

K.B. Dorsey Executive Director - Tank Car Safety

7/1/2019

SUBJECT: AAR M-1002 Tank Car Facility Certification

Mr. Kaleb Hoyt Quality and Product Application Manager Salco Products, Inc. 1385 101st Street, Suite A Lemont, IL 60439 USA

Dear Mr. Hoyt:

The Tank Car Committee directs that you be advised that subject facility is certified as shown below, provided that the facility maintains valid Quality Assurance certification in accord with AAR Specification M-1003 and provided that all outshopped tank cars are in accord with the Federal regulations and M-1002, Specification for Tank Cars. This facility must have the ability to produce this letter upon request.

This certification is only for the facility listed below:

Salco Products, Inc. 1385 101st Street, Suite A Lemont, IL 60439 USA Station Stencil: SALL Expiration Date: 1/9/2024 Activity Code(s): B85 B86 C4 C5 C6 Repair Level (if applicable): Material Group(s)(if applicable): 1 3

The AAR will periodically publish listings of certified facilities. The listing will include the following: Company name, facility location, station stencil, facility activity code(s), material group(s), repair level (if applicable), and expiration date of certification.

Very truly yours,

K.B. Dorsey

cc: D. Guillen, M. Forister

425 Third Street SW, Suite 1000 I Washington, DC 20024 I P (202) 639-2262 I F (202) 639-2930 I KDorsey@aar.org

An inspector (individual or team) assigned by the Executive Director – Tank Car Safety representing the Tank Car Committee will use this form to document the inspection performed during initial certification, recertification, annual evaluation, or other evaluations required to obtain and maintain M-1002 tank car facility certification. This form will be used as the basis for recommending approval of an application for certification and recertification or continuance of certification in accordance with AAR Manual of Standards and Recommended Practices, Section C Part III, Specifications for Tank Cars (M-1002). The M-1002 tank car facility certification program meets the prescribed provisions outlined under 49 CFR §179.7(b)(8). Comments, if applicable, are required to be written in each applicable section.

PART 1: GENERAL INFORMATION

- **1.** 🛛 Initial Certification Inspection 🗆 Recertification Inspection 🗆 Annual Evaluation 🗆 Other (See Comments)
- **2.** Date Exhibit B-3 and B-3A were Submitted (MM/DD/YYYY): 07/10/2017

If "YES", What is the facility's Station Stencil: SALLI

Comments:

PART 2: TANK CAR FACILITY INFORMATION

4. Company Name: Salco Products, Inc.									
5. Address: 1385 101st. Street, Suite A									
6. City: Lemont7. State/Province: Illinois8. Zip/Postal Code: 60439									
9. Country: USA									
10. Station Stencil/QA Code: SALL									
11. M-1002 Expiration Date: This is an i	nitial M-1002 certification audit .								
12. M-1003 Expiration Date: There was an initial M-1003 certification Quality Assurance Audit conducted in conjunction with this M-1002 audit.									
13. S-2034 Expiration Date (applicable only to A19 and/or B78): N/A									
2016 M-1002 Form Exhibit B-2									

PART 3: PRIMARY CONTACT AT	FACILITY						
14. Name: Kaleb Hoyt		15. Title	: Quality and Produ	uct Appli	ication Manager		
16. Office Phone: (630) 685-4658	17. Cell Phone	e: (312)	257-9168	18. Fax	x:		
19. Email Address: <u>kaleb_hoyt@salco</u>	oproducts.com						
PART 4: APPLICANT (AS IDENT	IFIED ON THE	E B-3)					
20. Is the applicant the primary conta	act at the facility	/? ⊠Y	ES 🗆 NO 🛛 (IF Y	ES, Skip	p this Section)		
21.Company Name:							
22. Name:			23. Title:				
24. Address:							
25. City:	26. State/	Province	:		27. Zip/Postal Code:		
28. Country:							
29. Office Phone:	30 . Cell F	30. Cell Phone:			31. Fax:		
32. Email Address:							
PART 5: RECIPIENT(S) OF CER	TIFICATION F	ROM A	AR				
33. Select the Recipient(s):	cant (Part 4) 🛛	Primary	Contact (Part 3)				
(NOTE: This facility must have the	e ability to prod	uce the c	certification letter up	on requ	lest.)		
PART 6: INSPECTOR INFORMA	TION						
34. Name(s) and Title: Danny L. Life	ord Jr. & Seth La	sure / AA	R Accredited Auditor	rs - Mich	ael Bordan / Trainee		
35. Organization(s): AAR / Bureau o	f Explosives						
2016 M-1002 Form Exhibit B-2							

Comment	Comments:							
PART 7:	INSPECTOR RECOMMENDATIO	DN						
36. Inspec	ction Date (MM/DD/YYYY): 01/09/2	018						
37. Has th	ne facility changed scope of work sin	ice the last inspection: \Box YES \Box No	D IF "YES", Complete the following:					
a. Did	they submit an Exhibit B-3 Change	Notification Form to the Executive Dire	ector: 🗆 YES 🗆 NO					
Include	e with this B-2 report a copy of the E	xhibit B-3 Change Notification Form.						
b. Des leve	scribe in the "Comments" section the el capability, and/or material group(s	e change in scope of work, which inclus ;).	des any changes to tank car activity codes, repair					
38. Was t notific	he equipment, personnel, and recor ation (B-3 and B-3A)? \boxtimes YES \square	ds found to be as listed in the request NO If "NO", explain why under "Comm	for initial certification, recertification, or change ients"					
39. Recon	nmend Certification for the following	Tank Car Activity Code(s):						
	A19 Manufacturer of tank cars	B24 Repair of tank cars	B78 Assemble of tank cars					
	B79 Alteration of tank cars	□ B80 Conversion of tank cars	B81 Qualification of tank cars					
	B82 Manufacture of tank car tanks, (running gear)	including support structure, that are m	oved to and from the facility without trucks					
	B83 Repair tank car tanks that are r	noved to and from the facility without t	rucks (running gear)					
	B84 Qualification of tank car tanks t	hat are moved to and from the facility	without trucks (running gear)					
\boxtimes	B85 Manufacturer of pressure-retain	ning tank components that are moved	to and from the facility without trucks (running gear)					
	B86 Repair of pressure-retaining ta	nk components that are moved to and	from the facility without trucks (running gear)					
	C4 Manufacturer of tank car service	equipment						
	C5 Reconditioner/repair and qualific	cation of tank car service equipment						
\boxtimes	C6 Removal and replacement of tank car service equipment (including changing of gaskets)							
	C7 Removal of interior linings and coatings in tank cars							
	C8 Installation of interior linings and	l coatings in tank cars						
	C9 Qualification of interior linings ar	nd coatings in tank cars						
	C10 Repair of interior linings and co	oatings in tank cars						
	C11 Inspection of interior linings and	d coatings in tank cars						
2016 M-100	2 Form Exhibit B-2							

Exhibit B-2: TANK CAR FACILITY INSPECTION AND EVALUATION FORM
40. Recommend Certification for the following material groups (only applicable to tank car tank welding):
⊠ MG 1 □ TC-128 Included □ MG 2 ⊠ MG 3 □ MG 4 □ MG 7
 41. Recommend Certification for the following Repair Level Capability (applicable only to B24 and/or B83): RL1 RL2
42. Signature of Inspector:
Comments:
38.) This facility is currently an F, G and L registered facility. The current Salco registration will expire on 01/24/2018.
 39.) It is the lead auditor's recommendation that due to number and/or severity of the issues identified and the number of unresolved Technical Inspection Deficiency Reports that the initial M-1002 certification cannot be recommended at this time. The Following TIDR's remain unresolved: TIDR# H-1-010918-C-03 TIDR# H-1-010918-C-04(a) TIDR# H-1-010918-C-04(b) TIDR# H-1-010918-C-05(a)
- TIDR# H-1-010918-C-06
- TIDR# H-1-010918-C-07 The AAR BOE General Manager worked with the facilty to resovle the above mentioned TIDR's please see the enclosed Memorandum File No 052419-19 sent to the facility rearding this matter therefore a recommendation for certification is submitted for consideration.
The root cause responses originally submitted were unacceptable; they required interpellation of their analysis by the BOE General Manager in order
to find the underlying causes since the information was extraneous. It was apparent in working thru this process with the VP (Engineering and Tech.

Consulting, Salco Products Inc.) that effective root cause analysis required a set of skills that are lacking in this organization.

Without a specific RCA skillset, this facility will continue to struggle to find root causes. RCCA is likely to take longer, be far less efficient than it would be if the appropriate training had been provided. Training and coaching in learning and applying RCA techniques removes the barrier and ensures that time spent in problem-solving is effective and provides the results that are needed without AAR intervention:

	M-1003 Actual Findings:						
AAFR No.	Finding	Accepted	RCA Accepted By RGA				
01 (a)	1	YES					
01 (b)	1	YES					
02 (a)	1	YES					
02 (b)	1	YES					
02 (c)	1	NO	YES				
02 (d)	1	YES					
02 (e)	1	YES					
02 (f)	1	NO	YES				
03 (a)	1	NO	YES				
04 (a)	1	YES					
04 (b)	1	YES					
04 (c)	1	YES					
04 (d)	1	YES					
04 (e)	1	YES					
05 (a)	1	NO	YES				
Total Findings	15	4 Unacceptable	0 Unacceptable				

PART 8: PUBLICATIONS

Items	Does the facility have the publication?	Technical Deficiency	Comments
43. AAR MSRP, Section C, Standard S-2034	□ YES □ NO ⊠ N/A	🗆 YES 🖾 NO	
44. AAR MSRP, Section C Part II, Design, Fabrication, and Construction of Freight Cars, (M-1001)	□ YES □ NO ⊠ N/A	🗆 YES 🖾 NO	
45. AAR MSRP, Section C Part III, Specifications for Tank Cars (M-1002)	🛛 YES 🗆 NO		
46. AAR MSRP, Section J, Specifications for Quality Assurance, (M-1003)	⊠ YES □ NO		
47. Field Manual of the AAR Interchange Rules	🛛 YES 🗆 NO	🗆 YES 🖾 NO	
48. Office Manual of the AAR Interchange Rules	⊠ YES □ NO	🗆 YES 🖾 NO	
49. Other Publications required by Rule 1.5.b, of the AAR Field Manual of the Interchange Rules	□ YES □ NO ⊠ N/A		
50. AAR Circular and Casualty Prevention Circular Letters	🛛 YES 🗆 NO	🗆 YES 🖾 NO	
51. Title 49 Code of Federal Regulations, Parts 171-180	🛛 YES 🗆 NO	🗆 YES 🖾 NO	
52. Title 49 Code of Federal Regulations, Parts 215, 231	⊠ YES □ NO □ N/A	🗆 YES 🖾 NO	
53. Transportation Dangerous Goods (TDG) Regulations	□ YES □ NO ⊠ N/A	🗆 YES 🖾 NO	
54. Transport Canada TP14877E	□ YES □ NO ⊠ N/A	🗆 YES 🖾 NO	
Comments:			,

PART 9: DOCUMENTATION						
Items	AAR M-1002 or Title 49 CFR Reference	Document Evaluation	Technical Deficiency	Comments		
55. Are Certificates of Construction Form AAR 4-2 properly prepared and filed?	Chapter 1	⊠ YES □ NO □ N/A		⊠ YES		
56. Are records of service equipment approvals (AAR Forms 4-3, 4-5, and/or 4-7) current and maintained?	Chapter 1	⊠ YES □ NO □ N/A	□ YES ⊠ NO	⊠ YES		
57. Are Exhibit R-1 or R-2 reports properly prepared and filed using the Tank Car Integrated Database (TCID)? If facility is not using TCID, Explain in "Comments:" how the facility is documenting repairs.	Appendix R	□ YES ⊠ NO □ N/A	□ YES ⊠ NO	⊠ YES		
58. Are reports of tank car, pressure relief valve and/or interior heater system inspections and tests prepared and retained, and reported to the tank car owner?	Appendix D, paragraph 5.0	□ YES ⊠ NO □ N/A	□ YES ⊠ NO	⊠ YES		
59. Are reports of NDT tests documented for each method used, and are records maintained?	Appendix T, paragraphs 1.20 and 1.21	⊠ YES □ NO □ N/A	□ YES ⊠ NO	⊠ YES		
60. If stub sill inspections are performed, are Form SS-3 reports properly prepared and submitted using the Tank Car Integrated Database (TCID)? If facility is not using TCID, Explain in "Comments:" how is the facility documenting stub sill inspections.	Appendix R	□ YES □ NO ⊠ N/A	□ YES ⊠ NO	⊠ YES		
61. Are Welding Procedure Specifications (WPSs) and Procedure Qualification Records (PQRs), on file for the Material Groups requested?	Appendix W, paragraph 12.0	⊠ YES □ NO □ N/A	□ YES ⊠ NO	⊠ YES		
62. Are Exhibit B-1, "Subcontractor Evaluation Sheet", completed, maintained, and are valid? Objective	Appendix B, paragraph 2.7,	⊠ YES □ NO □ N/A	□ YES ⊠ NO	⊠ YES		
2016 M-1002 Form Exhibit B-2						

	evidence must be provided: either provide an attachment or list in the comment section each subcontractor on the B-1's and the expiration date.	Chapter 1, paragraph 1.6			
63.	For tank car tank plate materials, are mill tests reports available and in compliance with Appendix M specifications?	Chapter 5, Appendix M	⊠ YES □ NO □ N/A	🗆 YES 🖾 NO	⊠ YES
64.	Does the facility have available for review their current M-1002 certification letter and M-1003 certificate? (If NO, explain in comments)	Appendix B	🗆 YES 🖾 NO	□ YES ⊠ NO	⊠ YES

Comments:

55) At the time of the audit, it was noted that the facility has access to the (4-2 Forms) Certificates of Construction from the customer to verify the drawings being used at the facility for manway cover plates that are receiving an application of Hazarsolve (coating), see Question 71 for work inprocess.

