATE TESTING LABORATORY Laboratory test no. 88220-1071
 our Paul J. Gal Test date 3/21/90

Filet Test Results

Appearance _____ Fillet size _____
 Fracture test root penetration _____ Merccatch _____
 (Describe the location, nature, and size of any crack or tearing of the specimen.)
 Test conducted by _____ Laboratory test no. _____
 per _____ Test date _____

RADIOGRAPHIC TEST RESULTS

Film identification	Results	Remarks	Film identification	Results	Remarks

Test witnessed by _____ Test no. _____

We, the undersigned, certify that the statements in this record are correct and that the welds were prepared and tested in accordance with the requirements of the American Welding Society AWS D12.1, (____) year.

Manufacturer or contractor WISCONSIN STATE CORP.
 Authorized by Paul J. Gal
 Date 3-21-90

Form J-1



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Date of Qualification

12/29/2005

Date of Expiration

INDEFINITE
 AS PER CODE.

Lab. No. 05F3G-2480
 E111T-1
 1/16"

Charles Kolinski
 Authorized Signature



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WELDER AND WELDING OPERATOR QUALIFICATION RECORD

Welder or welding operator's name CHARLES KUTLINSKI Identification no. 109
 Welding process E.C.A.W. Manual Semiautomatic X Machine
 Position 35 Vertical Up
 (Flat horizontal, overhead or vertical — if vertical, state whether upward or downward)
 In accordance with procedure specification no. 052RC-0136
 Material specification A-36
 Diameter and wall thickness (if pipe) — otherwise, joint thickness 1.0
 Thickness range this qualifies UNLIMITED

FILLER METAL

Specification no. 5.29 Classification E111F-1 F no. 5
 Describe filler metal (if not covered by AWS specification)
 Is backing strip used? Yes
 Filler metal diameter and trade name 7/16" ESAB Flux for submerged arc or gas for gas met. arc or flux
 cored arc welding 100% CO2

VISUAL INSPECTION

Appearance Satisfactory Undercut None Spiking porosity None

Guided Bend Test Results

Type	Result	Type	Result
SIDE BEND	NO DEFECTS		
SIDE BEND	NO DEFECTS		

Test conducted by RAIL TESTING LABORATORY Laboratory test no. 05130-2480
 per [Signature] Test date 12/29/2005

Fillet Test Results

Appearance Fillet size
 Fracture test root penetration Marcoetch
 (Describe the location, nature, and size of any crack or tearing of the specimen.)
 Test conducted by Laboratory test no.
 per Test date

RADIOGRAPHIC TEST RESULTS

Film identification	Results	Remarks	Film identification	Results	Remarks

Test witnessed by Test no.
 per

We, the undersigned, certify that the statements in this record are correct and that the welds were prepared and tested in accordance with the requirements of the American Welding Society AWS D15.1, (2001 year).

Manufacturer or contractor KANSAS RAIL CORP.
 Authorized by [Signature]
 Date 12/29/05

Form D-4



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WELDER AND WELDING OPERATOR QUALIFICATION TEST RECORD

Welder or welding operator's name: MILOK CULIVSKY Identification no. 109
 Welding process: Shielded Metal Arc Manual Semi-automatic X Machine
 Position: 3G Vertical Up
 (If 1st, horizontal, overhead or vertical — if vertical, state whether upward or downward)
 In accordance with procedure specification no. Prequalified joint fig. no. CLB
 Material specification: A-36
 Diameter and wall thickness (if pipe) — otherwise, joint thickness: 1.0"
 Thickness range this qualifies: UNLIMITED

FILLER METAL

Specification no.: 5.20 Classification: E70C-1 F no.: 6
 Describe filler metal (if not covered by AWS specification):
 Is backing strip used? Yes
 Filler metal diameter and trade name: 1/16" Lincoln Flux for submerged arc or gas for gas metal arc or flux cored arc welding: 100% CO2

VISUAL INSPECTION

Appearance: Satisfactory Undercut: None Riping porosity: None

Guided Bend Test Results

Type	Result	Type	Result
SIDE BEND	NO DEFECTS		
SIDE BEND	NO DEFECTS		

Test conducted by: ZAPF TESTING LABORATORY Laboratory test no.: 20F3G-2096
 per: [Signature] Test date: 11/13/2000

Fillet Test Results

Appearance: Fillet size:
 Fracture test root penetration: Macroetch:
 (Describe the location, nature, and size of any crack or tearing of the specimen.)
 Test conducted by: Laboratory test no.:
 per: Test date:

RADIOGRAPHIC TEST RESULTS

Film Identification	Results	Remarks	Film Identification	Results	Remarks

Test witnessed by: Test no.:
 per:

We, the undersigned, certify that the statements in this record are correct and that the welds were prepared and tested in accordance with the requirements of the American Welding Society AWS D15.1, (93 year).

Manufacturer or contractor: KASSRO RAIL, CORP.
 Authorized by: [Signature]
 Date: 11-13-00

Form D-4



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WELDER AND WELDING OPERATOR QUALIFICATION TEST RECORD

Welder or welding operator's name CHARLES KUTINSKI Identification no. 109
 Welding process E.M.A.W. Manual Semiautomatic _____ Machine _____
 Position 4G Overhead
 (Flat, horizontal, overhead or vertical) — if vertical, state whether upward or downward)
 In accordance with procedure specification no. Declassified joint fig. no. CID
 Material specification A-36
 Diameter and wall thickness (if pipe) — otherwise, joint thickness .375"
 Thickness range this qualifies .750"

FILLER METAL

Specification no. E-1 & 5.5 Classification E-7018 F no. 4
 Describe filler metal (if not covered by AWS specification) _____
 Is backing strip used? Yes
 Filler metal diameter and trade name 1/8" TIGCOIN Flux for submerged arc or gas for gas metal arc or flux
 cored arc welding _____

VISUAL INSPECTION

Appearance Satisfactory Undercut None Piping porosity None

Guided Bend Test Results

Type	Result	Type	Result
FACR BEND	1/32" tear/PASSED		
ROOT BEND	3/64" tear/PASSED		

Test conducted by WALY TESTING LABORATORY Laboratory list no. 03240-1754
 per [Signature] Test date 8/05/2003

Fillet Test Results

Appearance _____ Fillet size _____
 Fracture test root penetration _____ Macroetch _____
 (Describe the location, nature, and size of any crack or tearing of the specimen.)
 Test conducted by _____ Laboratory test no. _____
 per _____ Test date _____

RADIOGRAPHIC TEST RESULTS

Film Identification	Results	Remarks	Film Identification	Results	Remarks

Test witnessed by _____ Test no. _____
 per _____

We, the undersigned, certify that the statements in this record are correct and that the welds were prepared and tested in accordance with the requirements of the American Welding Society AWS D15.1, (2001)
 year

Manufacturer or contractor KANSAS RAIL CORP.
 Authorized by [Signature]
 Date 8-5-03

Form D-4



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AWS D16.13.15 IM-2007

ANNEX 1

WELDER AND WELDING OPERATOR QUALIFICATION RECORD

Welder or welding operator's name: CHARLES SPALDING Identification no. 822
 Welding process: PCBW Manual Semi-automatic Machine
 (Flat, horizontal, overhead, or vertical—if vertical, state whether upward or downward.) 1G, Flat
 in accordance with procedure specification no. E-DC5
 Material specification A-36
 Diameter and wall thickness (if pipe) - otherwise, joint thickness 750"
 Thickness range this qualifies UNLIMITED

FILLER METAL

Specification no. E-29 Classification E8018 F no. 6
 Describe filler metal (if not covered by AWS specification): _____
 is backing strip used? Yes
 Filler metal diameter and trade name 3/32" Lincoln Flux for submerged arc or gas for gas metal arc or flux
 cored arc welding 100% CO2

VISUAL INSPECTION

Appearance Satisfactory Undercut None Spiking porosity None

Guided Bend Test Results:

Type	Result	Type	Result
SIDE BEND	NO DEFECTS		
STOP BEND	NO DEFECTS		

Test conducted by KATE TESTING LABORATORY Laboratory test no. 10P16-7949
 per [Signature] Test date 2/18/2010

Hard Test Results

Appearance _____ Filler size _____
 Fracture test local penetration _____ Macroetch _____
 (Describe the location, nature, and size of any cracks or tearing of the specimen.)
 Test conducted by _____ Laboratory test no. _____
 per _____ Test date _____

RADIOGRAPHIC TEST RESULTS

Film Identification	Results	Remarks	Film Identification	Results	Remarks

Test witnessed by _____ Laboratory test no. _____
 per _____ Test date _____

We, the undersigned, certify that the statements in this record are correct and that all the test welds were prepared and tested in accordance with the requirements of AWS D16.1, (2007) Railroad Welding Specification for Cars and Locomotives, (v98.)

Manufacturer or Contractor: KANSAS RAIL CORP.
 Authorized by: [Signature]
 Date: 2/18/10

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ANNEX D

WELDER AND WELDING OPERATOR QUALIFICATION RECORD

Welder or welding operator's name: CHARLES SPAULDING Identification no.: 822
 Welding process: ECAW Manual Semicautomatic Machine
 (Flat, horizontal, overhead, or vertical - if vertical, state whether upward or downward) 3C Vertical Up
 In accordance with procedure specification no. P-001
 Material specification: A-36
 Diameter and wall thickness (if pipe) - otherwise, joint thickness: .750"
 Thickness range this qualifies: UNL/T/TPP

FILLER METAL

Specification no. A5.20 Classification E71T-1 Group 6
 Describe filler metal (if not covered by AWS specification):
 Is backing strip used? _____
 Filler metal diameter and trade name: 1/16" Lincoln Flux for submerged arc or gas for gas metal arc or flux
 cored arc welding: 100% CO2

VISUAL INSPECTION

Appearance: Satisfactory Undercut: None Piping porosity: None

Guided Bent Test Results

Type	Result	Type	Result
<u>SIDE BEND</u>	<u>NO DEFECTS</u>		
<u>SIDE BEND</u>	<u>NO DEFECTS</u>		

Test conducted by: KATE PESHAK LABORATORY Laboratory test no.: 10P3G-7954
 per: [Signature] Test date: 2/25/2010

Fillet Test Results

Appearance: _____ Fillet size: _____
 Fracture test tool penetration: _____ Macroetch: _____
 (Describe the location, nature, and size of any cracks or tearing of the specimen.)
 Test conducted by: _____ Laboratory test no.: _____
 per: _____ Test date: _____

RADIOGRAPHIC TEST RESULTS

Film Identification	Results	Remarks	Film Identification	Results	Remarks

Test witnessed by: _____ Laboratory test no.: _____
 per: _____ Test date: _____

We, the undersigned, certify that the statements in this record are correct and that the test welds were prepared and tested in accordance with the requirements of AWS D15.1, (2007) Railroad Welding Specification - Cars and Locomotives, (year)

Manufacturer or Contractor: KAIRO RAIL CORPORATION

Authorized by: [Signature]


Date: 2-25-10

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Professional Service Industries, Inc.

PITTSBURGH TESTING LABORATORY DIVISION

CERTIFICATE

OF

TEST AND APPROVAL OF WELDING PROCESS

AND

QUALIFICATION OF OPERATOR OF

WELDING EQUIPMENT

PROFESSIONAL SERVICE INDUSTRIES, INC., PITTSBURGH TESTING LABORATORY DIVISION, has witnessed the welding and testing of test specimens welded by

Miner Railcar Services
 2208 East Cherry Street
 New Castle, PA 16102

in accordance with

American Welding Society
 Structural Welding Code D11.1-88

Welding Operator DARRYL BEACHEM No. 15
 Welding Process Flux Cored (Immershield)

Operator Tested

This is to certify that the Welding Technique used in this test and described in SPECIFICATIONS FOR WELDING PROCESS No. AWS D1.1-88 and the results of the test given in PHYSICAL TEST REPORT No. PHY90073 complied with the requirements of the above code within the following limitations.

Maximum Plate or Wall Thickness 3/4"

Minimum Plate or Wall Thickness Unlimited

Welding Positions Flat Groove

Other Limitations Flat, Horizontal Fillet

Remarks AWS A 5.20 E711-7 P. No. 6

No. 10875

Order No. B28-73122

File No. _____

Approved January 12, 1989

PITTSBURGH TESTING LABORATORY DIVISION
 By J. Peter Merittas
 Director



Orano Federal Services
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PSI		Professional Service Industries, Inc. Pittsburgh Testing Laboratory Division		850 Poplar Street Pittsburgh, Pennsylvania 15220 412/222-4000	
WELDER AND WELDER OPERATOR QUALIFICATION TEST REPORT					
Welder/Welder Operator's Name DARRYL BEACHEM		Date Reported November 21, 1988		PTL Order No. 828-73122	
Welder Identification No. 15		Date Tested October 24, 1988		Lab No. PHY81607	
Client Miner Railcar Services 2208 East Cherry Street New Castle, PA 16102		Welding Code (10 & year) AWS D1.1-88		Base Material Specification A-36	
Process Shielded Metal Arc Welding		Specimen Furnished <input checked="" type="checkbox"/> PTL <input type="checkbox"/> Others		Joint <input checked="" type="checkbox"/> Groove <input type="checkbox"/> Fillet	
Position Vertical Groove		Specimens Machined <input checked="" type="checkbox"/> PTL <input type="checkbox"/> Others		Plate Thickness 3/8"	
Weld Progression <input checked="" type="checkbox"/> Up <input type="checkbox"/> Down <input type="checkbox"/> CW <input type="checkbox"/> CCW <input type="checkbox"/> L to R <input type="checkbox"/> R to L		Thickness Range Qualified 3/4" Maximum		Diameter & Wall Thickness —	
Welding Procedure AWS No. D1.1-88		Current AMPS: 80-200 AC <input checked="" type="checkbox"/> DC <input type="checkbox"/> DC		Polarity <input type="checkbox"/> Direct <input checked="" type="checkbox"/> Reverse	
Welding Procedure Date by: <input checked="" type="checkbox"/> PTL Witnessed (Tech):		<input type="checkbox"/> Other:			
FILLER METAL					
Specification No. AWS A5.1		Classification E7018		F.No. 4	
Backing A-36 Steel		Diameter 1/8"		Trade Name	
Shielding <input type="checkbox"/> Gas		<input type="checkbox"/> Flux:			
VISUAL INSPECTION (AWS ONLY)					
Appearance		Undercut		Piping Porosity	
VERTICAL GUIDED BEND TEST RESULTS					
TYPE		RESULTS		TYPE	
FACE BEND		Defect Under 1/8"-PASS			
ROOT BEND		Defect Under 1/8"-PASS			
FILLET TEST RESULTS					
Weld Appearance <input type="checkbox"/> Pass <input type="checkbox"/> Fail		Fillet Size Leg: in. x in. <input type="checkbox"/> Convexity: in. <input type="checkbox"/> Convexity: in.			
Macro Etch Test Results <input type="checkbox"/> Pass <input type="checkbox"/> Fail					
Fracture Test Results (Describe location, nature & size of any cracks or tearing of the specimen)					
RADIOGRAPHIC TEST RESULTS					
Film Identification	Results	Remarks	Film Identification	Results	Remarks
Tests Witnessed by:					
QUALIFICATION RESULTS					
The Welder/Operator identified above <input checked="" type="checkbox"/> DOES <input type="checkbox"/> DOES NOT meet the performance qualifications specified in the Code identified above for the variables stated. CITY OF PCH. ORDINANCE No. 243 & PA DEPT. OF HIGHWAYS					
Remarks & Report Distribution (* denotes data not provided or not applicable)				Submitted by: J. Peter Meritman Manager	



Orano Federal Services
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Professional Service Industries, Inc.
Pittsburgh Testing Laboratory Division

860 Proctor Street,
 Pittsburgh, Pa 15226
 412/292-4300


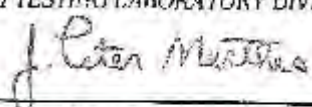
WELDER AND WELDING OPERATOR QUALIFICATION TEST REPORT					
Welder/Welder Operator's Name DARRYL BENCHEM		Date Reported November 21, 1988	PTL Order No. 828-73122		
Welder Identification No. 15		Date Tested October 24, 1988	Lab No. PHY21E07		
Client Miner Railway Services 2208 East Cherry Street New Castle, PA 16102		Welding Code (ID & year) AWS D1.1-88	Plant Order No.		
Process GMAW		Base Material Specification A36	Specimen <input checked="" type="checkbox"/> Plate <input type="checkbox"/> Pipe		
Position Vertical Groove		Specimen Furnished <input checked="" type="checkbox"/> PTL <input type="checkbox"/> Others	Weld <input checked="" type="checkbox"/> Groove <input type="checkbox"/> Fillet		
Weld Progression <input checked="" type="checkbox"/> Up <input type="checkbox"/> Down <input type="checkbox"/> CW <input type="checkbox"/> CCW <input type="checkbox"/> L to R <input type="checkbox"/> R to L		Specimens Machined <input checked="" type="checkbox"/> PTL <input type="checkbox"/> Others	Plate Thickness 3/8" Thick		
Welding Procedure No. _____ Rev. No. _____		Thickness Range Qualified 3/4" Maximum	Diameter & Wall Thickness		
Welding Procedure Data by: <input checked="" type="checkbox"/> PTL Witnessed (Tech): _____		Current VOLTAGE 18-21 AMPS 125-150 AC <input type="checkbox"/> DC	Polarity <input type="checkbox"/> Direct <input type="checkbox"/> Reverse		
FILLER METAL					
Specification No. AWS A5.18	Class/position E/US-3	Filler G	Trade Name		
Backing A36	Diameter .045	Shielding <input checked="" type="checkbox"/> Gas 75% Argon 25% CO₂	Flow 15-20 CFH		
VISUAL INSPECTION (AWS ONLY)					
Appearance	Undercut	Piping Porosity			
GUIDED BEND TEST RESULTS					
TYPE	RESULTS	TYPE	RESULTS		
FACE BEND	Defect Under 1/8" - PASS				
ROOT BEND	Defect Under 1/8" - PASS				
FILLET TEST RESULTS					
Weld Appearance <input type="checkbox"/> Pass <input type="checkbox"/> Fail	Fillet Groove Leg: <input type="checkbox"/> In <input type="checkbox"/> Out	Concavity: <input type="checkbox"/> In <input type="checkbox"/> Out	Convexity: <input type="checkbox"/> In <input type="checkbox"/> Out		
Macro Etch Test Results: <input type="checkbox"/> Pass <input type="checkbox"/> Fail					
Fracture Test Results (Describe location, nature & size of any cracks or testing of the specimen)					
RADIOGRAPHIC TEST RESULTS					
Film Identification	Results	Remarks	Film Identification	Results	Remarks
Tests Witnessed by: _____			Submitted by: <i>J. Peter Marthas</i> Manager		
QUALIFICATION RESULTS					
The Welder/Operator identified above <input checked="" type="checkbox"/> DOES <input type="checkbox"/> DOES NOT meet the performance qualifications specified in the Code identified above for the variables stated.					
Remarks & Material Distribution: (*denotes data not provided or not applicable)				Submitted by: _____	

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 Professional Service Industries, Inc. PITTSBURGH TESTING LABORATORY DIVISION CERTIFICATE OF TEST AND APPROVAL OF WELDING PROCESS AND QUALIFICATION OF OPERATOR OF WELDING EQUIPMENT	
<p><i>PROFESSIONAL SERVICE INDUSTRIES, INC., PITTSBURGH TESTING LABORATORY DIVISION, has witnessed the welding and testing of test specimens welded by</i></p> <p align="center"> <i>Miner Railcar Services 2208 East Cherry Street New Castle, Pennsylvania 16102</i> </p> <p align="center"> <i>in accordance with American Welding Society Structural Welding Code D1.1-88</i> </p>	
Welding Operator <u>DARRYL BEACHEN</u> Welding Process <u>SMAW/GMAW</u>	No. <u>15</u>
<div style="border: 1px solid black; height: 100px; width: 100%;"></div> <p align="center">Operator Tested</p>	<p>This is to certify that the Welding Technique used in this test and described in SPECIFICATIONS FOR WELDING PROCESS No. AWS D1.1-88 and the results of the test given in PHYSICAL TEST REPORT No. <u>PHYS1607</u> complied with the requirements of the above code within the following limitations.</p> <p> Maximum Plate or Wall Thickness <u>3/4"</u> Maximum Minimum Plate or Wall Thickness <u>Unlimited</u> Welding Positions <u>Flat-Horizontal-Vertical</u> Other Limitations <u>Fillet & Groove</u> </p> <p> Remarks <u>AWS A 5.1 E 7018 F, No. 4</u> <u>AWS A 5.10 E 709-3 F, No. 6</u> </p>
No. <u>10782</u> Order No. <u>820-73122</u> File No. _____ Approved <u>October 24, 1988</u> nek	<p align="center"><i>PITTSBURGH TESTING LABORATORY DIVISION</i></p> <p align="center">  By _____ Director </p>



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Professional Service Industries, Inc.
Pittsburgh Testing Laboratory Division

850 Foster Street
 Pittsburgh, Pennsylvania 15220
 412/922-4300
 LPA#1
 Rev. 7/88

WELDER AND WELDING OPERATOR QUALIFICATION TEST REPORT					
Welder/Welder Operator's Name DARRYL BEACHEM		Date Reported January 25, 1989		PTL Order No. 828-73172	
Welder Identification No. 15		Date Tested January 12, 1989		Lab No. PHY90073	
Client Miner Railcar Services 2208 East Cherry Street New Castle, PA 16102		Welding Code (ID & year) AWS D1.1-88		Client Order No.	
		Base Material Specification A-36 Group 1			
Process Flux Cored (Innershield)		Specimen Furnished <input checked="" type="checkbox"/> PTL <input type="checkbox"/> Others		Joint BU2a XXI Groove <input type="checkbox"/> J Fillet	
Position Flat Groove		Specimens Machined <input checked="" type="checkbox"/> PTL <input type="checkbox"/> Others		Plate Thickness 3/8"	
Weld Progression <input checked="" type="checkbox"/> Up <input type="checkbox"/> Down <input type="checkbox"/> L to R <input type="checkbox"/> R to L		Thickness Range Qualified 3/4" Maximum		Diameter & Wall Thickness	
Welding Procedure No. AWS D1.1-88 Rev. No. 0		Current AMPS: 125-250 <input type="checkbox"/> AC <input type="checkbox"/> DC		Polarity <input type="checkbox"/> Direct <input checked="" type="checkbox"/> Reverse	
Welding Procedure Data by: <input type="checkbox"/> PTL Witnessed (Tech): A. J. Lepczyk		<input type="checkbox"/> Others			
FILLER METAL					
Specification No. AWS A 5.20		Classification E71T-7		P No. 6	
Racking A-36 Steel		Diameter		Trade Name	
Shielding <input type="checkbox"/> Gas <input type="checkbox"/> Flux					
VISUAL INSPECTION (AWS ONLY)					
Appearance		Undercut		Pipino Porosity	
FLAT GROOVE		GUIDED BEND TEST RESULTS			
TYPE	RESULTS	TYPE	RESULTS		
FACE BEND	Defect Under 1/8" - PASS				
ROOT BEND	Defect Under 1/8" - PASS				
FILLET TEST RESULTS					
Weld Appearance <input type="checkbox"/> Pass <input type="checkbox"/> Fail		Fillet Size Leg: in. x in. <input type="checkbox"/> Concavity: in. <input type="checkbox"/> Convexity: in.			
Macro Etch Test Results <input type="checkbox"/> Pass <input type="checkbox"/> Fail					
Fracture Test Results (Describe location, nature & size of any cracks or tearing of the specimen)					
RADIOGRAPHIC TEST RESULTS					
Film Identification	Results	Remarks	Film Identification	Results	Remarks
Tests Witnessed by:					
QUALIFICATION RESULTS					
The Welder/Operator identified above <input checked="" type="checkbox"/> DOES <input type="checkbox"/> DOES NOT meet the performance qualifications specified in the Code identified above for the variables stated.					
Remarks & Report Distribution (Indicates data not provided or not applicable) mck			Submitted by J. Peter Mentzer Manager		

ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS. PUBLICATION IN TRADE PAPER, CONGRESSION OR OTHER MEDIA IS BEING PENDING OUR WRITTEN APPROVAL.



Orano Federal Services
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WELDER AND WELDING OPERATOR QUALIFICATION RECORD

Welder or welding operators name: DAVID S. WACKEN Identification no: 15
 Welding process: F. C. A. R. Manual _____ Semi-automatic X Machine _____
 Position: 30 Vertical Up
 (Flat, horizontal, overhead or vertical) — If vertical, state whether upward or downward
 In accordance with procedure specified on no. Prequalified Joint, Fig. No. 318
 Material specification: A-36
 Diameter and wall thickness (if pipe) — otherwise, joint thickness: 1.0"
 Thickest plate this qual fits: UNLIMITED

FILLER METAL

Specification no. E. 20 Classification E302-F Type B
 Describe filler metal (if not covered by AWS specification): _____
 Is backing strip used? Yes
 Filler metal, manufacturer and trade name: LAGER LAMINAR Flux (for submerged arc or gas for gas metal arc or flux cored arc welding): LAGER 602

VISUAL INSPECTION

Appearance: Satisfactory Undercut: None Pitting areas by: None

Guided Bent Test Results

Type	Result	Type	Result
<u>SIDE BEND</u>	<u>NO DEFECTS</u>		
<u>SIDE BEND</u>	<u>NO DEFECTS</u>		

Test conducted by: WELD TESTING LABORATORY Laboratory test no.: 00730-1800
 per: [Signature] Test date: 07/25/88

Filler Test Results

Appearance: _____ Fillet size: _____
 Exposure test root penetration: _____ Macroetch: _____
 (Describe the location, nature, and size of any crack or tearing of the specimen.)
 Test conducted by: _____ Laboratory test no.: _____
 per: _____ Test date: _____

RADIOGRAPHIC TEST RESULTS

Film Identification	Results	Remarks	Film Identification	Results	Remarks

Test witnessed by: _____ Test no.: _____
 per: _____

We, the undersigned, certify that the statements in this record are correct and that the welds were prepared and tested in accordance with the requirements of the American Welding Society AWS Q15.1, (88)
 year

Manufacturer or contractor: GLOBAL FATT CORP.
 Authorized by: [Signature]
 Date: 02/22/89

Form W-1



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WELDER AND WELDING OPERATOR QUALIFICATION TEST RECORD

Welder or welding operator's name DAVID BACHMAN Identification no. 15
 Welding process S.M.A.W. Manual Semiautomatic _____ Machine _____
 Position 1G Overhead
 (Flat, horizontal, overhead or vertical – if vertical, state whether upward or downward)
 In accordance with procedure specification no. Prequalification joint sig. CIR
 Material specification A-36
 Diameter and wall thickness (if pipe) – otherwise, joint thickness .375"
 Thickness range this qualifies .750"

FILLER METAL

Specification no. E-1 & E-2 Classification E-7018 F no. 1
 Describe filler metal (if not covered by AWS specification) _____
 Is backing strip used? Yes
 Filler metal diameter and trade name 1/8" Lincoln Flux for submerged arc or gas for gas metal arc or flux cored arc welding _____

VISUAL INSPECTION

Appearance Satisfactory Undercut None Piping porosity None

Guided Bend Test Results

Type	Result	Type	Result
<u>SPACE BEND</u>	<u>Minor check/PASSING</u>		
<u>ROOT BEND</u>	<u>1/16" tear/PASSING</u>		

Test conducted by KAL WISNING LABORATORY Laboratory test no. 03040-1750
 per [Signature] Test date 8/05/2003

Fillet Test Results

Appearance _____ Fillet size _____
 Fracture test root penetration _____ Marcastch _____
 (Describe the location, nature, and size of any crack or tearing of the specimen.)
 Test conducted by _____ Laboratory test no. _____
 per _____ Test date _____

RADIOGRAPHIC TEST RESULTS

Film identification	Results	Remarks	Film identification	Results	Remarks

Test witnessed by _____ Test no. _____
 per _____

We, the undersigned, certify that the statements in this record are correct and that the welds were prepared and tested in accordance with the requirements of the American Welding Society AWS D15.1, (2001)
 year

Manufacturer or contractor KASCRO RAIL CORP.
 Authorized by [Signature]
 Date 8-5-03

Form D-4



Orano Federal Services
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WELDER AND WELDING OPERATOR QUALIFICATION RECORD

Welder or welding operator's name DONALD E. KELLER Identification no. 817
 Welding process F-C-A-W Manual Semiautomatic Machine
 Position 3F Vertical Up
 (Flat, horizontal, overhead or vertical – if vertical, state whether upward or downward)
 In accordance with procedure specification no. Prequalified Joint, Fig. no. 010
 Material specification A-06
 Diameter and wall thickness (if pipe) – otherwise, joint thickness 1.0"
 Thickness range this qualifies UNLIMITED

FILLER METAL

Specification no. 3.20 Classification E71T-1 F no. 6
 Describe filler metal (if not covered by AWS specification) _____
 Is backing strip used? Yes
 Filler metal diameter and trade name 0.45" Lincoln Flux for submerged arc or gas for gas metal arc or flux
 used arc welding 100% CO2

VISUAL INSPECTION

Appearance Satisfactory Undercut None Piping porosity None

Guided Bent Test Results

Type	Result	Type	Result
SIDE BEND	NO DEFECTS		
SIDE BEND	NO DEFECTS		

Test conducted by KAIL TESTING LABORATORY Laboratory test no. QWEX-2524
 per *Paul J. Kail* Test date 6/16/2006

Fillet Test Results

Appearance _____ Fillet size _____
 Fracture test root penetration _____ Macroetch _____
 (Describe the location, nature, and size of any crack or tearing of the specimen.)
 Test conducted by _____ Laboratory test no. _____
 per _____ Test date _____

RADIOGRAPHIC TEST RESULTS

Film identification	Results	Remarks	Film identification	Results	Remarks

Test witnessed by _____ Test no. _____
 per _____

We, the undersigned, certify that the statements in this record are correct and that the welds were prepared and tested in accordance with the requirements of the American Welding Society AWS D15.1, [2001], YEAR.

