



**HAZARDOUS MATERIALS ATTACHMENT**


**Cargo Tank Facility Review (Akers)**

**Teutopolis, Illinois**

**HWY23MH017**

**(13 pages)**

**UNITED STATES DEPARTMENT OF TRANSPORTATION**

	<b>US DOT #</b> 550802	<b>Legal:</b> PAUL AKERS INC <b>Operating (DBA):</b>		
<b>MC/MX #:</b>		<b>Federal Tax ID:</b> 35-1106505 (EIN)		
<b>Review Type:</b> CTFR				
<b>Scope:</b> Principal Office		<b>Location of Review/Audit:</b> Company facility in the U. S.		<b>Territory:</b>
<b>Operation Types</b>		<b>Interstate</b>	<b>Intrastate</b>	
<b>Carrier:</b>	Non-HM	N/A	<b>Business:</b> Corporation	
<b>Shipper:</b>	N/A	N/A	<b>Gross Revenue:</b> \$6,780,178.00	
<b>Cargo Tank:</b>	CT		<b>for year ending:</b> 12/31/2023	
<b>Company Physical Address:</b>				
3155 WEST US 40 GREENFIELD, IN 46140				
<b>Contact Name:</b> Mark Mayhew				
<b>Phone numbers:</b> (1) 317- 462- [REDACTED]		(2)	<b>Fax</b>	
<b>E-Mail Address:</b> [REDACTED]				
<b>Company Mailing Address:</b>				
3155 WEST US 40 GREENFIELD, IN 46140				
<b>Facility - Physical Address:</b>			<b>CT #:</b> 0773	<b>Effective Date:</b>
3155 WEST US 40 GREENFIELD, IN 46140				
<b>Contact Name:</b> Mark Mayhew				
<b>Phone numbers:</b> (1) 317- 462- [REDACTED]		[REDACTED]	<b>Fax</b>	
<b>E-Mail Address:</b> [REDACTED]				
<b>Facility - Mailing Address:</b>				
3155 WEST US 40 GREENFIELD, IN 46140				
<b>Does carrier transport placardable quantities of HM?</b>				
<b>Is an HM Permit required?</b>		N/A		
Questions about this report or the Federal Motor Carrier Safety or Hazardous Materials regulations may be addressed to the Federal Motor Carrier Safety Administration at:  575 N Pennsylvania St, Rm 261 Indianapolis, IN 46204-1520 Phone: (317)226-7474 Fax:(317)226-5657				
<b>This report will be used to assess your safety compliance.</b>				
<b>Person(s) Interviewed</b>				
<b>Name:</b> Mark Mayhew		<b>Title:</b> Quality Control Manager		
<b>Name:</b> Alan Campbell		<b>Title:</b> Registered Inspector		





**PAUL AKERS INC**  
U.S. DOT #: 550802

Review Date:  
12/14/2023

**Part A - Cargo Tank Information**

CT #: 0773

**Facility Type**

Assembly S  
Repair M  
Inspection/Test L  
DCE M

**Inspection Types**

External Visual  
Internal Visual  
Leaking  
Thickness  
Pressure Test  
Wet Flourescent Magnetic  
Particle Test

**Mfg/Assembly Types**

Semi-trailer  
Tank-truck

<u>Tank Type</u>	<u>Mfg</u>	<u>Assembly</u>	<u>Repair</u>	<u>Inspection</u>	<u>Tank Type</u>	<u>Mfg</u>	<u>Assembly</u>	<u>Repair</u>	<u>Inspection</u>
MC330		ü	ü	ü	MC331		ü	ü	ü