56) At the time of the audit, the following was noted during a review of the 4-5 and 4-7 Forms on-site:

- (4-5 Form) Rupture Disc Holder / AAR# E-119004 / Drawing# B30249 / Approved - January 13, 2017

- (4-5 Form) 4" x 3" Reducing Flange / AAR# E-099037 / Drawing# B27729 / Approved September 2, 2014
- (4-5 Form) 9" Fill Hole Cover / AAR# E-099036 / Drawing# E27526 / Approved September 2, 2014
- (4-5 Form) 3" x 2" Parallel Instrument Tee / AAR# E-099017 / Drawing# D18563 / Approved September 2, 2014
- (4-5 Form) Dual Flanged Discharge Tube / AAR# E-099032 / Drawing# D27170 / Approved September 2, 2014
- (4-7 Form) 20" 8 Bolt Tank Car Manway Cover / AAR# B-089004 / Drawing# D9389 / Approved January 11, 2017
- (4-7 Form) 20" 6 Bolt Tank Car Manway Cover / AAR# E-089005 / Drawing# D9278 / Approved January 11, 2017
- (4-7 Form) 4" Bottom Outlet Cap / AAR# E-099015 / Drawing# PBC4001A / Approved January 13, 2017
- (4-7 Form) Surge Protector / AAR# E-099016 / Drawing# B7727 / Approved January 13, 2017
- (4-7 Form) 2-1/2" Vacuum Relief Valve / AAR# E-099034 / Drawing# D13807 / Approved July 27, 2010
- (4-7 Form) Magnetic Gauging Device / AAR# E-099035 / Drawing# B13035 / Approved July 16, 2015
- (4-7 Form) Surge Suppression Device / AAR# E-119002 / Drawing# D18495 / Approved January 13, 2017

- (4-7 Form) 6" Butterfly Valve Assembly / AAR# E-139508 / Drawing# D16675 / Approved - April 17, 2013

- (4-7 Form) 4" Kammed Quick Connect Cap / AAR# E-139315 / Drawing# B16083 / Approved - June 18, 2013

- (4-7 Form) 3/4" Thermometer Well Assembly / AAR# E-139509 / Drawing# C14000 / Approved - April 17, 2013

- (4-7 Form) 150psi Pressure Relief Valve / AAR# E-139510 / Drawing# E20765 / Approved - April 17, 2013

- (4-7 Form) 4" Thread-On Quick Connect / AAR# E-149523 / Drawing# D7227 / Approved - January 14, 2015

- (4-7 Form) 6" Unloading Quick Disconnect Flange / AAR# E-152114 / Drawing# D5699 / Approved - January 13, 2016

- (4-7 Form) 2" Flange Assembly / AAR# E-162103 / Drawing# C21758 / Approved - December 1, 2016

- (4-7 Form) 3-1/2" x 4" Eduction Tube / AAR# E-162104 / Drawing# D18624 / Approved - December 1, 2016

- (4-7 Form) Quick Inspect Safety Vent / AAR# PRD162102 / Drawings# E14934 and C13577 / Approved - December 1, 2016

57.) This is an initial inspection/audit of the SALL facility. There is no activity at this time to warrant filing R1 reports.

58) This facility is a wholesale distributor of Pressure Relief Valves. Salco will acquire Pressure Relief Valves to stock in their inventory for distribution. The required 6 month retest requirement per MSRP M-1002 Section CIII, Appendix D, Paragraph 5.2, is monitored. When retested all applicable processes and forms are followed and completed per the Salco Procedure (Q-2.15.9 / Maintenance and Qualification of Tank Car Pressure Relief Valves Procedure).

59) At the time of the audit, it was noted that the facility will complete a form when a NDT inspection is performed. The facility completed the NDT forms during the demonstrations being performed.

60) At the time of the audit, it was noted that the facility will not be completing stub sill inspections.

61) At the time of the audit, the following was noted with no exceptions:

- Material Group 1:
- WPS: SP-GM-516-516-001 / Rev. Original
- PQR: SP-GM-516-516-001w
- Material Group 3:
- WPS: SP-GM-304-304-001 / Rev. A
- PQR: SP-GM-304-304-001w

62) At the time of the audit, the following was noted during a review of the B-1 Subcontractor Evaluation Sheets on-site:

- Assurance Technologies, Inc. provides calibration services for measure and test equipment exp. 12/1/2018
- Control Company provides calibration services for measure and test equipment exp. 6/13/2018
- D&S Manufacturing performs certified welding on Salco Components exp. 6/5/2018
- Fox Valley Metrology provides calibration services for measure and test equipment exp. 12/29/2018
- Fusion Tech performs certified welding on Salco Components exp. 6/5/2018
- Innovative Machining performs certified welding on Salco Components exp. 6/6/2018
- Laser Dynamics performs certified welding on Salco Components exp. 6/6/2018
- Nationwide Gage Calibration provides calibration services for measure and test equipment exp. 6/6/2018
- Peterson Manufacturing performs certified welding on Salco Components exp. 6/6/2018
- Transcat provides calibration services for measure and test equipment exp. 12/29/2018
- Wisconsin Metal Fab performs certified welding on Salco Components exp. 6/6/2018

At the time of the audit, it was noted that the facility was receiving manway cover plates from the vendor Wisconsin Metal Fab and hinged manway covers from Peterson Manufacturing, neither facility are tank car (M-1002) certified facilities, see TIDR (H-1-010918-C-06).

63) At the time of the audit, it was noted that the facility did have the mill test report on-site for review during the manway nozzle (B 85/86) demonstration, see Question 71.

64) This is an initial M-1002 and M-1003 certification audit. The facility is currently registered F, G, and L with an expiration date of 1/24/2018.

PART 10: FACILITIES	PART 10: FACILITIES						
Items	AAR M-1002 or Title 49 CFR Reference	Technical Observation	Document Evaluation	Technical Deficiency	Comments		
65. Are tank car tank materials physically identified and traceable to a mill test report on file with the facility?	Chapter 5, paragraph 5.1.4	⊠ YES □ NO	⊠ YES □ NO □ N/A	□ YES ⊠ NO	⊠ YES		
66. If the facility performs hydrostatic testing, are gauges in compliance, and calibrated, as required?	Appendix D, paragraphs 4.5.1 and 4.5.2	□ YES □ NO ⊠ N/A	□ YES □ NO ⊠ N/A	□ YES ⊠ NO	⊠ YES		
67. Does the facility have the equipment on its premises in operating condition and calibrated to perform all activities they are seeking/maintaining certification for, as required?	Appendix B	⊠ YES □ NO	N/A	□ YES ⊠ NO	⊠ YES		
68. Is there proper storage for service equipment, valves and fittings, gaskets, and fasteners?	Manufacturer Guidance/Facility Procedures	⊠ YES □ NO □ N/A	⊠ YES □ NO □ N/A	□ YES ⊠ NO	⊠ YES		
69. Are all mobile units physically present at the time of M-1003 QA audits and M-1002 inspections?	Appendix B, paragraph 3.4	⊠ YES □ NO □ N/A	⊠ YES □ NO □ N/A	□ YES ⊠ NO	⊠ YES		
70. If the facility has mobile units does the facility have objective evidence that they operate under the certified facility's M-1003 Quality Assurance Program? Provide a list of all mobile units and their Commodity Code capabilities in Comments.	Appendix B, paragraph 3.4	⊠ YES □ NO □ N/A	⊠ YES □ NO □ N/A	□ YES ⊠ NO	⊠ YES		
Comments:	,		,]				
2016 M-1002 Form Exhibit B-2							

65) See Question 63.

66) At the time of the audit, it was noted that the facility will not be performing any hydrostatic testing.

67) During the audit of all tank car activity codes seeking certification for, all applicable equipment was verified to be in operating condition and, when applicable, current in their calibration cycles.

68) All stored service equipment parts, assemblies, gaskets and fasteners was found to be compliant.

69) The presented mobile unit was the Salco Ford F-550 boom truck, DOT#770034. This mobile unit contained no equipment, valves, fittings, gaskets or fasteners. The scope of work will be based upon the car owner request, but limited to C6 activities. There are no tracks coming into or out of the Salco facility. This mobile work could also include the use of a company vehicle (car) where the Salco qualified personnel would carry all required tools and equipment to complete an equipment change. A current AAR Field Manual is available on site that will travel with personnel assigned to each job order. All applicable procedures will be identified and printed from the Salco intranet shared folders that contain all current and approved work instructions and NDT procedures. Again, the commodity code capability is C6.

70) See Question 69.

PART 11: WORK IN PROGRESS						
Items	AAR M-1002 or Title 49 CFR Reference	Technical Observation	Document Evaluation	Technical Deficiency	Comments	
71. For the activity codes that the facility has requested or is certified to perform, was any work-in-progress observed and/or applicable files reviewed (i.e. manufacturing, repair, qualification/testing, etc.)? If "Yes", provide details under "Comments"	N/A	⊠ YES □ NO □ N/A	⊠ YES □ NO □ N/A	⊠ YES □ NO	⊠ YES	
Comments:						
2016 M-1002 Form Exhibit B-2						

71) The following was noted at the time of the audit:

(Activity Code's: B85/86) Welding Hinges on a Manway Nozzle

- Weld Technician: Harold McMullin (Welder Stamp ID#4, Appendix W Qualified on 6/12/2017, Visual Acuity due 12/12/2018)
- Nozzle Material: 5/8" Thickness A516, Grade 70 / Heat# E4K340
- Welding Machine Used: Miller Millermatic-350P / ID# WM-005 / due 1-2-2019
- Weld Wire Used: .045 / Techniweld / ER70S-6
- Weld Procedure Used: SP-GM-516-516-001 / Rev. Original
- Drawing Used: 20" Manway Nozzle 6-Bolt / Drawing# E30495 / Part# TCMR6TRCSA
- Gauges Used:
- 25' Measuring Tape / ID# SPG0178 / due 1-6-2019
- 8" Micrometer / ID# SPG0184 / due 1-5-2019

- Results: During the welding of the hinges on the manway nozzle, it was noted that the Appendix W welding technician deviated from the essential variables in the identified Appendix W weld procedure specification while welding on a manway nozzle at a wire feed speed of 243 and 250 inches per minute. The required wire feed speed shown on the qualified WPS is 336 minimum to 454 maximum inches per minute. Also noted was that while welding outside the parameters of the wire feed speed that the amps were below the required limitation of the qualified WPS, see TIDR (H-1-010918-C-05) issued at the time of the audit.

- VT Technician: Harold McMullin (VT Level II due 11/18/2019, Visual Acuity due 12/12/2018)

- Procedure Used w/ Appendix W: Q-2.15.4 / Direct Visual Weld Inspection Procedure / Rev. Original

- Gauge Used: Fillet Weld Gauge / ID# SWG009 / due 4-21-2018

- Results: The Salco Direct Visual Weld Inspection Procedure identified above makes the following statement in Section 2.0 "Scope", paragraph 2.2; "This procedure doesn't apply to the welding of tank car tanks, See Appendix W in AAR specification for Tank Cars M-1002, Section C, part III" MSRP M-1002 Section C, part III, Appendix W does not meet the NDT Procedure Requirements of Appendix T, paragraph 1.18, see TIDR (H-1-010918-C-02) issued at the time of the audit.

(Activity Code: C4) Manufacturing of a Vacuum Relief Valve

- Technician: Eric Hein (LT Level II exp. 3/19/2018, Visual Acuity due 12/11/2018)

- Valve Type: 2-1/2" Salco Vacuum Relief Valve / Part# VVN25S4107A / Serial# I9HGM001
- (4-7 Form) On-Site: 2-1/2" Vacuum Relief Valve / AAR# E-099034 / Approved July 27, 2010
- Procedure's Used:
- Q-2.15.7 / Leak Test Procedure / Rev. Original
- Q-2.15.10 / Assembly of Vacuum Relief Valves / Rev. Original
- Gauge's Used:
- 2-1/2"-8 NPT Ring Gauge / ID# 103 / due 12-19-2018
- 0 to 1000psi Digital Pressure Gauge / ID# G10005 / due 6-26-2018
- Digital Thermometer / ID# TPGN005 / due 1-24-2018
- Digital Stop Watch / ID# STW01 / due 3-24-2018
- Vacuum Set Pressure: -75psi
- Temperature: 69 degrees
- Leak Detector Used: Swagelock Snoop (27 degrees to 200 degrees)

- Results: The technician performed five (5) leak tests prior to having a complete and passed bench test. The five (5) tests were as follows: 1st Test - Threaded VRV with a leak at the sealing surface of the valve / 2nd Test - Threaded VRV with a leak at the threaded sealing surface of the valve / 3rd Test - Flanged VRV with a leak at the sealing surface of the valve and threaded attachment to the bench / 4th Test - Flanged VRV with a leak at the threaded VRV with a leak at the threaded VRV with a leak at the sealing surface of the valve and threaded attachment to the bench / 4th Test - Flanged VRV with a leak at the threaded VRV with a leak at the threaded VRV with a leak at the threaded attachment to the bench / 5th Test - Threaded VRV with a complete / passing test results.

(Activity Code: C5) Reconditioning of a Vacuum Relief Valve

- Technician: Eric Hein (LT Level II exp. 3/19/2018, Visual Acuity due 12/11/2018)
- Valve Type: 2-1/2" Salco Vacuum Relief Valve / Part# VVN25S4106A / Serial#I9HGM001
- (4-7 Form) On-Site: 2-1/2" Vacuum Relief Valve / AAR# E-099034 / Approved July 27, 2010
- Procedures Used:
- Q-2.15.10 The Assembly of Vacuum Relief Valve.
- Work Performed:
- The removal of the Viton B Gasket and replace with a Viton A hard gasket.
- Leak test per Q-2.15.7 / Leak Test Procedure / Rev. Original
- Gauges Used:
- 0 to 1000psi Digital Pressure Gauge / ID# G10005 / due 6-26-2018
- Digital Thermometer / ID# TPGN005 / due 1-24-2018

- Digital Stop Watch / ID# STW01 / due 3-24-2018
- Vacuum Set Pressure: -75psi
- Temperature: 69 degrees
- Leak Detector Used: Swagelock Snoop (27 degrees to 200 degrees)

Results: There were no noted deficiencies.

(Activity Code C5) The Disassembly / Inspection / Reassembly and Testing of an ARI Type A 1316 Angle Valve

- Technician: Eric Hein (LT Level II exp. 12/15/2019, Visual Acuity due 12/12/2018)
- Procedures Used:
- Q.2.15.7 / Leak Test Procedure / Rev. Original
- Q.2.15.8 / Maintenance and Test of Angle Valves / Rev. Original
- ARI Inspection Maintenance and Operation Manual
- Gauges Used:
- 0 to 1000psi Digital Pressure Gauge / ID# G10005 / due 6/26/2018
- Digital Thermometer / ID# TPGN005 / due 01/24/2018
- Digital Stop Watch / ID# STW01 / due 01/24/2018
- Temperature 71 degrees
- Leak Detector Used: Swagelock Snoop (27 degrees to 200 degrees F)

- Results: During the observation of this activity it was noted that the Salco Maintenance and Test of Angle Valves Procedure Q.2.15.8 had not been approved by the equipment owner, Chemtrade, for use in the maintenance, rebuild and testing of the ARI Angle valve being rebuilt. See TIDR (H-1-010918-C-04)

(Activity Code: C5) Application of Hazarsolve (Coating) to a Manway Cover Plate

- Technician: Armando Sanchez
- Car Mark / Number: GATX 212051
- Drawing Attached to 4-2: Trinity Rail Fittings Arrangement Drawing# D-54272
- AAR Approval#: L126067
- Procedure Used: Design Specification Sheet / Document# DSS 3 / Rev. 4

- Results: During an audit of a manway cover plate receiving a Hazarsolve coating in-process it was noted that the technician must heat the weld surface from 160 to 180 degrees, however upon an interview of the technician it was noted that the technician was only heating the weld surface from 150 to 160 degrees and the heated surface was 159 degrees at the time of the audit, see TIDR (H-1-010918-C-05). At the time of the audit, it was noted that the tank car owners approval was not provided to the facility for the reconditioning of the pressure plate, see TIDR (H-1-010918-C-03).