Manufacturer or contractor FASLER RAIL CORPORATION
 Authorized by *Paul J. Kail*
 Date 6-16-06

Form D-1



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AWS D15.1 (2007)

ANNEX II

WELDER AND WELDING OPERATOR QUALIFICATION RECORD

Welder or welding operator's name GEORGE SPENSLEY Identification no. 825
Welding process ECM Manual Semi-automatic Machine
(Position, horizontal, overhead, or vertical, if vertical, state whether upward or downward) 1G, Flat
In accordance with procedure specification no. F-005
Material specification A 36
Diameter and wall thickness (if pipe) - otherwise, joint thickness .750"
Thickness range this qualifies INDETERM

FILLER METAL

Specification no. A 29 Classification E60T-1 F.no. 6
Describe filler metal (if not covered by AWS specification)
Is backing strip used? Yes
Filler metal diameter and trade name 3/32" TIGALIN Flux for submerged arc or gas for gas metal arc or flux
covered arc welding 100% CO2

VISUAL INSPECTION

Appearance Satisfactory Undercut None Piping porosity None

Golded Bent Test Results

Type	Result	Type	Result
SHOE BEND	NO DEFECTS		
SHOE BEND	NO DEFECTS		

Test conducted by HAZEL TESTINE LABORATORY Laboratory test no. 1UE18-7947
per [Signature] Test date 2/18/2010

Fitnet Test Results

Appearance _____ Fillet size _____
Fracture test root penetration _____ Macroetch _____
(Describe the location, nature, and size of any crack or tearing of the specimen.)
Test conducted by _____ Laboratory test no. _____
per _____ Test date _____

RADIOGRAPHIC TEST RESULTS

Film Identification	Results	Remarks	Film Identification	Results	Remarks

Test witnessed by _____ Laboratory test no. _____
per _____ Test date _____

We, the undersigned, certify that the statements in this record are correct and that the test welds were prepared and tested in accordance with the requirements of AWS D15.1 (2007) Railroad Welding Specifications for Cars and Locomotives. (year)

Manufacturer or Contractor KANSAS RAIL CORP.
Authorized by [Signature]
Date 2-18-10

Form B-4



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AWS D15.1 (05.1M)2007

ANNEX D

WELDER AND WELDING OPERATOR QUALIFICATION RECORD

Welder or welding operator's name GEORGE SEPPESTE Identification no. 825
 Welding process RCM Manual Semi-automatic X Machine
 (If vertical, overhead, or vertical—if vertical, state whether upward or downward) 3G Vertical Up
 In accordance with procedure specification no. W-001
 Material specification A-36
 Diameter and wall thickness (if pipe)—full circle, joint thickness .750"
 Thickness range (if plates) UNLIMITED

FILLER METAL

Specification no. A-20 Classification E71T-1 F.no. 6
 Describe filler metal (if not covered by AWS specification)
 Is backing strip used? Yes
 Filler metal diameter and trade name 1/16" Lincoln Flux for submerged arc or gas for gas metal arc or flux
 cored arc welding 100% CO2

VISUAL INSPECTION

Appearance Satisfactory Unclear None Piping porosity None

Guided Bend Test Results

Type	Result	Type	Result
<u>SIDE BEND</u>	<u>NO DEFECTS</u>	<u> </u>	<u> </u>
<u>SIDE BEND</u>	<u>NO DEFECTS</u>	<u> </u>	<u> </u>

Test conducted by KATI WESTING LABORATORY Laboratory test no. 10F3G-7932
 per [Signature] Test date 2/12/2010

Fillet Test Results

Appearance Fillet size
 Fracture (at root penetration) Macroetch
 (Describe the location, nature, and size of any crack or tearing of the specimen.)
 Test conducted by Laboratory test no.
 per Test date

RADIOGRAPHIC TEST RESULTS

Film Identification	Results	Remarks	Film Identification	Results	Remarks
<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>

Test witnessed by Laboratory test no.
 per Test date

We the undersigned, certify that the statements in this record are correct and that the test welds were prepared and tested in accordance with the requirements of AWS D15.1, (2007) Railroad Welding Specification for Cars and Locomotives.
 (year)

Manufacturer or Contractor ENSCO RAIL CORPORATION

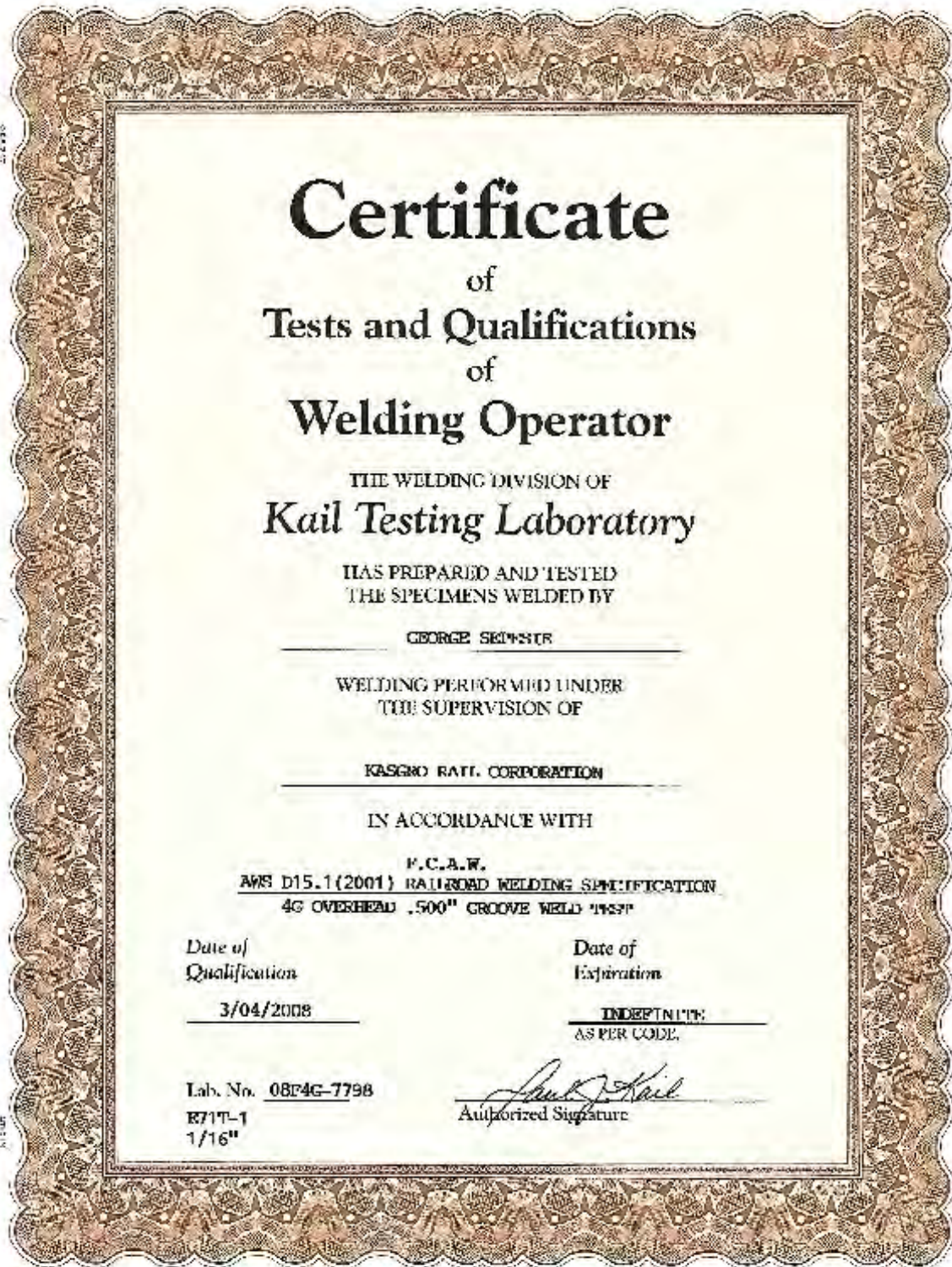
Authorized by [Signature]
 Date 2/12/10

Form D-4



Orano Federal Services
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ANNEX D

AWS D15.1:2001

WELDER AND WELDING OPERATOR QUALIFICATION RECORD

Welder or welding operator's name: GEORGE SEPSTIE Identification no. 825
 Welding process: FC, A, W, Manual Semiautomatic Machine _____
 (Flat, horizontal, overhead, or vertical—if vertical, state whether upward or downward.) 4G Overhead
 In accordance with procedure specification no. E-001
 Material specification: A-36
 Diameter and wall thickness (if pipe)—otherwise, joint thickness: .500"
 Thickness range this qualifies: 1.0"

FILLER METAL

Specification no. 5.20 Classification E71T-1 Class 6
 Describe filler metal (if not covered by AWS specification): _____
 Is backing strip used? Yes
 Filler metal diameter and trade name: 1/16" Lincoln Flux for submerged arc or gas for gas metal arc or flux-
 cored arc welding: 100% CO₂

VISUAL INSPECTION

Appearance: Satisfactory Undercut: None Piping porosity: None

Guided Bend Test Results

Type	Result	Type	Result
<u>SIDE BEND</u>	<u>NO DEFECTS</u>		
<u>SIDE BEND</u>	<u>NO DEFECTS</u>		

Test conducted by: KA, DA, WISCONSIN LABORATORY Laboratory test no.: 08F1G-7798
 per: [Signature] Test date: 3/04/2008

Fit Test Results

Appearance: _____ Fillet size: _____
 Fracture test root penetration: _____ Macroetch: _____
 (Describe the location, nature, and size of any crack or tearing of the specimen.)
 Test conducted by: _____ Laboratory test no.: _____
 per: _____ Test date: _____

RADIOGRAPHIC TEST RESULTS

Film Identification	Results	Remarks	Film Identification	Results	Remarks

Test witnessed by: _____ Laboratory test no.: _____
 per: _____ Test date: _____

We, the undersigned, certify that the statements in this record are correct and that the test results were prepared and tested in accordance with the requirements of AWS D15.1, (2001) Railroad Welding Specifications - Cars and Locomotives.
 (year)

Manufacturer or Contractor: WASCOP, BATH, CORP.
 Authorized by: [Signature]
 Date: 3/4/08

Form D-1



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AREVA		AREVA Federal Services LLC	
DATA TRANSMITTAL FORM			
Supplier:	KASGRO RAIL CORP., INC.	DTF No:	18A
P.O./SC No:	15C3011916	Date:	4/11/18
Type of Submittal:	<input type="checkbox"/> First <input checked="" type="checkbox"/> Re-Submittal	SDRL List Item No:	20
Submitted for:	<input checked="" type="checkbox"/> Approval <input type="checkbox"/> Review <input type="checkbox"/> Information	Number of Copies Submitted:	1
Submitted By:	RICK FORD	Rick Ford <small>Digitally signed by Rick Ford Date: 2018.04.11 12:55:49 -0402</small>	PROJECT MANAGER
	<small>(Name)</small>	<small>(Signature)</small>	<small>(Title)</small>

ITEM NUMBER	DOCUMENT NUMBER	REVISION NUMBER	DOCUMENT DESCRIPTION	AFS DISPOSITION
1	W7		Clock #15 Darryl Beachem Welding Qualification	<input checked="" type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
2	W9		Clock #825 George Sepesle Welding Qualifications	<input checked="" type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
3	Kasgro 4112018 Letter		Letter transferring Welder Qualifications to Kasgro from previous company name	<input checked="" type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
				<input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
				<input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
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				<input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
				<input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
				<input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA

Comments: No comments	Technical Reviewer (I.e., RE, PTL, SME, QA, etc.) KLEIN Slade <small>Digitally signed by KLEIN Slade Date: 2018.04.24 08:08:44 -0700</small> Date: 4/24/2018
--------------------------	---

AFS DISPOSITION CODES AND DEFINITIONS			
AP	Approved	Work may proceed.	Resubmittal is not required
AWC	Approved with Comment	Work may proceed; comments provided for Supplier's consideration only.	Resubmittal is not required
REV	Reviewed	Work may proceed; comments provided for Supplier's consideration only.	Resubmittal is not required
RWC	Reviewed with Comment	Work may proceed; subject to incorporation and compliance w/ Buyer comments.	Correct and resubmit
DS	Disapproved	Work may <u>not</u> proceed.	Correct and resubmit
RSA	Receipt Submittal Acknowledged	No other action required.	

If, in the judgment of the Supplier, the incorporation of AFS' comments will result in a change to the Purchase Order/Subcontract, work shall not proceed and the Supplier shall immediately provide a written notice to AFS' C&P Representative describing the change.

Project Manager (PM) / Engineering Manager (EM) or Designated Individual (DI) Approval 	<small>Digitally signed by MICHAEL A. HESTER DN: c=AREVA GROUP, 2.5.4.40=187437512804100020100, ou=CENTON Mack, Date: 2018.04.24 13:01:30 -0400</small> Date: 04/24/2018
--	--

AFS-EN-FRM-023 Rev 01 (Effective August 18, 2014)
 Refer to AFS-EN-PRC-012



Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
Appendix B

Doc./Rev.: EIR-3021970-000
 Project: 00225.03.0050 DOE Atlas Project

	Orano Federal Services	
	SUPPLIER DOCUMENT SUBMITTAL REVIEW	
Supplier / PO No.:	PTI / 16C3016046	DTF No. / Rev: 018A
Charge No: 01916.01.C005.08.00100	Due Date: 4/26/2018	
Document(s):	See DTF-018A	
REVIEW INSTRUCTIONS: (List Supplier Doc. No. and Rev. FS Spec and Dwg. Codes, Stds, etc.)		
PE	Slade Klein	
REVIEWERS	Slade Klein, Bernie Counterman	
QA	Bernie Counterman	
Technical Review		
Comments/Markup Attached Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Technical Reviewer Comments:		
Clock 109 (Charles Kluinski) will NOT be used for welding and was not resubmitted. Clock 15 (Darryl Beachem ok per letter. Miner Rail Services is now Kasgro. Clock numbers provided for all welders per R. Ford email.		
Technical Reviewer(s) (Sign/Date): KLEIN Slade		Digitally signed by KLEIN Slade Date: 2018.04.24 07:52:31 -07'00'
Quality Assurance Review (As Applicable)		
Comments/Markup Attached Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Technical Reviewer Comments:		
No Comments		
QA Reviewer(s) (Sign/Date):		Digitally signed by Bernie Counterman Date: 2018.04.24 08:00:31 -07'00'
COMMENT DISPOSITION (If Applicable. Attached further comments and disposition correspondence as necessary)		

FS-EN-FRM-026 Rev 01 (Effective March 1, 2018)
 Refer to FS-EN-PRC-012



Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
Appendix B

Doc./Rev.: EIR-3021970-000
Project: 00225.03.0050 DOE Atlas Project

Kasgro Rail Corporation
121 Rundle Road • New Castle, PA 16201
724-658-9061 • 724-658-7856 FAX • www.KASGRO.com



KASGRO

April 11, 2018

Weld Performance Qualification Records.

The weld performance qualification records of the following employees have been reviewed. They conform to the requirements of the American Welding Society D 15.1 Railroad Welding Specification for Cars and Locomotives.

Clock # 15 Darryl Beachem
Clock # 825 George Sepesie

This review was performed when the ownership of the company was changed from Miner Railcar to Kasgro Rail Corp.

Reviewed By:

Mark Zeigler

Specialty Rail Car Solutions



Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
Appendix B

Doc./Rev.: EIR-3021970-000
Project: 00225.03.0050 DOE Atlas Project

From: [Rick Ford](#)
To: [KLEIN Slade \(ORN-BE\)](#)
Cc: [DENTON Mark \(ORN-BE\)](#); [COUNTERMAN Bernie \(ORN-BE\)](#); [Mark](#)
Subject: Kasgro Welder Identification
Date: Tuesday, April 10, 2018 12:34:37 PM
Attachments: [Kasgro Welder List.xls](#)

Slade,

A number of the welder qualifications were developed under previous company names prior to Kasgro ownership using various methods such as social security numbers and/or employee numbers, that are no longer valid.

In reference to issue of welder identification and the original welder qualification records, the method used by Kasgro Rail is to use their current employee number per the attached list.

Sincerely,

Rick Ford
Kasgro Rail

From: David Stull <dave@kasgro.com>
Sent: Tuesday, April 10, 2018 2:41 PM
To: Rick Ford
Subject: FW:

From: Bill Baker [mailto:bbaker@kasgro.com]
Sent: Monday, April 09, 2018 6:49 AM
To: dave@kasgro.com
Subject:



Orano Federal Services
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Kasgro Welder Employee Numbers

Emp. #	Employee Name
11	James Clark
12	Jim McCreedy
15	Darryl Beachem
16	Bill Baker
56	Scott Neely
57	Robert Walker
81	Trevor Barker
131	Al Williams
148	Mark Baker
157	Adam Durst
300	Keith Peterson
373	John Novakovich
812	Ryan Vogus
814	Thomas Cummins
815	Leonard Agee
819	Bill Flory
821	Triston Mills
822	Charles Spaulding
823	Steven Presnar
824	Ron Price
825	George Sepesie
826	Randall Robison
834	Matt Smith
836	Paul Klamer
837	Brett Shepard
841	John Henke
842	Neil Shalenberger
843	Josh Clyde
844	Mike Beachem



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AREVA		AREVA Federal Services LLC	
DATA TRANSMITTAL FORM			
Supplier:	KASGRO RAIL CORP., INC.	DTF No:	019
P.O./SC No:	15C3011916	Date:	03/27/18
Type of Submittal:	<input checked="" type="checkbox"/> First <input type="checkbox"/> Re-Submittal	SDRL List Item No:	20
Submitted for:	<input checked="" type="checkbox"/> Approval <input type="checkbox"/> Review <input type="checkbox"/> Information	Number of Copies Submitted:	1
Submitted By:	RICK FORD <small>(Name)</small>	<i>Rick Ford</i> <small>Digitally signed by Rick Ford Date: 2018.03.27 15:34:40 -0402</small> <small>(Signature)</small>	PROJECT MANAGER <small>(Title)</small>

ITEM NUMBER	DOCUMENT NUMBER	REVISION NUMBER	DOCUMENT DESCRIPTION	AFS DISPOSITION
1	KAS W10		Clock #11 James Clark Welding Qualifications	<input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
2	KAS W11		Clock #12 Jimmy McCready Welding Qualifications	<input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input checked="" type="checkbox"/> DS <input type="checkbox"/> RSA
3	KAS W12		Clock #841 John Henke Welding Qualifications	<input checked="" type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
4	KAS W13		Clock #373 John Novakovich Welding Qualifications	<input checked="" type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
5	KAS W14		Clock #843 Josh Clyde Welding Qualifications	<input checked="" type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
6	KAS W15		Clock #300 Keith Peterson Welding Qualifications	<input checked="" type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
7	KAS W16		Clock #815 Leonard Agee Welding Qualifications	<input checked="" type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
8	KAS W17		Clock #148 Mark Baker Welding Qualifications	<input checked="" type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
9	KAS W18		Clock #834 Matthew Smith Welding Qualifications	<input checked="" type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA

Comments: Please address comments on attached DTF-019 RFM-026. Re-submit for James Clark (W10) and James McCready (W11).	Technical Reviewer (i.e., RE, PTL, SME, QA, etc.) KLEIN Slade KLEIN Slade <small>2018.04.10 04:59:05 -0700</small> Date: 4/10/2018
---	--

AFS DISPOSITION CODES AND DEFINITIONS			
AP	Approved	Work may proceed.	Resubmittal is not required
AWC	Approved with Comment	Work may proceed; comments provided for Supplier's consideration only.	Resubmittal is not required
REV	Reviewed	Work may proceed; comments provided for Supplier's consideration only.	Resubmittal is not required
RWC	Reviewed with Comment	Work may proceed; subject to incorporation and compliance w/ Buyer comments.	Correct and resubmit
DS	Disapproved	Work may <u>not</u> proceed.	Correct and resubmit
RSA	Receipt Submittal Acknowledged	No other action required.	

If, in the judgment of the Supplier, the incorporation of AFS' comments will result in a change to the Purchase Order/Subcontract, work shall not proceed and the Supplier shall immediately provide a written notice to AFS' C&P Representative describing the change.

Project Manager (PM) / Engineering Manager (EM) or Designated Individual (DI) Approval 	<small>Digitally signed by DENTON Mark DN: c=AREVA GROUP, 2.5.4.49=1747375128041022021700, ou=DENTON Mark, Date: 2018.04.10 08:51:37 -0400</small> Date: 04/10/2018
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AFS-EN-FRM-023 Rev 01 (Effective August 18, 2014)
 Refer to AFS-EN-PRC-012



Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
Appendix B

Doc./Rev.: EIR-3021970-000
 Project: 00225.03.0050 DOE Atlas Project

	AREVA Federal Services LLC	
	SUPPLIER DOCUMENT SUBMITTAL REVIEW	
Supplier / PO No.:	Kasgro Rail / 15C3011916	DTF No. / Rev: 019
Charge No:	00225.03.0050.02.00001	Due Date: 4/10/2018
Document(s):	See DTF No.: 019	
REVIEW INSTRUCTIONS: (List Supplier Doc. No. and Rev. AFS Spec and Dwg. Codes, Stds, etc.)		
PE	Slade Klein	
REVIEWERS	Slade Klein, Bernie Counterman	
QA	Bernie Counterman	
Technical Review		
Comments/Markup Attached Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Technical Reviewer Comments:		
No additional comments.		
Technical Reviewer(s) (Sign/Date): KLEIN Slade		KLEIN Slade 2018.04.10 04:53:23 -07'00'
Quality Assurance Review (As Applicable)		
Comments/Markup Attached Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Technical Reviewer Comments:		
1. James Clark – qualification for .375 was performed for Miner Rail Services. Need qualifications to Kasgro. (Ref. D15.1, Section 9.4 Qualification Responsibility). 2. James McCready – qualification 3-4 unlimited flat-groove was performed for Miner Rail Services. Need qualifications to Kasgro. (Ref. D15.1, Section 9.4 Qualification Responsibility). qualification 3-4 unlimited flat-horizontal was performed for Miner Rail Services. Need qualifications to Kasgro.		
QA Reviewer(s) (Sign/Date): Bernard Counterman		Digitally signed by Bernard Counterman Date: 2018.04.05 15:19:50 -07'00'
COMMENT DISPOSITION (If Applicable. Attached further comments and disposition correspondence as necessary)		

Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
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Doc./Rev.: EIR-3021970-000
Project: 00225.03.0050 DOE Atlas Project

PSI Professional Service Industries, Inc.
PITTSBURGH TESTING LABORATORY DIVISION
CERTIFICATE
OF
TEST AND APPROVAL OF WELDING PROCESS
AND
QUALIFICATION OF OPERATOR OF
WELDING EQUIPMENT

PROFESSIONAL SERVICE INDUSTRIES, INC., PITTSBURGH TESTING LABORATORY DIVISION, has witnessed the welding and testing of test specimens welded by
MINER RAIL CAR SERVICES
2208 EAST CHERRY STREET
NEW CASTLE, PA 16102

in accordance with
American Welding Society
Structural Welding Code D1.1-88

Welding Operator James Clark No. 011
Welding Process SAW/GMAW/Flux Cored (Innershield)

 Operator Tested

This is to certify that the Welding Testmate used in this test and described in SPECIFICATIONS FOR WELDING PROCESS No. AWS D1.1-88 and the results of the test given in PHYSICAL TEST REPORT No. PHY80142 complied with the requirements of the above code within the following limitations.
Maximum Plate or Wall Thickness 3/4" MAX.
Minimum Plate or Wall Thickness Unlimited
Welding Positions Flat-Horizontal-Vertical
Other Limitations Fillet & Groove

Remarks A5.20, A5.18, A5.1 E711-7, E70S-3
E7018 T. NO. 4 & 6

No. 10387
Order No. 828-73122
File No. _____
Approved. 6-15-88

PITTSBURGH TESTING LABORATORY DIVISION
By Peter Mentzer
Director



Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
Appendix B

Doc./Rev.: EIR-3021970-000
 Project: 00225.03.0050 DOE Atlas Project



Professional Service Industries, Inc.
Pittsburgh Testing Laboratory Division

600 Murray Avenue
 Pittsburgh, Pennsylvania 15220
 412/922-4000

WELDER AND WELDING OPERATOR QUALIFICATION TEST REPORT					
Welder/Welder Operator's Name James Clark		Date Reported 4/29/88		PTL Order No. 828-73122	
Welder Identification No. 011		Date Tested 4/15/88		Lab No. PHY80142	
Client Miner Railcar Services 2208 East Cherry Street New Castle, PA 16102		Welding Code (ID & year) AWS D1.1-88		Client Order No.	
		Base Material Specification A-36 Group 1			
Process F0UX CORED (INNERSHIELD)		Specimen <input checked="" type="checkbox"/> Plate <input type="checkbox"/> Pipe		Joint <input type="checkbox"/> Groove <input type="checkbox"/> Fillet	
Position Vertical Groove		Specimen Furnished <input checked="" type="checkbox"/> PTL <input type="checkbox"/> Others		Plate Thickness 3/8"	
Weld Progression <input checked="" type="checkbox"/> Up <input type="checkbox"/> Down <input type="checkbox"/> CW <input type="checkbox"/> CCW <input type="checkbox"/> L to R <input type="checkbox"/> R to L		Specimens Machined <input checked="" type="checkbox"/> PTL <input type="checkbox"/> Others		Diameter & Wall Thickness ---	
Welding Procedure No. 01.1-88 AWS Rev. No.		Current AMPS: 80-200 <input type="checkbox"/> AC <input checked="" type="checkbox"/> DC		Polarity <input type="checkbox"/> Direct <input checked="" type="checkbox"/> Reverse	
Welding Procedure Data by: <input type="checkbox"/> PTL Witnessed (Tech): <input type="checkbox"/> Others:					
FILLER METAL					
Specification No. AMS A 5.20		Classification E71T-7		F. No. 6	
Backing A-36 Steel		Diameter		Trade Name	
Shielding <input type="checkbox"/> Gas: <input type="checkbox"/> Flux:					
VISUAL INSPECTION (AWS ONLY)					
Appearance		Undercut		Piping Porosity	
VERTICAL GUIDED BEND TEST RESULTS					
TYPE	RESULTS	TYPE	RESULTS		
Face Bend	No Defects PASS				
Root Bend	No Defects PASS				
FILLET TEST RESULTS					
Weld Appearance <input type="checkbox"/> Pass <input type="checkbox"/> Fail		Fillet Size Leg: in. x in. <input type="checkbox"/> Convexity: in. <input type="checkbox"/> Concavity: in.			
Macro Etch Test Results <input type="checkbox"/> Pass <input type="checkbox"/> Fail					
Fracture Test Results (Describe location, nature & size of any cracks or tearing of the specimen)					
RADIOGRAPHIC TEST RESULTS					
Film Identification	Results	Remarks	Film Identification	Results	Remarks
Tests Witnessed by:					
QUALIFICATION RESULTS					
The Welder/Operator identified above <input checked="" type="checkbox"/> DOES <input type="checkbox"/> DOES NOT meet the performance qualifications specified in the Code identified above for the variables stated.					
Remarks & Report Distribution (* denotes data not provided or not applicable)					
Tcg			Submitted by: <i>J. Peter Mertes</i> Manager		

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Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
Appendix B