**Engineering Analysis Done?** No

**FHWA Engineer:**

**Agency:**

**Phone:**

**E-mail:**

**Person Responsible for Cargo Tank Compliance**

Mark Mayhew

**Title**

Quality Control Mgr





**Part B Violations**

1 FEDERAL	Primary: 180.407(a)(2)	Discovered 2	Checked 11	Drivers/Vehicles In Violation    Checked
<p><b>Description</b> Subjecting a cargo tank to a pressure greater than its design pressure or maximum allowable working pressure (MAWP). <b>Example</b> Date of Inspection: 4/11/2023 Cargo Tank Specification: MC331 Cargo Tank Serial Number: Q-45 MAWP: 265 Pressure test conducted at 400 psig. Should have been conducted at 397.5 psig.</p>				
2 FEDERAL	Primary: 180.407(g)(3)	Discovered 7	Checked 7	Drivers/Vehicles In Violation    Checked
<p><b>Description</b> Failing to perform a wet fluorescent magnetic particle test on an MC330/331 cargo tank. <b>Example</b> Date of Inspection: 3/21/2023 Cargo Tank Specification: MC331 Cargo Tank Unit Number: 18 MAWP: 265 Failure to conduct WFMPE on entire interior surface of tank heads as required.</p>				
3 FEDERAL	Primary: 180.413(b)	Discovered 1	Checked 1	Drivers/Vehicles In Violation    Checked
<p><b>Description</b> Failing to verify the suitability of a repair affecting the structural integrity of the cargo tank by testing as prescribed in the applicable specifications or in 180.407(g)(1)(iv). <b>Example</b> Date of Inspection: 5/9/2023 Cargo Tank Specification: MC331 Cargo Tank Unit Number: 392 MAWP: 265 Failure to conduct pressure retest at 2 times the MAWP after welded repairs. Pressure retest conducted at 400 psig. Should have been conducted at 530 psig.</p>				





**PAUL AKERS INC**  
U.S. DOT #: 550802

Review Date:  
12/14/2023

**Part B Violations**

4 FEDERAL	Primary: 180.417(b)	<b>Discovered</b> 48	<b>Checked</b> 48	<b>Drivers/Vehicles In Violation</b> 11	<b>Checked</b> 11
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**Description**

Failing to include the information required by 180.417(b)(1) or 180.417(b)(2) of this section on the test and inspection reports as required.

Inspection Date 3/21/2023

Cargo Tank Specification: MC331

Serial #: 80334

MAWP: 265

Part 180 inspection reports missing following: Failure to include a continued qualification statement; does not indicate that the cargo tank is in dedicated service;

WFMPE report does not identify the lighting equipment used, does not identify the magnetic particle equipment used.

<b>Safety Fitness Rating Information:</b>		<b>OOS Vehicle (CR): 0</b>
<b>Total Miles Operated</b>	0	<b>Number of Vehicle Inspected (CR): 0</b>
<b>Recordable Accidents</b>	0	<b>OOS Vehicle (MCMIS): 0</b>
		<b>Number of Vehicles Inspected (MCMIS): 0</b>

Your proposed safety rating is :

**This Review is not Rated.**





## Part B Requirements and/or Recommendations

1.

**Understand Why Compliance Saves Time and Money:** Compliance with FMCSRs will not only save lives, but also saves your business time and money. Tracking how much your business spends on non-compliance activities can help you understand the many benefits of compliance to your business and why safety is good business.

**Document and Follow Through on Action Plans:** Document and follow through on action plans to ensure the actions you are taking are creating improvement in safety management and compliance.

**NOTICE:** A pattern and/or repeated violations of the same or related acute or critical regulations (violations of the same Part in Title 49, Code of Federal Regulations) will cause the maximum penalties allowed by law to be assessed under Section 222 of the Motor Carrier Safety Improvement Act of 1999 (MCSIA). A pattern of violations means two or more violations of acute and/or critical regulations in three or more Parts of Title 49, Code of Federal Regulations discovered during any eligible investigation. Repeated violations means violation(s) of an acute regulation of the same Part of Title 49, Code of Federal Regulations discovered in an investigation after one or more closed enforcement actions within a six year period and/or violation(s) of a critical regulation in the same Part of Title 49, Code of Federal Regulations discovered in an investigation after two or more closed enforcement actions within a six year period.

For all Investigations that could result in a Notice of Claim:

**PLEASE NOTE:** The violations discovered during this compliance review may affect the civil penalty proposed in any subsequent Notice of Claim. In addition, your history of prior violations of the Federal Motor Carrier Safety Regulations, Federal Hazardous Material Regulations or the Federal Motor Carrier Commercial Regulations may also affect the civil penalty proposed in any subsequent Notice of Claim. Receipt of this report acknowledges your understanding that the violations discovered by the FMCSA during this review may be used to calculate any civil penalty proposed as a result of this review.

Attached to this report is Table 1, which identifies all the documented violations which were discovered during the course of this review.