(Activity Code: C5) Leak Testing of Fittings Assembly Plate

- Technicians:
- Leonardo Guerrido (LT Level II exp. 12/15/2019, Visual Acuity due 12/12/2018)
- Eric Walls (LT Level II exp. 5/7/2018, Visual Acuity due 12/11/2018)
- Procedure Used: Q-2.15.7 / Leak Test Procedure / Rev. Original
- Gauge's Used:
- 0 to 1000psi Digital Pressure Gauge / ID# G10006 / due 6-26-2018
- Digital Thermometer / ID# TPGN009 / due 12-18-2018
- Temperature: 67 degrees
- Leak Detector Used: Swagelock Snoop (27 degrees to 200 degrees)

- Results: The LT Technician was not using the correct soak/dwell time and was missing the Leak Test Form to record the results of the leak test, see TIDR (H-1-010918-C-01).

(Activity Code: C6) Leak Testing of a Vacuum Relief Valve on the Bench.

- Technician: Eric Hein (LT Level II exp. 3/19/2018, Visual Acuity due 12/11/2018)
- Valve Type: 2-1/2" Salco Vacuum Relief Valve / Part# VVN25S41173A / Serial# B6355001
- Procedure Used: Q-2.15.7 / Leak Test Procedure / Rev. Original
- Gauge's Used:
- 0 to 1000psi Digital Pressure Gauge / ID# G10005 / due 6-26-2018
- Digital Thermometer / ID# TPGN005 / due 1-24-2018
- Digital Stop Watch / ID# STW01 / due 3-24-2018
- Temperature: 69 degrees
- Leak Detector Used: Swagelock Snoop (27 degrees to 200 degrees)
- Results: The LT Technician passed the leak test with no leaks detected during the test.

Items		AAR M-1002 or Title 49 CFR Reference	Technical Observation	Document Evaluation	Technical Deficiency	Comments
72. Based of facility h qualified with the each ap subcontered subcontered for the expiration identified for the expiration of the expirat	n their activity codes, does the ave available one person and certified in accordance company's written practice, for plicable method employed? If racted, provide the name and on date of the NDE technician d from the B-1.	Appendix B, paragraph 2.6.2.1, 2.6.2.2, Appendix L; Appendix T	□ YES ⊠ NO □ N/A	⊠ YES □ NO □ N/A	□ YES ⊠ NO	⊠ YES
73. Is the fa administ the com of NDT I for each	cility's NDT program ered by an NDT Level III? In ment section provide the name _evel III and date of expiration method.	Appendix T, paragraph 1.4.1	N/A	⊠ YES □ NO □ N/A	□ YES ⊠ NO	⊠ YES
74. Are the the NDT practice certificat	qualification requirements for Level III included in the written for qualification and ion?	Appendix T, paragraph 1.8.4	N/A	⊠ YES □ NO □ N/A	□ YES ⊠ NO	⊠ YES
75. Are the this facil accorda subcontic commer expiration	NDT personnel employed by ity qualified and certified in nce with a written practice? If racted, identify in the its the subcontractor and the on date identified from the B-1.	Appendix T, paragraph 1.5, and paragraphs 1.6 through 1.17	□ YES ⊠ NO □ N/A	⊠ YES □ NO □ N/A	□ YES ⊠ NO	⊠ YES
76. Does the procedu III, for the	e facility have written res, approved by an NDT Level e NDT methods utilized?	Appendix T, paragraph 1.18.1	N/A	⊠ YES □ NO □ N/A	□ YES ⊠ NO	□ YES

77.	Have all NDT procedures been qualified and technically approved by an NDT Level III? NOTE: Example of NDT PQR is under Appendix T, Fig. T.1	Appendix T, paragraph 1.19.1	N/A	⊠ YES □ NO □ N/A	□ YES ⊠ NO	□ YES
78.	Are all NDT equipment calibrated as required per AAR MSRP Section J (M- 1003) and with the company's QA calibration requirements?	Appendix T, paragraph 1.22	⊠ YES □ NO □ N/A	⊠ YES □ NO □ N/A	□ YES ⊠ NO	⊠ YES
79.	For NDT examinations (RT, PT, MT and UT), are the acceptance criteria and personnel qualification requirements being met?	Appendix W, paragraph 10.0	□ YES □ NO ⊠ N/A	□ YES □ NO ⊠ N/A	□ YES ⊠ NO	⊠ YES
80.	Were any NDT examinations observed; and/or applicable reports or records reviewed during this inspection?; If "Yes", provide details under "Comments"	N/A	⊠ YES □ NO □ N/A	⊠ YES □ NO □ N/A	⊠ YES □ NO	⊠ YES
81.	Is the technical performance of Level I and II NDT personnel periodically evaluated and documented by an NDT Level III?	Appendix T, paragraph 1.10.2	N/A	⊠ YES □ NO □ N/A	□ YES ⊠ NO	□ YES
82.	Are written procedures (such as work instructions, welding/NDT procedures, etc.), provided to employees, or otherwise available at the work site, to ensure that work on tank cars conforms to M-1002 specification, AAR approval, and the owner's acceptance criteria?	49 CFR §179.7(d)	⊠ YES □ NO □ N/A	⊠ YES □ NO □ N/A	⊠ YES □ NO	⊠ YES
83.	Are the NDT visual examination requirements being met?	Appendix T, paragraph 1.8.3	⊠ YES □ NO □ N/A	⊠ YES □ NO □ N/A	□ YES ⊠ NO	⊠ YES
2016	M-1002 Form Exhibit B-2				·	

Comments:

72) The following Salco NDT Personnel were reviewed during this audit with no noted deficiencies;

- Eric Hein / NDT Bubble Leak Level II Technician / Current certification expires 03/19/2018

- Leonardo Guerrido / NDT Bubble Leak Level II Technician / Current certification expires 12/15/2019

- VT Technician: Harold McMullin (VT Level II due 11/18/2019, Visual Acuity due 12/12/2018)

73) There are two Salco identified NDT Level III personnel in house, the following was noted:

- Jonathan Pasqua / ASNT #219702 / Current Level III Certifications are VT which expires 06/15/20 and LP which expires 12/31/20

- Kevin Woloszyk / ASNT #244674 / Current Level III Certifications are MT which expires 10/31/20 and LP which expires 12/31/20

74.) At the time of this audit and during the document review of the Salco Written Practice for the Qualification and Certification of NDT Personnel Procedure, Q-2.22.1, it was noted that the reviewed procedure contained the requirements for a NDT Level III.

75) There was a document review of the Salco procedure (Q-2.22.1 / Written Practice for the Qualification and Certification of NDT Personnel Procedure). This procedure contains the qualification and certification of NDT personnel to include level I, level II and level III personnel. During the course of this audit the actual qualification and certification events were not performed for NDT personnel. All documentation reviewed of the Salco NDT personnel meet all requirements of the above mentioned procedure.

78) All applicable equipment associated with the NDT capabilities of this facility was found to be current in their calibration cycles.

79) At the time of the audit, it was noted that the facility will only perform Appendix W welding on manway nozzles to apply the manway cover hinges, see Question 71.

80) See TIDR# H-1-010918-C-01 as during the technical observation of the bubble leak testing of the tank car top pressure plate, the following deficiencies were identified as not being properly monitored per the Salco Q-2.15.7 Leak Test Procedure;
The leak test technician was found to be using the incorrect soak and dwell times as identified in the Salco Products Inc. Leak Test Procedure Q-

2.15.7, Appendix A Testing Requirements.

- The leak test inspection form Q-2.15.7-1 was not present during leak testing.

82) See TIDR# H-1-010918-C-05 / A reference to all applicable procedures as directed by the scope of work are referenced on the Production Floor Traveler. The Salco personnel will print off all identified work instructions at kiosks that are strategically placed throughout the plant. All floor travelers reviewed at the time of this audit referenced obsolete procedures.

83) The Salco NDT VT Level III Visual Acuity Designee, Mr. Gary Parker (Visual Acuity designated on 12/29/2017) administered a Visual and Color Acuity Exam to the auditor (Danny Liford) per the Salco procedure (Q-2.22.2 / Visual and Color Acuity Examination Procedure). The auditor (Danny Liford) was tested to the Jaeger number 2 eye chart at a minimum of 12" with corrected vision. This exam also included the use of a Pseudo-Isochromatic Plate for the testing of color vision. The visual examination results were recorded on the form (Q-2.22.2-1 / Visual Acuity Record).

PART 13: WELDING PRACTICES							
Items	AAR M-1002 or Title 49 CFR Reference	Technical Observation	Document Evaluation	Technical Deficiency	Comments		
84. Based on their activity codes, are all welding, fabrication and construction processes being performed by the facility in accordance with Appendix W?	Appendix W	⊠ YES □ NO □ N/A	⊠ YES □ NO □ N/A	⊠ YES □ NO	⊠ YES		
 85. Does the facility's quality control program include as a minimum the following? The designated authority for the administration of the welding quality control program. A description of the administration and technical supervision for all welders. 	Appendix W, paragraph 9.2.3.4	N/A	⊠ YES □ NO □ N/A	□ YES ⊠ NO	□ YES		
2016 M-1002 Form Exhibit B-2							

	 A description of the exclusive authority to assign and remove welders without involvement of any other organization. A requirement for assigning welder identification symbols 					
86.	If postweld heat treatment is required after welding, are the applicable requirements of Appendix R and Appendix W being met?	Appendix R, paragraph 19.0 and Appendix W, paragraph 16.0	□ YES □ NO ⊠ N/A	□ YES □ NO ⊠ N/A	□ YES ⊠ NO	
87.	Are welders and/or welding operators engaged in welding on tank car tanks tested, trained, and performance qualified?, as required by Appendix B, paragraph 2.6.1.1, in accordance with Appendix W, paragraph 11.0?	Appendix B, paragraph 2.6.1.1 and Appendix W, paragraph 11.0	□ YES ⊠ NO □ N/A	⊠ YES □ NO □ N/A	□ YES ⊠ NO	⊠ YES
88.	Are welders not engaged in welding on the tank car tanks trained and qualified per AAR MSRP, Section C Part II M- 1001 (AWS D.15.1)?	Appendix B, paragraph 2.6.1.2	□ YES ⊠ NO □ N/A	⊠ YES □ NO □ N/A	□ YES ⊠ NO	
89.	Are welders and welding operators assigned an identification number, letter, or symbol; and were welds / records observed with properly identified and traceable.	Appendix W, paragraph 9.4 and 14.8	⊠ YES □ NO □ N/A	⊠ YES □ NO □ N/A	□ YES ⊠ NO	⊠ YES
90.	Are the welder visual acuity requirements being met?	Appendix W, paragraph 14.2.1	N/A	⊠ YES □ NO □ N/A	□ YES ⊠ NO	⊠ YES
91.	If a welder's qualification(s) expired, or there is reason to question their ability, does the facility have procedures for the renewal of welder performance qualification procedures?	Appendix W, paragraph 11.8	N/A	⊠ YES □ NO □ N/A	□ YES ⊠ NO	□ YES

92. Are flux and/or rod ovens in use to support the operations?		□ YES □ NO ⊠ N/A	□ YES □ NO ⊠ N/A	□ YES ⊠ NO	□ YES
93. Are low hydrogen electrodes (rods) handled in accordance with Appendix W?	Appendix W, paragraph 14.12	□ YES □ NO ⊠ N/A	□ YES □ NO ⊠ N/A	□ YES ⊠ NO	□ YES
94. If the facility is currently certified or seeks certification to repair level "RL1" does the facility Demonstrate proficiency in performing welding to tank car tank material, NDT method MT or PT, and postweld heat treatment? This level excludes repairing a through the tank car tank defect (insert or through the shell/head crack). This demonstration must be performed on a tank car tank or test plate and must be performed on a material group for which the facility seeks certification. Attach pictures of the demonstration with the B-2. The following pictures must be provided, at a minimum: set-up, weld, NDT method, and postweld heat treatment pad.	Appendix B, paragraph 2.3.6 and 2.3.8 or 2.3.10	□ YES □ NO ⊠ N/A	□ YES □ NO ⊠ N/A	□ YES ⊠ NO	⊠ YES
95. If the facility is currently certified or seeks certification to repair level "RL2" does the facility Demonstrate proficiency in performing welding to tank car tank material, NDT, and postweld heat treatment? This level includes repairing a through the tank car tank defect (insert or through the shell/head crack). This demonstration must be performed on a tank car tank or test plate and must be performed on	Appendix B, paragraph 2.3.7 and 2.3.9 or 2.3.11	□ YES □ NO ⊠ N/A	□ YES □ NO ⊠ N/A	□ YES ⊠ NO	⊠ YES
2016 M-1002 Form Exhibit B-2					

a material from a material group for which the facility seeks certification.			
with the B-2. The following pictures			
must be provided, at a minimum: set-			
up, weld, NDT method, and postweld heat treatment pad.			

Comments:

84) See TIDR# H-1-010918-C-05

At the time of this audit there was an observation of the welding of the manway nozzle eyebolt lugs and the manway hinge brackets onto the 20" 6 bolt manway nozzle assembly dwg#TCMR6TRCSA. This welding was being performed per the Appendix W qualified WPS# SP-GM-516-516-001. The manway nozzles are being supplied to Salco by Hammond Machine Works, HMWI an M-1002 B84 and C4 certified facility.

87) At the time of the audit, it was noted that the facility had one (1) designated Appendix W welder for Material Group 1 and Material Group 3, the following was noted:

- Harold McMullin (Welder Stamp ID#4, Appendix W Qualified on 6/12/2017, Visual Acuity due 12/12/2018)

89) See Question 87 for the welder stamp id assigned to Harold McMullin.