Doc./Rev.: EIR-3021970-000
 Project: 00225.03.0050 DOE Atlas Project



Professional Service Industries, Inc.
Pittsburgh Testing Laboratory Division

850 Poplar Street
 Pittsburgh, Pennsylvania 15220
 412922-4000

WELDER AND WELDING OPERATOR QUALIFICATION TEST REPORT					
Welder/Welder Operator's Name James Clark		Date Reported 4/29/88		PTL Order No. 828-73122	
Welder Identification No. 011		Date Tested 4/15/88		Lab No. PHY80142	
Client Miner Railcar Services 2208 East Cherry Street New Castle, PA 16102		Welding Code (ID & year) AWS D1.1		Client Order No.	
		Base Material Specification A-36			
Process GMAW		Specimen Furnished <input checked="" type="checkbox"/> PTL <input type="checkbox"/> Others		Joint <input checked="" type="checkbox"/> Groove <input type="checkbox"/> Fillet	
Position Vertical Groove		Specimens Machined <input checked="" type="checkbox"/> PTL <input type="checkbox"/> Others		Plate Thickness 1" Thick	
Weld Progression <input checked="" type="checkbox"/> Up <input type="checkbox"/> Down <input type="checkbox"/> CW <input type="checkbox"/> CCW <input type="checkbox"/> L to R <input type="checkbox"/> R to L		Thickness Range Qualified Unlimited		Diameter & Wall Thickness	
Welding Procedure No. Rev. No.		Current Volts 18-21 AMPS: 125-150 AC <input type="checkbox"/> DC		Polarity <input type="checkbox"/> Direct <input type="checkbox"/> Reverse	
Welding Procedure Data by: <input checked="" type="checkbox"/> PTL Witnessed (Tech): <input type="checkbox"/> Other:					
FILLER METAL					
Specification No. AWS A 5.18		Classification E 70S-3		F. No. 6	
Backing A-36		Diameter		Trade Name	
Shielding Gas 75% Argon 25% CO ₂		15-20 CFH			
VISUAL INSPECTION (AWS ONLY)					
Appearance		Undercut		Piping Porosity	
GUIDED BEND TEST RESULTS					
Vertical		TYPE		RESULTS	
Face Bend		No Defects		PASS	
Root Bend		No Defects		PASS	
FILLET TEST RESULTS					
Weld Appearance <input type="checkbox"/> Pass <input type="checkbox"/> Fail		Fillet Size Leg: in. x in. <input type="checkbox"/> Concavity: in. <input type="checkbox"/> Convexity: in.			
Macro Etch Test Results <input type="checkbox"/> Pass <input type="checkbox"/> Fail					
Fracture Test Results (Describe location, nature & size of any cracks or tearing of the specimen)					
RADIOGRAPHIC TEST RESULTS					
Film Identification	Results	Remarks	Film Identification	Results	Remarks
Tests Witnessed by:					
QUALIFICATION RESULTS					
The Welder/Operator identified above <input checked="" type="checkbox"/> DOES <input type="checkbox"/> DOES NOT meet the performance qualifications specified in the Code identified above for the variables stated.					
Remarks & Report Distribution (*denotes data not provided or not applicable)				Submitted by: <i>J. Peter Matthews</i> Manager	
Tcq					

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Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
Appendix B

Doc./Rev.: EIR-3021970-000
 Project: 00225.03.0050 DOE Atlas Project



Professional Service Industries, Inc.
Pittsburgh Testing Laboratory Division

850 Poplar Street
 Pittsburgh, Pennsylvania 15220
 412/922-6000

L P0013
 Rev. 7/96

WELDER AND WELDING OPERATOR QUALIFICATION TEST REPORT					
Welder/Welder Operator's Name		Date Reported 4/29/88		PTL Order No. 828-73122	
Welder Identification No. 011		Date Tested 4/15/88		Lab No. PHY80142	
Client Miner Railcar Services 2208 East Cherry Street New Castle, PA 16102		Welding Code (ID & year) AWS D1.1-88		Client Order No.	
		Base Material Specification A-36 Group 1			
Process Shielded Metal Arc Welding		Specimen <input checked="" type="checkbox"/> Plate <input type="checkbox"/> Pipe		Joint <input checked="" type="checkbox"/> Groove <input type="checkbox"/> Fillet	
Position Vertical Groove		Specimen Furnished <input checked="" type="checkbox"/> PTL <input type="checkbox"/> Others		Plate Thickness 3/8"	
Weld Progression <input checked="" type="checkbox"/> Up <input type="checkbox"/> Down <input type="checkbox"/> CW <input type="checkbox"/> CCW <input type="checkbox"/> L to R <input type="checkbox"/> R to L		Specimens Machined <input checked="" type="checkbox"/> PTL <input type="checkbox"/> Others		Diameter & Wall Thickness	
Welding Procedure No. D1.1-88 AWS Rev. No.		Current AMPS: 80-200 <input type="checkbox"/> AC <input checked="" type="checkbox"/> DC		Polarity <input type="checkbox"/> Direct <input checked="" type="checkbox"/> Reverse	
Welding Procedure Data by: <input type="checkbox"/> PTL Witnessed (Tech): <input type="checkbox"/> Others:					
FILLER METAL					
Specification No. AWS A 5.1		Classification E 7018		F No. F. No. 4	
Backing A-36 Steel		Diameter 1/8"		Trade Name	
Shielding <input type="checkbox"/> Gas: <input type="checkbox"/> Flux:					
VISUAL INSPECTION (AWS ONLY)					
Appearance		Undercut		Piping Porosity	
GUIDED BEND TEST RESULTS					
VERTICAL TYPE		RESULTS		TYPE	
Face Bend		No Defects PASS			
Root Bend		No Defects PASS			
FILLET TEST RESULTS					
Weld Appearance <input type="checkbox"/> Pass <input type="checkbox"/> Fail		Fillet Size Leg: in. x in. <input type="checkbox"/> Concavity: in. <input type="checkbox"/> Convexity: in.			
Macro Etch Test Results <input type="checkbox"/> Pass <input type="checkbox"/> Fail					
Fracture Test Results (Describe location, nature & size of any cracks or tearing of the specimen)					
RADIOGRAPHIC TEST RESULTS					
Film Identification	Results	Remarks	Film Identification	Results	Remarks
Tests Witnessed by:					
QUALIFICATION RESULTS					
The Welder/Operator identified above <input checked="" type="checkbox"/> DOES <input type="checkbox"/> DOES NOT meet the performance qualifications specified in the Code identified above for the variables stated.					
Remarks & Report Distribution (*denotes data not provided or not applicable)				Submitted by: <i>J. Peter Mentzer</i> Manager	
1cg					

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Orano Federal Services
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Doc./Rev.: EIR-3021970-000
 Project: 00225.03.0050 DOE Atlas Project





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Appendix B

Doc./Rev.: EIR-3021970-000
Project: 00225.03.0050 DOE Atlas Project

WELDER AND WELDING OPERATOR QUALIFICATION RECORD

Welder or welding operator's name: JAMES N. CLARK Identification no: 011
 Welding process: IGAW Manual Semi-automatic Machine
 Position: 3G Vertical UP
 (Flat, horizontal, overhead or vertical — if vertical, state whether upward or downward)
 In accordance with procedure specification no: Pressure-tight joint, Fig. no. CID
 Material specification: A-36
 Diameter and wall thickness (if pipe) — otherwise, joint thickness: 1"
 Thickness range the qualifies: UNLIMITED

FILLER METAL

Specification no: E 70 Classification: E 7018-1 F no: 6
 (Describe filler metal (if not covered by AWS specification): _____
 Is backing strip used? Yes
 Filler metal diameter and trace name: 3/32" E 7018-1 Flux for submerged arc or gas (or gas metal arc) as
 cored arc weld no: 100 & 002

VISUAL INSPECTION

Appearance: Satisfactory Undercut: None Riping porosity: None

Guided Bend Test Results

Type	Result	Type	Result
<u>SIDE BEND</u>	<u>NO DEFECTS</u>		
<u>SIDE BEND</u>	<u>1/64" Tear/PASSED</u>		

Test conducted by: KATY TESTING LABORATORY Laboratory test no: 95-1643
 per: [Signature] Test date: 6/29/95

Fillet Test Results

Appearance: _____ Fillet size: _____
 Fracture test root penetration: _____ Marked notch: _____
 (Describe the location, nature, and severity of any crack or tearing of the specimen.)
 Test conducted by: _____ Laboratory test no: _____
 per: _____ Test date: _____

RADIOGRAPHIC TEST RESULTS

Film identification	Results	Remarks	Film identification	Results	Remarks

Test performed by: _____ Test no: _____
 per: _____

We, the undersigned, certify that the statements in this record are correct and that the welds were prepared and tested in accordance with the requirements of the American Welding Society AWS D18.1, (93 year)

Manufacturer or distributor: KANSAS BULL DOGG
 Authorized by: [Signature]
 Date: 6/29/95



Orano Federal Services
 Title: Design and Prototype Fabrication of Railcars for Transport of
 High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
 Appendix B

Doc./Rev.: EIR-3021970-000
 Project: 00225.03.0050 DOE Atlas Project





Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
Appendix B

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WELDER AND WELDING OPERATOR QUALIFICATION RECORD

Welder or welding operator's name: JAMES CLARK Identification no. 011
 Welding process: E.C.A.W. Manual Semi-automatic Machine
 Position: EG OVERHEAD
 (Flat, horizontal, overhead or vertical — if vertical, state whether upward or downward)
 In accordance with procedure specification no. PREQUALIFIED JOINT FIG. NO. C1B
 Material specification: A-36
 Diameter and wall thickness (if pipe) — otherwise, joint thickness: 501"
 Thickness range this qualifies: 1.12"

FILLER METAL

Specification no. E-20 Classification: E70Y-1 F no. 6
 Describe filler metal (if not covered by AWS specification):
 X backing strip used? Yes
 Filler metal diameter and trade name: .045" Lincoln Flux for submerged arc or gas for gas metal arc or flux
 name and welding: 100% CO₂

VISUAL INSPECTION

Appearance: Satisfactory Undercut: None Pitting porosity: None

Guided Bent Test Results

Type	Result	Type	Result
SIDE BEND	NO DEFECTS		
SIDE BEND	NO DEFECTS		

Test conducted by: KM TESTING LABORATORY Laboratory test no. DRF40-2265
 per Paul J. Hart Test date: 3/25/2003

Fillet Test Results

Appearance: _____ Fillet size: _____
 Cracks: test root penetration: _____
 (Describe the location, nature and extent of any cracks or testing of the specimen.)
 Test conducted by: _____ Laboratory test no. _____
 per: _____ Test date: _____

RADIOGRAPHIC TEST RESULTS

Film identification	Results	Remarks	Film identification	Results	Remarks

Test witnessed by: _____ Test no. _____
 per: _____

We, the undersigned, certify that the statements in this record are correct and that the welds were prepared and tested in accordance with the requirements of the American Welding Society AWS D15.1 (.. 2001)
 year _____

Manufacturer or contractor: KANSAS RAIL CORP.
 Authorized by: Mark Deigh
 Date: 3-25-03

Firm D-4



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WELDER AND WELDING OPERATOR QUALIFICATION RECORD

Welder or welding operator's name JAMES MCCREDDY Identification no. 012
 Welding process P.C.A.R. Manual Semi-automatic X Machine
 Position 1G FLAT
 (Flat, horizontal, overhead or vertical - if vertical, state whether upward or downward)
 In accordance with procedure specification no. Q1KRC-0129
 Material specification A-56
 Diameter and wall thickness of pipe; - otherwise, joint thickness 1.0"
 Thickest range this qualifies UNLIMITED

FILLED METAL

Specification no. 5-20 Classification E70T-1 F no. 6
 Describe filler metal (if not covered by AWS specification)
 Is backing strip used? Yes
 Filler metal diameter and trade name 3/32" Lincoln Flux for submerged arc or gas for gas metal arc or flux
 cored arc welding 100% CO2

VISUAL INSPECTION

Appearance Satisfactory Treatment None Piping porosity None

Guided Bend Test Results

Type	Result	Type	Result
STOP BEND	NO DEFECTS		
SIDE BEND	NO DEFECTS		

Test conducted by KALL TESTING LABORATORY Laboratory test no. 01FIG-2214
 per [Signature] Test date 11/30/01

Filet Test Results

Appearance Filet size
 maximum root penetration Marcellite
 (Describe the location, nature, and size of any crack or tearing of the specimen.)
 Test conducted by Laboratory test no.
 per Test date

RADIOGRAPHIC TEST RESULTS

Film identification	Results	Remarks	Film identification	Results	Remarks

Test witnessed by Test no.
 per

We, the undersigned, certify that the statements in this record are correct and that the welds were prepared and tested in accordance with the requirements of the American Welding Society AWS D15.1 (93 year).


Manufacturer or contractor KASPRO RAIL CORPORATION
 Authorized by [Signature]
 Date 11-30-01

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 Professional Service Industries, Inc. PITTSBURGH TESTING LABORATORY DIVISION CERTIFICATE OF TEST AND APPROVAL OF WELDING PROCESS AND QUALIFICATION OF OPERATOR OF WELDING EQUIPMENT	
<p><i>PROFESSIONAL SERVICE INDUSTRIES, INC., PITTSBURGH TESTING LABORATORY DIVISION</i>, has witnessed the welding and testing of test specimens welded by</p> <p align="center"> Miner Railcar Services 2208 East Cherry Street New Castle, Pennsylvania 16102 </p> <p align="center"> in accordance with American Welding Society Structural Welding Code D1.1-88 City of Pittsburgh ordinance No. 243 Series 1967 and Pennsylvania Department of Highways </p>	
Welding Operator <u>JAMES B. McCREADY</u> No. <u>012</u> Welding Process <u>Flux Cored (Innershield)</u>	<p>This is to certify that the Welding Technique used in this test and described in SPECIFICATIONS FOR WELDING PROCESS No. AWS D1.1-88 and the results of the test given in PHYSICAL TEST REPORT No. PHY80580 complied with the requirements of the above code within the following limitations:</p> <p> Maximum Plate or Wall Thickness <u>3/4"</u> Minimum Plate or Wall Thickness <u>Unlimited</u> Welding Positions <u>Flat Groove & Fillet</u> Other Limitations <u>Fillet & Groove</u> </p> <p>Remarks <u>AKS A 5.20 E 717-7 F. Ro. 5</u></p>
Operator Tested No. <u>10592</u> Order No. <u>828-73122</u> File No. _____ Approved: <u>June 10, 1988</u>	<p align="center">PITTSBURGH TESTING LABORATORY DIVISION</p> <p align="center">By <u>J. Peter Martin</u> Director</p>



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Professional Service Industries, Inc.
Pittsburgh Testing Laboratory Division

858 Poplar Street
 Pittsburgh, Pennsylvania 15223
 412/922-4000

L7000.1
 Rev. 7/88

WELDER AND WELDING OPERATOR QUALIFICATION TEST REPORT					
Welder/Welder Operator's Name JAMES B. MCCREADY		Date Reported June 27, 1988	PTL Order No. 828-73122		
Welder Identification No. 012		Date Tested June 10, 1988	Lab No. PHY80580		
Client Miner Railcar Services 2208 East Cherry Street New Castle, PA 16102		Welding Code (ID & year) AWS D1.1-88	Client Order No.		
		Base Material Specification A-36			
Process GMAW	Position Vertical Groove	Specimen <input checked="" type="checkbox"/> Plate <input type="checkbox"/> Pipe	Joint <input checked="" type="checkbox"/> Groove <input type="checkbox"/> Fillet		
Weld Progression <input checked="" type="checkbox"/> Up <input type="checkbox"/> CW <input type="checkbox"/> L to R <input type="checkbox"/> Down <input type="checkbox"/> CCW <input type="checkbox"/> R to L		Specimen Furnished <input checked="" type="checkbox"/> PTL <input type="checkbox"/> Others	Plate Thickness 3/8" Thick		
Welding Procedure No. _____ Rev. No. _____		Specimens Machined <input checked="" type="checkbox"/> PTL <input type="checkbox"/> Others	Diameter & Wall Thickness		
Welding Procedure Data by: <input checked="" type="checkbox"/> PTL Witnessed (Tech): MIKE AZZARA		Current Volts 18-21 AMPS: 125-150 <input type="checkbox"/> AC <input type="checkbox"/> DC	Thickness Range Qualified 3/4" maximum		
Polarity <input type="checkbox"/> Direct <input checked="" type="checkbox"/> Reverse					
FILLER METAL					
Specification No. AWS A 5.18	Classification E 70 S-3	F. No. 6	Trade Name		
Backing A 36	Diameter .045	Shielding <input checked="" type="checkbox"/> Gas: 75% Argon 25% CO ₂ XX OTHER 15-20 CFH			
VISUAL INSPECTION (AWS ONLY)					
Appearance	Undercut	Piping Porosity			
VERTICAL GUIDED BEND TEST RESULTS					
TYPE	RESULTS	TYPE	RESULTS		
FACE BEND	Defect Under 1/8" - PASS				
ROOT BEND	Defect Under 1/8" - PASS				
FILLET TEST RESULTS					
Weld Appearance <input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail	Fillet Size Leg: in. x in.	<input type="checkbox"/> Concavity	in. <input type="checkbox"/> Convexity: in.		
Macro Etch Test Results <input type="checkbox"/> Pass <input type="checkbox"/> Fail					
Fracture Test Results (Describe location, nature & size of any cracks or tearing of the specimen)					
RADIOGRAPHIC TEST RESULTS					
Film Identification	Results	Remarks	Film Identification	Results	Remarks
Tests Witnessed by:					
QUALIFICATION RESULTS					
The Welder/Operator identified above <input checked="" type="checkbox"/> DOES <input type="checkbox"/> DOES NOT meet the performance qualifications specified in the Code identified above for the variables stated.					
Remarks & Report Distribution: (*) denotes data not provided or not applicable				Submitted by <i>J. Peter Martin</i>	

ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF PSI. ALL RIGHTS OF STATEMENTS AND LOGS ARE RESERVED. THIS IS SUBJECT TO OUR WRITTEN APPROVAL.



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Professional Service Industries, Inc.
Pittsburgh Testing Laboratory Division

650 Poplar Street
 Pittsburgh, Pennsylvania 15203
 412922-4000


WELDER AND WELDING OPERATOR QUALIFICATION TEST REPORT					
Welder/Welder Operator's Name JAMES B. McCREADY		Date Reported June 27, 1988		PTL Order No. 828-73122	
Welder Identification No. 012		Date Tested June 10, 1988		Lab No. PHY80560	
Client Miner Railcar Services 220B East Cherry Street New Castle, PA 16102		Welding Code (ID & year) AWS D1.1-88		Client Order No.	
		Base Material Specification A-36 Group 1		Specimen <input checked="" type="checkbox"/> Plate <input type="checkbox"/> L Pipe <input type="checkbox"/> Joint BU2o <input checked="" type="checkbox"/> Groove <input type="checkbox"/> Fillet	
Process Flux Cored (Innershield)		Specimen Furnished <input checked="" type="checkbox"/> PTL <input type="checkbox"/> L Others		Plate Thickness 1/8"	
Position Flat Groove		Specimens Machined <input checked="" type="checkbox"/> PTL <input type="checkbox"/> Others		Diameter & Wall Thickness ---	
Weld Progression <input checked="" type="checkbox"/> Up <input type="checkbox"/> Down <input type="checkbox"/> CW <input type="checkbox"/> CCW <input type="checkbox"/> L to R <input type="checkbox"/> R to L		Thickness Range Qualified 3/4" maximum		Current AMPS 125-250 <input type="checkbox"/> AC <input type="checkbox"/> DC <input type="checkbox"/> Polarity <input type="checkbox"/> Direct <input checked="" type="checkbox"/> Reverse	
Welding Procedure No. AWS D1.1-88 Rev. No. 0		Welding Procedure Date by: <input checked="" type="checkbox"/> PTL Witnessed (Tech): Mike Azzara		<input type="checkbox"/> Others:	
FILLER METAL					
Specification No. AWS A 5.20		Classification E 71 T-7		F No. 6	
Backing A-36 Steel		Diameter		Trade Name	
Shielding <input type="checkbox"/> Gas:		Flux:			
VISUAL INSPECTION (AWS ONLY)					
Appearance		Undercut		Poring Porosity	
GUIDED BEND TEST RESULTS					
Flat Groove		RESULTS		TYPE	
FACE BEND		Defect Under 1/8"-PASS			
ROOT BEND		Defect Under 1/8"-PASS			
FILLET TEST RESULTS					
Weld Appearance <input type="checkbox"/> Pass <input type="checkbox"/> Fail		Fillet Size: Leg: in x in.		Concavity: in <input type="checkbox"/> Convexity: in <input type="checkbox"/>	
Macro Etch Test Results <input type="checkbox"/> Pass <input type="checkbox"/> Fail					
Fracture Test Results (Describe location, nature & size of any cracks or tearing of the specimen)					
RADIOGRAPHIC TEST RESULTS					
Film Identification	Exposure	Remarks	Film Identification	Results	Remarks
Tests Witnessed by:					
QUALIFICATION RESULTS					
The Welder/Operator identified above <input checked="" type="checkbox"/> DOES <input type="checkbox"/> DOES NOT meet the performance qualifications specified in the Code identified above for the variables stated.					
Remarks & Report Distribution: (1 denotes data not provided or not applicable)					
				Submitted by: <i>J. Peter Mearns</i> Manager	

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 Professional Service Industries, Inc. PITTSBURGH TESTING LABORATORY DIVISION CERTIFICATE OF TEST AND APPROVAL OF WELDING PROCESS AND QUALIFICATION OF OPERATOR OF WELDING EQUIPMENT	
<p><i>PROFESSIONAL SERVICE INDUSTRIES, INC., PITTSBURGH TESTING LABORATORY DIVISION</i>, has witnessed the welding and testing of test specimens welded by</p> <p align="center"> Miner Railcar Services 2206 East Cherry Street, New Castle, Pennsylvania 16102 </p> <p align="center"> in accordance with American Welding Society Structural Welding Code D1.1-88 City of Pittsburgh Ordinance No. 243 Series 1962 and Pennsylvania Department of Highways </p>	
Welding Operator _____ Welding Process _____	JAMES K. MCCREADY _____ No. 012 SMAW & GMAW
<div style="border: 1px solid black; width: 150px; height: 100px; margin: 5px;"></div> <p align="center">Operator Tested</p>	<p>This is to certify that the Welding Technique used in this test and described in SPECIFICATIONS FOR WELDING PROCESS No. AWS D1.1-88 and the results of the test given in PHYSICAL TEST REPORT No. PHY00580 complied with the requirements of the above code within the following limitations.</p> <p> Maximum Plate or Wall Thickness _____ <u>3/4"</u> _____ Minimum Plate or Wall Thickness _____ <u>Unlimited</u> _____ Welding Positions _____ <u>Flat-Horizontal-Vertical</u> _____ Other Limitations _____ <u>Filet & Groove</u> _____ </p> <p> Remarks _____ <u>AWS A 5.1 F 7018 F, No. 4</u> _____ _____ <u>AWS A 5.18 E 705-3 T, No. 6</u> _____ </p>
	No. _____ <u>10591</u> _____ Order No. _____ <u>828-73122</u> _____ File No. _____ _____ Approved _____ <u>June 12, 1988</u> _____



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psi		Professional Service Industries, Inc. Pittsburgh Testing Laboratory Division		850 Foster Street Pittsburgh, Pennsylvania 15220 412/522-4000	
WELDER AND WELDER OPERATOR QUALIFICATION TEST REPORT					
Welder/Welder Operator's Name JAMES B. McCreedy		Date Reported June 27, 1988		PTL Order No. 828-73122	
Welder Identification No. 012		Date Tested June 10, 1988		Lab No. PHY80580	
Client Miner Railcar Services 2208 East Cherry Street New Castle, PA 16102		Welding Code (ID & year) AWS D1.1-88		Base Material Specification A-36	
Process Shielded Metal Arc Welding		Specimen Furnished <input checked="" type="checkbox"/> PTL <input type="checkbox"/> Others		Joint <input checked="" type="checkbox"/> Groove <input type="checkbox"/> Fillet	
Position Vertical Groove		Specimens Machined <input checked="" type="checkbox"/> PTL <input type="checkbox"/> Others		Plate Thickness 3/8"	
Weld Progression <input checked="" type="checkbox"/> Up <input type="checkbox"/> Down <input type="checkbox"/> CW <input type="checkbox"/> CCW <input type="checkbox"/> L to R <input type="checkbox"/> R to L		Thickness Range Qualified 3/4" Maximum		Diameter & Wall Thickness —	
Welding Procedure AWS No. D1.1-88 Rev. No. —		Current AMPS: 90-200 <input type="checkbox"/> AC <input checked="" type="checkbox"/> DC		Polarity <input type="checkbox"/> Direct <input checked="" type="checkbox"/> Reverse	
Welding Procedure Data by: <input checked="" type="checkbox"/> PTL Witnessed (Tech):		Mike Azzara		<input type="checkbox"/> Others	
FILLER METAL					
Specification No. AWS A5.1		Classification E7018		F.No. 4	
Backing A-36 Steel		Diameter 1/8"		Trade Name	
Shielding <input checked="" type="checkbox"/> Gas <input type="checkbox"/> Flux					
VISUAL INSPECTION (AWS ONLY)					
Appearance		Undercut		Spaying Porosity	
VERTICAL GUIDED BEND TEST RESULTS					
TYPE		RESULTS		TYPE	
SIDE BEND		Defect Under 1/8" - PASS			
SIDE BEND		Defect Under 1/8" - PASS			
FILLET TEST RESULTS					
Weld Appearance <input type="checkbox"/> Pass <input type="checkbox"/> Fail		Fillet Size Leg: in. s. m. <input type="checkbox"/> Convexity: in. <input type="checkbox"/> Concavity: in.			
Macro Etch Test Results <input type="checkbox"/> Pass <input type="checkbox"/> Fail					
Fracture Test Results (Describe location, nature & size of any cracks or tearing of the specimen)					
RADIOGRAPHIC TEST RESULTS					
Film Identification	Refrills	Remarks	Film Identification	Results	Remarks
Tests Witnessed by:					
QUALIFICATION RESULTS					
The Welder/Operator identified above <input checked="" type="checkbox"/> DOES <input type="checkbox"/> DOES NOT meet the performance qualifications specified in the Code identified above for the variables stated. CITY OF PCH. ORDINANCE No. 243 & PA DEPT. OF HIGHWAYS					
Remarks & Report Distribution (* denotes data not provided or not applicable)				Submitted By Peter Martin	



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WELDER AND WELDING OPERATOR QUALIFICATION RECORD

Welder or welding operator's name: JAMES B. McCAADY Identification no. 012
 Welding process: M.C.A.W. Manual Semi-automatic Machine
 Position: 3G Vertical Up

(Flat, horizontal, overhead or vertical — if vertical, state whether upward or downward)
 In accordance with procedure specification no. Prequalified joint fig. no. C1B
 Material specification: A-36
 Diameter and wall thickness (if pipe) otherwise, joint thickness: 1"
 Thickness range (filler metal): OMITTED

FILLER METAL
 Specification no. 5, 20 Classification: E 7018 Filler: 0
 Describe filler metal (if not covered by AWS specification):

Is backing strip used? Yes
 Filler metal diameter and trade name: 0.045" Lincoln Flux for submerged arc or gas for gas-metal arc or flux cored arc welding: 100% GCS

VISUAL INSPECTION
 Appearance: Satisfactory Undercut: None Piping porosity: None

Guided Bend Test Results

Type	Result	Type	Result
SIDE BEND	NO DEFECTS		
SIDE BEND	NO DEFECTS		

Test conducted by: KATT TESTING LABORATORY Laboratory test no. 95T30-1657
 per [Signature] Test date: 10/10/95

Filler Test Results

Appearance: _____ Fillet size: _____
 Fracture test root penetration: _____ Warpage: _____
 (Describe the location, nature, and size of any crack or tearing of the specimen.)
 Test conducted by: _____ Laboratory test no.: _____
 per _____ Test date: _____

RADIOGRAPHIC TEST RESULTS

Film identification	Results	Remarks	Film identification	Results	Remarks

Test witnessed by: _____ Test no.: _____
 per _____

We, the undersigned, certify that the statements in this record are correct and that the welds were prepared and tested in accordance with the requirements of the American Welding Society AWS D15.1, (93) year.

