U.S. Department
of Transportation
Federal Railroad Administration

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

FRA-AIP 200204-01

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 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 specifically stated herein. The most recent revision supersedes all previous revisions.

b. The damage tolerance analysis or service reliability assessment performed in the development of this Alternative Inspection and Test Program only considered the hazards and risks associated with the transportation in commerce.

c. The approval to use an Alternative Inspection and Test Program is non-transferrable.

3. REGULATIONS AFFECTED: 49 CFR § 180.509(e)(1)(iii).

4. BASIS: This approval is based on the application of DOW CHEMICAL COMPANY dated April 16, 2002 submitted in accordance with § 180.509(l).

5. INSPECTION AND TEST PROCEDURES:

a. Definitions

1. Service Reliability Assessment – the process, 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 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 – DOW CHEMICAL COMPANY shall develop a sampling plan to measure the adequacy of tank shell butt welds within 60.96 cm (2 feet) of the bottom longitudinal centerline with an approved Non-Destructive Testing Method at the time of manufacture. This does not provide any relief from the requirements of AAR MSRP Section C-III Appendix W. For tank cars lacking these measurements, DOW CHEMICAL COMPANY shall perform Inspection and Test of tank shell butt welds within 60.96 cm (2 feet) of the bottom longitudinal centerline at the time of next qualification but not to exceed the maximum allowable interval given in 49 CFR 180.509(c)(3) or the maximum allowable interval permitted by an applicable Approved Alternative Inspection Program. The sample size must be determined by following recognized industry sampling standards.

c. DESIGN LEVEL OF RELIABILITY AND SAFETY – DOW CHEMICAL COMPANY shall maintain an analysis (e.g., finite element analysis, damage-tolerance analysis, or service reliability assessment) that the structure will not develop defects that reduce the design level of safety and reliability or fail within its operational life or prior to the next required inspection. DOW CHEMICAL COMPANY shall maintain all documentation used to make such determination at its principal place of business and make the data available to

FRA or an authorized representative of the Department upon request.

d. SENSITIVITY AND RELIABILITY – DOW CHEMICAL COMPANY shall develop and execute a sensitivity and reliability (POD) study to determine the level of reliability, sensitivity and minimum detectable flaw size for the Non-Destructive Testing Methods and Techniques used to maintain the design level of reliability and safety.

e. CONTROL – DOW CHEMICAL COMPANY shall perform Inspection and Test of tank shell butt welds within 60.96 cm (2 feet) of the bottom longitudinal centerline on a representative subgroup of the fleet covered by this Alternative Inspection Program approval based on the identified crack development and growth rate, utilization, and other factors to ensure continued applicability of this program. All tank cars in this sample must have benchmark testing as defined in section (b) above. These reports must be made available to FRA or a designated representative upon request. The sample size must be determined by following recognized industry sampling standards.

6. SPECIAL PROVISIONS:

a. A person who is not a holder of this approval who receives a package covered by this alternative inspection and test 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 shall 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 200204”. Additionally, the car must have the initial qualification year (QUALIFIED) and the next qualification year (DUE). This interval must be developed from the Service Reliability

Assessment. Marking must occur at 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 Approved Alternative Inspection Program.

7. 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 Hazardous Materials Regulations, 49 CFR 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 Alternative Inspection and Test Program in addition to the training required by §§ 172.700 through 172.704.

c. No person may use or apply this Alternative Inspection and Test Program, including display of its number, when this approval has lapsed or is otherwise no longer in effect.

8. 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 any incident involving tank shell butt welds within 60.96 cm (2 feet) of the bottom longitudinal centerline of a Tank Car conducted under terms of this Alternative Inspection Program Approval.

b. DOW CHEMICAL COMPANY shall report in writing to the Associate Administrator for Railroad Safety, Chief Safety Officer no later than 30 days after notification of occurrence, instances of corrosion damage or tank failure not considered in the damage-tolerance analysis or service reliability assessment that adversely affects tank shell butt welds within 60.96 cm (2 feet) of the bottom longitudinal centerline on any Tank Car subject to this Alternative Inspection Program Approval.

c. DOW CHEMICAL COMPANY shall maintain a listing of tank cars by reporting mark and number operating under this approval to include the status of the above required marking and shall report this listing to the Federal Railroad Administration every 5 years or upon request.

d. DOW CHEMICAL COMPANY shall report CONTROL results to the Federal Railroad Administration every 5 years or upon request.

9. 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 in accordance with the new Tank Car Owner's qualification and maintenance program.

10. CANCELLATION

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

Issued in Washington, D.C.:

_____ March 9, 2021

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
	04/2002	Original approval
A	01/2021	Updated format; added review terms; added control conditions; added limitations;