90) See Question 87 verifying the facility is maintaining the visual acuity requirements for the on-site Appendix W welder (Harold McMullin).

92) At the time of the audit, it was noted that the facility does not store low hydrogen electrodes on-site.

93) See Question 92.

94) At the time of the audit, it was noted that facility will not be performing under a Repair Level 1 and is not seeking certification to perform under a Repair Level 1.

95) At the time of the audit, it was noted that facility will not be performing under a Repair Level 2 and is not seeking certification to perform under a Repair Level 2.

Items	AAR M-1002 or Title 49 CFR Reference	Technical Observation	Document Evaluation	Technical Deficiency	Comments
96. Do tank car materials (plate, studs, bolts and nuts, etc.) comply with the specifications for materials contained in Appendix M? Provide a description under comments of what was observed.	Appendix M	⊠ YES □ NO □ N/A	⊠ YES □ NO □ N/A	□ YES ⊠ NO	⊠ YES
97. Are repairs and alterations to, or conversions of, tank car tanks performed in accordance with Appendix R? Provide a description under comments of what was observed.	Appendix R	□ YES □ NO ⊠ N/A	□ YES □ NO ⊠ N/A	□ YES ⊠ NO	⊠ YES
98. Is a hardness test performed after a butt-welded repair on a pressure car tanks that are constructed of Table M.10.1 materials?	Appendix R, paragraph 8.0	□ YES □ NO ⊠ N/A	□ YES □ NO ⊠ N/A	🗆 YES 🖾 NO	⊠ YES
Comments:					
96) All Materials reviewed allow steels tank plate	a fasteners were in com	nliance with Annend	ix M		

97) At the time of the audit, it was noted that the facility will not be performing repairs, alterations, and/or conversions to tank car tanks.

98) At the time of the audit, it was noted that the facility will not be performing butt-welded repairs to pressure car tanks.

PART 15: SERVICE EQUIPMENT PRACTICES							
Items	AAR M-1002 or Title 49 CFR Reference	Technical Observation	Document Evaluation	Technical Deficiency	Comments		
99. If tank car valves and fittings are manufactured, are the approval and service trial requirements contained in Chapter 1 complied with? Provide the AAR approval number in the "Comment" section for valves and fittings being manufactured.	Chapter 1	⊠ YES □ NO □ N/A	⊠ YES □ NO □ N/A	□ YES ⊠ NO	⊠ YES		
100. If tank car valves and fittings are manufactured, are the specifications for materials (including threaded fasteners and castings), and the design and application requirements complied with?	Appendix A, paragraph 2.0 and 3.0, and Appendix M, paragraph 4.0	⊠ YES □ NO □ N/A	⊠ YES □ NO □ N/A	⊠ YES □ NO	⊠ YES		
101. If pressure relief devices are manufactured, are flow capacity tests performed as required?	Appendix A, paragraph 5.0	□ YES ⊠ NO □ N/A	⊠ YES □ NO □ N/A	🗆 YES 🖾 NO	⊠ YES		
102. If manufactured or reconditioned, are pressure relief valves, rupture disc devices, frangible discs, liquid and vapor valves, and liquid level control and gauging devices marked in accordance with Appendix A?	Appendix A, paragraph 6.0	⊠ YES □ NO □ N/A	⊠ YES □ NO □ N/A	□ YES ⊠ NO	⊠ YES		
103. If the facility performs pressure relief valve, tank and/or interior heater systems testing are gauges in compliance, and calibrated?	Appendix D, paragraphs 4.5.1 and 4.5.2	⊠ YES □ NO □ N/A	⊠ YES □ NO □ N/A	□ YES ⊠ NO	⊠ YES		

104. If the facility installs a valve or fitting on a tank car, does the facility meet the traceability requirements? Provide a description under comments of what was observed and whether this is accomplished through physical means or electronically tied to the serial number of the valve/fitting.	Appendix A paragraph 3.3.8.5?	□ YES ⊠ NO □ N/A	⊠ YES □ NO □ N/A	□ YES ⊠ NO	⊠ YES
105. If tank car service equipment is qualified, are the applicable stenciling requirements complied with?	Appendix C, paragraph 2.3.3.2	□ YES ⊠ NO □ N/A	⊠ YES □ NO □ N/A	□ YES ⊠ NO	
106. Are the maintenance, qualification and test procedures for pressure relief devices in accordance with Appendix D?	Appendix D, paragraphs 3.2.1 and 4.0, (particularly paragraph 4.3, Step 5 regarding inspection of PRVs per the manufacturer's guidelines)	□ YES ⊠ NO □ N/A	⊠ YES □ NO □ N/A	□ YES ⊠ NO	⊠ YES
107. Are stock pressure relief valves that are not installed and protected from deterioration being retested after 6 months?	Appendix D, paragraph 5.2, line item 11	□ YES ⊠ NO □ N/A	⊠ YES □ NO □ N/A	🗆 YES 🖾 NO	⊠ YES
108. If an item of tank car service equipment has been removed, replaced, and/or re-installed, is a leak test performed after reassembly?	49 CFR, §180.509(c)(3) and (j)	⊠ YES □ NO □ N/A	⊠ YES □ NO □ N/A	□ YES ⊠ NO	⊠ YES
Comments: 99.) At the time of the audit, it was noted that the performing service trials, see Question 56.	facility currently had the	AAR approvals on-s	site for valves/fitting	gs and was not curre	ently

100) At the time of the audit/inspection, it was noted that the facility had an AAR approval for a 2-1/2" Threaded Vacuum Relief Valve (Part #VVN25S4101A) but did not have an AAR approval for a 2-1/2" Flanged Vacuum Relief Valve being manufactured by the facility, see TIDR (H-1-010918-C-07).

101) At the time of the audit, it was noted that the facility does have the 4-7 Form on-site with the approval to manufacture pressure relief devices (AAR# E-139510), however the facility does not currently manufacture these pressure relief devices.

102.) At the time of the audit, it was noted during an audit of the vacuum relief valves and gauging devices on-site being manufactured by the facility that the markings are in accordance with Appendix A.

103.) At the time of the audit, it was noted during an audit of the measuring and testing equipment on-site that the facility does have digital pressure gauges calibrated and in compliance to perform the testing of pressure relief devices if the facility had to re-test a pressure relief device that went beyond the 6-month shelf life.

104.) This facility will apply a round gold medallion to each applicable piece of equipment attached to a tank car under their C6 tank car activity code applied for. This medallion will be secured by a cable wire seal.

105 At the time of the audit, it was noted that facility will be performing field services (C6) when requested by the customer and has the capability's to update the qualification decal if the work necessitates this.

106.) At the time of the audit, it was noted that the facility does have a pressure relief device procedure (Q-2.15.9 / Maintenance and Qualification of Pressure Relief Valves / Rev. Original) in accordance with the maintenance, qualification and testing requirements of Appendix D.

107) At the time of the audit, it was noted that the facility will store pressure relief valves on-site for distribution (re-sale) purposes. The facility demonstrated the understanding of re-testing pressure relief valves after the 6-month shelf life and will perform this re-test prior to distributing these pressure relief valves to customers for installation on tank cars.

108.) See Question 80 for leak demonstration performed at the time of the audit.

PART 16: INSPECTIONS AND TESTS PRACTICES							
Items	AAR M-1002 or Title 49 CFR Reference	Technical Observation	Document Evaluation	Technical Deficiency	Comments		
109. If this facility manufactures tank car tanks, are tanks and/or interior heater systems hydrostatic tested and perform in accordance with the outlined procedures?	49 CFR §§179.12(b), 179.100-18 and/or 179.200-22, and Appendix D, paragraph 4.2.1	□ YES □ NO ⊠ N/A	□ YES □ NO ⊠ N/A	□ YES ⊠ NO	⊠ YES		
110. Are qualification and maintenance requirements complied with?	49 CFR §§180.509 and 180.511, and the additional AAR requirements contained in Appendix D, paragraphs 2.0	□ YES □ NO ⊠ N/A	□ YES □ NO ⊠ N/A	□ YES ⊠ NO	⊠ YES		
111. Are pressure relief valve gaskets or gasket seals made of elastomeric materials, normally exposed to the lading, replaced when the device is tested?	Appendix D, paragraph 3.4	□ YES ⊠ NO □ N/A	⊠ YES □ NO □ N/A	□ YES ⊠ NO	⊠ YES		
112. At the time of service equipment qualification, do tank cars equipped with bottom outlets have the outlet caps and nozzles inspected for wear?	Appendix D, paragraph 3.6	□ YES ⊠ NO □ N/A	⊠ YES □ NO □ N/A	□ YES ⊠ NO			

113. Are the hydrostatic test procedures contained in Appendix D complied with?	Appendix D, paragraph 4.0	□ YES □ NO ⊠ N/A	□ YES □ NO ⊠ N/A	□ YES ⊠ NO	⊠ YES
114. At each tank qualification, are manways on nonpressure cars inspected, maintained and tested?	Appendix D, paragraph 6.0	□ YES □ NO ⊠ N/A	□ YES □ NO ⊠ N/A	□ YES ⊠ NO	⊠ YES
115. Does the facility use a calibrated GO/NO-GO gauge per ANSI/ASME B1.2, Table 1, or an equivalent calibrated gauge to gauge the major diameter of external eyebolt threads over the nut clamping surface?	Appendix D, paragraph 6.4.2	□ YES □ NO ⊠ N/A	□ YES □ NO ⊠ N/A	□ YES ⊠ NO	⊠ YES
116. Does the facility inspect manway nozzles for gouges, nicks, and other defects?	Appendix D, paragraph 6.3.1	□ YES □ NO ⊠ N/A	□ YES □ NO ⊠ N/A	🗆 YES 🖾 NO	⊠ YES
Comments: 109) At the time of the audit, it was noted that the	facility will not be manuf	facturing tank car ta	nks.		

110) At the time of the audit, it was noted that the facility will not be performing maintenance and/or qualifications on tank car tanks.

111.) The review of the Salco Q-2.15.9, Maintenance and Qualification of Tank Car Pressure Relief Valves Procedure includes the instruction to replace all soft goods at the time of maintenance and/or qualification. This activity was not being performed at the time of this audit.

113) At the time of the audit, it was noted that the facility will not be performing any hydrostatic testing.

114) At the time of the audit, it was noted that the facility will not be performing any tank car qualifications.

115) See Question 114.

116) See Question 114.

DART 17: MARKING STENCILING AND DAINTING PRACTICES								
AAR M-1002 or Title 49 CFR Reference	Technical Observation	Document Evaluation	Technical Deficiency	Comments				
Appendix C, AAR MSRP Section L, Standard S-910	□ YES ⊠ NO □ N/A	⊠ YES □ NO □ N/A	□ YES ⊠ NO	⊠ YES				
49 CFR §§179.100- 20(a) or 179.200- 24(a), Appendix C, paragraph 3.0, and 49 CFR §179.24	□ YES □ NO ⊠ N/A	□ YES □ NO ⊠ N/A	□ YES ⊠ NO	⊠ YES				
Chapter 2, paragraph 2.2.10 and 49 CFR §§179.100-4(a) or 179.200-4(a)	□ YES □ NO ⊠ N/A	□ YES □ NO ⊠ N/A	□ YES ⊠ NO	⊠ YES				
Chapter 2, paragraph 2.2.10 and 49 CFR f §180.513(c)	□ YES □ NO ⊠ N/A	□ YES □ NO ⊠ N/A	□ YES ⊠ NO	⊠ YES				
	ND PAINTING PRACTIOAAR M-1002 or Title 49 CFR ReferenceAppendix C, AAR MSRP Section L, Standard S-910r49 CFR §§179.100- 20(a) or 179.200- 24(a), Appendix C, paragraph 3.0, and 49 CFR §179.24Chapter 2, paragraph 3.0, and 49 CFR §\$179.100-4(a) or 179.200-4(a)fChapter 2, paragraph 2.2.10 and 49 CFR §\$179.100-4(a) or 179.200-4(a)fChapter 2, paragraph 2.2.10 and 49 CFR §180.513(c)	ND PAINTING PRACTICESAAR M-1002 or Title 49 CFR ReferenceTechnical ObservationaAppendix C, AAR MSRP Section L, Standard S-910□ YES ⊠ NO □ N/Ar49 CFR §§179.100- 20(a) or 179.200- 24(a), Appendix C, paragraph 3.0, and 49 CFR §179.24□ YES □ NO ⊠ N/AChapter 2, paragraph 2.2.10 and 49 CFR §§179.100-4(a) or 179.200-4(a)□ YES □ NO ⊠ N/AMathematical MARChapter 2, paragraph 2.2.10 and 49 CFR §§179.100-4(a) or 179.200-4(a)□ YES □ NO ⊠ N/A	AAR M-1002 or Title 49 CFR Reference Technical Observation Document Evaluation a Appendix C, AAR MSRP Section L, Standard S-910 □ YES ⊠ NO □ N/A ⊠ YES □ NO □ N/A r 49 CFR §§179.100- 20(a) or 179.200- 24(a), Appendix C, paragraph 3.0, and 49 CFR §179.24 □ YES □ NO ⊠ N/A □ YES □ NO ⊠ N/A c Chapter 2, paragraph 2.2.10 and 49 CFR §\$179.100-4(a) or 179.200-4(a) □ YES □ NO ⊠ N/A □ YES □ NO ⊠ N/A f Chapter 2, paragraph 2.2.10 and 49 CFR §180.513(c) □ YES □ NO ⊠ N/A □ YES □ NO ⊠ N/A	AAR M-1002 or Title 49 CFR Reference Technical Observation Document Evaluation Technical Deficiency Appendix C, AAR MSRP Section L, Standard S-910 □ YES ⊠ NO □ N/A □ YES □ NO □ N/A □ YES □ NO □ N/A □ YES ⊠ NO r 49 CFR §§179.100- 20(a) or 179.200- 24(a), Appendix C, paragraph 3.0, and 49 CFR §179.24 □ YES □ NO ⊠ N/A □ YES □ NO ⊠ N/A □ YES □ NO Chapter 2, paragraph 2.2.10 and 49 CFR §§179.100-4(a) or 179.200-4(a) □ YES □ NO ⊠ N/A □ YES □ NO ⊠ N/A □ YES ⊠ NO f Chapter 2, paragraph 2.2.10 and 49 CFR §180.513(c) □ YES □ NO ⊠ N/A □ YES □ NO ⊠ N/A □ YES □ NO				

Comments:

117) See Question 105.

118) At the time of the audit, it was noted that the facility will not be manufacturing and/or converting tank car tanks.

