**ENVIRONMENTAL PROTECTION AGENCY** **6560-50-P**

**[EPA-HQ-OAR-2011-0894; FRL-9681-1]**

**Regulation of Fuel and Fuel Additives; Modification to Octamix Waiver (TOLAD)**

**AGENCY:** Environmental Protection Agency (EPA)

**ACTION:** Notice

**SUMMARY:** The Environmental Protection Agency has reconsidered a portion of a fuel waiver granted to the Texas Methanol Corporation (Texas Methanol) under the Clean Air Act on February 8, 1988. This waiver was previously reconsidered and modified on October 28, 1988 in a **Federal Register** publication titled "Fuel and Fuel Additives; Modification of a Fuel Waiver Granted to the Texas Methanol Corporation." Today's notice approves the use of an alternative corrosion inhibitor, TOLAD MFA-10A, in Texas Methanol's gasoline-alcohol fuel, OCTAMIX.

**ADDRESSES:** EPA has established a docket for this action under Docket ID Number EPA-HQ-OAR-2011-0894. All documents and public comments in the docket are listed on the *http://www.regulations.gov* Web site. Publically available docket materials are available either electronically through http://www.regulations.gov or in hard copy at the Air Docket, EPA Headquarters Library, Mail Code: 2822T, EPA West Building, 1301 Constitution Ave., N.W., Washington, DC. The Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding holidays. The Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding

holidays. The telephone number for the Public Reading Room is (202) 566-1742, and the facsimile number for the Air Docket is (202) 566-9744.

**FOR FURTHER INFORMATION CONTACT:** For information regarding this notice contact, Joseph R. Sopata, U.S. Environmental Protection Agency, Office of Air and Radiation, Office of Transportation and Air Quality, (202) 343-9034, fax number, (202) 343-2800, e-mail address: sopata.joe@epa.gov.

**SUPPLEMENTARY INFORMATION:**

## I. Background

Section 211(f)(1) of the Clean Air Act (CAA or the Act) makes it unlawful for any manufacturer of any fuel or fuel additive to first introduce into commerce, or to increase the concentration in use of, any fuel or fuel additive for use by any person in motor vehicles manufactured after model year 1974, which is not substantially similar to any fuel or fuel additive utilized in the certification of any model year 1975, or subsequent model year, vehicle or engine under section 206 of the Act. The Environmental Protection Agency (EPA or the Agency) last issued an interpretive rule on the phrase "substantially similar" at 73 FR 22281 (April 25, 2008). Generally speaking, this interpretive rule describes the types of unleaded gasoline that are likely to be considered "substantially similar" to the unleaded gasoline utilized in EPA's certification program by placing limits on a gasoline's chemical composition as well as its physical properties, including the amount of alcohols and ethers (oxygenates) that may be added to gasoline. Fuels that are found to be "substantially similar" to EPA's certification fuels may be registered and introduced into commerce. The current "substantially similar" interpretive rule for unleaded gasoline allows no more than 2.7 percent oxygen by weight for certain ethers and alcohols.

Section 211(f)(4) of the Act provides that upon application of any fuel or fuel additive manufacturer, the Administrator may waive the prohibitions of section 211(f)(1) if the Administrator determines that the applicant has established that the fuel or fuel additive, or a specified concentration thereof, will not cause or contribute to a failure of any emission control device or system (over the useful life of the motor vehicle, motor vehicle engine, nonroad engine or nonroad vehicle in which such device or system is used) to achieve compliance by the vehicle or engine with the emission standards to which it has been certified pursuant to sections 206 and 213(a) of the Act. The statute requires that the Administrator shall take final action to grant or deny an application after public notice and comment, within 270 days of receipt of the application.

The Texas Methanol Corporation received a waiver under CAA section 211(f)(4) for a gasoline-alcohol fuel blend, known as OCTAMIX,[1] provided that the resultant fuel is composed of a maximum of 3.7 percent by weight oxygen, a maximum of 5 percent by volume methanol, a minimum of 2.5 percent by volume co-solvents[2] and 42.7 milligrams per liter (mg/l) of Petrolite TOLAD MFA-10 corrosion inhibitor[3]. In the OCTAMIX waiver, the Agency invited other corrosion inhibitor manufacturers to submit test data to establish, on a case-by-case basis, whether their fuel additive formulations are acceptable as alternatives to TOLAD MFA-10.[4]

On October 14, 2011, Baker Hughes requested EPA allow the use of its alternative corrosion inhibitor, TOLAD™ MFA-10A, in the OCTAMIX gasoline-alcohol fuel blend which otherwise would