Manufacturer or contractor: [Signature]
 Authorized by: [Signature]
 Date: 10-10-95

Form D-4



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WELDER AND WELDING OPERATOR QUALIFICATION RECORD

Welder or welding operator's name JAMES MCCREARY Identification no. 012
 Welding process E.C.A.W. - Manual - Semiautomatic X - Machine
 Position 3G Vertical Up
 (Flat, horizontal, overhead or vertical - if vertical, state whether upward or downward)
 In accordance with procedure specification no. OSKRC-0136
 Material specification A-36
 Diameter and wall thickness (if pipe) - otherwise, joint thickness 1.0
 Thickness range this qualifies: UNLIMITED

FILLER METAL

Specification no. 5.29 Classification E11T-1 F no. 6
 Describe filler metal (if not covered by AWS specification)
 Is backing strip used? Yes
 Filler metal diameter and trade name 1/16" ES20 Flux for submerged arc or gas for gas metal arc or flux cored arc welding 100% CO2

VISUAL INSPECTION

Appearance Satisfactory Undercut None Piping porosity None

Guided Bend Test Results

Type	Result	Type	Result
SIDE BEND	NO DEFECTS		
SIDE BEND	NO DEFECTS		

Test conducted by KALI TESTING LABORATORY Laboratory test no. OSKRC-2475
 per [Signature] Test date: 12/29/2005

Fillet Test Results

Appearance Fillet size
 Fracture test: root penetration Macroetch
 (Describe the location, nature, and size of any crack or tearing of the specimen.)
 Test conducted by Laboratory test no.
 per Test date

RADIOGRAPHIC TEST RESULTS

Film identification	Results	Remarks	Film identification	Results	Remarks

Test witnessed by Test no.
 per

We, the undersigned, certify that the statements in this record are correct and that the welds were prepared and tested in accordance with the requirements of the American Welding Society AWS D15.1, (2001 year).

Manufacturer or contractor KASCO RAIL CORP.
 Authorized by [Signature]
 Date 12-29-05

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WELDER AND WELDING OPERATOR QUALIFICATION RECORD

Welder or welding operator's name: JAMES MCCREARY Identification no: 012
 Welding process: E.C.A.W. Manual Semi-automatic Machine
 Position: 4G OVERHEAD
 (Flat, horizontal), overhead or vertical vertical, state whether upward or downward:
 In accordance with procedure specification no: PROQUALIFIED JOINT, FIS. NO. 410
 Material specification: A 36
 Diameter and wall thickness (if pipe) — otherwise, joint thickness: 5/8"
 Thickness range the qualifies: 1/2"

FILLER METAL

Specification no: 5.20 Class location: GTN-1 F no: 6
 Describe filler metal (if not covered by AWS specification): _____
 Is backing strip used? Yes
 Filler metal diameter and trade name: 1/45" LINCOLN Flux for submerged arc or gas for gas metal arc or flux
 coated arc welding: 1008_O2

VISUAL INSPECTION

Appearance: Satisfactory Undercut: None Piping porosity: None

Guided Bend Test Results

Type	Result	Type	Result
SIDE BEND	NO DEFECTS		
ROOT BEND	NO DEFECTS		

Test conducted by: RATI TESTING LABORATORY Laboratory test no: UVF4G 2266
 per: Paul J. Hart Test date: 8/25/2003

Filet Test Results

Appearance: _____ Fillet size: _____
 Fracture test root penetration: _____ Maraging: _____
 (Describe the location, nature, and size of any crack or tearing of the specimen.)
 Test conducted by: _____ Laboratory test no: _____
 per: _____ Test date: _____

RADIOGRAPHIC TEST RESULTS

Film identification	Results	Remarks	Film identification	Results	Remarks

Test witnessed by: _____ Test no: _____
 per: _____

We, the undersigned, certify that the statements in this record are correct and that the welds were prepared and tested in accordance with the requirements of the American Welding Society AWS D16.1 (____ 2001).
 year

Manufacturer or contractor: RATI CORP.
 Authorized by: [Signature]
 Date: 8-25-03

Form D-4



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General Inquiry: 800-368-7776 • TUV Rheinland, Inc. • 10000 Lakeside Blvd., Dallas, TX 75243-2198
 TUV Rheinland

Reported To: Mr. Dave Stahl
 Kasegro Rail Corp
 121 Runzie Road
 New Castle, PA 16102
 Date: April 19, 2016
 P/O Number: QAF
 Report Number: 453841-1
 Project: Welder Qualification

AWS - WELDER, WELDING OPERATOR OR TACK WELDER QUALIFICATION TEST RECORD

Name: John Heals
 Welding Code: AWS D15.1/D15.1M-2012
 Type of Welder: Semi Automatic
 Identification Number: 841
 Welding Procedure Specification No.: F-001
 Rev: 0
 Date: 4/13/2016

Variables	Record Actual Values	Qualification Range
Process Type	FCAW	FCAW
Electric (single/multiple)	Single	Single
Current/Polarity	DCe2	DCe2
Position	3G	Flat, Vertical Fillet & Groove
Weld Progression	Upbill	Upbill
Backing (With or Without)	With	With
Material/Spec	A36 10 A36	All AWS Prescribed Material
Base Metal		
Thickness (Plate)		
Groove	1"	1/8" to Unlimited
Fillet	N/A	1/8" to Unlimited
Thickness (Pipe/Tube)		
Groove	N/A	1/8" to Unlimited
Fillet	N/A	1/8" to Unlimited
Diameter (Pipe)		
Groove	N/A	24" OD and Over
Fillet	N/A	Any Diameter
Filler Metal		
Spec. No.	A5.20	
Class	E71T-1	
E-Num	6	F6
Gas/Flux Type	100% CO ₂	
Other	N/A	N/A

VISUAL INSPECTION Acceptable: Yes No Date coupon welded: 4/13/2016

Guided Bend Test Results

Type	Result	Type	Result
Side Bend	PASS		
Side Bend	PASS		

Weld Test Results
 Appearance: N/A
 Fillet Size: Macroscopic
 Penetration Test Root: Macroscopic
 (Describe the location, nature, and size of any crack or tearing of the specimen):

Macroscopic Test Results

Film ID	Results	Remarks	Film ID	Results	Remarks
N/A					

Film evaluated by: N/A
 Mechanical tests conducted by: Tom Plese/Rich Postman
 Laboratory Test Number: 151996
 Welding supervised by: Mark Ziegler
 Company: TUV Rheinland Industrial Solutions

The welder identified above PASSES, FAILS based on the requirements of the code listed above.

Reviewer's Signature: *[Signature]* Date: 4/20/2016
 Client Approval: *[Signature]* Date: 4/19/2016

TUV RHEINLAND INDUSTRIAL SOLUTIONS, INC.
 These test results report the findings at the time of inspection and shall be reviewed by the client for compliance to the project requirements. Due to the limitations of destructive testing in evaluating all of the factors that determine the overall component quality, no guarantee is made or liability assumed by TUV Rheinland Industrial Solutions, Inc. ("TRIS") for the component quality or acceptability.
 QAF 03281000 Rev 04/20/2015
 Q01 EXP. 04/2017 AWS Welder Qualification Page 1 of 1



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WELDER AND WELDING OPERATOR QUALIFICATION TEST RECORD

Welder or welding operator's name JOHN NOVAKOVICH ITT Identification no. 373
 Welding process F.C.A.W. Manual Semiautomatic Machine
 Position 3C Vertical Up
 (Flat, horizontal, overhead or vertical — If vertical, state whether upward or downward)
 In accordance with procedure specification no. KRC-C128
 Material specification A-36
 Diameter and wall thickness (if pipe) — otherwise, joint thickness 1.0"
 Thickness range this qualifies UNLIMITED

FILLER METAL

Specification no. 5.20 Classification E/IT-1 F no. 6
 Describe filler metal (if not covered by AWS specification) _____
 Is backing strip used? Yes
 Filler metal diameter and trade name 1/16" Lincoln Flux for submerged arc or gas for gas metal arc or flux
 cored arc welding 100% CO2

VISUAL INSPECTION

Appearance Satisfactory Undercut None Piping porosity None

Guided Bend Test Results

Type	Result	Type	Result
SIDE BEND	NO DEFECTS		
SIDE BEND	NO DEFECTS		

Test conducted by KATH TESTING LABORATORY Laboratory test no. 03E9G-2274
 per [Signature] Test date 10/24/2013

Filet Test Results

Appearance _____ Filet size _____
 Fracture test root penetration _____ Marcotch _____
 (Describe the location, nature, and size of any crack or tearing of the specimen.)
 Test conducted by _____ Laboratory test no. _____
 per _____ Test date _____

RADIOGRAPHIC TEST RESULTS

Film identification	Results	Remarks	Film identification	Results	Remarks

Test witnessed by _____ Test no. _____
 per _____

We, the undersigned, certify that the statements in this record are correct and that the welds were prepared and tested in accordance with the requirements of the American Welding Society AWS D15.1, (2001),
 year

Manufacturer or contractor KASCRO RAIL CORP.
 Authorized by [Signature]
 Date 10-24-13

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Kasgro Rail Corp

121 Rundle Road
 New Castle, PA 16102

AWS - WELDER PERFORMANCE QUALIFICATION TEST RECORD

Name: Josh Clyde Welding Code: AWS D15.1 2013
 Type of Welder: Semi Automatic Identification Number: 843
 Welding Procedure Specification No. F-001 Rev: 0 Date: 9/5/2017

Variables	Record Actual Values		Qualification Range
Process/Type	FCAW		FCAW
Electrode (single/multiple)	Single		Single
Current/Polarity	DCEP		Flat and Vertical Fillet and Groove
Position	3G		
Weld Progression	Uphill		Uphill
Backing (With or Without)	With		Backing Only
Material/Spec	A572 Gr50	to A572 Gr50	All AWS Prequalified Material
Base Metal			
Thickness: (Plate)			
Groove	1"		1/8" to Unlimited
Fillet	N/A		1/8" to Unlimited
Thickness: (Pipe/tube)			
Groove	N/A		1/8" to Unlimited
Fillet	N/A		1/8" to Unlimited
Diameter: (Pipe)			
Groove	N/A		Greater Than 24" OD
Fillet	N/A		Any Diameter
Filler Metal			
Spec. No.	A520		
Class	E70T-E1		
F-No.	6		F6
Gas/Flux Type	C/C2		
Other	N/A		N/A

VISUAL INSPECTION Acceptable: Yes No Date coupon welded: 9/5/2017

Guided Bend Test Results

Type	Result	Type	Result
Side Bend	PASS		
Side Bend	PASS		

Fillet Test Results

Appearance: N/A Fillet Size:

Fracture Test Root:

Macroetch:

(Describe the location, nature, and size of any crack or tearing of the specimen):

Radiographic Test Results

Film ID	Results	Remarks	Film ID	Results	Remarks
N/A					

Film evaluated by: N/A Company:

Mechanical tests conducted by: Tom Pleso/Rich Portman Laboratory Test Number: 154187

Welding supervised by: SCOTT NIBBY Company: TLV Rheinland Industrial Solutions

The welder identified above PASSES FAILS based on the requirements of the code listed above.

Reviewer's Signature: [Signature] Date: 9/12/17

We, the undersigned, certify that the statements in this record are correct and that the test welds were prepared, welded, and tested in conformance with the requirements of Section II of AWS D15.1 (2012) Railroad Welding Specification for Cars and Locomotives.

Manufacturer or Contractor Kasgro Specialty Railcar

Authorized By Mark Zeigler Date: September 12, 2017



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Grand Rapids, MI – Pittsburgh, PA – Birmingham, AL
 NDE • MECHANICAL LAB • ENVIRONMENTAL www.tuvris.com



GUIDED BEND TEST

Mr. Mark Zeigler
 Kaspro Rail Corporation
 121 Rundle Road
 New Castle, PA 16102


Report #: 463668A Page 1 of 1
 PO #: K17-2045
 Lab #: 154187
 Date Received: 9/07/2017
 Date Tested: 9/08/2017
 Work Order: 463668

Date: September 12, 2017

PQR #: N/A Welder ID: Josh Clyde - 843
 Process: FCAW Position: JG
 Base Metal(s): A572 Gr50 to A572 Gr50 Coupon Shape: 1" Plate

Test #	Orientation	Result	Test #	Orientation	Result
1	Side	PASS			
2	Side	PASS			

Equipment Used:	
<input type="checkbox"/> Wrap Around Bend Jig:	<input checked="" type="checkbox"/> Guided Fixture
Pin Diameter: 1.5"	
Specification: AWS D15.1	<input checked="" type="checkbox"/> Conforming <input type="checkbox"/> Non-Conforming
Test Witness By:	
Test Technician: Tom Plese	

Respectfully submitted,

 Tim Clark
 Laboratory Manager
 TÜV Rheinland Industrial Solutions, Inc.

This report was prepared in accordance with applicable industry practices as well as the test methods referenced. TÜV Rheinland Industrial Solutions, Inc. has no direct knowledge of the origin, sampling practices, use, condition, of the samples, and makes no claim as to the suitability or actual use of the material. The purchaser applies only to those referenced. This report shall not be reproduced, except in full, without the written consent of TÜV Rheinland Industrial Solutions, Inc.



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WELDER AND WELDING OPERATOR QUALIFICATION RECORD

Welder or welding operator's name KEITH PETERSON Identification no. 300
 Welding process FCAW Manual Semiautomatic X Machine
 Position 3G Vertical Up
 (Flat, horizontal, overhead or vertical — if vertical, state whether upward or downward)
 In accordance with procedure specification no. QSKRC-0135
 Material specification A-36
 Diameter and wall thickness (if pipe) otherwise, joint thickness
 Thickness range this qualifies UNLIMITED

FILLER METAL

Specification no. 5.29 Classification E111C-1 F no. 6
 Describe filler metal (if not covered by AWS specification)
 Is backing strip used? Yes
 Filler metal diameter and trade name 1/16" ER50C Flux for submerged arc or gas for gas metal arc or flux cored arc welding 100% CO₂

VISUAL INSPECTION

Appearance Satisfactory Undercut None Piping porosity None

Guided Bent Test Results

Type	Result	Type	Result
SLIDE BEND	NO DEFECTS		
SLIDE BEND	1/8" tear/FISSURE		

Test conducted by RAIL TESTING LABORATORY Laboratory test no. 06139-2493
 per [Signature] Test date 1/09/2006

Fillet Test Results

Appearance Fillet size
 Fracture test root penetration Marcbetch
 (Describe the location, nature, and size of any crack or tearing of the specimen.)
 Test conducted by Laboratory test no.
 per Test date

RADIOGRAPHIC TEST RESULTS

Film identification	Results	Remarks	Film identification	Results	Remarks

Test witnessed by Test no.
 per

We, the undersigned, certify that the statements in this record are correct and that the welds were prepared and tested in accordance with the requirements of the American Welding Society AWS D15.1, (2001 year).

Manufacturer or contractor LAGGED RAIL CORP.
 Authorized by [Signature]
 Date 1-7-06

Form D-4



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WELDING QUALIFICATION BY <i>Kail Testing Laboratory</i> RD 5 BOX 116 SHADY GROVE NEW CASTLE, PA - 72424-3104 TESTED BY KEITH PETERSON S.S.J. [REDACTED]-9634 HAS MET THE REQUIREMENTS OF AWS D15.1(93) RAILROAD WELDING SPEC/FCAM BASE METAL <u>A-36</u> FILLER <u>E71T-1</u> 1/16" POS. <u>3G UP</u> DATE OF TEST <u>11/13/2000</u> EXPIRATION <u>INDEFINITE</u> NUMBER <u>2DF3G-2090</u> SIGNED <i>A. J. Kail</i> WELDING SUPERVISOR	
<h1>ificate</h1> of <h2>Tests and Qualifications</h2> of <h2>Welding Operator</h2> THE WELDING DIVISION OF <h3><i>Kail Testing Laboratory, Inc.</i></h3> HAS PREPARED AND TESTED THE SPECIMENS WELDED BY <u>KEITH PETERSON</u> WELDING PERFORMED UNDER THE SUPERVISION OF <u>KASCRO RAIL CORPORATION</u> IN ACCORDANCE WITH <u>F.C.A.W.</u> <u>AWS D15.1(93) RAILROAD WELDING SPECIFICATION</u> <u>3G VERTICAL, UP 1.0" GROOVE WELD TEST</u>	
Date of Qualification <u>11/13/2000</u>	Date of Expiration <u>INDEFINITE</u> AS PER CODE.
Lab. No. <u>2DF3G-2090</u> E71T-1 1/16"	<i>A. J. Kail</i> Authorized Signature



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WELDER AND WELDING OPERATOR QUALIFICATION TEST RECORD

Welder or welding operator's name KEITH PETERSON Identification no. 300
 Welding process T-C.P.W. Manual Semi-automatic X Machine
 Position 3G Vertical, Up
 (Flat, horizontal, overhead or vertical. If vertical, state whether upward or downward)
 In accordance with procedure specification no. Prequalified joint fig. no. C1B
 Material specification A-36
 Diameter and wall thickness (if pipe) otherwise, joint thickness 1.0"
 Thickness range this qualifies UNLIMITED
FILLER METAL
 Specification no. E-20 Classification E71T-1 F no. B
 Describe filler metal (if not covered by AWS specification)
 Is backing strip used? Yes
 Filler metal diameter and trade name 1/16" Lincoln Flux for submerged arc or gas for gas metal arc or flux
 core arc welding 100% CO₂

VISUAL INSPECTION

Appearance Satisfactory Undercut None Piping porosity None

Guided Bend Test Results

Type	Result	Type	Result
SIDE BEND	NO DEFECTS		
SIDE BEND	1/32" tear/PASSRD		

Test conducted by RALPH ESTLING LABORATORY Laboratory test no. 2013G-2090
 per [Signature] Test date 11/13/2000

Filler Test Results

Appearance Filler size
 Fracture test root penetration Macroetch
 (Describe the location, nature, and size of any crack or tearing of the specimen.)
 Test conducted by Laboratory test no.
 per Test date

RADIOGRAPHIC TEST RESULTS

Film Identification	Results	Remarks	Film Identification	Results	Remarks

Test witnessed by Test no.
 per

We, the undersigned, certify that the statements in this record are correct and that the welds were prepared and tested in accordance with the requirements of the American Welding Society AWS D15.1, (93)
 year

Manufacturer or contractor K&S CORP. RADIATION
 Authorized by [Signature]
 Date 11-13-2000

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WELDER AND WELDING OPERATOR QUALIFICATION TEST RECORD

Welder or welding operator's name: KEITH PHILLIPSON Identification no. 300
 Welding process: S.M.A.W. Manual Semiautomatic _____ Machine _____
 Position: 4G Overhead
 (Flat, horizontal, overhead or vertical – if vertical, state whether upward or downward)
 In accordance with procedure specification no. PROCESSED JOINT Fig. no. C1B
 Material specification: A-36
 Diameter and wall thickness (if pipe) – otherwise, joint thickness: .375"
 Thickness range for qualifier: .730"

FILLER METAL

Specification no. 5.1 & 5.5 Classification: E-7018 P no. 4
 Describe filler metal (if not covered by AWS specification): _____
 Is backing strip used? Yes
 Filler metal diameter and trade name: 1/8" Minolta Flux for submerged arc or gas for gas metal arc or flux cored arc welding: _____

VISUAL INSPECTION

Appearance: Satisfactory Undercut: None Piping porosity: None

Guided Bend Test Results

Type	Result	Type	Result
FACE BEND	Minor check/PASSED		
ROOT BEND	1/32" bead/PASSED		

Test conducted by: RAIL WELDING LABORATORY Laboratory test no. 02E4G-1757
 per: [Signature] Test date: 8/25/2003

Fillet Test Results

Appearance: _____ Fillet size: _____
 Fracture test root penetration: _____ Macroetch: _____
 (Describe the location, nature, and size of any crack or tearing of the specimen.)
 Test conducted by: _____ Laboratory test no. _____
 per: _____ Test date: _____

RADIOGRAPHIC TEST RESULTS

Film identification	Results	Remarks	Film identification	Results	Remarks

Test witnessed by: _____ Test no. _____
 per: _____

We, the undersigned, certify that the statements in this record are correct and that the welds were prepared and tested in accordance with the requirements of the American Welding Society AWS D15.1, (____ 2001 ____), year _____.

Manufacturer or contractor: KANSAS RAIL CORP.
 Authorized by: [Signature]
 Date: 8-5-03

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WELDER AND WELDING OPERATOR QUALIFICATION RECORD

Welder or welding operators name LEONARD MOSE Identification no. 815
 Welding process F.C.A.M. Manual Semiautomatic Machine
 Position 4C Overhead
 (Flat, horizontal, overhead or vertical — if vertical, state whether upward or downward)
 In accordance with procedure specification no. Prequalified joint fig. no. (11)
 Material specification 2-36
 Diameter and wall thickness (if pipe) — otherwise, joint thickness .750"
 Thickness range this qualifies: .5"

FILLER METAL

Specification no. 5.20 Classification E 71T-1 Fno. G
 Describe filler metal (if not covered by AWS specification) _____
 Is backing strip used? Yes
 Filler metal diameter and trade name .045" Lincoln Flux for submerged arc or gas for gas metal arc or flux
 coated arc welding 100% CO2

VISUAL INSPECTION

Appearance Satisfactory Undercut None Piping porosity None

Guided Bend Test Results

Type	Result	Type	Result
SIDE BEND	NO DEFECTS		
SIDE BEND	1/32" tear/PASSED		

Test conducted by KAIL TESTING LABORATORY Laboratory test no. 05F40-2447
 per [Signature] Test date 3/18/2005

Fillet Test Results

Appearance _____ Fillet size _____
 Fracture test root penetration _____ Marcbetch _____
 (Describe the location, nature, and size of any crack or tearing of the specimen.)
 Test conducted by _____ Laboratory test no. _____
 per _____ Test date _____

RADIOGRAPHIC TEST RESULTS

Film identification	Results	Remarks	Film identification	Results	Remarks

Test witnessed by _____ Test no. _____
 per _____

We, the undersigned, certify that the statements in this record are correct and that the welds were prepared and tested in accordance with the requirements of the American Welding Society AWS D15.1, (2001)
 year

Manufacturer or contractor KASCO RAIL CORPORATION
 Authorized by [Signature]
 Date 3-18-05



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AWS D15.1/D15.1M:2007

ANNEX D

WELDER AND WELDING OPERATOR QUALIFICATION RECORD

Welder or welding operator's name LEONARD WJONES Identification no. 815
 Welding process FCM Manual Semi-automatic Machine
 (Flat, horizontal, overhead, or vertical—if vertical, state whether upward or downward) 3G Vertical Up
 In accordance with procedure specification no. F-001
 Material specification A-36
 Diameter and wall thickness (if pipe) of test piece, joint thickness .750"
 Thickness range (if applicable) UNLIMITED

FILLER METAL

Specification no. 5.20 Classification E71T-1 F-no. 6
 Describe filler metal (if not covered by AWS specification) _____
 Is backing strip used? Yes
 Filler metal diameter and trade name 1/16" Lincoln Flux for submerged arc or gas for gas metal arc or flux cored arc welding 100% CO2

VISUAL INSPECTION

Appearance Satisfactory Undercut None Piping porosity None

Guided Bent Test Results

Type	Result	Year	Result
<u>SIDE BEND</u>	<u>NO DEFECTS</u>		
<u>SIDE BEND</u>	<u>NO DEFECTS</u>		

Test conducted by KAIL TESTING LABORATORY Laboratory test no. 10F3G-7936
 per [Signature] Test date 2/12/2010

Fillet Test Results

Appearance _____ Fillet size _____
 Penetration test root penetration _____ Magnification _____
 (Describe the location, nature, and size of any crack or tearing of the specimen.) _____
 Test conducted by _____ Laboratory test no. _____
 per _____ Test date _____

RADIOGRAPHIC TEST RESULTS

Film identification	Results	Remarks	Film identification	Results	Remarks

Film witnessed by _____ Laboratory test no. _____
 per _____ Test date _____

We, the undersigned, verify that the statements in this report are correct and that the test welds were prepared and tested in accordance with the requirements of AWS D15.1 (2007) Overhead Welding Specification for Cars and Locomotives.

Manufacturer or Contractor: KASCO RAIL CORPORATION

Authorized by [Signature]
 Date 2/12/10

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WELDER AND WELDING OPERATOR QUALIFICATION TEST RECORD

Welder or welding operator's name MARK PARKER Identification no. 148
 Welding process GTAW Manual Semiautomatic Machine
 Position 4C Overhead
 (Flat, horizontal, overhead or vertical — if vertical, state whether upward or downward)
 In accordance with procedure specification no. Prequalified joint fig. no. 01E
 Material specification A-36
 Diameter and wall thickness (if pipe) — otherwise, joint thickness .375"
 Thickness range this qualifies .750"

FILLER METAL

Specification no. E-20 Classification E7018 F no. 6
 Describe filler metal (if not covered by AWS specification) _____
 Is backing strip used? Yes
 Filler metal diameter and trade name 1/16" Lincoln Flux for submerged arc or gas for gas metal arc or flux
 cored arc welding 100% CO₂

VISUAL INSPECTION

Appearance: Satisfactory Undercut None Piping porosity None

Guided Bend Test Results

Type	Result	Type	Result
FACE BEND	NO DEFECTS		
ROOT BEND	1/32" back/TASSED		

Test conducted by MARK TESTING LABORATORY Laboratory test no. U3F4G-2280
 per [Signature] Test date 12/07/2003

Fillet Test Results

Appearance _____ Fillet size _____
 Fracture test root penetration _____ Matched _____
 (Describe the location, nature, and size of any crack or tearing of the specimen.)
 Test conducted by _____ Laboratory test no. _____
 per _____ Test date _____

RADIOGRAPHIC TEST RESULTS

Film identification	Results	Remarks	Film identification	Results	Remarks

Test witnessed by _____ Test no. _____
 per _____

We, the undersigned, certify that the statements in this record are correct and that the welds were prepared and tested in accordance with the requirements of the American Welding Society AWS D15.1, (2001)
 year

Manufacturer or contractor RASCRO RAIL CORP.
 Authorized by [Signature]
 Date 12-2-03

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WELDER AND WELDING OPERATOR QUALIFICATION RECORD

Welder or welding operator's name MARK BARRER Identification no. 148
 Welding process G.M.A.W. Manual Semi-automatic Machine _____
 Position 3G VERTICAL Up _____
 (Flat, horizontal, overhead or vertical — if vertical, state whether upward or downward)
 In accordance with procedure specification no. Procedure # 01KRC-0131 _____
 Material specification A561 _____
 Diameter and wall thickness (if pipe) — otherwise, joint thickness .500" _____
 Thickness range (if plates) 1/4" _____

FILLER METAL

Specification no. 5.10 Classification 5356 Filler 6
 Describe filler metal (if not covered by AWS specification) _____
 Is backing strip used? No _____
 Filler metal diameter and trade name 3/64" LINCOLN Flux for submerged arc or gas for gas metal arc or flux 100% Argon
 conduct arc welding _____

VISUAL INSPECTION

Appearance Satisfactory Undercut None Hazing porosity None

Guided Bend Test Results

Type	Result	Type	Result
SIDE BEND	1/32" Tear/PASSED		
SIDE BEND	3/64" Tear/PASSED		

Test witnessed by KALK TESTING LABORATORY Laboratory test no. 01MRG-1435
 per Scott Hill Test date 10/16/01

Fillet Test Results

Appearance _____ Fillet size _____
 Fracture test root penetration _____ Max depth _____
 (Describe the location, nature, and size of any crack or tearing of the specimen.)
 Test conducted by _____ Laboratory test no. _____
 per _____ Test date _____

RADIOGRAPHIC TEST RESULTS

Film Identification	Results	Remarks	Film Identification	Results	Remarks

Test witnessed by _____ Test no. _____
 per _____

We, the undersigned, certify that the statements in this record are correct and that the welds were prepared and tested in accordance with the requirements of the American Welding Society AWS D16.1, [93] year.

Manufacturer or contractor KASPRO DATA CORP.
 Authorized by Mark Barrer
 Date 10-16-01

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WELDER AND WELDING OPERATOR QUALIFICATION RECORD

Welder or welding operator's name MARK R. BARFR Identification no. 148
 Welding process GTAW Manual Semiautomatic Machine
 Position 3G Vertical Up
 (Flat, horizontal, overhead or vertical. — if vertical, state whether upward or downward)
 In accordance with procedure specification no. Prequalified joint file, CO, CCB
 Material specification A-30
 Diameter and wall thickness (if plate) — otherwise joint thickness .500"
 Thickness range thickness 1.0"

FILLER METAL

Specification no. 5.20 Classification E70T-1 F no. 6
 Describe filler metal (if not covered by AWS specification) _____
 Is backing strip used? Yes
 Filler metal, diameter and trade name 1/16" E70T-1 Flux for submerged arc or gas for gas metal arc or flux
 some arc welding 100% CO2

VISUAL INSPECTION

Appearance Satisfactory Undercut None Pitting porosity None

Guided Bent Test Results

Type	Result	Type	Result
SIDE BEND	7/64" tear/PASSED		
SIDE BEND	NO DEFECTS		

Test run checked by KAL YESTINE LABORATORY Laboratory test no. 99P30 1659
 per Paul J. Kahl Test date 11/12/99

Fillet Test Results

Appearance _____ Fillet size _____
 Fracture test root penetration _____ Marking _____
 (Describe the location, nature, and size of any cracks or tearing of the specimen.)
 Test conducted by _____ Laboratory test no. _____
 per _____ Test date _____

RADIOGRAPHIC TEST RESULTS

Film identification	Results	Remarks	Film identification	Results	Remarks

Test witnessed by _____ Test no. _____
 per _____

We, the undersigned, certify that the statements in this record are correct and that the welds were prepared and tested in accordance with the requirements of the American Welding Society AWS D15.1, (____) 93 year.