119) At the time of the audit, it was noted that the facility will not be applying and/or repairing tank car jackets.

120) See Question 119.

ltems		AAR M-1002 or Title 49 CFR Reference	Technical Observation	Document Evaluation	Technical Deficiency	Comments
	Unless approved, in writing, by the contracting authority, are all valves and fittings removed when stripping or applying an interior lining or protective coating? IF approved, in writing provide objective evidence with the B-2 as an attachment.	Appendix L, paragraph 2.2.2	□ YES □ NO ⊠ N/A	□ YES □ NO ⊠ N/A	□ YES ⊠ NO	⊠ YES
122. /	Are the methods prescribed by Appendix L, used for cleaning, application or stripping of linings or coatings? If YES, provide which method(s) in the comment section.	Appendix L, paragraph 2.3	□ YES □ NO ⊠ N/A	□ YES □ NO ⊠ N/A	□ YES ⊠ NO	□ YES
123.	For activities regulated by 49 CFR Part 180: does the facility have	Appendix L, paragraph 3.1	□ YES □ NO ⊠ N/A	□ YES □ NO ⊠ N/A		

	available a qualified coatings inspector?					
124.	For activities regulated by 49 CFR Part 180: are the interior surfaces of tank cars prepared by trained and qualified personnel?	Appendix L, paragraph 3.2	□ YES □ NO ⊠ N/A	□ YES □ NO ⊠ N/A	□ YES ⊠ NO	
125.	For activities regulated by 49 CFR Part 180: are interior coatings and/or linings applied in accordance with the material manufacturer's application procedure and/or the contracting authority's requirements by qualified personnel?	Appendix L, paragraph 3.3	□ YES □ NO ⊠ N/A	□ YES □ NO ⊠ N/A	□ YES ⊠ NO	□ YES
126.	For activities regulated by 49 CFR Part 180: does the facility follow the inspection and test procedure (including acceptance requirements) established by the coating or lining owner?	49 CFR, §180.509(i),	□ YES □ NO ⊠ N/A	□ YES □ NO ⊠ N/A	□ YES ⊠ NO	□ YES
127.	Are the requirements of Appendix L, regarding valves and fittings being met?	Appendix L, paragraph 4.0	□ YES □ NO ⊠ N/A	□ YES □ NO ⊠ N/A	□ YES ⊠ NO	
128.	Are the compliance requirements of Appendix L and inspection and test plan being met?	Appendix L, paragraph 5.0 and 49 CFR, §180.509	□ YES □ NO ⊠ N/A	□ YES □ NO ⊠ N/A	□ YES ⊠ NO	
129.	Are the application/removal reports prepared, retained and furnished to the car owner?	Appendix L, paragraph 6.0	□ YES □ NO ⊠ N/A	□ YES □ NO ⊠ N/A	🗆 YES 🖾 NO	
130.	Are the requirements pertaining to coatings and linings applied for corrosive service being met?	Appendix L, paragraph 7.0	□ YES □ NO ⊠ N/A	□ YES □ NO ⊠ N/A	□ YES ⊠ NO	
2016 N	A-1002 Form Exhibit B-2					

131.	Are the coating/lining qualification stenciling requirements being complied with?	Appendix C, paragraph 2.3.3.3	□ YES □ NO ⊠ N/A	□ YES □ NO ⊠ N/A	□ YES ⊠ NO	
132.	If the facility removes and/or replaces tank car service equipment or replaces gaskets (other than non- pressure hinged manway, fill hole or bottom outlet cap gaskets), does the facility obtain and maintain activity code C6?	Appendix L, paragraph 9.2	□ YES □ NO ⊠ N/A	□ YES □ NO ⊠ N/A	□ YES ⊠ NO	□ YES

Comments:

121) At the time of the audit, it was noted that the facility will not be performing any lining and/or coatings on tank car tanks.

PART 19: 49 CFR HAZARDOUS MATERIALS REGULATION REQUIREMENTS

(THE FOLLOWING ITEMS ARE NOT REQUIRED FOR CERTIFICATION; HOWEVER THEY ARE BEING FURNISHED AS INFORMATION TO FACILITIES PERFORMING TANK CAR ACTIVITIES.)

Items

- **133.** If tank cars containing the residue of a hazardous material are offered for transportation, are shipping papers prepared in accordance with 49 CFR Subparts C and G, Part 172?
- **134.** If tank cars containing the residue of a hazardous material are offered for transportation, are they marked and/or placarded in accordance with 49 CFR Subparts D and F, Part 172?
- **135.** Personnel meeting the definition of a "hazmat employee" in 49 CFR §171.8, must be trained, tested and certified as prescribed by 49 CFR Subpart H, Part 172, including General Awareness or Familiarization; Function-Specific; Safety; and, Security Awareness training. Is the facility aware of these requirements?

- **136.** As prescribed by 49 CFR §179.7(e), tank car facility personnel must be trained, tested and certified regarding the facility's Quality Assurance program and procedures in accordance with Subpart H, Part 172. Is the facility aware of these requirements?
- 137. If applicable to the facility's operations, a transportation Security Plan must be developed and implemented as prescribed by 49 CFR Subpart I, Part 172, and, "hazmat employees" must receive in-depth Security Training as required by 49 CFR §172.704(a)(5),. Is the facility aware of these requirements?
- **138.** Per 49 CFR §180.513(b), Responsibilities of Tank Car Facility; A tank car facility must obtain the permission of the equipment owner before performing work affecting alteration, conversion, repair, or qualification of the owner's equipment per 49 CFR §180.513(b)

PART 20: TDG REGULATIONS AND TRANSPORT CANADA TP14877E STANDARD REQUIREMENTS (THE FOLLOWING ITEMS ARE NOT REQUIRED FOR CERTIFICATION; HOWEVER THEY ARE BEING FURNISHED AS INFORMATION TO FACILITIES PERFORMING TANK CAR ACTIVITIES IN CANADA.)

Items

- **139.** Has the facility registered in accord with Transport Canada TP14877E, section 6.1?
- **140.** If tank cars containing the residue of dangerous goods are offered for transportation, are shipping papers prepared in accordance with Part 3 of the TDG Regulations
- **141.** If tank cars contain the residue of dangerous goods, are they marked and/or placarded in accordance with Part 4 of the TDG Regulations?
- **142.** If tank cars are cleaned and purged of dangerous goods, are identification numbers, commodity names, hazard warnings, placards, etc., removed or covered for compliance with Part 4 of the TDG Regulations?

143. Have personnel received transportation of dangerous goods training as required by Part 6 of the TDG Regulations?

144. Have personnel received Quality Management System training in accord with Transport Canada TP14877E, section 5?

The Technical Inspection Deficiency Report (TIDR) must be used to identify each technical deficiency found during any inspection. This report must be included in the complete report as applicable. The inspector is responsible for handing and processing the Technical Inspection Deficiency Report including the evaluation of the corrective action on technical deficiencies.

SECTION A: FACILITY INFORMATION

- **1.** Name: Salco Products Inc.
- **2.** Address: 1385 101st Street Suite A
- 3. City: Lemont
- 4. State/Province: Illinois
- 5. Zip/Postal Code: 60439

- SECTION B: PRIMARY FACILITY CONTACT
- 7. Name: Kaleb Hoyt

 \boxtimes Yes \square No

- **8.** Title: Quality & Product Application Manager
- **9.** Phone Number: (630) 685-4658
- **10.** Email Address: kaleb_hoyt@salcoproducts.com
- **11.** Responsible for Corrective Action:

6. Country: USA

SECTION C: DEFICIENCY INFORMATION

- **12.** Deficiency Number: H-1-010918-C-01
- **13.** Reference/Requirements: 49CFR 179.7 (b) (6), which states, "Monitoring and control of processes and product characteristics during production."
- 14. Deficiency Identified: During the technical observation of the bubble leak testing of the tank car top pressure plate, the following deficiencies were identified as not being properly monitored;
 The leak test technician was found to be using the incorrect soak and dwell times as identified in the Salco Products Inc. Leak Test Procedure Q-2.15.7, Appendix A Testing Requirements.
 The leak test inspection form Q-2.15.7-1 was not present during leak testing.
- **15.** Response Due Date: 01/28/2018

SECTION D: CORRECTIVE ACTION

16. Clearly define the deficiency identified.During the technical observation of the bubble leak testing of the tank car top pressure plate, the following deficiencies were identified as not being properly monitored; - The leak test technician was found to be using the incorrect soak and dwell times as identified in the Salco Products Inc. Leak Test Procedure Q-2.15.7, Appendix A Testing Requirements.1/10/18		Action Required	Description of Action(s) Taken	Date
	16.	Clearly define the deficiency identified.	During the technical observation of the bubble leak testing of the tank car top pressure plate, the following deficiencies were identified as not being properly monitored; - The leak test technician was found to be using the incorrect soak and dwell times as identified in the Salco Products Inc. Leak Test Procedure Q-2.15.7, Appendix A Testing Requirements.	1/10/18

	Exhibit H-1: Technical Inspection Deficiency Report						
		- The leak test inspection form Q-2.15.7-1 was not present during leak testing.					
17.	Clearly define the action(s) taken for correcting the deficiency	The technician responsible has been removed from leak testing responsibilities at this time. His NDT Level II cert is invalidated until such time that he undergoes the required training hours again to refresh his knowledge of definitions and applications of soak and dwell times.					
		Any potential impact on the quality of the products made using these incorrect soak/dwell times was reviewed. It was determined that using a 15 minute dwell time when the procedure required a 15 minute soak time will not negatively impact final product quality as this method will produce evidence of leaks occurring throughout the 15 minute period which would otherwise only be viewed during the 1 minute dwell. This failure mode is capable of rejecting an acceptable part but not of passing a rejected part so no futher immediate corrective action was necessary.	1/10/18				
18.	Clearly define the root causes that resulted in the deficiency.	The leak test procedure had recently been re-written for inclusion into the new Salco Products QAM. Training was conducted to the new procedure for all test personnel, but the verification of the effectiveness of the training was deemed to be insufficient. This issue was a Salco policy breakdown.	1/17/18				
19.	Clearly define the correction action(s) taken that will eliminate the root cause(s) of the deficiency.	Salco re-administered this training program in-depth and did not accept interview responses as an adequate verification of effectiveness for this procedure, which was a policy breakdown that has been corrected. Training effectiveness was only verified when personnel were observed to understand and comprehend the new procedure and documentation requirements associated with it through functional demonstration.	3/1/18				
20.	Clearly define the follow-up plan(s) that will ensure the effectiveness of the corrective action(s) taken to prevent the deficiency from recurring.	Performance examinations will be administered by the area supervisor, QC manager, or his/her designee at 30, 60, and 90 days from the date of certification. This will ensure that the employee is knowleadgeable and following the NDT test method requirements completely. If the technician	6/1/18				

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t: 4/3/18

SECTION E: INSPECTION EVALUATION INFORMATION

26.	Inspector: Danny L. Liford Jr.		27 Inspection Date: 01/09/2018
28.	Response Received Date: 03/08/2018 29 Response Received Revi		onse Evaluation Date: 03/16/2018 ised by RGA 1/23/2019
30.	Evaluation of Proposed Corrective Action(s):		
	Response(s) Acceptable: 🛛 Yes 🗆 No		

SEC	SECTION F: INSPECTION VERIFICATION INFORMATION					
31.	I. Inspector: 32. Inspection Date:					
33.	. Verification of Corrective Action(s) Implemented and Effective					
	Response(s) Acceptable: Yes No					
34.	Verification Date:					
35.	Deficiency Closed: \Box Yes \Box No	36. Close	d Date:			

The Technical Inspection Deficiency Report (TIDR) must be used to identify each technical deficiency found during any inspection. This report must be included in the complete report as applicable. The inspector is responsible for handing and processing the Technical Inspection Deficiency Report including the evaluation of the corrective action on technical deficiencies.

SECTION A: FACILITY INFORMATION

- **1.** Name: Salco Products Inc.
- **2.** Address: 1385 101st Street Suite A
- 3. City: Lemont
- 4. State/Province: Illinois
- 5. Zip/Postal Code: 60439

- SECTION B: PRIMARY FACILITY CONTACT
- 7. Name: Kaleb Hoyt

 \boxtimes Yes \square No

- **8.** Title: Quality & Product Application Manager
- **9.** Phone Number: (630) 685-4658
- **10.** Email Address: kaleb_hoyt@salcoproducts.com
- **11.** Responsible for Corrective Action:

6. Country: USA

SECTION C: DEFICIENCY INFORMATION

- **12.** Deficiency Number: H-1-010918-C-02
- 13. Reference/Requirements:
 a.) MSRP M-1002, Section C III, Appendix T, paragraph 1.18 "NDT Procedure Requirements." and paragrpah 9.0 "Visual Inspection"
 b.) The provided Salco Products Inc. Direct Visual Weld Inspection Procedure, Q-1.15.4
 c.) 49CFR 179.7 (b) (5)
- 14. Deficiency Identified: The Salco Direct Visual Weld Inspection Procedure identified above makes the following statement in Section 2.0 "Scope", paragraph 2.2;
 "This procedure doesn't apply to the welding of tank car tanks, See Appendix W in AAR specification for Tank Cars M-1002, Section C, part III." MSRP M-1002 Section C, part III, Appendix W does not meet the NDT Procedure Requirements of Appendix T, paragraph 1.18.
- **15.** Response Due Date: 01/28/2018

SECTION D: CORRECTIVE ACTIONAction RequiredDescription of Action(s) TakenDate16. Clearly define the deficiency
identified.The Salco Direct Visual Weld Inspection Procedure
identified above makes the following statement in
Section 2.0 "Scope", paragraph 2.2;
"This procedure doesn't apply to the welding of tank1/10/18Exhibit H-1, ver. 1.2

	Exhibit H-1: Technical Inspection Deficiency Report						
	car tanks, See Appendix W in AAR specification for Tank Cars M-1002, Section C, part III." MSRP M-1002 Section C, part III, Appendix W does not meet the NDT Procedure Requirements of Appendix T, paragraph 1.18.						
17.	Clearly define the action(s) taken for correcting the deficiency	(s) taken ncy Salco procedure Q-2.15.4 Direct Visual Weld Inspection was revised to revision A to add the missing requirements. The subject matter experts reviewed and accepted the revisions for compliance.			1/19/18		
18.	Clearly define the root causes that resulted in the deficiency. Welding and NDT procedures are authored and reviewed only by the person(s) holding those certifications. Additional reviews are not typically performed. Industry personnel certified to ASNT or AWS become the subject matter experts. Because of this, these individuals generate and approve their own procedures. These issues were a Salco policy breakdown that has been addressed and corrected			1/19/18			
19.	Clearly define the correction action(s) taken that will eliminate the root cause(s) of the deficiency.	A review process has been implemented to combine the subject matter experts for both NDT and welding.			4/2/18		
20.	Clearly define the follow-up plan(s) that will ensure the effectiveness of the corrective action(s) taken to prevent the deficiency from recurring.			4/2/18			
21.	Date when corrective action(s) will b	e achieve	ed: 4/2/18				
22.	Submitted By: Kaleb Hoyt			23 Date Submitted: 4/3/18			
24.	Management Approval: Tom Delafoss	se	25 Date Ap	proved by Management: 4/3/18	3		
L		I					
SEC	CTION E: INSPECTION EVALUAT	ION INF	ORMATIO	N			
26.	Inspector: Danny L. Liford Jr.			27 Inspection Date: 01/09/201	8		
28.	Response Received Date: 03/08/2018 (2nd) 29 Response Evaluation Date: 03/16/20 Revised RGA 1/23/2019			018			
30.	Evaluation of Proposed Corrective A	Action(s):					
	Response(s) Acceptable: 🛛 Yes 🛛	∃ No					

	Exhibit H-1: Technical Inspection Deficiency Report					
SEC	TION F: INSPECTION VERIFICATION INF	ORMATIC	DN			
31.	I. Inspector: 32. Inspection Date:					
33.	Verification of Corrective Action(s) Implemente	ed and Effe	ective			
	Response(s) Acceptable: Yes No					
34.	Verification Date:					
35.	Deficiency Closed: \Box Yes \Box No	36. Close	ed Date:			

The Technical Inspection Deficiency Report (TIDR) must be used to identify each technical deficiency found during any inspection. This report must be included in the complete report as applicable. The inspector is responsible for handing and processing the Technical Inspection Deficiency Report including the evaluation of the corrective action on technical deficiencies.