2. This is a cargo tank facility review. No safety rating is generated.

3. Ensure inspection of entire interior surface of heads are WFMPE tested in accordance with CGA Technical Bulletin TB-2.

4. 1) Each test or inspection report must include the following information:

- (i) Owner's and manufacturer's unique serial number for the cargo tank;
- (ii) Name of cargo tank manufacturer;
- (iii) Cargo tank DOT or MC specification number;
- (iv) MAWP of the cargo tank;
- (v) Minimum thickness of the cargo tank shell and heads when the cargo tank is thickness tested in accordance with §180.407(d)(5), §180.407(e)(3), §180.407(f)(3), or §180.407(i);
- (vi) Indication of whether the cargo tank is lined, insulated, or both; and
- (vii) Indication of special service of the cargo tank (e.g., transports material corrosive to the tank, dedicated service, etc.)

(2) Each test or inspection report must include the following specific information as appropriate for each individual type of test or inspection:

- (i) Type of test or inspection performed;
- (ii) Date of test or inspection (month and year);
- (iii) Listing of all items tested or inspected, including information about pressure relief devices that are removed, inspected and tested or replaced, when applicable (type of device, set to discharge pressure, pressure at which device opened, pressure at which device re-seated, and a statement of disposition of the device (e.g., reinstalled,





## Part B Requirements and/or Recommendations

repaired, or replaced)); information regarding the inspection of upper coupler assemblies, when applicable (visually examined in place, or removed for examination); and, information regarding leakage and pressure testing, when applicable (pneumatic or hydrostatic testing method, identification of the fluid used for the test, test pressure, and holding time of test);

Code of Federal Regulations 1148

(iv) Location of defects found and method of repair;

(v) ASME or National Board Certificate of Authorization number of facility performing repairs, if applicable;

(vi) Name and address of person performing test;

(vii) Registration number of the facility or person performing the test;

(viii) Continued qualification statement, such as "cargo tank meets the requirements of the DOT specification identified on this report" or "cargo tank fails to meet the requirements of the DOT specification identified on this report";

(ix) DOT registration number of the registered inspector; and

(x) Dated signature of the registered inspector and the cargo tank owner.

(3) The owner and the motor carrier, if not the owner, must each retain a copy of the test and inspection reports until the next test or inspection of the same type is successfully completed. This requirement does not apply to a motor carrier leasing a cargo tank for fewer than 30 days.

(c) Additional requirements for Specification MC 330 and MC 331 cargo tanks. (1) After completion of the pressure test specified in §180.407(g)(3), each motor carrier operating a Specification MC 330 or MC 331 cargo tank in anhydrous ammonia, liquefied petroleum gas, or any other service that may cause stress corrosion cracking, must make a written report containing the following information:

(i) Carrier's name, address of principal place of business, and telephone number;

(ii) Complete identification plate data required by Specification MC 330 or MC 331, including data required by ASME Code;

(iii) Carrier's equipment number;

(iv) A statement indicating whether or not the tank was stress relieved after fabrication;

(v) Name and address of the person performing the test and the date of the test;

(vi) A statement of the nature and severity of any defects found. In particular, information must be furnished to indicate the location of defects detected, such as in weld, heat-affected zone, the liquid phase, the vapor phase, or the head-to-shell seam. If no defect or damage was discovered, that fact must be reported;

(vii) A statement indicating the methods employed to make repairs, who made the repairs, and the date they were completed. Also, a statement of whether or not the tank was stress relieved after repairs and, if so, whether full or local stress relieving was performed;

(viii) A statement of the disposition of the cargo tank, such as "cargo tank scrapped" or "cargo tank returned to service"; and

(ix) A statement of whether or not the cargo tank is used in anhydrous ammonia, liquefied petroleum gas, or any other service that may cause stress corrosion cracking. Also, if the cargo tank has been used in anhydrous ammonia service since the last report, a statement indicating whether each shipment of ammonia was certified by its shipper as containing 0.2 percent water by weight.

(2) A copy of the report must be retained by the carrier at its principal place of business during the period the cargo tank is in the carrier's service and for one year thereafter. Upon a written request to, and with the approval of, the Field Administrator, Regional Service Center, Federal Motor Carrier Safety Administration for the region in which a motor carrier has its principal place of business, the carrier may maintain the reports at a regional or terminal office.