[1] OCTAMIX waiver decision, 53 FR 3636 (February 8, 1988).
[2] The co-solvents are any one or a mixture of ethanol, propanols, butanols, pentanols, hexanols, heptanols and octanols with the following constraints: the ethanol, propanols and butanols or mixtures thereof must compose a minimum of 60 percent by weight of the co-solvent mixture; a maximum limit of 40 percent by weight of the co-solvents mixture is placed on the pentanols, hexanols, heptanols and octanols; and the heptanols and octanols are limited to 5 percent by weight of the co-solvent mixture.
[3] Additional conditions were the final fuel must meet ASTM volatility specifications contained in ASTM D439-85a, as well as phase separation conditions specified in ASTM D-2 Proposal P-176 and Texas Methanol alcohol purity specifications.
[4] 53 FR at 3637.

not be allowed under the waiver.[5] TOLAD™ MFA-10A is a fuel additive formulation consisting of a corrosion inhibitor.

On January 20, 2012, EPA published a notice in the Federal Register (77 FR 2979) announcing receipt of Baker Hughes's request and inviting comment on it. The comment period closed on February 21, 2012. EPA received comments from four commenters (discussed below).

## II. Discussion

One of the major areas of concern to EPA in reviewing any waiver request is the problem of materials compatibility. Materials compatibility data could show a potential failure of fuel systems, emissions related parts and emission control parts from use of the fuel or fuel additive. Any failure could result in greater emissions that would cause or contribute to the engines or vehicles exceeding their emissions standards. Initially, Texas Methanol requested the use of TOLAD MFA-10 or an appropriate concentration of any other corrosion inhibitor such that the fuel will pass the National Association of Corrosion Engineer's TM-01-72 (NACE RUST TEST). However, EPA concluded that compliance with the NACE Rust Test alone was not adequate in determining suitability of a corrosion inhibitor for use under the OCTAMIX waiver.[6] The Agency decided, therefore, to look at corrosion inhibitors on a case-by-case basis to establish whether each formulation would be acceptable as an alternative to the formulation of the original corrosion inhibitor, TOLAD MFA-10, used in the OCTAMIX waiver.[7]

In order to determine whether the OCTAMIX waiver would meet the criteria of section 211(f) if TOLAD MFA-10A were to be used an alternative corrosion inhibitor, EPA reviewed all data submitted

[5] EPA-HQ-OAR-2011-0894-0001.
[6] 53 FR at 3637
[7] 53 FR at 3637

with or referenced by the Baker Hughes application. Baker Hughes provided data showing their corrosion inhibitor, TOLAD MFA-10A, met the NACE corrosion test.[8] EPA also considered the information received from the public during the public comment period. There were four public comments submitted to the Agency in response to the notice published on January 20, 2012. Carbon Recycling International[9], Methanex[10], Methanol Institute[11] and TEIR Associates Incorporated[12] submitted comments in support of allowing TOLAD MFA-10A as an alternative corrosion inhibitor for use in the OCTAMIX fuel. Two of these commenters noted that the original corrosion inhibitor, TOLAD MFA-10, had been used successfully by several refiners on a commercial basis as an effective corrosion inhibitor. Two commenters, in addition to Baker Hughes, stated that the active ingredients for corrosion inhibitor efficacy are the same for both TOLAD MFA-10 and TOLAD MFA-10A, while one commenter in addition to Baker Hughes noted that the only difference between these two corrosion inhibitor formulations is a solvent to improve additive handling in commerce. Three commenters noted that the Baker Hughes' evaluation of both TOLAD MFA-10 and TOLAD MFA-10A resulted in equivalent passing performance with regards to the NACE corrosion test.[13]

TOLAD MFA-10A is a fuel additive containing the same active ingredients for corrosion inhibitor efficacy with OCTAMIX gasoline-alcohol fuels as the original corrosion inhibitor approved in the OCTAMIX waiver, TOLAD MFA-10. The only difference between TOLAD MFA-10 and TOLAD MFA-10A is a solvent formulation change to improve additive handling in commerce. Both TOLAD MFA-10 and TOLAD MFA-10A were evaluated under the most aggressive fuel formulation of alcohols allowed under the OCTAMIX waiver[1] that included only methanol at 5 volume percent and ethanol at 2.5 volume percent. The use of higher molecular weight cosolvent alcohols, such as propanols or butanols,

[8] NACE Standard TM-01-72.
[9] EPA-HQ-OAR-2011-0894-0008.
[10] EPA-HQ-OAR-2011-0894-0007.
[11] EPA-HQ-OAR-2011-0894-0005.
[12] EPA-HQ-OAR-2011-0894-0006.
[13] EPA-HQ-OAR-2011-0894-0002 and EPA-HQ-OAR-2011-0894-0003.

would tend to be less corrosive. Both TOLAD MFA-10 and TOLAD MFA-10A passed the NACE corrosion test with the most aggressive fuel allowed under the OCTAMIX waiver. Since TOLAD MFA-10A passed the NACE corrosion test using the most aggressive fuel formulation allowed under the OCTAMIX waiver, the Agency believes that Baker Hughes has demonstrated that TOLAD MFA-10A is an effective corrosion inhibitor for use under the OCTAMIX waiver.