Manufacturer or contractor Georgo Rail Corp.
 Authorized by Mark Zayh
 Date 11-12-99

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 Appendix B

Doc./Rev.: EIR-3021970-000
 Project: 00225.03.0050 DOE Atlas Project





Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
Appendix B

Doc./Rev.: EIR-3021970-000
Project: 00225.03.0050 DOE Atlas Project





Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
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WELDER AND WELDING OPERATOR QUALIFICATION TEST RECORD

Welder or welding operator's name MARZ HAKKAR Identification no. 148
 Welding process E.C.A.W. Manual Semiautomatic Machine
 Position 31 Vertical Up
 (Flat, horizontal, overhead or vertical — if vertical, state whether upward or downward)
 In accordance with procedure specification no. Prequalified joint fig. no. C1B
 Material specification A-316
 Diameter and wall thickness (if pipe) — otherwise, joint thickness 0"
 Thickness range (if applicable) UNLIMITED

FILLER METAL

Specification no. E-20 Classification E71T-1 F no. 6
 Describe filler metal (if not covered by AWS specification) _____
 Is backing strip used? Yes
 Filler metal diameter and trade name 1/16" Lincoln Flux for submerged arc or gas for gas metal arc or flux cored arc welding 100% CO2

VISUAL INSPECTION

Appearance Satisfactory Undercut None Piping porosity None

Guided Bend Test Results

Type	Result	Type	Result
SIDE BEND	NO DEFECTS		
SIDE BEND	Minor check/PASSED		

Test conducted by KATE JUSTINE LABORATORY Laboratory test no. 20183-2097
 per [Signature] Test date 11/13/2000

Fillet Test Results

Appearance _____ Fillet size _____
 Fracture test root penetration _____ Marcobitch _____
 (Describe the location, nature, and size of any crack or tearing of the specimen.)
 Test conducted by _____ Laboratory test no. _____
 per _____ Test date _____

RADIOGRAPHIC TEST RESULTS

Film identification	Results	Remarks	Film identification	Results	Remarks

Test witnessed by _____ Test no. _____
 per _____

We, the undersigned, certify that the statements in this record are correct and that the welds were prepared and tested in accordance with the requirements of the American Welding Society AWS D15.3, (93 year),

Manufacturer or contractor KASPRO RAIL CORP.
 Authorized by [Signature]
 Date 11-13-00

Form D-1



Orano Federal Services
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Grand Rapids, MI – Flint, MI – Pittsburgh, PA – Birmingham, AL – Decatur, AL

NDE + MECHANICAL LAB

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Reported To: Mr. Dave Stahl
 Kasgro Rail Corp
 121 Kundle Road
 New Castle, PA 16102

Date: December 11, 2014
 P/O Number: QAF
 Report Number: I
 Project: Welder Qualification

AWS - WELDER, WELDING OPERATOR OR TACK WELDER QUALIFICATION TEST RECORD

Name: Matthew Smith Welding Code: AWS D15 LD15 IM-2012
 Type of Welder: Semi Automatic Identification Number: 834
 Welding Procedure Specification No. F-001 Rev: 0 Date: 12-11-14

Variables	Record Actual Values		Qualification Range
Process/Type	FCAW		FCAW
Electrode (single/multiple)	Single		Single
Current/Polarity	DC/EP		Flat, Vertical, Horizontal Fillet & Groove
Position	3G		Up Hill
Weld Progression	Up Hill		With
Backing (With or Without)	With		All AWS Prequalified Material
Material/Spec	A36	to A36	
Base Metal			
Thickness: (Plate)			
Groove	2"		1/8" to unlimited
Fillet	N/A		1/8" to unlimited
Thickness: (Pipe/tube)			
Groove	N/A		1/8" to unlimited
Fillet	N/A		1/8" to unlimited
Diameter: (Pipe)			
Groove	N/A		24" and greater
Fillet	N/A		Any Diameter
Filler Metal			
Spec. No.	A5.20		
Class	E71T-1		
E-No.	5		6
Gas/Flux Type	100% CO ₂		
Other	N/A		Not an essential variable

VISUAL INSPECTION Acceptable: Yes No Date coupon welded: 12/11/14

Guided Bend Test Results

Type	Result	Type	Result
Sides Bend	No Defects - PASS		
Sides Bend	No Defects - PASS		

Fillet Test Results

Appearance: N/A Fillet Size:

Fracture Test Root: Magnetically

(Describe the location, nature, and size of any crack or tearing of the specimen):

Radiographic Test Results

Film ID	Results	Remarks	Film ID	Results	Remarks
N/A					

Film evaluated by: N/A Company:

Mechanical tests conducted by: Tom Pless / Rich Portman Laboratory Test Number: 141586

Welding supervised by: Dan Church Company: TUV Rheinland Industrial Solutions

The welder identified above **PASSES**, **FAILS** based on the requirements of the code listed above.

Reviewer's Signature: Richard A. Portman

Date: 12/24/14

Client Approval: [Signature]

Date: 12/24/14

TÜV RHEINLAND INDUSTRIAL SOLUTIONS, INC.

These test results report our findings at the time of inspection and shall be reviewed by the client for compliance to the project requirements. Due to the limitations of non-destructive testing in evaluating all of the factors that determine the overall component quality, no guarantee is made or liability assumed by TÜV Rheinland Industrial Solutions, Inc. ("TRIS") for the component quality of any item fabricated by the client.



Richard A. Portman
 CAP 08061311
 QC1 EXP. 8/1/2017

Revised 7/15/2013
 AWS Welder Qualification

100 INDUSTRIAL BOULEVARD • ALBUQUERQUE, PA 15001 • TELEPHONE (724)-373-3900 • FAX (724)-373-3940



Orano Federal Services
Title: Design and Prototype Fabrication of Railcars for Transport of
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Attachment 49

		Orano Federal Services	
DATA TRANSMITTAL FORM			
Supplier:	KASGRO RAIL CORP., INC.	DTF No:	019A
P.O./SC No:	15C3011916	Date:	05/14/18
Type of Submittal:	<input type="checkbox"/> First <input checked="" type="checkbox"/> Re-Submittal	SDRL List Item No:	20
Submitted for:	<input checked="" type="checkbox"/> Approval <input type="checkbox"/> Review <input type="checkbox"/> Information	Number of Copies Submitted:	1
Submitted By:	RICK FORD	Rick Ford <small>Digitally signed by Rick Ford Date: 2018.05.14 18:06:37 -0400</small>	PROJECT MANAGER
	(Name)	(Signature)	(Title)

ITEM NUMBER	DOCUMENT NUMBER	REVISION NUMBER	DOCUMENT DESCRIPTION	FS DISPOSITION
1	KAS W10		Clock #10 James Clark Welding Qualifications	<input checked="" type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
2	KAS W11		Clock #11 Jimmy McCready Welding Qualifications	<input checked="" type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
3	KAS4112018 LETTER		Letter Transferring Welder Qualifications to Kasgro from previous company name	<input checked="" type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
				<input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
				<input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
				<input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
				<input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
				<input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
				<input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
				<input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA

Comments: No comments.	Technical Reviewer (i.e., RE, PTL, SME, QA, etc.) KLEIN Slade <small>Digitally signed by KLEIN Slade Date: 2018.05.21 15:29:51 -0700</small>
	Date: 5/21/2018

FS DISPOSITION CODES AND DEFINITIONS			
AP	Approved	Work may proceed.	Resubmittal is not required
AWC	Approved with Comment	Work may proceed; comments provided for Supplier's consideration only.	Resubmittal is not required
REV	Reviewed	Work may proceed; comments provided for Supplier's consideration only.	Resubmittal is not required
RWC	Reviewed with Comment	Work may proceed; subject to incorporation and compliance w/ Buyer comments.	Correct and resubmit
DS	Disapproved	Work may <u>not</u> proceed.	Correct and resubmit
RSA	Receipt Submittal Acknowledged	No other action required.	

If, in the judgment of the Supplier, the incorporation of FS' comments will result in a change to the Purchase Order/Subcontract, work shall not proceed and the Supplier shall immediately provide a written notice to FS' C&P Representative describing the change.

Project Manager (PM) / Engineering Manager (EM) or Designated Individual (DI) Approval		Digitally signed by DENTON Mark DN: c=AREVA GROUP, 2.5.4.40=02A37512B0410E000170B, co=DENTON Mark Date: 2018.05.22 09:06:24 -0400	Date: 05/22/2018
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FS-EN-FRM-023 Rev 02 (Effective March 1, 2018)
 Refer to FS-EN-PRC-012



Orano Federal Services
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High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
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 Project: 00225.03.0050 DOE Atlas Project

	Orano Federal Services	
	SUPPLIER DOCUMENT SUBMITTAL REVIEW	
Supplier / PO No.:	PTI / 16C3016046	DTF No. / Rev: 019A
Charge No:	01916.01.C005.08.00100	Due Date: 5/28/2018
Document(s):	See DTF No.: 019A	
REVIEW INSTRUCTIONS: (List Supplier Doc. No. and Rev. FS Spec and Dwg. Codes, Stds, etc.)		
PE	Slade Klein	
REVIEWERS	Slade Klein, Bernie Counterman	
QA	Bernie Counterman	
Technical Review		
Comments/Markup Attached Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Technical Reviewer Comments:		
No comments.		
Technical Reviewer(s) (Sign/Date): KLEIN Slade		Digitally signed by KLEIN Slade Date: 2018.05.21 09:15:23 -07'00'
Quality Assurance Review (As Applicable)		
Comments/Markup Attached Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Technical Reviewer Comments:		
No Comments		
QA Reviewer(s) (Sign/Date):		Digitally signed by Bernie Counterman Date: 2018.05.21 13:54:27 -07'00'
COMMENT DISPOSITION (If Applicable. Attached further comments and disposition correspondence as necessary)		

FS-EN-FRM-026 Rev 01 (Effective March 1, 2018)
 Refer to FS-EN-PRC-012



Orano Federal Services
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Appendix B

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Project: 00225.03.0050 DOE Atlas Project

Kasgro Rail Corporation
121 Rundle Road • New Castle, PA 16102
724-658-9061 • 724-658-7856 FAX • www.KASGRO.com



KASGRO

April 11, 2018

Weld Performance Qualification Records.

The weld performance qualification records of the following employees have been reviewed. They conform to the requirements of the American Welding Society D 15.1 Railroad Welding Specification for Cars and Locomotives.

James Clark
James McCready

This review was performed when the ownership of the company was changed from Miner Railcar to Kasgro Rail Corp.

Reviewed By:

Mark Zeigler

Specialty Rail Car Solutions



Orano Federal Services
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Project: 00225.03.0050 DOE Atlas Project

From: [Rick Ford](#)
To: [KLEIN Slade \(ORN-BE\)](#)
Cc: [DENTON Mark \(ORN-BE\)](#); [COUNTERMAN Bernie \(ORN-BE\)](#); [Mark](#)
Subject: Kasgro Welder Identification
Date: Tuesday, April 10, 2018 12:34:37 PM
Attachments: [Kasgro Welder List.xls](#)

Slade,

A number of the welder qualifications were developed under previous company names prior to Kasgro ownership using various methods such as social security numbers and/or employee numbers, that are no longer valid.

In reference to issue of welder identification and the original welder qualification records, the method used by Kasgro Rail is to use their current employee number per the attached list.

Sincerely,

Rick Ford
Kasgro Rail

From: David Stull <dave@kasgro.com>
Sent: Tuesday, April 10, 2018 2:41 PM
To: Rick Ford
Subject: FW:

From: Bill Baker [mailto:bbaker@kasgro.com]
Sent: Monday, April 09, 2018 6:49 AM
To: dave@kasgro.com
Subject:



Orano Federal Services
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High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
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Kasgro Welder Employee Numbers

Emp. #	Employee Name
11	James Clark
12	Jim McCready
15	Darryl Beachem
16	Bill Baker
56	Scott Neely
57	Robert Walker
81	Trevor Barker
131	Al Williams
148	Mark Baker
157	Adam Durst
300	Keith Peterson
373	John Novakovich
812	Ryan Vogus
814	Thomas Cummins
815	Leonard Agee
819	Bill Flory
821	Triston Mills
822	Charles Spaulding
823	Steven Presnar
824	Ron Price
825	George Sepesie
826	Randall Robison
834	Matt Smith
836	Paul Klamer
837	Brett Shepard
841	John Henke
842	Neil Shalenberger
843	Josh Clyde
844	Mike Beachem



Orano Federal Services
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Doc./Rev.: EIR-3021970-000
 Project: 00225.03.0050 DOE Atlas Project

	AREVA Federal Services LLC		
DATA TRANSMITTAL FORM			
Supplier:	KASGRO RAIL CORP., INC.	DTF No:	020
P.O./SC No:	15C3011916	Date:	03/27/18
Type of Submittal:	<input checked="" type="checkbox"/> First <input type="checkbox"/> Re-Submittal	SDRL List Item No:	20
Submitted for:	<input checked="" type="checkbox"/> Approval <input type="checkbox"/> Review <input type="checkbox"/> Information	Number of Copies Submitted:	1
Submitted By:	RICK FORD <small>(Name)</small>	<i>Rick Ford</i> <small>Digitally signed by Rick Ford Date: 2018.03.27 16:33:57 -0402</small> <small>(Signature)</small>	PROJECT MANAGER <small>(Title)</small>

ITEM NUMBER	DOCUMENT NUMBER	REVISION NUMBER	DOCUMENT DESCRIPTION	AFS DISPOSITION
1	KAS W19		Clock #844 Michael Beacham Welding Qualifications	<input checked="" type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
2	KAS W20		Clock #842 Neil Sheleberger Welding Qualifications	<input checked="" type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
3	KAS W21		Clock #836 Paul Klamer Welding Qualifications	<input checked="" type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
4	KAS W22		Clock #826 Randy Robinson Welding Qualifications	<input type="checkbox"/> AP <input checked="" type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
5	KAS W23		Clock # 57 Robert Walker Welding Qualifications	<input checked="" type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
6	KAS W24		Clock #824 Ronald Price Welding Qualifications	<input checked="" type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
7	KAS W25		Clock #812 Ryan Vogus Welding Qualifications	<input checked="" type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
8	KAS W26		Clock #56 Scott Neely Welding Qualifications	<input checked="" type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
9	KAS W27		Clock #823 Steven Persnar Welding Qualifications	<input checked="" type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA

Comments: Randy Robinson, 1G and 3G qualification ID #2880, 4G qualification ID #478. Please provide clarification.	Technical Reviewer (i.e., RE, PTL, SME, QA, etc.) KLEIN Slade KLEIN Slade <small>2018.04.10 07:03:18 -0700</small> Date: 4/10/2018
--	--

AFS DISPOSITION CODES AND DEFINITIONS			
AP	Approved	Work may proceed.	Resubmittal is not required
AWC	Approved with Comment	Work may proceed; comments provided for Supplier's consideration only.	Resubmittal is not required
REV	Reviewed	Work may proceed; comments provided for Supplier's consideration only.	Resubmittal is not required
RWC	Reviewed with Comment	Work may proceed; subject to incorporation and compliance w/ Buyer comments.	Correct and resubmit
DS	Disapproved	Work may <u>not</u> proceed.	Correct and resubmit
RSA	Receipt Submittal Acknowledged	No other action required.	

If, in the judgment of the Supplier, the incorporation of AFS' comments will result in a change to the Purchase Order/Subcontract, work shall not proceed and the Supplier shall immediately provide a written notice to AFS' C&P Representative describing the change.

Project Manager (PM) / Engineering Manager (EM) or Designated Individual (DI) Approval 	<small>Digitally signed by DENTON Mark DN: cn=AREVA GROUP, 2.5.4.49=17437512804102021700, o=DENTON Mark Date: 2018.04.10 10:00:19 -0400</small> Date: 04/10/2018
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AFS-EN-FRM-023 Rev 01 (Effective August 18, 2014)
 Refer to AFS-EN-PRC-012



Orano Federal Services
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High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
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Doc./Rev.: EIR-3021970-000
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	AREVA Federal Services LLC	
	SUPPLIER DOCUMENT SUBMITTAL REVIEW	
Supplier / PO No.:	Kasgro Rail / 15C3011916	DTF No. / Rev: 020
Charge No:	00225.03.0050.02.00001	Due Date: 4/10/2018
Document(s):	See DTF No.: 020	
REVIEW INSTRUCTIONS: (List Supplier Doc. No. and Rev. AFS Spec and Dwg. Codes, Stds, etc.)		
PE	Slade Klein	
REVIEWERS	Slade Klein, Bernie Counterman	
QA	Bernie Counterman	
Technical Review		
Comments/Markup Attached Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Technical Reviewer Comments:		
No comments.		
Technical Reviewer(s) (Sign/Date): KLEIN Slade		KLEIN Slade 2018.04.10 05:08:00 -07'00'
Quality Assurance Review (As Applicable)		
Comments/Markup Attached Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Technical Reviewer Comments:		
Randall Robinson - 1G & 3G qualification ID #2880. 4G qualification ID #478		
QA Reviewer(s) (Sign/Date): Bernard Counterman		Digitally signed by Bernard Counterman Date: 2018.04.05 15:58:54 -07'00'
COMMENT DISPOSITION (If Applicable. Attached further comments and disposition correspondence as necessary)		



Orano Federal Services
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Kasgro Rail Corp

121 Rundle Road
 New Castle, PA 16102

WELDER PERFORMANCE QUALIFICATION TEST RECORD

Name: Michael Beauchem Welding Code: AWS D15.1 2012
 Type of Welder: Semi Automatic Identification Number: 844
 Welding Procedure Specification No. P-001 Rev: 0 Date: 10/2/2017

Variables	Record Actual Values		Qualification Range
Process/Type	FCAW		FCAW
Electrode (single/multiple)	Single		Single
Current/Polarity	DC/HP		
Position	5G		Flat and Vertical Fillet and Groove
Weld Progression	Uphill		Uphill
Backing (With or Without)	With		Backing Only
Material/Spec	A572 Gr50	to A572 Gr50	All AWS Prequalified Material
Base Metal			
Thickness: (Plate)			
Groove	1"		1/8" to Unlimited
Fillet	N/A		1/8" to Unlimited
Thickness: (Pipes/tube)			
Groove	N/A		1/8" to Unlimited
Fillet	N/A		1/8" to Unlimited
Diameter: (Pipe)			
Groove	N/A		Greater Than 24" OD
Fillet	N/A		Any Diameter
Filler Metal			
Spec. No.	A5.20		
Class	E71T-1		
F-No.	6		1/6
Gas/Flux Type	CO2		
Other	N/A		N/A

VISUAL INSPECTION Acceptable: Yes No Date coupon welded: 10/7/2017

Grided Bend Test Results

Type	Result	Type	Result
Side Bend	PASS		
Side Bend	PASS		

Fillet Test Results
 Appearance: N/A Fillet Size: N/A
 Fracture Test Root: N/A Macroetch: N/A

(Describe the location, nature, and size of any crack or tearing of the specimen):

Radiographic Test Results

Film ID	Results	Remarks	Film ID	Results	Remarks
N/A			N/A		

Film evaluated by: N/A Company: N/A
 Mechanical tests conducted by: Tom Pleso/Tim Clark Laboratory Test Number: 154285
 Welding supervised by: _____ Company: T.V Rheinland Industrial Solutions

The welder identified above X PASSES, FAILS based on the requirements of the code listed above.

We, the undersigned, certify that the statements in this record are correct and that the test welds were prepared, welded, and tested in conformance with the requirements of Section 11 of AWS D15.1 (2012) Railroad Welding Specification for Cars and Locomotives.

Manufacturer or Contractor Kasgro Specialty Railcar

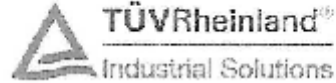
Authorized By Mark Zeigler  Date: October 2, 2017



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Project: 00225.03.0050 DOE Atlas Project

Grand Rapids, MI – Pittsburgh, PA – Birmingham, AL
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GUIDED BEND TEST

Mr. Mark Zeigler
 Kuagro Rail Corporation
 121 Rundle Road
 New Castle, PA 16102

Report #: 464194A Page 1 of 1
 PO #: K17-2045
 Lab #: 154283
 Date Received: 10/02/2017
 Date Tested: 10/05/2017

Date: October 5, 2017

Work Order: 464194

PQR #:	N/A	Welder ID:	Michael Beachem - 844
Process:	FCAW	Position:	3G
Base Metal(s):	A572 Gr50 to A572 Gr50	Coupon Shape:	1" Plate

Test #	Orientation	Result	Test #	Orientation	Result
1	Side	PASS			
2	Side	PASS			

Equipment Used:	
<input type="checkbox"/> Wrap Around Bend Jig:	<input checked="" type="checkbox"/> Guided Fixture
Pin Diameter: 1.5"	
Specification: AWS D13.1	[X] Conforming [] Non-Conforming
Test Witness By:	
Test Technician: Tom Plose	

Respectfully submitted,

 Tim Clark
 2017.10.05 11:24:16 -0400
 Tim Clark
 Laboratory Manager
 TÜV Rheinland Industrial Solutions, Inc.

Testing was performed in accordance with accepted industry practices as well as the standard data referenced. TÜV Rheinland Industrial Solutions, Inc. has no direct knowledge of the sample, sampling procedure, nor condition of the sample, and makes no claim as to the suitability for final use of the material. This test report applies only to those items tested. This report shall not be reproduced except in full without the written consent of TÜV Rheinland Industrial Solutions, Inc.

Guided Bend Test Report
 RI 8-07916



Orano Federal Services
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 Project: 00225.03.0050 DOE Atlas Project

Kasgro Rail Corp

121 Rundle Road
 New Castle, PA 16102

AWS - WELDER PERFORMANCE QUALIFICATION TEST RECORD

Name: Neil Shelebenser Welding Code: AWS D15.1 2012
 Type of Welder: Semi Automatic Identification Number: 842
 Welding Procedure Specification No. F-001 Rev: 0 Date: 8/15/2017

Variables	Record Actual Values		Qualification Range
Process/Type	FCAW		FCAW
Electrode (single/multiple)	Single		Single
Current/Polarity	DC/CP		
Position	3G		Flat and Vertical Fillet and Groove
Weld Progression	Uphill		Uphill
Backing (With or Without)	With		Backing Only
Material/Spec	A572 Gr50	to A572 Gr50	All AWS Prequalified Material
Base Metal			
Thickness: (Plate)			
Groove	1"		1/8" to Unlimited
Fillet	N/A		1/8" to Unlimited
Thickness: (Pipe/tube)			
Groove	N/A		1/8" to Unlimited
Fillet	N/A		1/8" to Unlimited
Diameter: (Pipe)			
Groove	N/A		Greater than 74" O.D.
Fillet	N/A		Any Diameter
Filler Metal			
Spec. No.	A5.20		
Class	E71T-1		
F-No.	6		F6
Gas/flux type	CO ₂		
Other	N/A		N/A

VISUAL INSPECTION Acceptable: Yes No Date coupon welded: 8/15/2017

Guided Bend Test Results

Type	Result	Type	Result
Side Bend	PASS		
Side Bend	PASS		

Fillet Test Results
 Appearance: N/A Fillet Size:
 Fracture Test Root: Macroetch:

(Describe the location, nature, and size of any crack or tearing of the specimen):

Radiographic Test Results

Film ID	Results	Remarks	Film ID	Results	Remarks
N/A					

Film evaluated by: N/A Company:

Mechanical tests conducted by: Tom Pless/Richard Portman Laboratory Test Number: 154115

Welding supervised by: Neil Shelebenser Company: TUV Rheinland Industrial Solutions

The welder identified above PASSES FAILS based on the requirements of the code listed above.

Reviewer's Signature: Neil Shelebenser Date: 8/24/2017

We, the undersigned, certify that the statements in this record are correct and that the test welds were prepared, welded, and tested in conformance with the requirements of Section 11 of AWS D15.1 (2012) Railroad Welding Specification for Cars and Locomotives.

Manufacturer or Contractor: Kasgro Specialty Railcar

Authorized By: Mark Zeidler Date: August 17, 2017



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Project: 00225.03.0050 DOE Atlas Project

Grand Rapids, MI – Pittsburgh, PA – Birmingham, AL
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GUIDED BEND TEST

Mr. Mark Zeigler
 Kasgro Rail Corporation
 121 Rundle Road
 New Castle, PA 16102


Report #: 463300A Page 1 of 1
 PO #: K17-2045
 Lab #: 154115
 Date Received: 8/17/2017
 Date Tested: 8/22/2017
 Work Order: 463300

Date: August 22, 2017

PQR #:	N/A	Welder ID:	Noel Shelenberger - 842
Process:	FCAW	Position:	3G
Base Metal(s):	A572 Gr50 to A572 Gr59	Coupon Shape:	1" Plate

Test #	Orientation	Result	Test #	Orientation	Result
1	Side	PASS			
2	Side	PASS			

Equipment Used:	
<input type="checkbox"/> Wrap Around Bend Jig:	<input checked="" type="checkbox"/> Guided Fixture
Pin Diameter: 1.5"	
Specification: AWS D15.1	<input checked="" type="checkbox"/> Conforming <input type="checkbox"/> Non-Conforming
Test Witness By:	
Test Technician: Tom Plese	

Respectfully submitted,

 Tim Clark
 Laboratory Manager
 TÜV Rheinland Industrial Solutions, Inc.

This is a reproduction of a procedure with accepted industry practice as well as the test methods referenced. TÜV Rheinland Industrial Solutions, Inc. has certified the validity of the design, sampling procedure, and condition of the samples, and makes no claims as to the suitability and final use of the material. This test report applies only to those parameters. This report shall not be reproduced except in full without the written consent of TÜV Rheinland Industrial Solutions, Inc.

Guided Bend Test Report
 IIR 507341



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Grand Rapids, MI – Flint, MI – Pittsburgh, PA – Birmingham, AL – Decatur, AL
 NDE – MECHANICAL LAB www.tuvrh.com



Reported To: Mr. Dave Stahl
 Kasgro Rail Corp
 121 Rundle Road
 New Castle, PA 16102

Date: December 11, 2014
 P/O Number: QAF
 Report Number: 1
 Project: Welder Qualification

AWS - WELDER, WELDING OPERATOR OR TACK WELDER QUALIFICATION TEST RECORD

Name: Paul Klamer Welding Code: AWS D15.1/D15.1M-2012
 Type of Welder: Semi Automatic Identification Number: 836
 Welding Procedure Specification No. K-401 Rev: 0 Date: 12-11-14

Variables	Record Actual Values		Qualification Range
	A35	A36	
Process/Type	FCAW		FC/AW
Electronic (single/multiple)	Single		Single
Current/Polarity	DCBP		Flat, Vertical, Horizontal Fillet & Groove
Position	3G		Vertical
Weld Progression	Up/Down		Up/Down
Rocking (With or Without)	With		With
Material/Spec	A35	A36	All AWS Prequalified Material
Base Metal			
Thickness: (Plate)			
Groove	1"		1/8" to unlimited
Fillet	N/A		1/8" to unlimited
Thickness: (Pipe/tube)			
Groove	N/A		1/8" to unlimited
Fillet	N/A		1/8" to unlimited
Diameter: (Pipe)			
Groove	N/A		24" and greater
Fillet	N/A		Any Diameter
Filler Metal			
Spec. No.	A5.20		
Class	E71T-1		
F-No.	6		6
Gas/Flux Type	100% CO ₂		
Other	N/A		Not an essential variable

VISUAL INSPECTION Acceptable: Yes No Date coupon welded: 12/11/14

Guided Bend Test Results

Type	Result	Type	Result
Side Bend	No Defects - PASS		
Side Bend	No Defects - PASS		

Fillet Test Results

Appearance:	N/A	Fillet Size:	
Fracture Test Root:		Microetch:	
(Describe the location, nature, and size of any crack or tearing of the specimen):			

Radiographic Test Results

Film ID	Results	Remarks	Film ID	Results	Remarks
N/A					

Film evaluated by: N/A Company: _____
 Mechanical tests conducted by: Tom Pleso / Rich Portman Laboratory Test Number: 141586
 Welding supervised by: Dan Gierch Company: TUV Rheinland Industrial Solutions

The welder identified above PASSES FAILS based on the requirements of the code listed above.

Reviewer's Signature: *Richard [Signature]* Date: 12/24/14

Client Approval: *Mark [Signature]* Date: 12/24/14

TUV RHEINLAND INDUSTRIAL SOLUTIONS, INC.