SECTION A: FACILITY INFORMATION

- **1.** Name: Salco Products Inc.
- **2.** Address: 1385 101st Street Suite A
- 3. City: Lemont

6. Country: USA

- 4. State/Province: Illinois
- 5. Zip/Postal Code: 60439

SECTION B: PRIMARY FACILITY CONTACT

- 7. Name: Kaleb Hoyt
- **8.** Title: Quality & Product Application Manager
- **9.** Phone Number: (630) 685-4658
- **10.** Email Address: kaleb_hoyt@salcoproducts.com
- **11.** Responsible for Corrective Action:
- 🛛 Yes 🗆 No

SECTION C: DEFICIENCY INFORMATION

- **12.** Deficiency Number: H-1-010918-C-03
- 13. Reference/Requirements: 49CFR 180.513 (b)
- 14. Deficiency Identified: During this technical inspection/audit the permission of the equipment owner required before performing work of the owner's equipment could not be provided for the following work;
 The reconditioning of a 22" Acid cover assembly or pressure plate.
- **15.** Response Due Date: 01/28/2018

SEC	SECTION D: CORRECTIVE ACTION						
	Action Required	Description of Action(s) Taken	Date				
16.	Clearly define the deficiency identified.	During this technical inspection/audit the permission of the equipment owner required before performing work of the owner's equipment could not be provided for the following work; - The reconditioning of a 22" Acid cover assembly or pressure plate.	1/10/18				
17.	Clearly define the action(s) taken for correcting the deficiency	Salco Products contacted Axiall during the course of the audit and received a signed Tank Car Owner/Lessee Repair Permission Letter in	1/11/18				
Exh	ibit H-1, ver. 1.2	Pa	age 1 of 3				

		accorda letter aj cover p replace will be the Kyn Salco's UHMW Attache Owner/	ance with 40C oplies to main lates for inspe- ment. It speci- sent to Salco's nar, re-coating approved supp VPE lining at S ed is a signed of Lessee Repain	FR 180.513 requirements. This tenance of acid car top fittings action, repair, and/or fies that top fittings assemblies a Lemont office for evalation of of Kynar (as-needed) through plier, and re-application of the Salco. copy of the Tank Car Permission Letter.	
18.	Clearly define the root causes that resulted in the deficiency.	Salco did not comply with 49 CFR 180.513(b) requirements. This was an oversight because Salco believed this requirement only effected repair facilities. Until the time of our certification audit, the Lemont staff was unaware that this section of the CFR affected our operations, which clearly it does. This issue was a Salco policy breakdown.		1/18/18	
19.	Clearly define the correction action(s) taken that will eliminate the root cause(s) of the deficiency.	The cur Procedure require work" to require CFR 18	The current Salco Products Customer Support Procedure CSPM2.23 will be updated to include the requirement for all sales orders involving "repair work" to be reviewed for any owner approval requirements that would require compliance with 49 CFR 180.513(b).		4/9/18
20.	Clearly define the follow-up plan(s) that will ensure the effectiveness of the corrective action(s) taken to prevent the deficiency from recurring.	The customer support contract review requir ensures that customer acceptance of any rep		t group will be trained to the rements of CSPM2.23 that r approvals are obtained prior to pair work.	7/9/18
21.	Date when corrective action(s) will b	e achiev	/ed: 4/9/18		
22.	Submitted By: Kaleb Hoyt			23 Date Submitted: 4/3/18	
24.	Management Approval: Tom Delafoss	se	25 Date Ap	oproved by Management: 4/3/18	
SEC	CTION E: INSPECTION EVALUAT	ION IN	FORMATIO	N	
26.	Inspector: Danny L. Liford Jr.			27 Inspection Date: 01/09/2018	

	Exhibit H-1: Technical Inspection Deficiency Report					
	Response(s) Acceptable: Yes No					
SEC	TION F: INSPECTION VERIFICATION INF	ORMATIC	ON			
31.	Inspector:		32. Inspection Date:			
33.	Verification of Corrective Action(s) Implemente	ed and Effe	ective			
	Response(s) Acceptable: 🗆 Yes 🗆 No					
34.	Verification Date:					
35.	Deficiency Closed: □ Yes □ No 36. Closed Date:					

The Technical Inspection Deficiency Report (TIDR) must be used to identify each technical deficiency found during any inspection. This report must be included in the complete report as applicable. The inspector is responsible for handing and processing the Technical Inspection Deficiency Report including the evaluation of the corrective action on technical deficiencies.

SECTION A: FACILITY INFORMATION

- **1.** Name: Salco Products Inc.
- **2.** Address: 1385 101st Street Suite A
- 3. City: Lemont
- 4. State/Province: Illinois
- 5. Zip/Postal Code: 60439

SECTION B: PRIMARY FACILITY CONTACT

7. Name: Kaleb Hoyt

 \boxtimes Yes \square No

- **8.** Title: Quality & Product Application Manager
- **9.** Phone Number: (630) 685-4658
- **10.** Email Address: kaleb_hoyt@salcoproducts.com
- **11.** Responsible for Corrective Action:

6. Country: USA

SECTION C: DEFICIENCY INFORMATION

12. Deficiency Number: H-1-010918-C-04

13. Reference/Requirements: a.) 49CFR 179.7 (b) (3) / Salco Products Inc. Maintenance and Testing of Angle Valve Procedure Q-2.15.8, Original Revision b.) 49 CFR 180.513 (b) c.) ARI Inspection & Maintenance Bulletin (IMB)

14. Deficiency Identified:

a.) During this technical inspection/audit and on the initial observation of the inspection and rebuild of the ARI 1316 600psi Angle Valve, the required NPT ring and plug gauges were not used per provided procedure.

b.) The initial maintenance, rebuild and testing of the ARI 1316 Angle Valve was performed with a unapproved procedure. The Salco facility did not have equipment owner permission to use Salco procedure Q-2.15.8 or the ARI IMB instruction which were both used for the initial observation.

c.) The IMB identified above was used for the reassembly of the ARI 1316 Angle Valve. The packing rings were initially mis-identified. This mis-identification and the subsequent tightening of the packing gland rendered this valve inoperable.

15. Response Due Date: 01/28/2018

SECTION D: CORRECTIVE ACTION

Exhibit H-1, ver. 1.2

	Action Required		Description	n of Action(s) Taken	Date
16.	Clearly define the deficiency identified.	During initial of the AR NPT rin provide breakdo	this technical observation of I 1316 600 psi ng and plug ga ed procedure. T own that has b	inspection/audit and on the the inspection and rebuild of Angle Valve, the required uges were not used per These issues were a policy een addressed and corrected	1/9/18
17.	Clearly define the action(s) taken for correcting the deficiency	Q-2.15 prior to erroneo threads Americ In addit Pressur for adeu this tim	prior to completion of the audit. The procedure erroneously required that the Unified National screw threads on the body insert be inspected using American National Pipe Thread acceptance criteria. In addition, the written valve rebuild procedure for Pressure Relief Valves, Q-2.15.9, was also reviewed for adequacy of the rebuild/reconditioning process at this time and was determined to be suitable as-is.		
18.	Clearly define the root causes that resulted in the deficiency.	At the time of the audit, the requirements of the Salco Q-2.15.8 procedure were reviewed for thread gage requirements in comparison to those of the ARI IMB. It was found that the Salco procedure mis- stated the acceptance criteria for the body insert thread by referencing the wrong acceptance standard. This issue was a Salco policy breakdown.		1/19/18	
19.	Clearly define the correction action(s) taken that will eliminate the root cause(s) of the deficiency.	Future valve rebuilding procedures, typically authored by Salco's designated NDT level III, will be reviewed by the Salco subject matter expert committee prior to release.		4/2/18	
20.	Clearly define the follow-up plan(s) that will ensure the effectiveness of the corrective action(s) taken to prevent the deficiency from recurring.	Salco Products ASNT Level III's along with AWS CWI/SCWI will be utilized to form the subject matter expert review committee for future welding, NDT, and valve reconditioning related matters.		4/2/18	
21.	Date when corrective action(s) will b	e achiev	ved: 4/2/18	·	
22.	Submitted By: Kaleb Hoyt			23 Date Submitted: 3/8/18	
24.	Management Approval: Tom Delafoss	se	25 Date Ap	proved by Management: 3/8/18	}

SECTION E: INSPECTION EVALUATION INFORMATION

26.	Inspector: Danny L. Liford Jr.		27 Inspection Date: 01/09/2018
28.	Response Received Date: 03/08/2018 (2nd)	29 Respo Revi	onse Evaluation Date: 03/16/2018 ised 1/23/2019
30.	Evaluation of Proposed Corrective Action(s):		
	Response(s) Acceptable: 🛛 Yes 🛛 No		

SEC	SECTION F: INSPECTION VERIFICATION INFORMATION					
31.	Inspector:		32. Inspection Date:			
33.	Verification of Corrective Action(s) Implemented and Effective					
	Response(s) Acceptable: Yes No					
34.	Verification Date:					
35.	Deficiency Closed: Ves No	36. Close	d Date:			

The Technical Inspection Deficiency Report (TIDR) must be used to identify each technical deficiency found during any inspection. This report must be included in the complete report as applicable. The inspector is responsible for handing and processing the Technical Inspection Deficiency Report including the evaluation of the corrective action on technical deficiencies.

SECTION A: FACILITY INFORMATION

- **1.** Name: Salco Products Inc.
- **2.** Address: 1385 101st Street Suite A
- 3. City: Lemont
- 4. State/Province: Illinois
- 5. Zip/Postal Code: 60439

SECTION B: PRIMARY FACILITY CONTACT

7. Name: Kaleb Hoyt

 \boxtimes Yes \square No

- **8.** Title: Quality & Product Application Manager
- **9.** Phone Number: (630) 685-4658
- **10.** Email Address: kaleb_hoyt@salcoproducts.com
- **11.** Responsible for Corrective Action:

6. Country: USA

SECTION C: DEFICIENCY INFORMATION

- **12.** Deficiency Number: H-1-010918-C-04
- **13.** Reference/Requirements:

a.) 49CFR 179.7 (b) (3) / Salco Products Inc. Maintenance and Testing of Angle Valve Procedure Q-2.15.8, Original Revision
b.) 49 CFR 180.513 (b)
c.) ARI Inspection & Maintenance Bulletin (IMB)

14. Deficiency Identified:

a.) During this technical inspection/audit and on the initial observation of the inspection and rebuild of the ARI 1316 600psi Angle Valve, the required NPT ring and plug gauges were not used.

b.) The initial maintenance, rebuild and testing of the ARI 1316 Angle Valve was performed with a unapproved procedure. The Salco facility did not have equipment owner permission to use Salco procedure Q-2.15.8 or the ARI IMB instruction which were both used for the initial observation.

c.) The IMB identified above was used for the reassembly of the ARI 1316 Angle Valve. The packing rings were initially mis-identified. This mis-identification and the subsequent tightening of the packing gland rendered this valve inoperable.