With regard to the question of the emissions impacts of TOLAD MFA-10A, its minimum treat rate of 25 mg/l is about 40 percent less than TOLAD MFA-10. The chemical composition and treat rate of TOLAD MFA-10A, which is less than 0.01 mass percent by weight, is such that it is a fuel additive falling under the baseline gasoline fuel grouping category[14] under our fuel and fuel additive registration regulations. In addition, the chemical composition and treat rate of TOLAD MFA-10A is such that it is a fuel additive that meets our gasoline substantially similar definition[15]. Given that TOLAD MFA-10A is a fuel additive that is both substantially similar to the fuel additives used in our certification program and a fuel additive falling under our baseline gasoline fuel category, one would not expect significant emissions changes from the use of TOLAD MFA-10A compared to other fuel additives that fall under the baseline gasoline fuel category, which also includes TOLAD MFA-10 and DMA-67. Therefore, as long as the other conditions of the OCTAMIX waiver are met, which include applicable gasoline volatility specifications[16], gasoline phase separation specifications[17] and alcohol purity conditions[18], the Agency believes the that the use of TOLAD MFA-10A in place of TOLAD MFA-10 will allow engines and

[14] See 40 CFR 79.56(e)(3)(i).
[15] For our most recent substantially similar gasoline interpretative rule, please see: http://www.epa.gov/fedrgstr/EPA-AIR/2008/April/Day-25/a8944.pdf.
[16] See 40 CFR 80.27 for applicable volatility specifications for conventional gasoline, or 40 CFR 80 Subpart D for reformulated gasoline requirements, or any applicable state implementation plan approved by EPA that includes low RVP fuel.
[17] See American Society for Testing and Materials (ASTM) D4814 for applicable gasoline phase separation conditions.
[18] Additional conditions were the final fuel must meet ASTM volatility specifications contained in ASTM D439-85a (ASTM D4814 supercedes ASTM D439-85a), as well as phase separation conditions specified in ASTM D-2 Proposal P-176 (ASTM D4814 supercedes ASTM D-2 Proposal P-176) and Texas Methanol alcohol purity specifications.

vehicles to remain compliant with their emissions standards when using fuels made as approved under the original conditions granted for the OCTAMIX waiver.

## III. Finding and Conclusion

Based on the information submitted by Baker Hughes in its application, and the additional information received during the public comment period, I conclude that the performance of TOLAD MFA-10A in OCTAMIX would be comparable to TOLAD MFA-10, the original corrosion inhibitor approved under the OCTAMIX waiver. Therefore, I am modifying condition (3) of the OCTAMIX waiver to read as follows:

(3) Any one of the following four corrosion inhibitors must be included:

(a) Petrolite's corrosion inhibitor formulation, TOLAD MFA-10, blended in the final fuel at 42.7 mg/l;

OR

(b) DuPont's corrosion inhibitor formulation, DMA-67, blended in the final fuel at 31.4 mg/l;

OR

(c) Spirit of 21st Century LLC's corrosion inhibitor formulation, TXCeed, blended in the final fuel at 3.9 ml/gal (987.6 mg/l);

OR

(d) Baker Hughes's corrosion inhibitor formulation, TOLAD MFA-10A, blended in the final fuel at 25 mg/l.

This action should provide additional flexibility to any manufacturer wishing to produce the OCTAMIX blend. At the same time, any manufacturer wishing to use a corrosion inhibitor other than the four permitted by the OCTAMIX waiver must apply for a further modification of the waiver. Since EPA is still unaware of any basis for extrapolating findings in the emissions impact of one corrosion inhibitor to

other corrosion inhibitors, the Agency will continue to examine the emissions impact of specific corrosion inhibitor formulations on a case-by-case basis.

## IV. Miscellaneous

This waiver modification decision is final agency action of national applicability for purposes of section 307(b)(1) of the Act. Pursuant to CAA section 307(b)(1), judicial review of this final agency action may be sought only in the United States Court of Appeals for the District of Columbia Circuit. Petitions for review must be filed by [INSERT 60 DAYS FROM DATE OF PUBLICATION]. Judicial review of this final agency action may not be obtained in subsequent proceedings, pursuant to CAA section 307(b)(2). This action is not a rulemaking and is not subject to the various statutory and other provisions applicable to a rulemaking.

Dated: June 7, 2012.

Lisa P. Jackson,
Administrator.

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