These test results report our findings at the time of inspection and shall be reviewed by the client for compliance to the project requirements. Due to the limitations of nondestructive testing in evaluating all of the factors that determine the overall component quality, no guarantee is made or liability assumed by TUV Rheinland Industrial Solutions, Inc. ("TRIS") for the component quality of any component.



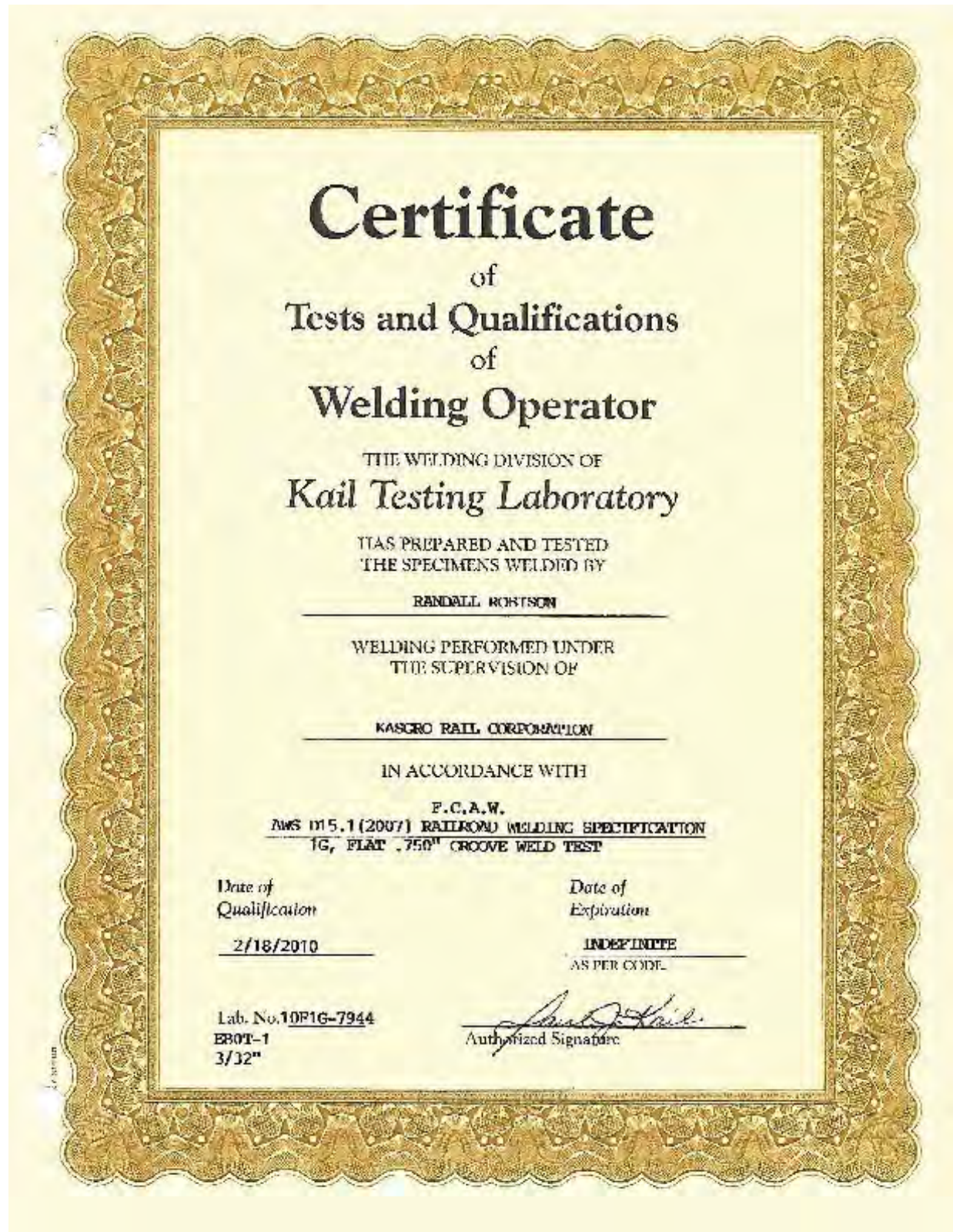
Richard A. Portman
 GWI 00001211
 QC EXP. 03/2017

Revision 01/2013
 AWS Welder Qualification



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AWR-115 (0) 5.17.2007

ANNEX D

WELDER AND WELDING OPERATOR QUALIFICATION RECORD

Welder or welding operator's name RANDY L. ROBINSON Identification no. 826
 Welding process ECW Manual Semiautomatic X Machine
 (Flat, horizontal, overhead, or vertical. If vertical, state whether upward or downward.) 1G, Flat
 In accordance with procedure specification no. P-005
 Material specification A-36
 Parameter one wall thickness (if pipe)—otherwise, joint thickness .750"
 Thickness range this qualifies UNLIMITED

FILLER METAL

Specification no. A-29 Classification ERUT-1 F.no. 6
 Describe filler metal (if not covered by AWS specification)
 Is backing strip used? Yes
 Filler metal diameter and trade name 3/32" Tri-Met 6 Flux for submerged arc or gas for gas metal arc or flux
 used for welding 100% CO2

VISUAL INSPECTION

Appearance Satisfactory Undercut None Faying porosity None

Grided Bent Test Results

Type	Result	Type	Result
SIDE BEND	NO DEFECTS		
STEM BEND	NO DEFECTS		

Test conducted by KATE TESTING LABORATORY Laboratory test no. 10010-7944
 per [Signature] Test date 2/18/2010

Filet Test Results

Appearance Filet size
 Fracture test: root penetration Macroetch
 (Describe the location, nature, and size of any crack or tearing of the specimen)
 Test conducted by Laboratory test no.
 per Test date

RADIOGRAPHIC (RT) RESULTS

Film Identification	Results	Remarks	Film Identification	Results	Remarks

Test witnessed by Laboratory test no.
 per Test date

We, the undersigned, certify that the statements in this record are correct and that the test welds were prepared and tested in accordance with the requirements of AWS D15.1 (2007) Railroad Welding Specification for Cars and Locomotives (WRR)

Manufacturer or Contractor RASCRO RAIL CORP.

Authorized by [Signature]

Date 2/18/10

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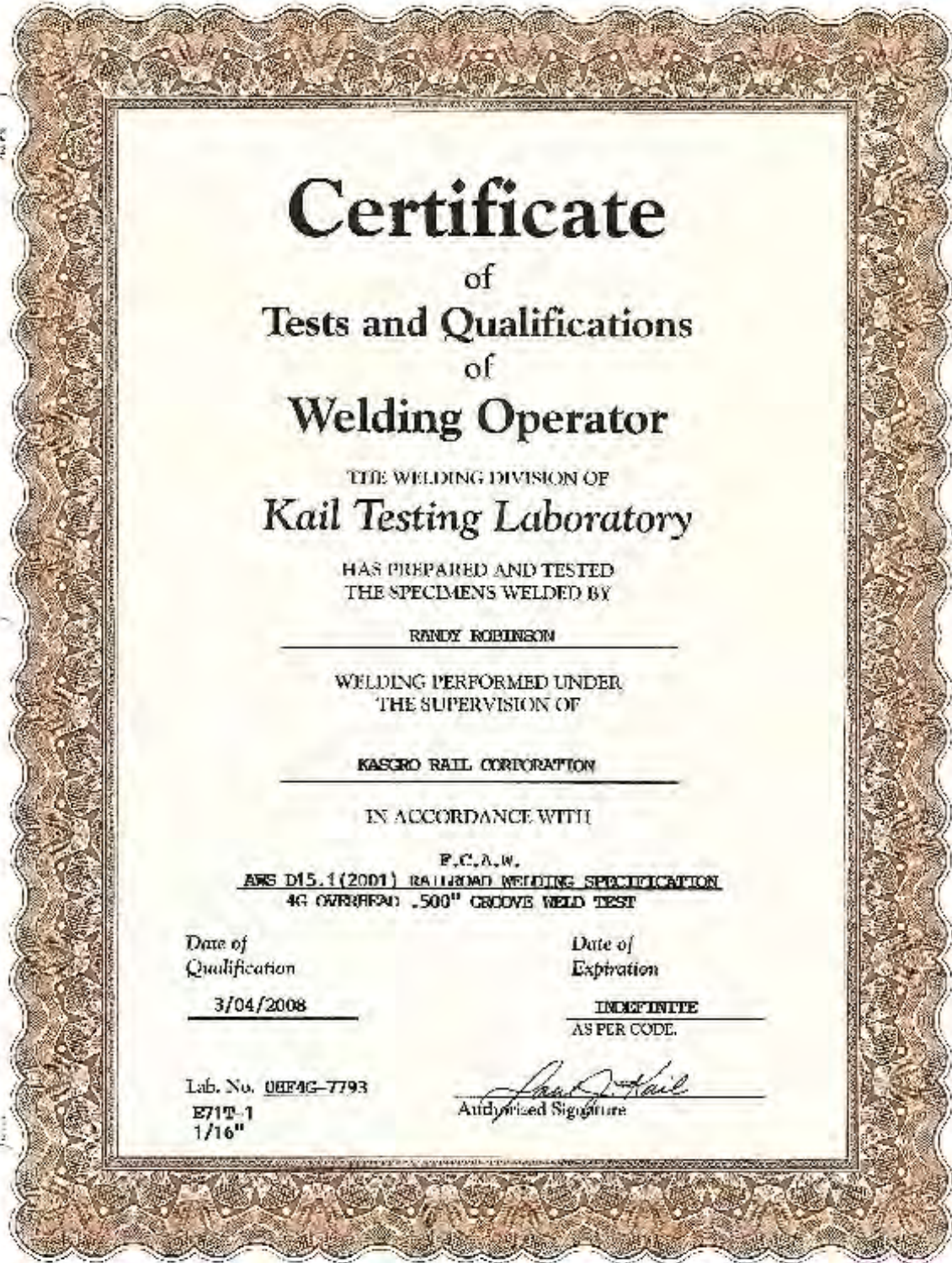
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WELDER AND WELDING OPERATOR QUALIFICATION RECORD

Welder or welding operator's name: ROBERT WALKER Identification no. 057
 Welding process: F.C.A.W. Manual Semiautomatic Machine
 Position: 1G FLAT
 (Flat, horizontal, overhead or vertical – if vertical, state whether upward or downward)
 In accordance with procedure specification: Q1190-0129
 Material specification: A-36
 Diameter and wall thickness (if pipe) – otherwise, joint thickness: 1.0"
 Thickness range the qualifies: UNLIMITED

FILLER METAL

Specification no.: 5.20 Classification: E70T-1 Form: 6
 Describe filler metal (if not covered by AWS specification): _____
 Is backing strip used? Yes
 Filler metal diameter and trade name: 3/32" Lincoln Flux or submerged arc or gas for gas metal arc or flux
 coated arc welding: 100% CO₂

VISUAL INSPECTION

Appearance: SATISFACTORY Undercut: NONE Piping porosity: NONE

Guided Bend Test Results

Type	Result	Type	Result
<u>SIDE BEND</u>	<u>1/6" tear/PASSED</u>		
<u>SIDE BEND</u>	<u>NO DEFECTS</u>		

Test conducted by: SAFETY TEST LAB Laboratory test no.: 01FLG 2196
 per: [Signature] Test date: 11/03/01

Fillet Test Results

Appearance: _____ Fillet size: _____
 Fracture test root penetration: _____ Macroetch: _____
 (Describe the location, nature, and size of any crack or tearing of the specimen.)
 Test conducted by: _____ Laboratory test no.: _____
 per: _____ Test date: _____

RADIOGRAPHIC TEST RESULTS

Film Identification	Results	Remarks	Film Identification	Results	Remarks

Test witnessed by: _____ Test no.: _____
 per: _____

We, the undersigned, certify that the statements in this record are correct and that the welds were prepared and tested in accordance with the requirements of the American Welding Society AWS Q15.1, (93 year).

Manufacturer or contractor: KASPER RAIL CORPORATION
 Authorized by: [Signature]
 Date: 11-3-01

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WELDER AND WELDING OPERATOR QUALIFICATION RECORD

Welder or welding operators name ROBERT W. MATTHEW Identification no. 057
 Welding process P, S, A, B Manual Semi-automatic 3 Machine
 Position SG Vertical Up
 (Flat, horizontal, overhead or vertical — if vertical state whether upward or downward)
 In accordance with procedure specification no: PROBABILISTIC SAFETY EVAL. CO. CIR
 Material specification A 23
 Diameter and wall thickness (if pipe) otherwise joint thickness 3.0"
 thickness range this qualifies 0.5001750

FILLER METAL

Specification no. A 23 Classification E71T-1 F no. 8
 Describe filler metal (if not covered by AWS specification)
 Is backing strip used? Yes
 Filler metal brand and trade name ESAB Rodin Flux for submerged arc or gas for gas metal arc or flux cored arc welding 100% O2

VISUAL INSPECTION

Appearance Good System Undercut None Piping activity None

Colded Bent Test Results

Type	Result	Type	Result
<u>WIDE BEND</u>	<u>NO DEFECTS</u>		
<u>STAG BEND</u>	<u>1/16" bend/PERIOD</u>		

Test conducted by RAT. SYSTEMS LABORATORY Laboratory test no. 8222-1290
 per [Signature] Test date 4/22/07

Filler Test Results

Appearance Filler size
 Fracture test: root penetration Macroetch
 (Describe the location, nature, and size of any crack or tearing of the specimen.)
 Test conducted by Laboratory test no.
 per Test date

RADIOGRAPHIC TEST RESULTS

Film Identification	Results	Remarks	Film Identification	Results	Remarks

Test witnessed by Test no.
 per

We, the undersigned, certify that the statements in this record are correct and that the welds were prepared and tested in accordance with the requirements of the American Welding Society AWS D15.1, () of () year.

Manufacturer or contractor NASSCO RAIL CORP.
 Authorized by [Signature]
 Date 5/25/07

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WELDER AND WELDING OPERATOR QUALIFICATION RECORD

Welder or welding operator's name ROBERT WALKER Identification no. 057
 Welding process F.C.A.W. Manual Semicautomatic Machine
 Position All Overhead
 (Flat, horizontal, overhead or vertical — if vertical, state whether upward or downward)
 In accordance with procedure specification no. Prequalified joint fig. no. C18
 Material specification A-36
 Diameter and wall thickness (if pipe) otherwise, joint thickness .500"
 Thickness range this qualifies 1.0"

FILLER METAL

Specification no. E-20 Classification E-XT-1 F no. 8
 Describe filler metal (if not covered by AWS specification) _____
 Is backing strip used? Yes
 Filler metal diameter and trade name .063" Lincoln Flux for submerged arc or gas for gas metal arc or flux cored arc welding 100% CXX

VISUAL INSPECTION

Appearance Satisfactory Undercut None Piping porosity None

Guided Bent Test Results

Type	Result	Type	Result
SIDE BEND	NO DEFECTS		
SIDE BEND	NO DEFECTS		

Test conducted by KALD TESTING LABORATORY Laboratory test no. 04F43-2300
 per [Signature] Test date 4/26/01

Fillet Test Results

Appearance _____ Fillet size _____
 Fracture test (not penetration) _____ Marcellch _____
 (Describe the location, nature, and size of any crack or tearing of the specimen.)
 Test conducted by _____ Laboratory test no. _____
 per _____ Test date _____

RADIOGRAPHIC TEST RESULTS

Film identification	Results	Remarks	Film identification	Results	Remarks

Test witnessed by _____ Test no. _____
 per _____

We, the undersigned, certify that the statements in this record are correct and that the welds were prepared and tested in accordance with the requirements of the American Welding Society AWS D18.1, (2001)
 year

Manufacturer or contractor KANSAS RAIL CO.
 Authorized by [Signature]
 Date 4-26-01

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AWS D15.1M2007

ANNEX D

WELDER AND WELDING OPERATOR QUALIFICATION RECORD

Welder or welding operators name RONALD PRICE Identification no. B24
 Welding process PCAN Manual Semi-automatic X Machine
 (Flat, horizontal, overhead, or vertical. If vertical, state whether upward or downward.) 3G Vertical Up
 In accordance with procedure specification no. W-001
 Material specification A-36
 Diameter and wall thickness (if pipe) — otherwise, joint thickness .750"
 Thickness range (if applicable) UNLIMITED

FILLET METAL

Specification no. A-20 Classification E71T-1 Filler G
 Describe filler metal (if not covered by AWS specification)
 Is backing strip used? Yes
 Filler metal diameter and trade name 1/16" Lincoln Flux for submerged arc or gas for gas metal arc or flux
 cored arc welding 100% CO2

VISUAL INSPECTION

Appearance Satisfactory Unclear None Piping porosity None

Guided Bent Test Results

Type	Result	Type	Result
<u>SIDE BEND</u>	<u>NO DEFECTS</u>		
<u>SIDE BEND</u>	<u>NO DEFECTS</u>		

Test conducted by RAIL TESTING LABORATORY Laboratory test no. 10FRC-7930
 per *Randy Pauli* Test date 2/12/2010

Fillet Test Results

Appearance Fillet size
 Fracture test, root penetration Macroetch
 (Describe the location, nature, and size of any crack or tearing of the specimen)
 Test conducted by Laboratory test no.
 per Test date

RADIOGRAPHIC TEST RESULTS

Flaw Identification	Results	Remarks	Flaw Identification	Results	Remarks

Test witnessed by Laboratory test no.
 per Test date

We, the undersigned, certify that the statements in this record are correct and that the test welds were prepared and tested in accordance with the requirements of AWS D15.1, () 2007 () Railroad Welding Specification for Cars and Locomotives, (year)

Manufacturer or Contractor, KASCRO RAIL CORPORATION

Authorized by *Mark Guff*
 Date 2/12/10

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AWS D15.10D15.1M0007

ANNEX 11

WELDER AND WELDING OPERATOR QUALIFICATION RECORD

Welder or welding operator's name RYAN VOGUS Identification no. 812
 Welding process: PCAW Manual Semiautomatic X Machine
 (Flat, horizontal, overhead, or vertical—if vertical, state whether upward or downward) 1G, Flat
 In accordance with procedure specification no. E-005
 Material specification A-36
 Diameter and wall thickness (if pipe)—otherwise, joint thickness .750"
 Thickness range this qualifies: UNLIMITED

FILLER METAL

Specification no. E-29 Classification E80T-1 F no. 6
 Describe filler metal (if not covered by AWS specification)
 Is backing strip used? Yes
 Filler metal diameter and trade name 3/32" Lincoln Flux for submerged arc or gas for gas metal arc or flux
 cored arc welding 100% CO2

VISUAL INSPECTION

Appearance Satisfactory Undercut None Riping porosity None

Guided Bend Test Results

Type	Result	Type	Result
<u>SIDE BEND</u>	<u>NO DEFECTS</u>		
<u>SIDE BEND</u>	<u>NO DEFECTS</u>		

Test conducted by KAPY TESTING LABORATORY Laboratory test no. 10F1G-7938
 per *Fred J. Kopy* Test date 2/18/2010

Fillet Test Results

Appearance Fillet size
 Fracturing, root penetration Match
 (Describe the location, nature, and size of any crack or tearing of the specimen.)
 Test conducted by Laboratory test no.
 per Test date

RADIOGRAPHIC TEST RESULTS

Film Identification	Results	Remarks	Film Identification	Results	Remarks

Test witnessed by Laboratory test no.
 per Test date

We, the undersigned, certify that the statements in this record are correct and that the test welds were prepared and tested in accordance with the requirements of AWS D15.1 (2007) Railroad Welding Specification for Carbon Steel Components.

Manufacturer or Contractor KASBO RAIL CORP.
 Authorized by *[Signature]*
 Date 2-18-10

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AWS D15.1M11.1M2007

ANNEX D

WELDER AND WELDING OPERATOR QUALIFICATION RECORD

Welder or welding operator's name RYAN VOGLIS Identification no. 812
 Welding process ECAW Manual Semi-automatic Machine
 (Flat, horizontal, overhead, or vertical. If vertical, state whether upward or downward.) 3G Vertical Up
 In accordance with procedure specification no. E-001
 Material specification A-36
 Diameter and wall thickness of pipe (if pipe), joint thickness .750"
 Thickness range this qualifies UNLIMITED

FILLER METAL

Specification no. 5.20 Classification E71T-1 F-in. 6
 Describe filler metal (if not covered by AWS specification) _____
 Is backing strip used? Yes
 Filler metal diameter and trade name 1/16" Lincoln Flux for submerged arc or gas for gas metal arc or flux cored arc welding 100% CO2

VISUAL INSPECTION

Appearance Satisfactory Undercut None Piping porosity None

Guided Bent Test Results

Type	Result	Type	Result
<u>SIDE BEND</u>	<u>NO DEFECTS</u>		
<u>SIDE BEND</u>	<u>NO DEFECTS</u>		

Test conducted by KATI TESTING LABORATORY Laboratory test no. 10F3G-7925
 per [Signature] Test date 2/12/2010

Fillet Test Results

Appearance _____ Fillet size _____
 Fracture test root penetration _____ Macroetch _____
 (Describe the location, nature, and size of any crack or tearing of the specimen.)
 Test conducted by _____ Laboratory test no. _____
 per _____ Test date _____

RADIOGRAPHIC TEST RESULTS

Film Identification	Results	Remarks	Film Identification	Results	Remarks

Test witnessed by _____ Laboratory test no. _____
 per _____ Test date _____

We, the undersigned, certify that the statements in this record are correct and that the test welds were prepared and tested in accordance with the requirements of AWS D15.1M11.1M2007 _____ () Railroad Welding Specification for Cars and Locomotives.
 (year) _____

Manufacturer or Contractor KANSAS RAIL CORPORATION

Authorized by [Signature]
 Date 2/12/10

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WELDER AND WELDING OPERATOR QUALIFICATION TEST RECORD

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Welder or welding operator's name: EYAN VOGLS Identification no. _____
 Welding process: F.C.A.W. Manual _____ Semiautomatic X Machine _____
 Position: 4G Overhead Groove Weld
 (Flat, horizontal, overhead or vertical — if vertical, state whether upward or downward)
 In accordance with procedure specification no. Prequalified Joint Fig. no. C1E
 Material specification: A-36
 Diameter and wall thickness (if pipe) — otherwise, joint thickness: .500"
 Thickness range this qualifies: 1.0"

FILLER METAL

Specification no.: 5.20 Classification: E71P-1 F no.: 6
 Describe filler metal (if not covered by AWS specification): _____
 Is backing strip used? Yes
 Filler metal diameter and trade name: 1/16" Lincoln Flux for submerged arc or gas for gas metal arc or flux cored arc welding: 100% CO2

VISUAL INSPECTION

Appearance: Satisfactory Undercut: None Piping porosity: None

Guided Bend Test Results

Type	Result	Type	Result
STICH BEND	NO DEFECTS		
SIDE BEND	Minor check/PASSED		

Test conducted by: RATL TESTING LABORATORY Laboratory test no.: 20F4G-2045
 per: [Signature] Test date: 9/11/2000

Fillet Test Results

Appearance: _____ Fillet size: _____
 Fracture test root penetration: _____ Macroetch: _____
 (Describe the location, nature, and size of any crack or tearing of the specimen.)
 Test conducted by: _____ Laboratory test no.: _____
 per: _____ Test date: _____

RADIOGRAPHIC TEST RESULTS

Film Identification	Results	Remarks	Film Identification	Results	Remarks

Test witnessed by: _____ Test no.: _____
 per: _____

We, the undersigned, certify that the statements in this record are correct and that the welds were prepared and tested in accordance with the requirements of the American Welding Society AWS D15.1, (93 year).

Manufacturer or contractor: KASPRO RAIL CORP.
 Authorized by: [Signature]
 Date: 9-11-00

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WELDER AND WELDING OPERATOR QUALIFICATION RECORD

Welder or welding operator's name: J. SCOTT KEELY Identification no.: 056
 Welding process: FC-A-W Manual Semi-automatic Machine
 Position: IG Flat
 (Flat, horizontal, overhead or vertical - if vertical, state whether upward or downward)
 In accordance with procedure specification no. 01KRC-0129
 Material specification: A 36
 Diameter and wall thickness (if pipe) - otherwise, joint thickness: 1.0"
 Thickness range this qualifies: UNLIMITED

FILLER METAL
 Specification no.: 5.20 Classification: E70T-1 Fing: 6
 Describe filler metal (if not covered by AWS specification): _____
 Is backing also used? Yes
 Filler metal diameter and trade name: 3/32" E70T-1 Flux for submerged arc or gas for gas metal arc or flux cored arc welding: 100% Co2

VISUAL INSPECTION
 Appearance: Satisfactory Undercut: None Filing porosity: None

Guided Bend Test Results

Type	Result	Type	Result
SIDE BEND	NO DEFECTS		
STRIKE BEND	NO DEFECTS		

Test conducted by: KATI TESTING LABORATORY Laboratory test no.: 01FIG-2183
 per: [Signature] Test date: 10/18/01

Fillet Test Results
 Appearance: _____ Fillet size: _____
 Fracture test metal orientation: _____ Macroetch: _____
 (Describe the location, nature, and size of any crack or tearing of the specimen.)
 Test conducted by: _____ Laboratory test no.: _____
 per: _____ Test date: _____

RADIOGRAPHIC TEST RESULTS

Film Identification	Results	Remarks	Film Identification	Results	Remarks

Test witnessed by: _____ Test no.: _____
 per: _____

We, the undersigned, certify that the statements in this record are correct and that the welds were prepared and tested in accordance with the requirements of the American Welding Society AWS D5.1, (93 year).

Manufacturer or contractor: EMBERO RAIL CORP.
 Authorized by: [Signature]
 Date: 10-16-01

Form D-4



Orano Federal Services
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 High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
 Appendix B

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WELDER AND WELDING OPERATOR QUALIFICATION RECORD

Welder or welding operator's name: J. SCOTT HUBBY Identification no. 056
 Welding process: E. Q. A. W. Manual Semiautomatic X Machine
 Position: 2G Vertical Up
 (Flat, horizontal, overhead or vertical — if vertical, state whether upward or downward)
 In accordance with procedure specification in: Welded Joint (Up. do. CW)
 Material specification: A-38
 Diameter and wall thickness (if pipe) — otherwise, joint thickness: 1.0"
 Thickness range this qualifies: UNLIMITED

FILLER METAL
 Specification no.: E. 20 Classification: A710-2 Flux: E
 Describe filler metal (if not covered by AWS specification):
 Is backing strip used? Yes
 Filler metal diameter and trade name: 1/16" Lincoln Flux for submerged arc or gas for gas metal arc or flux
 coated arc welding: 100% CO₂

VISUAL INSPECTION
 Appearance: Satisfactory Undercut: None Piping porosity: None

Guided Bent Test Results

Type	Result	Type	Result
SIDE BEND	NO DEFECTS		
FACE BEND	NO DEFECTS		

Test conducted by: KALLI ZETTEL-LABORATORY Laboratory test no.: 2753-1720
 per: [Signature] Test date: 8/28/97

Fillet Test Results
 Appearance: Fillet size:
 Fracture test root penetration: Macroetch:
 (Describe the location, nature, and size of any crack or tearing of the specimen.)
 Test conducted by: Laboratory test no.:
 per: Test date:

RADIOGRAPHIC TEST RESULTS

Film Identification	Results	Remarks	Film Identification	Results	Remarks

Test witnessed by: Test no.:
 per:

We, the undersigned, certify that the statements in this record are correct and that the welds were prepared and tested in accordance with the requirements of the American Welding Society AWS D15.1, (80 year).

Manufacturer or contractor: KANSAS RAIL CORP.
 Authorized by: [Signature]
 Date: 8/28/97

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Certificate
 of
Tests and Qualifications
 of
Welding Operator

THE WELDING DIVISION OF
Kail Testing Laboratory, Inc.

HAS PREPARED AND TESTED
 THE SPECIMENS WELDED BY

J. SCOTT NEELY

WELDING PERFORMED UNDER
 THE SUPERVISION OF

KAGGIO RAIL, CORPORATION

IN ACCORDANCE WITH

F.C.A.W.

AWS D15.1 (2001) RAILROAD WELDING SPECIFICATION
4C, OVERHEAD .375" GROOVE WELD TEST

*Date of
 Qualification*

9/29/2003

*Date of
 Expiration*

INDEFINITE
 AS PER CODE.