(3) The requirement in paragraph (c)(1) of this section does not apply to a motor carrier leasing a cargo tank for less than 30 days.

5. Hazardous Materials training documentation is to include: The hazmat employee's name; the most recent training completion date; a description, copy or the location of the training materials; the name and address of the person providing the training; and employer certification that the hazmat employee has been trained and tested.
6. Ensure all equipment used in the cargo tank inspection and testing process is properly maintained. Any equipment required to be re-inspected or re-calibrated should adhere to prescribed manufacturer standards
7. (d) External visual inspection and testing. The following applies to the external visual inspection and testing of cargo tanks:
  - (1) Where insulation precludes a complete external visual inspection as required by paragraphs (d)(2) through (d)(6)





## Part B Requirements and/or Recommendations

of this section, the cargo tank also must be given an internal visual inspection in accordance with paragraph (e) of this section. If external visual inspection is precluded because any part of the cargo tank wall is externally lined, coated, or designed to prevent an external visual inspection, those areas of the cargo tank must be internally inspected.

8. Ensure that for each repair done to piping or valves which does not involve welding to the cargo tank wall, the applicable parts are leak tested (180.413(c)).
9. Ensure all Registered Inspectors meet the minimum qualifications specified in 171.8 and 180.409 and maintain documentation of such qualifications.
10. Ensure that all gauges used to test cargo tanks with an ASME U Stamp are calibrated according to the ASME code.
11. <https://www.fmcsa.dot.gov/regulations/hazardous-materials/cargo-tank-safety-advisories>
12. Ensure all employees involved in testing and inspecting cargo tanks are properly trained and familiar with the regulations applicable to their jobs in the hazardous materials transportation system. Also ensure all employees undergo recurrent HM training every 3 years as required.
13. National Tank Truck Carriers Cargo Tank Test & Inspections Workshops  
<https://www.tanktruck.org>
14. When conducting thickness tests ensure your thickness tester is calibrated to the material being tested.
15. For Part 180 pressure tests on MC 330, 331 cargo tanks: The test pressure on the name plate or specification plate, 1.5 times either the MAWP or the re-rated pressure, whichever is applicable.
16. <https://www.phmsa.dot.gov/training/hazmat/training-modules>
17. Ensure that a full external visual inspection is conducted, including evaluation of all corroded areas. Registered Inspectors should be equipped with a pit gauge and/or thickness tester to properly evaluate dents, gouges, pits, and corroded areas.  
Ensure that each external visual inspection is performed as prescribed in 180.407(d).  
Ensure that corroded or abraded areas discovered during an external visual inspection are thickness tested as prescribed in Section 180.407(i).
18. Ensure that a written report is prepared after the completion of a pressure test specified in 180.407(g)(3) for every Specification MC 330 and MC 331 cargo tank in anhydrous ammonia, liquefied petroleum gas, or any other service that may cause stress corrosion cracking and ensure that the written report contains the information required in 180.417(c)(1)(i) through (c)(ix).
19. T-762 Lifting Power of yokes: The magnetizing power of yokes shall be verified prior to use each day the yoke is used and whenever the yoke has been damaged or repaired. Each alternating current (A/C) electromagnetic yoke shall have a lifting power of at least 10 lbs. at the maximum pole spacing that will be used. Each direct current or permanent magnetic yoke shall have a lifting power of at least 40 lb. at the maximum pole spacing that will be used. Each weight shall be weighed with a scale from a reputable manufacturer and stenciled with the applicable nominal weight prior to first use. A weight need only be verified again if damaged in a manner that could have caused potential loss of material.







## Part B Requirements and/or Recommendations

T-777.2 Fluorescent Magnetic Particles with Black Light. Examination performed as follows:

1. Performed in a darkened area
2. Examiners shall be in a darkened area for at least 5 minutes prior to performing examinations to enable their eyes to adapt to dark viewing. Glasses or lenses worn by examiners shall not be photochromic or exhibit any fluorescence.
3. Black lights shall achieve a minimum of 1000  $\mu\text{W}/\text{cm}^2$  on the surface of the part being examined throughout the examination.
4. Reflectors, filters, glasses, and lenses should be checked and if necessary cleaned prior to use. Cracked or broken reflectors, filters, glasses, or lenses shall be replaced immediately.
5. The black light intensity shall be measured with a black light meter prior to use, whenever the light's power source is interrupted or changed, and at the completion of the examination or series of examinations.