15. Response Due Date: 01/28/2018

SECTION D: CORRECTIVE ACTION

Exhibit H-1, ver. 1.2

	Action Required		Descriptior	n of Action(s) Taken	Date
16.	Clearly define the deficiency identified.	The ini ARI 13 unappro have eq procedu which v	tial maintenan 16 Angle Valv oved procedur juipment owne ure Q-2.15.8 o were both used	ce, rebuild and testing of the ve was performed with a e. The Salco facility did not er permission to use Salco r the ARI IMB instruction I for the initial observation.	1/9/18
17.	Clearly define the action(s) taken for correcting the deficiency	Owner with Sa with 49 comple	Owner approval for valve rebuilds in accordance with Salco Procedure Q-2.15.8 and in compliance with 49 CFR 180.513(b) was received prior to completion of the audit by Chemtrade.		1/10/18
18.	Clearly define the root causes that resulted in the deficiency.	Salco h activitio submitt finalize was uno breakdo	Salco had not yet started ARI angle valve rebuild activities for Chemtrade. The procedure had been submitted for review and approval which was not finalized until such time that the audit demonstration was underway. This issue was a Salco policy breakdown that has been addressed and corrected.		1/19/18
19.	Clearly define the correction action(s) taken that will eliminate the root cause(s) of the deficiency.	The current Salco Products Customer Support Procedure CSPM2.23 will be updated to include the requirement for all sales orders involving "repair work" to be reviewed for any owner approval requirements that would require compliance with 49 CFR 180.513(b).		4/9/18	
20.	Clearly define the follow-up plan(s) that will ensure the effectiveness of the corrective action(s) taken to prevent the deficiency from recurring.	The customer support group will be trained to the contract review requirements of CSPM2.23 that ensures that customer approvals are obtained prior to acceptance of any repair work.		7/9/18	
21.	Date when corrective action(s) will b	e achiev	/ed: 4/9/18	`	
22.	Submitted By: Kaleb Hoyt			23 Date Submitted: 4/3/18	
24.	Management Approval: Tom Delafoss	se	25 Date App	proved by Management: 4/3/18	,

SE	SECTION E: INSPECTION EVALUATION INFORMATION					
26.	Inspector: Danny L. Liford Jr.		27 Inspection Date: 01/09/2018			
28.	Response Received Date: 03/08/2018 (2nd)	29 Response Evaluation Date: 03/16/2018 Revised RGA 1/23/2019				
Exhibit H-1, ver. 1.2						

Exhibit H-1: Technical Inspection Deficiency Report 30. Evaluation of Proposed Corrective Action(s): Response(s) Acceptable: □ Yes ☑ No SECTION F: INSPECTION VERIFICATION INFORMATION 31. Inspector: 32. Inspection Date: 33. Verification of Corrective Action(s) Implemented and Effective Response(s) Acceptable: □ Yes □ No 34. Verification Date: 35. Deficiency Closed: □ Yes □ No	Exhibit H-1: Technical Inspection Deficiency Report 30. Evaluation of Proposed Corrective Action(s): Response(s) Acceptable: Yes SECTION F: INSPECTION VERIFICATION INFORMATION 31. Inspector: 32. Inspection Date: 33. Verification of Corrective Action(s) Implemented and Effective Response(s) Acceptable: Yes No 34. Verification Date: 35. Deficiency Closed: Yes No 36. Closed Date:				
30. Evaluation of Proposed Corrective Action(s): Response(s) Acceptable: Yes No SECTION F: INSPECTION VERIFICATION INFORMATION 31. Inspector: 32. Inspection Date: 33. Verification of Corrective Action(s) Implemented and Effective Response(s) Acceptable: Yes No 34. Verification Date: 35. Deficiency Closed: Yes No 36. Closed Date:	30. Evaluation of Proposed Corrective Action(s): Response(s) Acceptable: Yes ⊠ No SECTION F: INSPECTION VERIFICATION INFORMATION 31. Inspector: 32. Inspection Date: 33. Verification of Corrective Action(s) Implemented and Effective Response(s) Acceptable: Yer No 34. Verification Date: 35. Deficiency Closed: Yes No 36. Closed Date:		Exhibit H-1: Technical Ins	pection	Deficiency Report
Response(s) Acceptable: Yes SECTION F: INSPECTION VERIFICATION INFORMATION 31. Inspector: 32. Inspection Date: 33. Verification of Corrective Action(s) Implemented and Effective Response(s) Acceptable: Yes No 34. Verification Date: 35. Deficiency Closed: Yes No 36. Closed Date:	Response(s) Acceptable: Yes SECTION F: INSPECTION VERIFICATION INFORMATION 31. Inspector: 32. Inspector: 32. Inspection Date: 33. Verification of Corrective Action(s) Implemented and Effective Response(s) Acceptable: Yerification Date: 34. Verification Date: 35. Deficiency Closed: Yes No 36. Closed Date:	30.	Evaluation of Proposed Corrective Action(s):		
SECTION F: INSPECTION VERIFICATION INFORMATION 31. Inspector: 32. Inspection Date: 33. Verification of Corrective Action(s) Implemented and Effective Response(s) Acceptable: Yes 34. Verification Date: 35. Deficiency Closed: Yes No 36. Closed Date:	SECTION F: INSPECTION VERIFICATION INFORMATION 31. Inspector: 32. Inspection Date: 33. Verification of Corrective Action(s) Implemented and Effective Response(s) Acceptable: Yes No 34. Verification Date: 35. Deficiency Closed: Yes No 36. Closed Date:		Response(s) Acceptable: 🛛 Yes 🛛 No		
SECTION F: INSPECTION VERIFICATION INFORMATION 31. Inspector: 32. Inspection Date: 33. Verification of Corrective Action(s) Implemented and Effective Response(s) Acceptable: Yes No 34. Verification Date: 35. Deficiency Closed: Yes No 36. Closed Date:	SECTION F: INSPECTION VERIFICATION INFORMATION				
31. Inspector: 32. Inspection Date: 33. Verification of Corrective Action(s) Implemented and Effective Response(s) Acceptable: Yes □ No 34. Verification Date: 36. Closed Date: 35. Deficiency Closed: □ Yes □ No 36. Closed Date:	31. Inspector: 32. Inspection Date: 33. Verification of Corrective Action(s) Implemented and Effective Response(s) Acceptable: Yes No 34. Verification Date:	SEC	TION F: INSPECTION VERIFICATION INF	ORMATI	ON
 33. Verification of Corrective Action(s) Implemented and Effective Response(s) Acceptable: □ Yes □ No 34. Verification Date: 35. Deficiency Closed: □ Yes □ No 36. Closed Date: 	 33. Verification of Corrective Action(s) Implemented and Effective Response(s) Acceptable: Yes No 34. Verification Date: 35. Deficiency Closed: Yes No 36. Closed Date: 	31.	Inspector:		32. Inspection Date:
Response(s) Acceptable: Yes No 36. Closed Date:	Response(s) Acceptable: Yes No 36. Closed Date:	33.	Verification of Corrective Action(s) Implement	ed and Eff	ective
 34. Verification Date: 35. Deficiency Closed: □ Yes □ No 36. Closed Date: 	 34. Verification Date: 35. Deficiency Closed: □ Yes □ No 36. Closed Date: 		Response(s) Acceptable: □ Yes □ No		
35. Deficiency Closed: □ Yes □ No 36. Closed Date:	35. Deficiency Closed: Yes No 36. Closed Date:	34.	Verification Date:		
		35.	Deficiency Closed: Yes No	36. Close	ed Date:

The Technical Inspection Deficiency Report (TIDR) must be used to identify each technical deficiency found during any inspection. This report must be included in the complete report as applicable. The inspector is responsible for handing and processing the Technical Inspection Deficiency Report including the evaluation of the corrective action on technical deficiencies.

SECTION A: FACILITY INFORMATION

- **1.** Name: Salco Products Inc.
- **2.** Address: 1385 101st Street Suite A
- 3. City: Lemont
- 4. State/Province: Illinois
- 5. Zip/Postal Code: 60439

SECTION B: PRIMARY FACILITY CONTACT

7. Name: Kaleb Hoyt

 \boxtimes Yes \square No

- **8.** Title: Quality & Product Application Manager
- **9.** Phone Number: (630) 685-4658
- **10.** Email Address: kaleb_hoyt@salcoproducts.com
- **11.** Responsible for Corrective Action:

6. Country: USA

SECTION C: DEFICIENCY INFORMATION

- **12.** Deficiency Number: H-1-010918-C-04
- **13.** Reference/Requirements:

a.) 49CFR 179.7 (b) (3) / Salco Products Inc. Maintenance and Testing of Angle Valve Procedure Q-2.15.8, Original Revision
b.) 49 CFR 180.513 (b)
c.) ARI Inspection & Maintenance Bulletin (IMB)

14. Deficiency Identified:

a.) During this technical inspection/audit and on the initial observation of the inspection and rebuild of the ARI 1316 600psi Angle Valve, the required NPT ring and plug gauges were not used.

b.) The initial maintenance, rebuild and testing of the ARI 1316 Angle Valve was performed with a unapproved procedure. The Salco facility did not have equipment owner permission to use Salco procedure Q-2.15.8 or the ARI IMB instruction which were both used for the initial observation.

c.) The IMB identified above was used for the reassembly of the ARI 1316 Angle Valve. The packing rings were initially mis-identified. This mis-identification and the subsequent tightening of the packing gland rendered this valve inoperable.

15. Response Due Date: (01/28/2018) - Accept 02/05/2018

SECTION D: CORRECTIVE ACTION

Exhibit H-1, ver. 1.2

	Action Required	Description of Action(s) Taken	Date
16.	Clearly define the deficiency identified.	The IMB identified above was used for the reassembly of the ARI 1316 Angle Valve. The packing rings were initially mis-identified. This mis- identification and the subsequent tightening of the packing gland rendered this valve inoperable.	1/9/18
17.	Clearly define the action(s) taken for correcting the deficiency	At the time of the audit, the requirements of the Salco Q-2.15.8 procedure were reviewed for installation and tightening specifications for the stem packing seals and revised to add clarity regarding non-PTFE seals. Q-2.15.8 was corrected and Revision A was released prior to completion of the audit. The misidentification of packing seals caused a temporary binding of the valve until the torque on packing seal bolts was loosened, no components were damaged as a result of misidentification. No immediate action was required for the valve and components outside of readjusting the torque value on the packing seals. Note: salco technician caught the misidentification at the time of assembly and corrected it through review of the written procedure.	1/10/18
18.	Clearly define the root causes that resulted in the deficiency.	The inconsistency was not found prior to initial release of the procedure due to the inadequate review of content for suitability of the process. As stated in H-1-010918-C-04(a), the review process used for new procedure release was found to be lacking adequate review by personnel other than the author prior to release. This issue was a Salco policy breakdown that has been addressed and corrected.	1/19/18
19.	Clearly define the correction action(s) taken that will eliminate the root cause(s) of the deficiency.	Future procedures will be reviewed by Salco's subject matter experts prior to release.	2/23/18
20.	Clearly define the follow-up plan(s) that will ensure the effectiveness of the corrective action(s) taken to prevent the deficiency from recurring.	Salco Products ASNT Level III's along with AWS CWI/SCWI will be utilized to form the subject matter expert review committee for future welding, NDT, and valve reconditioning related matters.	4/2/18
21.	Date when corrective action(s) will b	e achieved: 2/23/18	
Exh	ibit H-1, ver. 1.2	Pa	age 2 of 3

	Exhibit H-1: Technical In	spection Deficiency Report
22.	Submitted By: Kaleb Hoyt	23 Date Submitted: 4/3/18
24.	Management Approval: Tom Delafosse	25 Date Approved by Management: 4/3/18
SE	CTION E: INSPECTION EVALUATION IN	IFORMATION
26.	Inspector: Danny L. Liford Jr.	27 Inspection Date: 01/09/2018
28.	Response Received Date: 01/27/2018	29 Response Evaluation Date: 02/05/2018 Revised RGA 1/23/2019
30.	Evaluation of Proposed Corrective Action(s	s):
	Response(s) Acceptable: 🛛 Yes 🗌 No	
SE	CTION F: INSPECTION VERIFICATION I	NFORMATION
31.	Inspector:	32. Inspection Date:
31. 33.	Inspector: Verification of Corrective Action(s) Impleme	32. Inspection Date:
31. 33.	Inspector: Verification of Corrective Action(s) Implement Response(s) Acceptable: \[Yes \[D No \]	32. Inspection Date:
31. 33. 34.	Inspector: Verification of Corrective Action(s) Impleme Response(s) Acceptable: Yes No Verification Date:	32. Inspection Date:

The Technical Inspection Deficiency Report (TIDR) must be used to identify each technical deficiency found during any inspection. This report must be included in the complete report as applicable. The inspector is responsible for handing and processing the Technical Inspection Deficiency Report including the evaluation of the corrective action on technical deficiencies.

SECTION A: FACILITY INFORMATION

- **1.** Name: Salco Products Inc.
- **2.** Address: 1385 101st Street Suite A
- 3. City: Lemont
- 4. State/Province: Illinois
- 5. Zip/Postal Code: 60439

SECTION B: PRIMARY FACILITY CONTACT

7. Name: Kaleb Hoyt

 \boxtimes Yes \square No

- **8.** Title: Quality & Product Application Manager
- **9.** Phone Number: (630) 685-4658
- **10.** Email Address: kaleb_hoyt@salcoproducts.com
- **11.** Responsible for Corrective Action:

6. Country: USA

SECTION C: DEFICIENCY INFORMATION

- **12.** Deficiency Number: H-1-010918-C-05
- 13. Reference/Requirements:
 a.) 49CFR 179.7 (b) (3)
 b.) MSRP M-1002 Section C part III, Appendix W, Essential variable paragraph 15.2.7.3

14. Deficiency Identified:

* At the time of this audit/inspection it was noted that the Salco technician applying the hazarsolve lining/coating via plastic friction welding was preheating the joint to be welded to a temperature of 159 degrees Fahrenheit. The identified procedure required the weld surface to be preheated to a temperature range of 160 degrees up to 180 degrees Fahrenheit.

* At the time of the audit/inspection it was noted during a review of the floor job traveler for job orders that obsolete procedures were referenced.

* At the time of the audit/inspection it was noted that the Appendix W wedling technician deviated from the essential varibles in the identified Appendix W weld procedure specification while welding on a manway nozzle at a wire feed speed of 243 and 250 inches per minute. The required wire feed speed shown on the qualified WPs is 336 minimum to 454 maximum inches per minute. Also noted was that while welding outside the parameters of the wire feed speed that the amps were below the required limitation of the qualified WPS.

