



U.S. Department
of Transportation
Federal Railroad Administration

West Building, W35-322
1200 New Jersey Avenue S.E.
Washington, D.C. 20590

FRA-AIP200701-B

REVIEW DATE: January 1, 2026

1. GRANTEE:

DOW Chemical Company
2211 H.H. Dow Way
Midland, MI 48674

2. PURPOSE AND LIMITATION:

a. This approval authorizes the use of an Alternative Inspection and Test Program (AIP) as allowed by 49 CFR § 180.509(l) *Alternative inspection and test procedures*. This letter provides no relief from the Hazardous Materials Regulations (HMR) other than as expressly stated herein. The most recent revision supersedes all previous revisions.

b. The damage tolerance analysis or service reliability assessment performed in developing this AIP only considered the hazards and risks associated with transportation in commerce.

c. This approval of this AIP is non-transferrable.

3. REGULATIONS AFFECTED: 49 CFR §§ 180.509(d), 180.509(e), 180.509(f), 180.509(h)

4. BASIS: This approval is based on the applications of DOW CHEMICAL COMPANY dated January 5, 2007, and March 22, 2021, submitted per § 180.509(l). This letter supersedes the previous approvals dated February 12, 2008, and March 8, 2021, and any modifications to those approvals.

5. INSPECTION AND TEST PROCEDURES:

a. Definitions

1. Service Reliability Assessment - the process of using in-service data to determine the time a tank car or component will continue to function as designed under specified conditions.
 2. Tank Car Owner - the person to whom a rail car's reporting marks are assigned, as listed in the Universal Machine Language Equipment Register (UMLER).
 3. Damage-Tolerance Analysis - Determination of the probable locations and modes of damage due to manufacturing, fatigue, corrosion, or accidental damage. The analysis must establish a period of time/load cycles during which it is demonstrated that widespread fatigue or corrosion damage will not occur in the tank car structure.
- b. BENCHMARK TESTING - All DOW CHEMICAL COMPANY tank cars added to this program must have External and Internal Visual Inspection, Ultrasonic Thickness Testing (UTT) measurements, Structural Integrity Fillet Weld inspections, and Safety Systems inspections for every tank car taken at the time of manufacture. DOW CHEMICAL COMPANY shall develop a sampling plan for the existing fleet of tank cars lacking these measurements and take External and Internal Visual Inspection, UTT measurements, Structural Integrity Fillet Weld inspections, and Safety Systems inspections. The sample size must be determined by following recognized industry sampling standards.
- c. DESIGN LEVEL OF RELIABILITY AND SAFETY - DOW CHEMICAL COMPANY shall ensure that any visually detected tank car external and internal damage, tank thickness, structural integrity, and safety systems do not decrease its design level of reliability and safety.
- d. SENSITIVITY AND RELIABILITY - DOW CHEMICAL COMPANY shall develop and execute a sensitivity and reliability study to determine the level of sensitivity, reliability, and minimum detectable flaw size for the nondestructive testing methods and techniques used to maintain the design level of reliability and safety.
- e. CONTROL - DOW CHEMICAL COMPANY must perform External and Internal Visual Inspection, UTT measurements, Structural Integrity Fillet Weld inspections, and Safety

Systems inspections on a representative sample of the fleet covered by this AIP approval. The frequency must be based on the identified corrosion rate, utilization, and other factors to maintain the design level of reliability and safety and shall be made available to FRA or a designated representative upon request. The sample size must be determined by following recognized industry sampling standards.

6. REGULATORY RELIEF:

a. The interval for the initial performance of the external and internal visual inspection is extended to 15 years from the date of construction, with subsequent inspection intervals at 10-years.

b. The interval for the initial performance of the structural integrity inspection of fillet welds is extended to 15 years from the date of construction, with subsequent intervals at 10-year intervals.

c. The interval for the initial performance of the tank car thickness testing inspection is extended to 20 years from the date of construction, with subsequent intervals at 10-year intervals.

d. The interval for the initial performance of the safety systems inspection, including thermal protection systems, insulation systems, discontinuity protection, and head puncture resistance systems, is extended to 15 years from the date of construction, with subsequent intervals at 10-year intervals.