### 20.

- a. Article 1, T-190(a):
  - i. Date of examination
  - ii. Name and/or identity and certification level (if applicable) for personnel performing the examination
  - iii. Identification of the weld, part, or component examined including weld number, serial number, or other identifier.
  - iv. Examination method, technique, procedure identification, and revision
  - v. Results of the examination
2. Magnetic particle equipment and type of current
3. Magnetic particles (visible or fluorescent, wet or dry)
4. Map or record of indications per T-792
5. Material and thickness
6. Lighting equipment

21. Repairs to pressure vessels must comply with CGA Tech Bulletin TB-2 and NBIC Code. Welds to CT wall must comply with Section 178.337-16 (post-weld heat treatment, hydrostatic test, and WFMPE).





**PAUL AKERS INC**  
U.S. DOT #: 550802

Review Date:  
12/14/2023

**Part C**

**Reason for Review:** Other HM Program Goals  
**Planned Action:** Compliance Monitoring

**Parts Reviewed Certification:**

325 382 383 387 390 391 392 393 395 396 397 398 399 171 172 173 177 178 180  
Ü Ü

**Prior Reviews**      **Prior Prosecutions**

5/12/2017  
2/15/1996

**Unsat/Unfit Information**

**Is the motor carrier of passengers subject to the safety fitness procedures contained in 49 CFR part 385 subpart A, AND does it transport passengers in a commercial motor vehicle?**

**Does carrier transport placardable quantities of hazardous materials?**

**Unsat/Unfit rule:** Not Applicable

**Corporate Contact:** Mark Mayhew  
**Corporate Contact Title:** VP/Quality Control Manager

**Special Study Information:**

**Remarks:**

INVESTIGATIVE REPORT RECEIVED BY:

Name: Mark Mayhew  
Title: Quality Control Manager  
Facility Name: Paul Akers, Inc.  
Cargo Tank Facility: CT-0773  
USDOT: 550802  
Date:

**REASON FOR INVESTIGATION**

An investigation was initiated on Paul Akers Inc. as part of Program Goals of the National Hazardous Materials Program of FMCSA. A review of the facility was requested as part of a significant crash involving the release of hazardous materials from a DOT specification cargo tank in which this facility conducted the Part 180 tests. The last facility review was in 2017.

**SCOPE OF INVESTIGATION**

A full cargo tank facility review was performed on the company.

**CARGO TANK FACILITY OPERATION DESCRIPTION**

Paul Akers, Inc. is a cargo tank facility that conducts Part 180 inspections and repairs on MC330 and MC331 specification cargo tanks. Their principal place of business and CT facility address is 3155 West US Highway 40, Greenfield, Indiana. Located at the PPOB is a large maintenance shop with an attached administrative building and a large gravel parking lot. The company is registered to conduct external visual, internal visual, leakage, pressure and thickness tests on MC330 and MC331 cargo tanks. The last CT registration was completed on 9/12/2023. The Person Responsible for Compliance is Mark Mayhew, Quality Control Manager. The company conducts both fixed and mobile testing. Mobile testing consists of testing of nurse tanks The CT Registration shows Mark Mayhew as a Design Certified Engineer (DCE). The company is registered to conduct assemblies of MC330 and MC331 cargo tanks. They also conduct non-ASME and ASME repairs on MC330 and MC331 cargo tanks. Paul Akers possesses and R-stamp, R-2257. It expires 10/22/2026.

Paul Akers currently employs five Registered Inspectors: Mark Mayhew, Date of Hire: 1981; Ben Haeberle, Date of Hire:





**Part C**

2/28/2002; David Stephenson, Date of Hire: 6/23/2003; Mark Logan, Date of Hire: 4/23/2001 and Alan Campbell, Date of Hire : 5/8/2017. Haeberle, Stephenson and Logan only conduct Part 180 inspections on nurse tanks.