15. Response Due Date: 01/28/2018

Exhibit H-1, ver. 1.2

SEC	CTION D: CORRECTIVE ACTION		
	Action Required	Description of Action(s) Taken	Date
16.	Clearly define the deficiency identified.	At the time of this audit/inspection it was noted that the Salco technician applying the hazarsolve lining/coating via plastic friction welding was preheating the joint to be welded to a temperature of 159 degrees Fahrenheit. The identified procedure required the weld surface to be preheated to a temperature range of 160 degrees up to 180 degrees Fahrenheit.	1/10/18
17.	Clearly define the action(s) taken for correcting the deficiency	Prior to the audit, there was not a defined preheat temperature for fusion welding of the pipe to the flange. Because of this procedure DSS 3 was revised to add the fusion weld temperature range days before the start of the audit. DSS 3 was added to the traveler when siphon pipe orders are generated. Actual temperatures are now being recorded on a log sheet. The Hazarsolve lined fittings plates subject to this nonconformance are 100% spark tested per Q- 2.15.11 and 100% leak tested per Q-2.15.7 to verify effectiveness of the fusion weld. Salco considers that no recall of product is warranted due to the additional testing and verification undertaken.	1/10/18
18.	Clearly define the root causes that resulted in the deficiency.	Prior to the audit, Salco had not identified this parameter as an essential variable in this process. The operator would preheat based on feel of the material prior to fusion welding the pipe to the flange. Because the operator was a part of the development of the procedure, DSS 3 as well as the testing for determination of the preheat temperature range, although rare, we believe operator error is the root cause in this case. This root cause analysis identified an additional issue in which there was not previously an effective solution in place to require the operator to document the preheat temperature at the time of the fusion welding. Overall we determined that these issues were a Salco policy breakdown that has been	1/18/18

		1			
		address	sed and correct	ted.	
19.	Clearly define the correction action(s) taken that will eliminate the root cause(s) of the deficiency.	Salco h used fo require This re- manage in-proc All fric have be revised effectiv review	as revised the r friction weld ment for docu quires review er prior to pass ess inspection tion weld oper een retrained to in-process for veness for docu of procedures	in-process inspection sheet led components to include a menting preheat temperatures. and sign-off by a supervisor or sing through final review of the form. rators that perform this work to the procedure using this rm with verification of training umentation and proper use and at points of use.	3/30/18
20.	Clearly define the follow-up plan(s) that will ensure the effectiveness of the corrective action(s) taken to prevent the deficiency from recurring.	The area supervisor now reviews and signs off on all in-process inspection forms to ensure continued compliance to the preheat ranges specified in the Salco procedures for plastic friction welding.		3/30/18	
21.	Date when corrective action(s) will be achieved: 3/30/18				
22.	Submitted By: Kaleb Hoyt			23 Date Submitted: 4/3/18	
24.	Management Approval: Tom Delafoss	se	25 Date Ap	proved by Management: 4/3/18	3

SECTION E: INSPECTION EVALUATION INFORMATION

26.	Inspector: Danny L. Liford Jr.		27 Inspection Date: 01/09/2018
28.	Response Received Date: 03/08/2018 (2nd)	29 Respo Revi	onse Evaluation Date: 03/16/2018 ised RGA 1/23/2019
30.	Evaluation of Proposed Corrective Action(s):	·	
	Response(s) Acceptable: 🛛 Yes 🗵 No		

SECTION F: INSPECTION VERIFICATION INFORMATION					
31.	Inspector:	32. Inspection Date:			
33.	. Verification of Corrective Action(s) Implemented and Effective				
	Response(s) Acceptable: 🗆 Yes 🗆 No				
Exhi	bit H-1, ver. 1.2		Page 3 of 4		

Exhibit H-1: Technical Inspection Deficiency Report					
34.	Verification Date:				
35.	Deficiency Closed: \Box Yes \Box No	36. Closed Date:			

The Technical Inspection Deficiency Report (TIDR) must be used to identify each technical deficiency found during any inspection. This report must be included in the complete report as applicable. The inspector is responsible for handing and processing the Technical Inspection Deficiency Report including the evaluation of the corrective action on technical deficiencies.

	SECTION B: PRIMARY FACILITY CONTACT		
	7.	Name: Kaleb Hoyt	
	8.	Title: Quality & Product Application Manager	
	9.	Phone Number: (630) 685-4658	
	10.	Email Address: kaleb_hoyt@salcoproducts.com	
	11.	Responsible for Corrective Action:	
		⊠ Yes □ No	
SECTION A: FACILITY INFORMATION			
1. Name: Salco Products Inc.			
2. Address: 1385 101st Street Suite A			
3. City: Lemont			
4. State/Province: Illinois			
5. Zip/Postal Code: 60439			
6. Country: USA			

SECTION C: DEFICIENCY INFORMATION

- **12.** Deficiency Number: H-1-010918-C-06
- 13. Reference/Requirements: MSRP M-1002 Section CIII, Appendix B, paragraph 2.1.1 / Table B.1
- **14.** Deficiency Identified: At the time of this audit/inspection it was noted that the facility is receiving manway cover pressure plates from vendor Wisconsin Metal Fab. This facility is also receiving a hinged manway cover from vendor Peterson Manufacturing. Neither of the two identified manufacturers are certified facilities.
- **15.** Response Due Date: 01/28/2018

SECTION D: CORRECTIVE ACTION								
Action Required			Description of Action(s) Taken			Date		
16.	Clearly define the deficiency identified.	See iter	See item 14.			1/9/18		
17.	Clearly define the action(s) taken for correcting the deficiency	Interna unfami 1002, A	Internal audits were conducted by staff that were unfamiliar with the technical requirements of M- 1002, Appendix B.			3/6/18		
18.	Clearly define the root causes that resulted in the deficiency.	Why 1: left up were no require Interna with th these is No dire regulate	Why 1: Purchasing requirements for closures were left up to Salco's purchasing department by staff that were not as familiar with all industry and regulatory requirements as others in the company were. Why 2: Internal audits were conducted by staff unfamiliar with the technical requirements. Why 3: Both of these issues were Salco policy breakdowns. Why 4: No direction from management for achieving regulatory compliance.			5/9/19		
19.	Clearly define the correction action(s) taken that will eliminate the root cause(s) of the deficiency.	Purchas were w	Purchasing requirements and internal audit policies were written and implemented.			3/15/18		
20.	Clearly define the follow-up plan(s) that will ensure the effectiveness of the corrective action(s) taken to prevent the deficiency from recurring.	Since of in Janu strengtl improv traceab equipm interna qualifie being s industr key sta facilitie	our initial M-10 ary 2018 Salco hen our compl ements in even ility to materia ent, parts and l audits are bei ed certified aud trengthened th y and regulato ff are aware of es operation an	002/M-1003 cer o has continued iance with proc by department the als, personal, pre equipment. Going conducted be ditors. Overall co at covers the re ry rules changes any changes the d regulatory co	tification audit working to ess nat provides ocess, ng forward our y trained and our training is view of all s to ensure our at effect our mpliance.	3/15/18		
21.	Date when corrective action(s) will be achieved: March 15, 2018							
22.	Submitted By: Kaleb Hoyt			23 Date Submitted: 3/8/18				
24.	Management Approval: Tom Delafosse 25 Date Ap			proved by Mar	nagement: 5/9/19)		

SECTION E: INSPECTION EVALUATION INFORMATION

Exhibit H-1, ver. 1.2

Exhibit H-1: Technical Inspection Deficiency Report							
26.	Inspector: Danny L. Liford Jr / p.p. R.G. Ashton 5	27 Inspection Date: 01/09/2018					
28.	Response Received Date: 03/08/2018 (2nd)	29 Resp Rev	onse Evaluation Date: 03/16/2018 vised RGA 5/10/2019				
30.	Evaluation of Proposed Corrective Action(s):						
	Response(s) Acceptable: 🛛 Yes 🗆 No	Response(s) Acceptable: 🛛 Yes 🗆 No					
SEC	CTION F: INSPECTION VERIFICATION INF	ORMATI	ON				
31.	Inspector:		32. Inspection Date:				
33.	Verification of Corrective Action(s) Implement	ted and Eff	fective				
	Response(s) Acceptable: 🗆 Yes 🗆 No						
34.	Verification Date:						
35.	Deficiency Closed: Yes No	36. Clos	ed Date:				

The Technical Inspection Deficiency Report (TIDR) must be used to identify each technical deficiency found during any inspection. This report must be included in the complete report as applicable. The inspector is responsible for handing and processing the Technical Inspection Deficiency Report including the evaluation of the corrective action on technical deficiencies.

	SECTION B: PRIMARY FACILITY CONTACT			
	7.	Name: Kaleb Hoyt		
	8.	Title: Quality & Product Application Manager		
	9.	Phone Number: (630) 685-4658		
	10.	Email Address: kaleb_hoyt@salcoproducts.com		
	11.	Responsible for Corrective Action:		
		⊠ Yes □ No		
SECTION A: FACILITY INFORMATION				
1. Name: Salco Products Inc.				
2. Address: 1385 101st Street Suite A				
3. City: Lemont				
4. State/Province: Illinois				
5. Zip/Postal Code: 60439				
6. Country: USA				

SECTION C: DEFICIENCY INFORMATION

- **12.** Deficiency Number: H-1-010918-C-07
- **13.** Reference/Requirements: MSRP M-1002 Section CIII, Chapter 1, paragraph 1.4.5.2 "Service Equipment Approval."
- **14.** Deficiency Identified: At the time of the audit/inspection, it was noted that the facility had an AAR approval for a 2-1/2" threaded Vacuum Relief Valve (Part #VVN25S4101A) but did not have an AAR approval for a reviewed 2-1/2" Flanged Vacuum Relief Valve.

15. Response Due Date: 01/28/2018

Exhibit H-1, ver. 1.2

SECTION D: CORRECTIVE ACTION						
	Action Required	Description of Action(s) Taken	Date			
16.	Clearly define the deficiency identified.	At the time of the audit/inspection, it was noted that the facility had an AAR approval for a 2-1/2" threaded Vacuum Relief Valve (Part #VVN25S4101A) but did not have an AAR approval for a reviewed 2-1/2" Flanged Vacuum Relief Valve.	1/11/18			
17.	Clearly define the action(s) taken for correcting the deficiency	Salco Products reviewed the contents of the AAR Manual of Standards and Recommended Practices, M-1002, Section C-III, Paragraph 1.4.5.3.3 in conjunction with our valve application E-099034 and the assembly and component drawings for the 2- 1/2" threaded and flanged VRV's.				
		Bill Borowski (Salco Director of Engineering) and Kaleb Hoyt (Salco Quality Manager) had a phone call with Ken Dorsey on 1/22/18 at approximately 1:05 PM and confirmed our interpretation of Paragraph 1.4.5.3.3 to be correct in its assertion that the changes described would coincide with the listed criteria for "External changes to a previously approved device".	2/9/18			
		Mr. Dorsey did request that the additional valve design and revised drawings be submitted and appended to the existing approval number for record-keeping at the AAR. This was prepared and submitted to him on 2/8/18 via mail and email as an addendum to the existing AAR approval # E099034.				
18.	Clearly define the root causes that resulted in the deficiency.	Salco Products reviewed the contents of the AAR Manual of Standards and Recommended Practices, M-1002, Section C-III, Paragraph 1.4.5.3.3 and found our current application for approval for valves and fittings, E-099034 to be suitable for coverage of the 2-1/2" flanged vacuum relief valve as supported by review with Ken Dorsey. Per 1.4.5.3.3 a submission to the Tank Car Committee is not required and a device may be listed under approval of a previously approved device if changes made are external. The Salco VRV design is such that the flow path, orifice size, spring rate, and materials of construction are identical between flanged and threaded offerings	2/9/18			

	Exhibit H-1: Technic	al Ins	pection	Deficiency Report		
		with the only change being in method of mounting/application to the tank car fittings plate.				
19.	Clearly define the correction action(s) taken that will eliminate the root cause(s) of the deficiency.	Salco has appended the existing approval and will submit the flanged valve variation alongside the threaded on the application for reapproval in 2019 upon expiration of the existing application for approval for valves and fittings.			2/9/18	
20.	Clearly define the follow-up plan(s) that will ensure the effectiveness of the corrective action(s) taken to prevent the deficiency from recurring.	None required.				
21.	Date when corrective action(s) will be achieved: 2/9/18					
22.	Submitted By: Kaleb Hoyt			23 Date Submitted: 3/8/18	Date Submitted: 3/8/18	
24.	Management Approval: Tom Delafos	se	25 Date Ap	proved by Management: 3/8/1	.8	
SEC	CTION E: INSPECTION EVALUAT		FORMATIO	N		
26.	Inspector: Danny L. Liford Jr.			27 Inspection Date: 01/09/20	018	
28.	Response Received Date: 03/08/2018 (2nd)29			29 Response Evaluation Date: 03/16/2018 RGA 5/24/2019		
30.	Evaluation of Proposed Corrective	Action(s)):			
	Response(s) Acceptable: 🛛 Yes 🗆 No					
SEC	CTION F: INSPECTION VERIFICA		FORMATI	ON		
31.	Inspector: 32. Inspection Date:					
33.	Verification of Corrective Action(s) I	mpleme	nted and Eff	ective		
	Response(s) Acceptable: Yes No					
34.	Verification Date:					
35.	Deficiency Closed: Yes No 3			36. Closed Date:		
Exhit	bit H-1, ver. 1.2			Pa	uge 3 of 4	



Memo

File No: 052419-19

To: Kaleb Hoyt (Quality and Product Application Manager, Salco Products Inc. Tom Delafosse (VP), Engineering and Tech. Consulting, Salco Products Inc.

From: R.G. Ashton AAR-BOE General Manager

CC: Michael J. Rush Senior VP Safety and Operations AAR David L. Cackovic AVP AAR Chief Technical Standards Matthew Forister Director, AAR Tank Car/Hazmat Safety Don Guillen AAR QAC Manager

Date: May 24, 2019

Subject:Salco Products Inc. Initial Certification
B85 Manufacturer of Pressure-Retaining Tank Components;
B86 Repair of Pressure-Retaining Tank Components;
C4 Manufacturer of Tank Car Service Equipment;
C5 Recondition/Repair and Qualification of Tank Car Service Equipment;
C6 Removal and Replacement of Tank Car Service Equipment (including
changing gaskets).

This memorandum is to provide the QAC and TCC, a brief account for prolonging the Salco Final Audit Report which the Auditor identified six (6) Exhibit H-1 Technical Inspection Deficiency Reports. The following is the collaborative work between me and Tom Delafosse pertaining specifically to root-cause analysis (RCA). The Audit was conducted January 9, 2018, by Auditor Danny Liford, the former BoE Accredited Auditor. WHEREAS Kaleb Hoyt (Salco) submitted written responses approved by Tom Delafosse. However, the responses were not accepted by the Auditor because of inadequate RCA's.

For the above reasons, Tom Delafosse reached out to me for assistance. The collective work consisted of reviewing the substantive matter under Section 18 of Exhibit H-1 Technical Inspection Deficiency Report Form, which states; clearly define the root causes

that resulted in the deficiency. I examined Danny Liford TIDR's and found the RCA's ineffectual as well, except Tom Delafosse disputed the assessment. To reconcile the six unacceptable RCA's, it took extraordinary time achieving resolution. The first five TIDR's were reconciled after several weeks of cooperative analysis with Tom Delafosse. The sixth TIDR, H-010918-C-06 took the longest to conciliate given that Tom Delafosse became impatience for good reason but also became contentious and argued, the AAR requirement are baseless in Salco's situation and the auditor was incorrect in writing the finding in the first place.

However, the cause and effect methodology were used in this situation. This practice is a repetitive interrogative technique used to explore the cause-and-effect relationships of problems. Except it's a very lengthy process, nevertheless I was able to successfully work thru this process with Tom Delafosse. The framing and content of the (6) revised RCA's were exclusively written by Salco. The guidance I provided in a vade mecum effort was to work-thru the RCA's. The RCA's were ultimately accepted, I submitted the revised Final Audit Report with a recommendation for certification. *The outcome of this effort is subject to the approval, rejection, or revision of the AAR Quality Assurance and Tank Car Committees respectfully*.

Sincerely yours,

R. G. ashton

R.G. Ashton