Lab. No. 03F4C-2268

E/UT-1
 .045"

Paul J. Kail
 Authorized Signature



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WELDER AND WELDING OPERATOR QUALIFICATION RECORD

Welder or welding operator's name J. SCOTT WELBY Identification no. 056
 Welding process GTAW Manual Semi-automatic Machine
 Position 3G Overhead
 (Flat, horizontal, overhead or vertical - if vertical, state whether upward or downward)
 In accordance with procedure specification no. Prequalified tests, fig. no. 41B
 Material specification A-36
 Diameter and wall thickness (if pipe) - otherwise, joint thickness 1/2"
 Thickness range thickness .750"

FILLER METAL

Specification no. E-20 Classification E7017 F no. 6
 Describe filler metal (if not covered by AWS specification) _____
 Is backing or preheat? Yes
 Filler metal diameter and trade name .045" Lincoln Flux for submerged arc or gas for gas metal arc or flux covered arc welding 100% O2

VISUAL INSPECTION

Appearance Satisfactory Undercut None Piping porosity None

Guided Bend Test Results

Type	Result	Type	Result
<u>FACE BEND</u>	<u>1/8" Tear/PASSED</u>		
<u>ROOT BEND</u>	<u>NO DEFECTS</u>		

Test conducted by KAIL TESTING LABORATORY Laboratory test no. 03FAC-2268
 per [Signature] Test date 9/24/2003

Fillet Test Results

Appearance _____ Fillet size _____
 Fracture: no root penetration Match _____
 (Describe the location, nature, and extent of any crack or tearing of the specimen.)
 Test conducted by _____ Laboratory test no. _____
 per _____ Test date _____

RADIOGRAPHIC TEST RESULTS

Film identification	Results	Remarks	Film identification	Results	Remarks

Test witnessed by _____ Test no. _____
 per _____

We, the undersigned, certify that the statements in this record are correct and that the welds were prepared and tested in accordance with the requirements of the American Welding Society AWS D16.1 (2001).

Manufacturer or contractor KANSAS RAIL CORP
 Authorized by [Signature]
 Date 9/29/03

Form D-4



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WELDER AND WELDING OPERATOR QUALIFICATION TEST RECORD

Welder or welding operator's name JOHN SCOTT NEELY Identification no. 056
 Welding process F.C.A.W. Manual Semiautomatic Machine
 Position 4G Overhead Groove Weld
 (Flat, horizontal, overhead or vertical — if vertical, state whether upward or downward)
 In accordance with procedure specification no. Pregualified joint fig. no. C1B
 Material specification A-36
 Diameter and wall thickness (if pipe) — otherwise, joint thickness .500"
 Thickness range this qualifies 1.0"

FILLED METAL

Specification no. 5.20 Classification E71th 1 F no. 6
 Describe filler metal (if not covered by AWS specification) _____
 Is backing strip used? Yes
 Filler metal diameter and trade name 1/16" Lincoln Flux for submerged arc or gas for gas metal arc or flux
 cored arc welding 100% CO₂

VISUAL INSPECTION

Appearance Satisfactory Undercut None Piping porosity None

Guided Bent Test Results

Type	Result	Type	Result
SIDE BEND	NO DEFECTS		
SIDE BEND	NO DEFECTS		

Test conducted by RAIL TESTING LABORATORY Laboratory test no. 9/11/2000
 per [Signature] Test date 2003-20-01

Fillet Test Results

Appearance _____ Fillet size _____
 Fracture test root penetration _____ Marcatch _____
 (Describe the location, nature, and size of any crack or tearing of the specimen.)
 Test conducted by _____ Laboratory test no. _____
 per _____ Test date _____

RADIOGRAPHIC TEST RESULTS

Film identification	Results	Remarks	Film identification	Results	Remarks

Test witnessed by _____ Test no. _____
 per _____

We, the undersigned, certify that the statements in this record are correct and that the welds were prepared and tested in accordance with the requirements of the American Welding Society AWS D16.1, (93 year).

Manufacturer or contractor KASPRO RAIL CORP.
 Authorized by [Signature]
 Date 9-11-00

Form D-4



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AWS D15.1:2015.1M.2007

ANNEX D

WELDER AND WELDING OPERATOR QUALIFICATION RECORD

Welder or welding operator's name: STEVEN PRINSENER Identification no. 823
 Welding process: FCM Manual Semiautomatic Machine
 (Flat, horizontal, overhead, or vertical - if vertical, state whether upward or downward) 1G, F1aL
 In accordance with procedure specification no. E-005
 Material specification A-36
 Diameter and wall thickness (if pipe) - otherwise, joint thickness .750"
 Thickness range (if applicable) UNLIMITED

FILLER METAL

Specification no. E-29 Classification E80T-1 F-number 6
 Describe filler metal (if not covered by AWS specification) _____
 Is backing strip used? Yes
 Filler metal diameter and trace name: 3/32" Lincoln Flux for submerged arc or gas for gas metal arc or flux
 used arc welding 100% CO2

VISUAL INSPECTION

Appearance Satisfactory Undercut None Piping porosity None

Guided Bend Test Results

Type	Result	Type	Result
<u>SIDE BEND</u>	<u>NO DEFECTS</u>		
<u>SHOULDER BEND</u>	<u>NO DEFECTS</u>		

Test conducted by KATE TESTING LABORATORY Laboratory test no. 10F1G-7942
 per [Signature] Test date 2/18/2010

Fillet Test Results

Appearance _____ Fillet size _____
 Fracture test root penetration _____ Microetch _____
 (Describe the location, nature, and size of any crack or tearing of the specimen.)
 Test conducted by _____ Laboratory test no. _____
 per _____ Test date _____

RADIOGRAPHIC TEST RESULTS

Film Identification	Results	Remarks	Film Identification	Results	Remarks

Test witnessed by _____ Laboratory test no. _____
 per _____ Test date _____

We, the undersigned, certify that the statements in this record are correct and that the test welds were prepared and tested in accordance with the requirements of AWS D15.1: (2007) Handed Welding Specification for Cars and Loaders, (2007)

Manufacturer or Contractor KASPRO RAIL CORP.

Authorized by [Signature]

Date 2/18/10

Form D-4



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AWS D15.1:15 (M,2007)

APP-X-D

WELDER AND WELDING OPERATOR QUALIFICATION RECORD

Welder or welding operator's name: STEWEN PRISNAR Identifying no. 823
 Welding process: EXAM Manual Semi-automatic: X Machine
 (List, horizontal, overhead, or vertical—If vertical, state whether upward or downward.) 3X Vertical Up
 In accordance with procedure specification no. E-001
 Material specification: A-36
 Diameter and wall thickness (if pipe); otherwise, joint thickness: .750"
 Thickness range that qualifies: UNLIMITED

FILLER METAL

Specification no.: E-20 Classification: E71T-1 Form: G
 Describe filler metal (if not covered by AWS specification):
 Is backing strip used? YES
 Filler metal diameter and trade name: 1/16" LINCOLN Flux for submerged arc or gas for gas metal arc or flux:
 core-d wire welding: 100% CO2

VISUAL INSPECTION

Appearance: Satisfactory Undercut: None Piping porosity: NONE

Guided Bend Test Results

TYPE	Result	Type	Result
STDR BEND	NO DEFECTS		
SIDE BEND	NO DEFECTS		

Test conducted by: KAL PHOSPHOR LABORATORY Laboratory test no.: 10130-7929
 per: [Signature] Test date: 2/12/2010

Flillet Test Results

Appearance: Fillet size:
 Fillet root penetration: Max depth:
 (Describe the location, nature, and size of any crack or tearing of the specimen.)
 Test conducted by: Laboratory testing:
 per: Test date:

RADIOGRAPHIC TEST RESULTS

Film Identification	Results	Remarks	Film Identification	Results	Remarks

Test witnessed by: Laboratory test no.:
 per: Test date:

We, the undersigned, certify that the statements in this record are correct and that the test welds were prepared and tested in accordance with the requirements of AWS D15.1, (2007) Railroad Welding Specification for Cars and Locomotives, (year)

Manufacturer or Contractor: KASCRO RAIL CORPORATION

Authorized by: [Signature]

Date: 2-12-10

Form D-4



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AREVA		AREVA Federal Services LLC	
DATA TRANSMITTAL FORM			
Supplier:	KASGRO RAIL CORP., INC.	DTF No:	021
P.O./SC No:	15C3011916	Date:	03/27/18
Type of Submittal:	<input checked="" type="checkbox"/> First <input type="checkbox"/> Re-Submittal	SDRL List Item No:	20
Submitted for:	<input checked="" type="checkbox"/> Approval <input type="checkbox"/> Review <input type="checkbox"/> Information	Number of Copies Submitted:	1
Submitted By:	RICK FORD	<small>Digitally signed by Rick Ford Date: 2018.03.27 15:33:07 -0402</small> Rick Ford	PROJECT MANAGER
	(Name)	(Signature)	(Title)

ITEM NUMBER	DOCUMENT NUMBER	REVISION NUMBER	DOCUMENT DESCRIPTION	AFS DISPOSITION
1	KAS W28		Clock # 814 Thomas Cummings Welder Qualifications	<input checked="" type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
2	KAS W29		Clock #81 Trevor Barker Welding Qualifications	<input checked="" type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
3	KAS W30		Clock #821 Triston Mills Welding Qualifications	<input type="checkbox"/> AP <input checked="" type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
				<input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
				<input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
				<input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
				<input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
				<input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
				<input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA

Comments: Triston Mills, 1G and 3G use ID #9980, 4G uses ID #673. Please provide clarification.	Technical Reviewer (I.e., RE, PTL, SME, QA, etc.) KLEIN Slade KLEIN Slade <small>2018.04.10 07:04:15 -0700</small> Date: 4/10/2018
--	--

AFS DISPOSITION CODES AND DEFINITIONS			
AP	Approved	Work may proceed.	Resubmittal is not required
AWC	Approved with Comment	Work may proceed; comments provided for Supplier's consideration only.	Resubmittal is not required
REV	Reviewed	Work may proceed; comments provided for Supplier's consideration only.	Resubmittal is not required
RWC	Reviewed with Comment	Work may proceed; subject to incorporation and compliance w/ Buyer comments.	Correct and resubmit
DS	Disapproved	Work may <u>not</u> proceed.	Correct and resubmit
RSA	Receipt Submittal Acknowledged	No other action required.	

If, in the judgment of the Supplier, the incorporation of AFS' comments will result in a change to the Purchase Order/Subcontract, work shall not proceed and the Supplier shall immediately provide a written notice to AFS' C&P Representative describing the change.

Project Manager (PM) / Engineering Manager (EM) or Designated Individual (DI) Approval 	<small>Digitally signed by DENTON Mark DN: c=AREVA GROUP, 2.5.4.49=187437512804102021700, ou=DENTON Mark, Date: 2018.04.10 10:00:40 -0400</small> Date: 04/10/2018
--	---

AFS-EN-FRM-023 Rev 01 (Effective August 18, 2014)
 Refer to AFS-EN-PRC-012



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	AREVA Federal Services LLC	
	SUPPLIER DOCUMENT SUBMITTAL REVIEW	
Supplier / PO No.:	Kasgro Rail / 15C3011916	DTF No. / Rev: 021
Charge No:	00225.03.0050.02.00001	Due Date: 4/10/2018
Document(s):	See DTF No.: 021	
REVIEW INSTRUCTIONS: (List Supplier Doc. No. and Rev. AFS Spec and Dwg. Codes, Stds, etc.)		
PE	Slade Klein	
REVIEWERS	Slade Klein, Bernie Counterman	
QA	Bernie Counterman	
Technical Review		
Comments/Markup Attached Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Technical Reviewer Comments:		
No comments		
Technical Reviewer(s) (Sign/Date): KLEIN Slade		KLEIN Slade 2018.04.10 05:12:28 -07'00'
Quality Assurance Review (As Applicable)		
Comments/Markup Attached Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Technical Reviewer Comments:		
Triston Mills - 1G & 3G use ID #9980, 4G uses ID #673		
QA Reviewer(s) (Sign/Date): Bernard Counterman		Digitally signed by Bernard Counterman Date: 2018.04.05 16:14:48 -07'00'
COMMENT DISPOSITION (If Applicable. Attached further comments and disposition correspondence as necessary)		



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AWS D15.1 (15) (11/2007)

ANNEX D

WELDER AND WELDING OPERATOR QUALIFICATION RECORD

Welder or welding operator's name: THOMAS CUMMINS Identification no. 814
 Welding process: PCBW Manual Semi-automatic Machine
 (Flat, horizontal, overhead, or vertical—if vertical, state whether upward or downward.) Flat
 In accordance with procedure specification no. E-005
 Material specification A-36
 Diameter and wall thickness (if pipe) otherwise, joint thickness .750"
 Thickness range this qualifies UNLIMITED

FILLER METAL

Specification no. E-29 Classification E60T-1 F.no. 6
 Describe filler metal (if not covered by AWS specification):
 Is backing strip used? Yes
 (Filler metal diameter and trade name) 3/32" Lincoln Flux for submerged arc or gas for gas metal arc or flux
 cored arc welding 100% CO₂

VISUAL INSPECTION

Appearance Satisfactory Undercut None Riping porosity None

Guided Bend Test Results

Type	Result	Year	Result
SIDE BEND	NO DEFECTS		
SIDE BEND	NO DEFECTS		

Test conducted by KATH HENSHAW LABORATORY Laboratory test no. 10F1G-7939
 per [Signature] Test date 2/18/2018

Filler Test Results

Appearance _____ Filler size _____
 Fracture test (no penetration) _____ Macroetch _____
 (Describe the location, nature, and size of any crack or tearing of the specimen.)
 Test conducted by _____ Laboratory test no. _____
 per _____ Test date _____

RADIOGRAPHIC TEST RESULTS

Film Identification	Results	Remarks	Film Identification	Results	Remarks

Test witnessed by _____ Laboratory test no. _____
 per _____ Test date _____

We, the undersigned, certify that the statements in this record are correct and that the test welds were prepared and tested in accordance with the requirements of AWS D15.1, (2007) Railroad Welding Specification for Cars and Locomotives, (yes)

Manufacturer or Contractor KAGAN RAIL CORP.
 Authorized by [Signature]
 Date 2-18-18



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AWS D15.1/D15 (M)2007

ANNEX D

WELDER AND WELDING OPERATOR QUALIFICATION RECORD

Welder or welding operator's name: THOMAS CUMMINS Classification no. **814**
 Welding process: ECW Manual Semi-automatic Machine
 (Flat, horizontal, overhead, or vertical; if vertical, state whether upward or downward.) 3G Vertical Up
 In accordance with procedure specification no. C-001
 Material specification: A-36
 Diameter and wall thickness (if pipe) - otherwise, joint thickness: .750"
 Thickness range this qualifies: UNLIMITED

FILLER METAL

Specification no.: 5.20 Classification: E70T-1 Filler no.: 6
 Describe filler metal (if not covered by AWS specification): _____
 Is backing strip used? Yes
 Filler metal diameter and trade name: 1/16" Lincoln Flux for submerged arc or gas for gas metal arc or flux
 cured arc welding: 100% CO₂

VISUAL INSPECTION

Appearance: Satisfactory Undercut: None Piping porosity: None

Guided Bend Test Results

Type	Result	Type	Result
<u>STIR BEND</u>	<u>NO DEFECTS</u>		
<u>SIDE BEND</u>	<u>NO DEFECTS</u>		

Test conducted by: KATE TESTING LABORATORY Laboratory test no.: 10130-7926
 Per: [Signature] Test date: 2/12/2010

Fillet Test Results

Appearance: _____ Fillet size: _____
 Fracture (at root penetration): _____ Macroetch: _____
 (Describe the location, nature, and size of any crack or tearing of the specimen.)
 Test conducted by: _____ Laboratory test no.: _____
 Per: _____ Test date: _____

RADIOGRAPHIC TEST RESULTS

Pin Identification	Results	Remarks	Pin Identification	Results	Remarks

Test witnessed by: _____ Laboratory test no.: _____
 Per: _____ Test date: _____

We, the undersigned, certify that the statements in this record are correct and that the test welds were prepared and tested in accordance with the requirements of AWS D15.1, (2007) Manual Welding Specification for Cars and Locomotives (year)

Manufacturer or Contractor: KASCRO RAIL CORPORATION

Authorized by: [Signature]
 Date: 2-12-10

Form 024



Orano Federal Services
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WELDER AND WELDING OPERATOR QUALIFICATION TEST RECORD

Welder or welding operator's name TEENOR BARKER Identification no. 081
 Welding process MIG Manual Semi-automatic Machine
 Position CG FLAT
 (Flat, horizontal, overhead or vertical — if vertical, state whether upward or downward)
 In accordance with procedure specification no. 01383-0129
 Material specification A-36
 Diameter and wall thickness (if pipe) — otherwise, joint thickness 1.0"
 Thickness range this qualifies UNLIMITED

FILLER METAL

Specification no. E-30 Classification ER70S-L F no. 6
 Describe filler metal (if not covered by AWS specification) _____
 Is backing strip used? YES
 Filler metal diameter and trade name 3/32" LINCOLN Flux for submerged arc or gas for gas metal arc or flux
 cored arc welding 100% CO₂

VISUAL INSPECTION

Appearance: Satisfactory Undercut None Ripping porosity None

Guided Bend Test Results

Type	Result	Type	Result
SHOE BEND	NO DEFECTS		
SIDE BEND	NO DEFECTS		

Test conducted by RAZ TESTING LABORATORY Laboratory test no. 02PLG-2259
 per Paul J. Hall Test date 7/14/2003

Fillet Test Results

Appearance _____ Fillet size _____
 Fracture test root penetration _____ Macroetch _____
 (Describe the location, nature, and size of any crack or tearing of the specimen.)
 Test conducted by _____ Laboratory test no. _____
 per _____ Test date _____

RADIOGRAPHIC TEST RESULTS

Film Identification	Results	Remarks	Film Identification	Results	Remarks

Test witnessed by _____ Test no. _____
 per _____

We, the undersigned, certify that the statements in this record are correct and that the welds were prepared and tested in accordance with the requirements of the American Welding Society AWS D15.1, (_____ 2001 _____)
 year

Manufacturer or contractor KASSIRO RAIL CORP.
 Authorized by Mark Yeigh
 Date 7-14-03

Form D-4



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WELDER AND WELDING OPERATOR QUALIFICATION RECORD

Welder or welding operator's name: TRAVIS BARKER Identification no.: 081
 Welding process: GTAW Manual Semi-automatic Machine
 Position: 3G Vertical up
 (Flat, horizontal, overhead or vertical — if vertical, state whether upward or downward)
 In accordance with procedure specification no. Procedure for Joint Plan No. 018
 Material specification: A 36
 Diameter and wall thickness (if pipe) — otherwise, joint thickness: 3/8"
 Thickness range, min. to max.: 1/8"
FILLER METAL
 Specification no.: 5.25 Classification: E 717.1 S no.: 2
 Describe filler metal (if not covered by AWS specification): _____
 Is backing strip used? Yes
 Filler metal diameter and trade name: 3/32" Titanium Flux for submerged arc or gas for gas metal arc or flux cored arc welding: None

VISUAL INSPECTION

Appearance: Good Defects: None Hazing porosity: None

Guided Bend Test Results

Type	Result	Type	Result
<u>90° BEND</u>	<u>NO DEFECTS</u>		
<u>180° BEND</u>	<u>3/64" Cracks/PASS</u>		

Test conducted by: DATE WELDING LABORATORY Laboratory test no.: 08202-1008
 per: Paul J. Hall Test date: 5/05/88

Fillet Test Results

Appearance: _____ H fillet size: _____
 Fracture test root penetration: _____ Macroetch: _____
 (Describe the location, nature, and size of any crack or tearing of the specimen.)
 Test conducted by: _____ Laboratory test no.: _____
 per: _____ Test date: _____

RADIOGRAPHIC TEST RESULTS

Film identification	Results	Remarks	Film identification	Results	Remarks

Test witnessed by: _____ Test no.: _____
 per: _____

We, the undersigned, certify that the statements in this record are correct and that the welds were prepared and tested in accordance with the requirements of the American Welding Society AWS D15.1 (20)
 year

Manufacturer or contractor: SAVING HILL CORP.

Authorized by: Mark Zapp

Date: 5-5-88

Form D-4



Orano Federal Services
 Title: Design and Prototype Fabrication of Railcars for Transport of
 High-Level Radioactive Material Phase 3 – Prototype Fabrication and Delivery
 Appendix B

Doc./Rev.: EIR-3021970-000
 Project: 00225.03.0050 DOE Atlas Project





Orano Federal Services
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WELDER AND WELDING OPERATOR QUALIFICATION RECORD

Welder or welding operator's name THOMAS HANSON Identification no. 081
 Working process TIG Manual Semi-automatic _____ Machine _____
 Position BC Vertical Up
 (Flat, horizontal, overhead or vertical — if vertical, state whether upward or downward)
 in accordance with procedure specification no. Insulated joint fig. no. 019
 Material specification A 307
 Diameter and wall thickness (if pipe) — otherwise joint thickness .875"
 Thickness range this qualifies _____
FILLER METAL
 Specification no. E 308 L-9 Class/location A 7023 F no. 4
 Describe filler metal (if not covered by AWS specification): _____
 Is backing strip used? Yes
 Filler metal diameter and trade name 1/32" EXXON Flux for submerged arc or gas for gas metal arc or flux
 cored arc welding _____

VISUAL INSPECTION

Appearance Good/Pass Undercut None Piping porosity None

Guided Bend Test Results

Type	Result	Type	Result
<u>FACE BEND</u>	<u>NO DEFECTS</u>		
<u>ROOT BEND</u>	<u>1/16" TEAR/FACED</u>		

Test conducted by WELDER TESTING LABORATORY Laboratory test no. 300602230
 per [Signature] Test date 6/26/20

Filler Test Results

Appearance _____ Filler size _____
 Fracture test root penetration _____ Marbetch _____
 (Describe the location, nature, and size of any crack or tearing of the specimen.)
 Test conducted by _____ Laboratory test no. _____
 per _____ Test date _____

RADIOGRAPHIC TEST RESULTS

File identification	Results	Remarks	File identification	Results	Remarks

Test witnessed by _____ Test no. _____
 per _____

We, the undersigned, certify that the statements in this record are correct and that the welds were prepared and tested in accordance with the requirements of the American Welding Society AWS Q16.1, (____) year.

Manufacturer or contractor VERVO EATS CORP
 Authorized by [Signature]
 Date 3-5-20

Form B-4



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WELDER AND WELDING OPERATOR QUALIFICATION RECORD

Welder or welding operator's name TRAVOR BARNER Identification no. 081
 Welding process E.C.A.E. Manual Semi-automatic Machine
 Position 3G Vertical Up
 (Flat, horizontal, overhead or vertical — if vertical, state whether upward or downward)
 In accordance with procedure specification no. Prequalified joint fig. no. C18
 Material specification A-5C
 Diameter and wall thickness (if pipe) — otherwise, joint thickness 1.5"
 Thickness range this qualifies UNLIMITED

FILLER METAL

Specification no. E.80 Classification E77C-7 F no. 6
 Describe filler metal (if not covered by AWS specification)
 Is backing strip used? Yes
 Filler metal diameter and trade name 1/16" Lincoln Flux for submerged arc or gas for gas metal arc or flux
 cored arc welding 100% AWS

VISUAL INSPECTION

Appearance Satisfactory Undercut None Piping porosity None

Guided Bend Test Results

Type	Result	Type	Result
<u>SIDE BEND</u>	<u>Minor check/PASSED</u>		
<u>SIDE BEND</u>	<u>1/16" Pass/PASSED</u>		

Test conducted by KALYANESHY SATHYANARAYAN Laboratory test no. 26130-1299
 per Paul J. Paul Test date 2/02/03

Fillet Test Results

Appearance _____ Fillet size _____
 Fracture test root penetration _____ Marcatch _____
 (Describe the location, nature, and size of any crack or tearing of the specimen.)
 Test conducted by _____ Laboratory test no. _____
 per _____ Test date _____

RADIOGRAPHIC TEST RESULTS

Film identification	Results	Remarks	Film identification	Results	Remarks

Test witnessed by _____ Test no. _____
 per _____

We, the undersigned, certify that the statements in this record are correct and that the welds were prepared and tested in accordance with the requirements of the American Welding Society AWS D18.1, (03)
 year

Manufacturer or contractor MASCOR F/TT CORP.
 Authorized by [Signature]
 Date 2/02/03

Form 2-4



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AWS D15.1 (01.11) (rev. 7)

ANNEX D

WELDER AND WELDING OPERATOR QUALIFICATION RECORD

Welder or welding operator name: TRISTON MILLS Identification no. 821
 Welding process: FCM Manual Semiautomatic Machine
 (Flat, horizontal, overhead, or vertical—if vertical state whether upward or downward) 1G, 6Lat
 In accordance with procedure specification no. E-005
 Material specification: A-36
 Diameter and wall thickness (if pipe) otherwise, joint thickness: .750"
 Thickness range this qualifies: UNLIMITED

FILLER METAL

Specification no. 6.29 Classification: E8011 F no. G
 Describe filler metal (if not covered by AWS specification): _____
 Is backing strip used? Yes
 Filler metal diameter and trade name: 3/32" Lincoln Flux for submerged arc or gas for gas metal arc or flux cored arc welding: 100% CO2

VISUAL INSPECTION

Appearance: Satisfactory Undercut: None Piping porosity: None

Guided Bent Test Results

Type	Result	Type	Result
SIDE BEND	NO DEFECTS		
SLID-BEND	NO DEFECTS		

Test conducted by: KATE TESTING LABORATORY Laboratory test no.: 10E1G-7941
 per: [Signature] Test date: 2/10/2010

Fit Test Results

Appearance: _____ Filler size: _____
 Fraction test root penetration: _____ Macroetch: _____
 (Describe the location, nature, and size of any cracks or tearing of the specimen)
 Test conducted by: _____ Laboratory test no.: _____
 per: _____ Test date: _____

RADIOGRAPHIC TEST RESULTS

Film identification	Results	Remarks	Film identification	Results	Remarks

Test witnessed by: _____ Laboratory test no.: _____
 per: _____ Test date: _____

We, the undersigned, certify that the statements in this record are correct and that the test welds were prepared and tested in accordance with the requirements of AWS D15.1 (11-2007) *Manual Welding Specification for Cars and Tankcars*, by:

Manufacturer or Contractor: KASCO RAIL CORP.
 Authorized by: [Signature]
 Date: 2-18-10

Form D-1



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AWS D15.10.119 (M2007)

ANNEX D

WELDER AND WELDING OPERATOR QUALIFICATION RECORD

Welder or welding operator's name TRISTON MILLS Identification no. 821
 Welding process AWW Manual Machine
 (Flat, horizontal, overhead, or vertical—if vertical, state whether upward or downward) 3C Vertical Up
 In accordance with procedure specification no. F-001
 Material specification A-36
 Diameter and wall thickness (if pipe) otherwise, joint thickness: .750"
 Thickness range this qualifies: UNLIMITED

FILLER METAL

Specification no. 5.20 Classification E71T-1 Filler no. 6
 Describes filler metal (if not covered by AWS specification)
 Is backing strip used? Yes
 Filler metal diameter and trade name 1/16" Lincoln Flux for submerged arc or gas for this metal and on line
 covered arc welding 100% CB2

VISUAL INSPECTION

Appearance Satisfactory Undercut None Piping porosity None

Guided Bend Test Results

Type	Result	Type	Result
<u>SIDE BEND</u>	<u>NO DEFECTS</u>		
<u>SIDE BEND</u>	<u>NO DEFECTS</u>		

Test conducted by KAIL TESTING LABORATORY Laboratory test no. 10F2G-7931
 per [Signature] Test date 2/12/2011

Fillet Test Results

Appearance Fillet size
 Describe test root orientation Macroetch
 (describe the location, nature, and size of any crack or tearing of the specimen.)
 Test conducted by Laboratory test no.
 per Test date

RADIOGRAPHIC TEST RESULTS

Film Identification	Results	Remarks	Film Identification	Results	Remarks

Test witnessed by Laboratory test no.
 per Test date

We, the undersigned, certify that the statements in this record are correct and that the test welds were prepared and tested in accordance with the requirements of AWS D15.1, (2007) (Manual Welding Specification for Cars and Locomotives; year:

Manufacturer or Contractor KANSAS RAIL CORPORATION

Authorized by [Signature]
 Date 2-12-10

Form D-1



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APPENDIX B

AWS D15, 19904

WELDER AND WELDING OPERATOR QUALIFICATION RECORD

Welder or welding operator's name: TRISTON MILLS Identification no. 821
 Welding process: M Manual X Semi-automatic Machine
 (Flat, horizontal, overhead, or vertical - if vertical, state whether upward or downward.) 4G Overhead
 In accordance with procedure specification no. E-001
 Material specification A-36
 Diameter and wall thickness (if pipe) - otherwise joint thickness: .500"
 Thickness range this qualifies: 1.0"

FILLER METAL

Specification no. 5.20 Classification E71T-1 F.no. 6
 Describe filler metal (if not covered by AWS specification) _____
 Is backing strip used? Yes
 Filler metal diameter and trade name: 1/16" TIGRODIN Flux for submerged arc or gas for gas metal arc or flux-cored arc welding: 100% CO2