Corporate Officers:

Ben Haeberle-President  
Mark Mayhew-Vice President  
Mark Logan-Treasurer  
Alan Campbell-Secretary

CDLIS (DRIVER LICENSE) CHECKS

The company does not have any vehicles that require a CDL License. No CDLIS checks were conducted.

INVESTIGATION

Present throughout the investigation was the Person Responsible for Compliance, Mark Mayhew. Mr. Mayhew is also registered as a DCE and Registered Inspector.

REGISTERED INSPECTORS QUALIFICATIONS/TRAINING

The five Registered Inspectors meet RI qualification requirements through possession of a high school diploma and at least three years work experience. Mark Mayhew is listed as a Design Certifying Engineer (DCE). Mayhew meets the qualifications of a DCE by experience. He has been performing the duties of a DCE since 1981.

RIs [REDACTED] only conduct Part 180 inspections on nurse tanks. Function specific training materials for inspection of nurse tanks was provided for each RI conducting nurse tank inspections. Training materials for nurse tank inspections included training conducted by Asmark Institute. Function specific training for Mayhew and Campbell included training on the Part 180 inspections. The training materials included wet fluorescent magnetic particle testing procedures. The training materials also included a list of the procedures to conduct each type of Part 180 test-external visual, leakage, internal visual and pressure retests. Testing materials were provided. General Awareness training materials for all RIs included anhydrous ammonia and LPG safety and characteristics. Security Awareness training materials consisted of the employee handbook. The company provided certification of training and testing for each RI; training was current, conducted within the past three years. OSHA Confined Space Entry training and written procedures were provided by the facility.

TESTS/INSPECTIONS

The sample size for walk-around inspections was ten (10). The sample was not met. There were two MC331 cargo tank trailers available on the day of the inspection. However, the company had not conducted the Part 180 tests on the cargo tanks at that time.

ASSEMBLY

Mark Mayhew stated they have not conducted any assemblies of cargo tanks during the past 365 days.

REPORT FORMS

Test reports were requested for eleven DOT specification cargo tanks. The following vehicles' Part 180 tests were reviewed:

Year	Manufacturer	Serial #	DOT Specification	Cargo Tank Owner
1982	Trans-Western	A-6379	MC331	Ferrell Gas
(Bobtail Truck)				
1989	Bulk Truck & Transport Service	135	MC331	Indy Propane
(Bobtail Truck)				





**Part C**

1977	Arrow	7682	MC331	Murphy's
Gas (Bobtail Truck)				
2014	Bulk Truck & Transport Service	1133	MC331	Union County
Co-op (Bobtail Truck)				
2018	Mississippi	T14751	MC331	Overpeck
(Transport Trailer)				
1978	Mississippi	80288	MC331	Airgas
(Transport Trailer)				
1966	Superior Tank	126-66	MC331	Murphy's
(Transport Trailer)				
1978	Mississippi	80303	MC331	Ceres Solutions
(Transport Trailer)				
1978	Trinity Industries	418523	MC331	S & M Transport
(Transport Trailer)				
1971	Lubbock	57755	MC331	S & M
Transport (Transport Trailer)				
1978	Mississippi	80334	MC331	Prairieland Ltd
(Transport Trailer)				

I reviewed eleven (11) external visual reports, eight (8) internal visual reports, eleven (11) leakage reports, eleven (11) pressure retests and seven (7) wet magnetic particle exams. Vehicles sampled included the vehicle involved in the Significant Crash on 9/29/2023, Unit 18. Reports did not contain a continued qualification statement as required in 49 CFR Part 180.417(b)(2). Seven of the eleven tests were conducted on transport trailers. The inspection reports did not indicate that the trailers were in dedicated service. I contacted the owner of each of the cargo tanks to confirm whether the cargo tanks were used in dedicated service. All seven were in dedicated service.

An annual Jaeger Type Number 1 eye exam is required for RIs conducting Wet Fluorescent Magnetic Particle Exams.. Evidence of exams were provided for RIs Mayhew and Campbell. The Wet Fluorescent Magnetic Particle Exam reports did not identify the light meter used or the magnetizing equipment used during the tests as required.