7. SPECIAL PROVISIONS:

a. A person who is not a holder of this approval who receives a package covered by this AIP approval may reoffer it for transportation provided no modification or change is made to the package or its contents, and it is reoffered for transportation in conformance with this approval and the HMR.

b. A current copy of this approval must be maintained at each facility where the package is maintained and/or repaired.

- c. Marking of each tank car is required and must meet the marking and labeling requirements of 49 CFR Part 172, Subpart D. The car must be identified by a stencil or decal placed above the tank specification number. The stencil must have at least 1 1/2-in high (38.1 mm) letters and numbers and display "FRA-AIP 200701". Additionally, the car must have the initial qualification year (QUALIFIED) and the subsequent qualification year (DUE). This interval must be developed from the Service Reliability Assessment. The marking must occur at the time of next shopping by a tank car facility, not to exceed the maximum allowable interval given in 49 CFR 180.509(c)(3) or the maximum allowable interval permitted by an applicable AIP.
- d. If a tank car operating under this approval is removed from the AIP or exceeds the original qualification intervals, any AIP markings must be removed.
8. COMPLIANCE: Failure by a person to comply with any of the following may result in suspension or revocation of this approval and penalties prescribed by the Federal hazardous materials transportation law, 49 U.S.C. 5101 et seq.
- a. The grantee must comply with all terms and conditions prescribed in this approval and the HMR, 49 CFR Parts 171-180.
- b. Each "Hazmat employee," as defined in § 171.8, who performs a function subject to this approval must receive training on the requirements and conditions of this AIP in addition to the training required by §§ 172.700 through 172.704.
- c. No person may use or apply this AIP, including the display of its number, when this approval has lapsed or is otherwise no longer in effect.
9. REPORTING REQUIREMENTS:
- a. DOW CHEMICAL COMPANY shall notify the Associate Administrator for Railroad Safety, Chief Safety Officer, in writing no later than 30 days after notification of any incident involving a Tank Car conducted under terms of this AIP.

b. DOW CHEMICAL COMPANY shall report instances of corrosion damage or tank failure not considered in the damage tolerance analysis or service reliability assessment on any car subject to this approval to FRA within five days of being notified of such occurrence.

10. LIMITATIONS:

a. If a tank car operating under this approval is transferred from DOW CHEMICAL COMPANY to another Tank Car Owner, then the tank car will no longer be subject to the relief granted under this approval, and all the above required stenciling must be removed. The qualification due date must be changed to reflect the new Tank Car Owner's Qualification Interval under the new Tank Car Owner's qualification and maintenance program. If the new due date is passed, the qualification is due immediately.

b. This approval does not amend any inspection intervals for the following:


1. Any inspection interval for tank cars used in the transportation of toxic by inhalation materials (TIH);
2. Any inspection intervals for service equipment, including pressure relief devices (PRD);
3. Any inspection interval for the pad to tank welds for the ACF-200 underframe;
4. Any inspection interval for linings and coatings;
5. Any inspection interval for tank cars transporting spent sulfuric acid in non-lined tank cars;

c. This approval does not grant any relief from any requirements imposed by the Association of American Railroads (AAR).

11. CANCELLATION:

a. FRA may rescind this approval for failure to comply with its terms.

Issued in Washington, D.C.:



April 8, 2022

Karl Alexy
 Associate Administrator for Railroad Safety
 Chief Safety Officer

Address all inquiries to Randy M Keltz Jr., Manager, Tank Car Safety Programs, Federal Railroad Administration, U.S. Department of Transportation, West Building, 1200 New Jersey Avenue, Southeast, Washington, D.C. 20590.

Photo reproductions and legible reductions of this approval are permitted. Any alteration of this approval is prohibited.

REVISION HISTORY		
REV	DATE	DESCRIPTION
	02/2008	Original approval
A	10/2020	Updated format, added new requirements
B	03/2022	Removed Paragraph 10(b)(6), which prohibited the extension of thermal protection system qualifications in response to the DOW CHEMICAL COMPANY petition and review of reliability data.