VISUAL INSPECTION

Appearance: Satisfactory Undercut: None Piping porosity: None

Guided Bend Test Results

Type	Result	Type	Result
<u>SIDE BEND</u>	<u>NO DEFECTS</u>		
<u>SIDE BEND</u>	<u>NO DEFECTS</u>		

Test conducted by KATHY THOMPSON LABORATORY Laboratory test no. 08F46-7796
 per [Signature] Test date 3/04/2008

Fillet Test Results

Appearance: _____ Fillet size: _____
 Fracture test root penetration: _____ Macroetch: _____
 (Describe the location, nature, and size of any crack or tearing of the specimen.)
 Test conducted by: _____ Laboratory test no.: _____
 per: _____ Test date: _____

RADIOGRAPHIC TEST RESULTS

Film Identification	Results	Remarks	Film Identification	Results	Remarks

Test witnessed by _____ Laboratory test no. _____
 per _____ Test date: _____

We, the undersigned, certify that the statements in this record are correct and that the test welds were prepared and tested in accordance with the requirements of AWS D15.1, (2001) Railroad Welding Specification—Cars and Locomotives. (year)

Manufacturer or Contractor: KAGRO BATH CORP.
 Authorized by: [Signature]
 Date: [Signature]

Form D-1



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Appendix B.4.4 – Kasgro Personnel AAR S-486 Brake Test Certification

Orano Federal Services				
DATA TRANSMITTAL FORM				
Supplier: KASGRO RAIL CORP., INC.	DTF No: 038 Page <u>1</u> of <u>1</u>			
P.O./SC No: 15C3011916	KLEIN Slade Date: 2019.02.27 14:12:31 -08'00' Date: 2/19/2019			
Type of Submittal: <input checked="" type="checkbox"/> First <input type="checkbox"/> Re-Submittal	SDRL List Item No: 24			
Submitted for: <input checked="" type="checkbox"/> Approval <input type="checkbox"/> Review <input type="checkbox"/> Information	Number of Copies Submitted: 1			
Submitted By: RICK FORD	Rick Ford Digitally signed by Rick Ford Date: 2019.02.19 13:31:27 -08'00' PROJECT MANAGER			
(Name) (Signature) (Title)				
ITEM NUMBER	DOCUMENT NUMBER	REVISION NUMBER	DOCUMENT DESCRIPTION	FS DISPOSITION
1	KAS 127		ATLAS CASK CAR CMS LASER DIMENSIONS FOR PIN BLOCK ATTACHMENT BLOCKS	<input type="checkbox"/> AP <input checked="" type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
2	KAS 128		FRA S-2044 INPSECTION FOR BUFFER CARS	<input checked="" type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
3	KAS 129		AAR S-486 BRAKE TEST CERTIFICATION	<input checked="" type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
4	KAS 130		TRACK SCALE CALIBRATION RECORDS	<input checked="" type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
5	KAS 131		TUV UT NDE REPORT CASK CAR	<input checked="" type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
6	KAS 132		TUV PT NDE REPORT CASK CAR	<input checked="" type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
7	KAS 133		TUV MT NDE REPORT CASK CAR	<input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input checked="" type="checkbox"/> DS <input type="checkbox"/> RSA
8	KAS 143 134		TUV VT NDE REPORT CASK CAR	<input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input checked="" type="checkbox"/> DS <input type="checkbox"/> RSA
Comments: 1) NOTE: KAS 127 provides as-built railcar dimensions. Kasgro rework modified some of these. Kasgro to submit final dimensions separately. 2) KAS 133 does not include the shear block or outer pin block weld MT. 3) KAS 134 does not include VT of the shear block welds.				Technical Reviewer (i.e., RE, PTL, SME, QA, etc.) KLEIN Slade Date: 2019.02.27 13:47:33 -08'00' Date 2/27/2019
FS DISPOSITION CODES AND DEFINITIONS				
AP	Approved	Work may proceed.	Resubmittal is not required	
AWC	Approved with Comment	Work may proceed; comments provided for Supplier's consideration only.	Resubmittal is not required	
REV	Reviewed	Work may proceed; comments provided for Supplier's consideration only.	Resubmittal is not required	
RWC	Reviewed with Comment	Work may proceed; subject to incorporation and compliance w/ Buyer comments.	Correct and resubmit	
DS	Disapproved	Work may <u>not</u> proceed.	Correct and resubmit	
RSA	Receipt Submittal Acknowledged	No other action required.		
If, in the judgment of the Supplier, the incorporation of FS' comments will result in a change to the Purchase Order/Subcontract, work shall not proceed and the Supplier shall immediately provide a written notice to FS' C&P Representative describing the change.				
Project Manager (PM) / Engineering Manager (EM) or Designated Individual (DI) Approval 		Digitally signed by Mark A. Denton DN: cn=Mark A. Denton, o=Orano Federal Services, email=mark.denton@orano.gov, c=US Date: 02/27/2019		

FS-EN-FRM-023 Rev 02 (Effective March 1, 2018)
 Refer to FS-EN-PRC-012



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 Project: 00225.03.0050 DOE Atlas Project

	Orano Federal Services	
	SUPPLIER DOCUMENT SUBMITTAL REVIEW	
Supplier / PO No.:	KASGRO / 15C3011916	DTF No. / Rev: 038
Charge No:	00225.03.0050.02.00001	Due Date: 3/8/2019
Document(s):	See DTF No.: 038	
REVIEW INSTRUCTIONS: (List Supplier Doc. No. and Rev. FS Spec and Dwg. Codes, Stds, etc.)		
PE	Slade Klein	
REVIEWERS	Slade Klein, Bernie Counterman	
QA	Bernie Counterman	
Technical Review		
Comments/Markup Attached Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Technical Reviewer Comments:		
KAS 133 does not include the required MT inspection of the shear blocks and outer pin blocks. This was required by Kasgro drawing 1155-41.		
Technical Reviewer(s) (Sign/Date): KLEIN Slade		Date: 2019.02.26 07:23:43 -08'00'
Quality Assurance Review (As Applicable)		
Comments/Markup Attached Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Technical Reviewer Comments:		
Only potential question was regarding missing signature by the technician on the UT report. Discussed with TUV Rheinland Level III (Randy @ 616-818-8188). The technician signature is not required provided the report is signed by his supervisor. This report is signed by the individuals supervisor.		
QA Reviewer(s) (Sign/Date):		Digitally signed by COUNTERMAN Bernard Date: 2019.02.25 09:29:24 -08'00'
COMMENT DISPOSITION (If Applicable. Attached further comments and disposition correspondence as necessary)		

FS-EN-FRM-026 Rev 01 (Effective March 1, 2018)
 Refer to FS-EN-PRC-012



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Wabtec CORPORATION

This is to certify that
Mark Butler
 (First and Last Name)

of Wabtec
 (Name of Company)

has met the requirements for testing in accordance with FRA Regulation Part 49 232.203 for testing freight equipment on the date and for the process specified on reverse.

PROCESS	DATE	INSTR. INITIALS	RETEST DUE
MANUAL SCT	1-10-19		1-10-2
AUTOMATED SCT			
SCP - SCT			
TERMINAL BRAKE TESTING			

[Signature] **Wabtec CORPORATION**
 (Inspector Signature)



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Written Exam on Freight Air Brake Single Car Tests per AAR S-486-13 is available upon request



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	Orano Federal Services	
	SUPPLIER DOCUMENT SUBMITTAL REVIEW	
Supplier / PO No.:		DTF No. / Rev:
Charge No:		Due Date:
Document(s):		
REVIEW INSTRUCTIONS (List Supplier Doc. No. and Rev. FS Spec and Dwg. Codes, Stds, etc.)		
PE		
REVIEWERS		
QA		
Technical Review		
Comments/Markup Attached Yes <input type="checkbox"/> No <input type="checkbox"/>		
Technical Reviewer Comments:		
Technical Reviewer(s) (Sign/Date):		
Quality Assurance Review (As Applicable)		
Comments/Markup Attached Yes <input type="checkbox"/> No <input type="checkbox"/>		
Technical Reviewer Comments:		
QA Reviewer(s) (Sign/Date):		
COMMENT DISPOSITION (If Applicable. Attached further comments and disposition correspondence as necessary)		

FS-EN-FRM-026 Rev 01 (Effective March 1, 2018)
 Refer to FS-EN-PRC-012



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Certification of NDT Qualification:

Dan Gjurich

The education, training and experience of the individual named above has been reviewed, and found to meet or exceed the requirements as listed below.

Professional Qualifications/Certifications

<u>Description</u>	<u>Original Cert Date</u>	<u>Re-Cert Date</u>	<u>Exp Date</u>
ENF-TC-1A, Liquid Penetrant, Level II	01/20/2007	11/20/2014	11/20/2019
T5074-GIB-010/271, Liquid Penetrant, Level II, Limited Solvent Removable	11/20/2014	01/20/2018	01/09/2021
ENF-TC-1A, Magnetic Particle, Level II Limited – Yoke Only	08/27/2008	08/23/2014	08/23/2016
T5074-GIB-010/271, Magnetic Particle Level II Limited – Yoke Only	08/23/2014	01/09/2018	01/09/2021
AWIS, Certified Welding Inspector	04/01/1995	04/01/2017	04/01/2020

Eye Examination Record

Last Test Date: 02/09/2015 Correction Required: Expiration: 02/25/2015

The individual named above has satisfactorily demonstrated the ability to read the J-4 letters on a standard Jaeger test chart, and the capacity to distinguish and differentiate colors used in the NDE methods for which the individual is qualified.

The individual named above is certified in the indicated NDE Method(s) and Level(s). The certification(s) will expire on the date(s) listed above, or upon termination of employment.

I hereby certify that, to the best of my knowledge, the information listed above is true and correct.

Claude D. Davis
Name

**Certification Program
 Manager, Level III**
Title

Claude D. Davis
Signature

14 MAR 2018
Date

**FOR VERIFICATION OF CERTIFICATION
 CONTACT 206-938-3313**



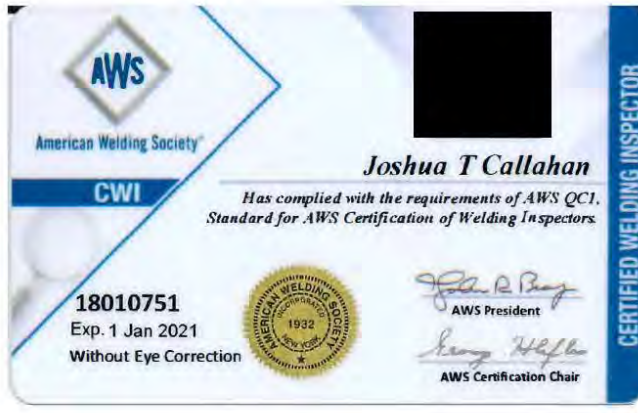
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Wednesday, February 22, 2019

AWS Certification information received from Jennifer Novak
Amsted Rail Quality Assurance Manager, Worldwide Sourcing.

Verification of Amsted Rail AWS Certified Welding Inspector Qualification for Joshua Callahan.





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Appendix B.4.6 – Measuring and Test Equipment Calibration Record, Kasgro Form 14 for Track Scale

		Orano Federal Services	
DATA TRANSMITTAL FORM			
Supplier:	KASGRO RAIL CORP., INC.	DTF No:	038
P.O./SC No:	15C3011916	Date:	2/19/2019
Type of Submittal:	<input checked="" type="checkbox"/> First <input type="checkbox"/> Re-Submittal	SDRL List Item No:	24
Submitted for:	<input checked="" type="checkbox"/> Approval <input type="checkbox"/> Review <input type="checkbox"/> Information	Number of Copies Submitted:	1
Submitted By:	RICK FORD	Rick Ford	PROJECT MANAGER
	(Name)	(Signature)	(Title)

ITEM NUMBER	DOCUMENT NUMBER	REVISION NUMBER	DOCUMENT DESCRIPTION	FS DISPOSITION
1	KAS 127		ATLAS CASK CAR CMS LASER DIMENSIONS FOR PIN BLOCK ATTACHMENT BLOCKS	<input type="checkbox"/> AP <input checked="" type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
2	KAS 128		FRA S-2044 INSPECTION FOR BUFFER CARS	<input checked="" type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
3	KAS 129		AAR S-488 BRAKE TEST CERTIFICATION	<input checked="" type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
4	KAS 130		TRACK SCALE CALIBRATION RECORDS	<input checked="" type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
5	KAS 131		TUV UT NDE REPORT CASK CAR	<input checked="" type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
6	KAS 132		TUV PT NDE REPORT CASK CAR	<input checked="" type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input type="checkbox"/> DS <input type="checkbox"/> RSA
7	KAS 133		TUV MT NDE REPORT CASK CAR	<input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input checked="" type="checkbox"/> DS <input type="checkbox"/> RSA
8	KAS 143 134		TUV VT NDE REPORT CASK CAR	<input type="checkbox"/> AP <input type="checkbox"/> AWC <input type="checkbox"/> REV <input type="checkbox"/> RWC <input checked="" type="checkbox"/> DS <input type="checkbox"/> RSA

Comments:	Technical Reviewer (i.e., RE, PTL, SME, QA, etc.)
1) NOTE: KAS 127 provides as-built railcar dimensions. Kasgro rework modified some of these. Kasgro to submit final dimensions separately. 2) KAS 133 does not include the shear block or outer pin block weld MT. 3) KAS 134 does not include VT of the shear block welds.	KLEIN Slade Date: 2019.02.27 13:47:33 -08'00'
	Date: 2/27/2019

FS DISPOSITION CODES AND DEFINITIONS			
AP	Approved	Work may proceed.	Resubmittal is not required
AWC	Approved with Comment	Work may proceed; comments provided for Supplier's consideration only.	Resubmittal is not required
REV	Reviewed	Work may proceed; comments provided for Supplier's consideration only.	Resubmittal is not required
RWC	Reviewed with Comment	Work may proceed; subject to incorporation and compliance w/ Buyer comments.	Correct and resubmit
DS	Disapproved	Work may <u>not</u> proceed.	Correct and resubmit
RSA	Receipt Submittal Acknowledged	No other action required.	

If, in the judgment of the Supplier, the incorporation of FS' comments will result in a change to the Purchase Order/Subcontract, work shall not proceed and the Supplier shall immediately provide a written notice to FS' C&P Representative describing the change.

Project Manager (PM) / Engineering Manager (EM) or Designated Individual (DI) Approval		Date: 02/27/2019
	Digitally signed by Mark A. Denton DN: cn=Mark A. Denton, o=Orano Federal Services, email=mark.denton@orano.gov, ou=ORF Date: 2019.02.27 17:04:03 -0800	

FS-EN-FRM-023 Rev 02 (Effective March 1, 2018)
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Appendix B

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 Project: 00225.03.0050 DOE Atlas Project

	Orano Federal Services	
	SUPPLIER DOCUMENT SUBMITTAL REVIEW	
Supplier / PO No.:	KASGRO / 15C3011916	DTF No. / Rev: 038
Charge No:	00225.03.0050.02.00001	Due Date: 3/8/2019
Document(s):	See DTF No.: 038	
REVIEW INSTRUCTIONS: (List Supplier Doc. No. and Rev. FS Spec and Dwg. Codes, Stds, etc.)		
PE	Slade Klein	
REVIEWERS	Slade Klein, Bernie Counterman	
QA	Bernie Counterman	
Technical Review		
Comments/Markup Attached Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Technical Reviewer Comments:		
KAS 133 does not include the required MT inspection of the shear blocks and outer pin blocks. This was required by Kasgro drawing 1155-41.		
Technical Reviewer(s) (Sign/Date): KLEIN Slade		Date: 2019.02.26 07:23:43 -08'00'
Quality Assurance Review (As Applicable)		
Comments/Markup Attached Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Technical Reviewer Comments:		
Only potential question was regarding missing signature by the technician on the UT report. Discussed with TUV Rheinland Level III (Randy @ 616-818-8188). The technician signature is not required provided the report is signed by his supervisor. This report is signed by the individuals supervisor.		
QA Reviewer(s) (Sign/Date):		Digitally signed by COUNTERMAN Bernard Date: 2019.02.25 09:29:24 -08'00'
COMMENT DISPOSITION (If Applicable. Attached further comments and disposition correspondence as necessary)		

FS-EN-FRM-026 Rev 01 (Effective March 1, 2018)
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TRACK SCALE - TEST AND INSPECTION REPORT

As per NIST Handbook 44 Testing Standards

DATE OF TEST

05/16/2018

Location Information	
Railroad	CSX
City/State	New Castle, PA
Owner/Industry Name	Kasgro Rail Corp. (Plt 1)

Location Information	
House Condition	Good
Pit Condition	Good
Pit Foundation Type	Concrete
Pit Drainage Type	Drain

Location Information			
Manufacturer	Length of Weight Rail	Date of Last RSI Test	
Fairbanks Scale	10'	05/17/2017	
Instrument Serial Number	# of Sections	Total Capacity	Sectional Capacity
100470050013	2	125 Tons	85 Tons
Type/Condition of Scale			
Operation Type	Static	Display Type	Digital
Control Type	Digital	Dead Rail	No
Girder Type	Continuous	Girder Condition	Good
Deck Type	Live	Deck Condition	Good
Condition of Pivots and Bearings or Load Cells			Good
Condition of Approach Rail Right End			Good
Condition of Approach Rail Left End			Good

Test Vehicle Information				
Test Car(t) #	Nominal Weight	Wheel Base	Jacks	Calibration Date
WC 210500	80000	5'3"	N/A	2017-10-02
Balance as Found		S.R. Test (Beam Scale Only)		
Indicator Reading (lbs.)	-200	SR at Zero Load	SR at M Load	
		SR Meets Requirements?	N/A	
Master Scale Location		State of Minnesota W & M		

Strain/Buildup Test	
Sub. Weight	
Cal. Weight	80000
Total Weight	0
Disp. Weight	
Error	0
Completes?	No Power Available

TEST RESULTS

First 2 Runs As Found		Sections									
Run Info	Test Load	Zero	1	2	Zero						
→	80,000 lbs.	0	80000	80000	0						
←	80,000 lbs.	0	80000	80000	0						

Weather Conditions: Wind Factor: Temperature:

REMARKS

Test is billable by RSI to: Industry PO #: This test is:

UNDER CONDITIONS STATED ABOVE THIS TEST HAS BEEN LEFT

Bill Baker
 Owner/Industry Representative
 Bill Baker

N/A
 State Representative
 N/A

Frank Spencer
 Scale Company Representative
 Frank Spencer

Keith Pearce
 RSI Representative
 Keith Pearce



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Appendix B.4.7 – Safety Monitoring System Installation and Testing Results


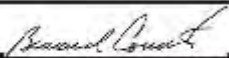
		Orano Federal Services				
		DATA TRANSMITTAL FORM				
Supplier:	KASGRO RAIL CORP., INC.	DTF No:	39	Page 1 of 1		
P.O./SC No:	15C3011916	Date:	2/22/2019			
Type of Submittal:	<input checked="" type="checkbox"/> First <input type="checkbox"/> Re-Submittal	SDRL List Item No:	24			
Submitted for:	<input type="checkbox"/> Approval <input type="checkbox"/> Review <input type="checkbox"/> Information	Number of Copies Submitted:	1			
Submitted By:	RICK FORD (Name)	Rick Ford (Signature) <small>Digitally signed by Rick Ford Date: 2019.02.27 09:16:40 +05'00'</small>	PROJECT MANAGER (Title)			
ITEM NUMBER	DOCUMENT NUMBER	REVISION NUMBER	DOCUMENT DESCRIPTION	FS DISPOSITION		
1	KAS 138		ATLAS CASK/BUFFER CARS LATLON INSTALLATION AND TEST DATA	<input checked="" type="checkbox"/> AP	<input type="checkbox"/> AWC	<input type="checkbox"/> REV
2	KAS 139		ATLAS CASK BODY MATERIAL HEAT IDENTIFICATION, FORMS 42, 42A, 44B	<input checked="" type="checkbox"/> AP	<input type="checkbox"/> AWC	<input type="checkbox"/> REV
3	KAS 140		ATLAS BUFFER IDOX 20001 BODY MATERIAL HEAT IDENTIFICATION, FORM 44B	<input checked="" type="checkbox"/> AP	<input type="checkbox"/> AWC	<input type="checkbox"/> REV
4	KAS 141		ATLAS BUFFER IDOX 20002 BODY MATERIAL HEAT IDENTIFICATION, FORM	<input checked="" type="checkbox"/> AP	<input type="checkbox"/> AWC	<input type="checkbox"/> REV
5	KAS 142		ATLAS CASK CAR FORM 36 STATIC FORCE BRAKE TEST	<input checked="" type="checkbox"/> AP	<input type="checkbox"/> AWC	<input type="checkbox"/> REV
6	KAS 143		ATLAS CASK CAR IDOX 10001, FORM 5-13-B NEW CAR INSPECTION	<input checked="" type="checkbox"/> AP	<input type="checkbox"/> AWC	<input type="checkbox"/> REV
7	KAS 144		ATLAS CASK IDOX 10001 SUPPLIER CERTIFICATION/ AMSTED RAIL SEDARSKI / MCCABE	<input checked="" type="checkbox"/> AP	<input type="checkbox"/> AWC	<input type="checkbox"/> REV
				<input type="checkbox"/> RWC	<input type="checkbox"/> DS	<input type="checkbox"/> RSA
				<input type="checkbox"/> AP	<input type="checkbox"/> AWC	<input type="checkbox"/> REV
				<input type="checkbox"/> RWC	<input type="checkbox"/> DS	<input type="checkbox"/> RSA
				<input type="checkbox"/> AP	<input type="checkbox"/> AWC	<input type="checkbox"/> REV
				<input type="checkbox"/> RWC	<input type="checkbox"/> DS	<input type="checkbox"/> RSA
Comments:			Technical Reviewer (i.e., RE, PTL, SME, QA, etc.)			
No comments			KLEIN Slade Date: 2019.02.26 07:33:08 -08'00'			
			Date: 2/26/2019			
FS DISPOSITION CODES AND DEFINITIONS						
AP	Approved	Work may proceed.			Resubmittal is not required	
AWC	Approved with Comment	Work may proceed; comments provided for Supplier's consideration only.			Resubmittal is not required	
REV	Reviewed	Work may proceed; comments provided for Supplier's consideration only.			Resubmittal is not required	
RWC	Reviewed with Comment	Work may proceed; subject to incorporation and compliance w/ Buyer comments.			Correct and resubmit	
DS	Disapproved	Work may <u>not</u> proceed.			Correct and resubmit	
RSA	Receipt Submittal Acknowledged	No other action required.				
If, in the judgment of the Supplier, the incorporation of FS' comments will result in a change to the Purchase Order/Subcontract, work shall not proceed and the Supplier shall immediately provide a written notice to FS' C&P Representative describing the change.						
Project Manager (PM) / Engineering Manager (EM) or Designated Individual (DI) Approval			 <small>Digitally signed by Mark A. Denton DN: cn=Mark A. Denton, o=Orano Federal Services, email=mark.denton@orano.gov, ou=US Date: 2019.02.28 15:28:54 -0500</small>		Date: 02/26/2019	

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 Refer to FS-EN-PRC-012



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 Project: 00225.03.0050 DOE Atlas Project

 orano	Orano Federal Services	
SUPPLIER DOCUMENT SUBMITTAL REVIEW		
Supplier / PO No.:	KASGRO / 15C3011916	DTF No. / Rev: 039
Charge No:	00225.03.0050.02.00001	Due Date: 3/8/2019
Document(s):	See DTF No.: 039	
<small>REVIEW INSTRUCTIONS: (List Supplier Doc. No. and Rev. FS Spec and Dwg. Codes, Stds, etc.)</small>		
PE	Slade Klein	
REVIEWERS	Slade Klein, Bernie Counterman	
QA	Bernie Counterman	
Technical Review		
Comments/Markup Attached Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Technical Reviewer Comments:		
No comments		
Technical Reviewer(s) (Sign/Date): KLEIN Slade		Date: 2019.02.25 15:52:04 -08'00'
Quality Assurance Review (As Applicable)		
Comments/Markup Attached Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Technical Reviewer Comments:		
KAS 142 Cask Car Form 36 Brake Test - Why is the Gross Shoe Force = 0		
QA Reviewer(s) (Sign/Date):		Digitally signed by COUNTERMAN Bernard Date: 2019.02.25 10:22:16 -08'00'
<small>COMMENT DISPOSITION (if Applicable. Attached further comments and disposition correspondence as necessary)</small>		

FS-EN-FRM-026 Rev 01 (Effective March 1, 2018)
 Refer to FS-EN-PRC-012



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February 15, 2019

Rick Ford
Kasgro Rail Corp.
121 Rundle Road
New Castle, PA 16102

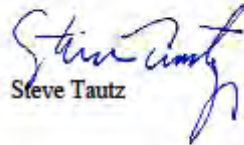
Dear Rick,

Lat-Lon, LLC has completed the AAR-S-2043 System Safety Monitoring (SSM) installation on three Atlas Project DOE railcars. The installation took place on February 12th through 15th and the first rail car is IDOX 10001 and has two systems, one on each end. The second and third railcars, IDOX 20001 and IDOX 20002, have one system each, installed on the "A" end of both cars for a total of four units.

I have attached System Health Reports data from each of the units as of the morning of February 15th to demonstrate that the systems are operational. I have also attached a few photos.

Please let me know if you need any additional information.

Regards,


Steve Tautz



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Appendix B.4.8 – Fabrication Specifications

The following list of specifications encompasses both the fabrication of the prototype railcars and future fabrication activities. A detailed discussion of railcar specifications is included in the Phase 3 Report, Section 3.2.

Railroad Transportation Requirements

- AAR's *Manual of Standards and Recommended Practices*
- AAR's *Manual of Standards and Recommended Practices*, Section J – Quality Assurance M-1003 (2014)
- AAR Standard S-2043, *Performance Specification for Trains Used to Carry High-Level Radioactive Material*
- AAR Standard S-2044, *Safety Appliance Requirements for Freight Cars*

Other DOE Requirements

- Oak Ridge National Laboratory (ORNL) report, *Cask Railcar System Requirements Document*.
 - Note that in AFS' Request for Information (RFI) AFS-RFI-00225-0001-00 [6], Table 3-3 of the ORNL requirements document [5] was questioned regarding the establishment of bounding design requirements specifically for the conceptual cradle designs. The DOE responded to the RFI that the table "simply lists the largest and heaviest cradle characteristics that exist at this time," hence, the word "bounding" is used to describe these characteristics. As a result, AFS has not limited its conceptual cradle designs specifically to the values in this table and has determined bounding conditions necessary to meet AAR S-2043 and AAR Plate E requirements.
 - Cask cradles are to be tall enough and open-ended so that the impact limiters can be attached to a cask after the cask is secured to the cradle while on the Atlas railcar with a clearance of at least 1 inch above the cask car deck
 - The cask cradle must be specifically designed to meet the requirements of AAR Rule 88 (which specifies the minimum mechanical requirements for railcars used in interchange commerce service), as included in the AAR 2015 Field Manual of the AAR Interchange Rules
 - The Atlas railcar, including a cradle and a cask, and buffer car clearances must fit within AAR Plate E, except when loaded with casks that are more than 128 inches wide with impact limiters attached



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- Refer to AAR Standards S-2028, S-2029, S-2030, and S-2031 for railcar plate requirements

Nuclear Regulatory Commission (NRC) Requirements

For shipments under subtitle A or subtitle C of the NWPA, HLRM must be shipped in transport casks certified by the NRC in accordance with 10 CFR Part 71 [14]. The cask cradle and its attachments are to meet commercial grade requirements.

Code Requirements

The following design codes were used in the development of the conceptual cradle design:

ANSI N14.6 used to provide a lifting criteria for the cradles

ASME Boiler and Pressure Vessel Codes and ASTM codes for material properties, material yield, and ultimate strengths

Project Quality Requirements

- Atlas and buffer railcar fabrication activities are performed in accordance with the fabricator's AAR M-1003-approved QA program

Specific Project Quality Requirements

A summary of specific project quality requirements includes:

QA requirements of AAR Standard S-2043, *Performance Specification for Trains Used to Carry High-Level Radioactive Material*

AAR *Manual of Standards and Recommended Practices (MSRP)*, Section J – *Specification for Quality Assurance, Specification M-1003*

Orano Federal Services *Quality Assurance Program Description (QAPD)*, AFS-QA-PMD-001 (Note: for prototype railcar production only)

Orano Federal Services Project Specific QA Plan, QA-3014737, *Design and Prototype Fabrication of Atlas Railcars for HLRM* (Note: for prototype railcar production only)

Orano Federal Services *Quality Assurance Surveillance Plan* as incorporated into DOE contract DE-NE0008390, Part III, Attachment J-C (Note: for prototype railcar production only)

Kasgro Rail's Quality Assurance Manual for AAR Specification M-1003 (Note: for prototype railcar production only)