Akers provided a copy of their written procedures they use for the WFMPE exam. The procedures included the magnetizing technique, magnetizing current type, method of particle application, surface preparation, method of excess particle removal and minimum light intensity. The reports did not specify the examination of the entire interior surface of the head in their examination procedure. On 12/6/2017, I interviewed RIs Mayhew and Campbell. I asked them to describe their WFMPE examination process. They stated they examined the welds on both the shell and heads. I asked them if they examined the entire surface of the heads. Both stated they did not. I informed them that CGA Technical Bulletin TB-2 specifically stated the entire interior head surface was to be examined. Mayhew examined his copy of the CGA TB-2 (2020). It stated the entire interior head surface was to be examined. Both RIs stated they were unaware of the requirement. The WFMPE examination procedures provided by the company also did not specify that the lifting power of the magnetizing power of the yoke was to be verified prior to use each day the yoke is used. The procedures also did not specify that the black light intensity was measured with a black light meter prior to use, whenever the light's power source is interrupted or changed and at the completion of the examination or series of examinations.

The written procedures provided by the company also did not address any specific procedure or specific type of retest to be conducted after welded repairs are made. (After welded repairs are made a re-examination of the area using the WFMPE method after hydrostatic testing is required to assure all defects have been removed-Section 3.8 of CGA TB-2. The company's reports did indicate they were conducting hydrostatic retests and WFMPE examinations of the repaired area.

**SHOP WALK-THROUGH**

During the facility review, a walk-through of the facility's shop area was conducted with the PRC, Mark Mayhew. The carrier possessed an ASME pressure gauge. Their thickness tester is a Cygnus double echo tester. They did not have calibration coupons for the materials in which the inspect. Mr. Mayhew stated he would be able to fabricate one from scrap material they have on hand to be used in the future. The magnetizing equipment used to conduct WETMAG exams was a Magnaflux Y-6 yoke tester, AC Current. A ten-pound weight was on hand to test the yoke. The light meter used to conduct WETMAG exams was a Magnaflux EV6500 light tester. Calibration records were produced for the pressure gauge, Magnaflux Yoke and Magnaflux light. The corresponding manuals for the testing equipment were maintained by the company. Akers does not conduct bench testing of the pressure relief valves; the pressure relieve vales are replaced during the five-year tests.





**Part C**

**R-STAMP REPAIRS**

The company's R-stamp (R-2257) was reissued on August 15,2023 and expires October 22, 2026.

Four of the eleven vehicles sampled required welding on the cargo tank wall- Units 2288, 18, 392 and 821. Mayhew stated the repairs required on the four cargo tanks were minor repairs. The R-1 reports indicated hydrostatic retests were conducted at 400 psig. The MAWP for the cargo tanks was 265 psig. TB-2 Section 3.8 states the tanks shall be hydrostatically retested to a pressure at least twice the tank design pressure for quenched and tempered steel. The tanks should have been hydrostatically retested at 530 psig.

Each Form R-1 report included a Certificate of Compliance completed by Mark Mayhew. They also contained a Certificate of Compliance completed by Rick Smetana NB 11861R. He is employed by Bureau Veritas Inspection and Insurance Company. The certificates of compliance by Smetana state he inspected the work conducted and that it complied with the National Board Inspection Code (NBIC).

Akers produced copies of the NBIC, CGA Technical Bulletin, FMCSR and applicable ASME Codes. I interviewed RI Mark Mayhew regarding the welding procedures used for both minor and major repairs. Mayhew demonstrated knowledge of the NBIC, ASPE and other applicable codes that pertain to the welding and repair of ASME code cargo tanks. Mayhew uses Welding Procedure Specification 2B for minor repairs. A copy of the WPS 2B was provided. He also provided his welding procedure qualifications and continuity logs for 2023 and 2022.

**FOLLOW-ON ACTION**

A copy of the compliance review was provided to the Midwest HM Program Manager, Jessica Stiles. Recommended compliance monitoring.

**DOCUMENTS PROVIDED TO CARRIER:**

Present during close-out was Mark Mayhew and Alan Campbell. Violations discovered were discussed. The company was provided with the Part A, CTFR, Part B and Recommendations.

<b>Upload Authorized:</b>	<b>Yes</b>	<b>No</b>	
<b>Authorized by:</b>			<b>Date:</b>
<b>Uploaded:</b>	<b>Yes</b>	<b>No</b>	<b>Failure Code:</b>
<b>Verified by:</b>			<b>Date:</b>

