



Gasoline Sulfur Rule Questions and Answers

The following are responses to questions received by the Environmental Protection Agency (EPA) concerning the manner in which the EPA intends to implement and assure compliance with the gasoline sulfur regulations at 40 CFR Part 80. This document was prepared by EPA's Office of Air and Radiation, Office of Transportation and Air Quality, and the Office of Enforcement and Compliance Assurance, Office of Regulatory Enforcement.

Regulated parties may use this document to aid in achieving compliance with the gasoline sulfur regulations. However, this document does not in any way alter the requirements of these regulations. While the answers provided in this document represent the Agency's interpretation and general plans for implementation of the regulations at this time, some of the responses may change as additional information becomes available or as the Agency further considers certain issues.

This guidance document does not establish or change legal rights or obligations. It does not establish binding rules or requirements and is not fully determinative of the issues addressed. Agency decisions in any particular case will be made applying the law and regulations on the basis of specific facts and actual action.

While we have attempted to include answers to all questions received to date, the necessity for policy decisions and/or resource constraints may have prevented the inclusion of certain questions. Questions not answered in this document will be answered in a subsequent document. The Agency intends to provide any additional responses as expeditiously as possible. Questions that merely require a justification of the regulations, or that have previously been answered or discussed in the preamble to the regulations have been omitted.

COMPLIANCE

1. **Question:** Is a parent company responsible for complying with the corporate pool average standards in 2004 and 2005 for all of the refineries owned by its subsidiaries in addition to all of its own refineries?

Answer: Section 80.195(c) provides that the corporate pool average standards in 2004 and 2005 are the maximum average sulfur levels allowed for a refiner's or importer's gasoline production from all of the refiner's refineries or all gasoline imported by an importer in a

calendar year. The preamble to the final rule states that, for purposes of compliance with the corporate pool average standards, a parent company is considered to be the refiner of any refinery facilities owned by wholly-owned subsidiaries of the parent company. As such, the parent company must comply with the corporate pool average standards for these facilities. In its compliance calculations, the parent company must include the gasoline produced at any refineries it owns, plus the gasoline produced at any refineries owned by its wholly-owned subsidiaries. *See* 65 FR 6698, 6755 (February 10, 2000). We believe, however, that parties should have the option to comply with the corporate pool average standards on a corporate parent level or a subsidiary level. As a result, a parent company may demonstrate compliance with the corporate pool average standards based on all of the gasoline produced at all refineries owned by the parent company and the parent company's wholly-owned subsidiaries, or, the parent company may be deemed in compliance if it demonstrates compliance for the gasoline produced at all of its own refineries and each of the parent company's subsidiaries demonstrates compliance for the gasoline produced at all of its own refineries. The environmental benefits of the sulfur rule would not be compromised by allowing this option, since compliance on the level of each subsidiary would result in the corporate pool average standard being met by a greater number of pools with fewer refineries in each pool over which to average the sulfur content. We intend to modify the regulations to clarify this option in a future rulemaking. In any case, the parent company would remain liable for any violations by the subsidiary. *See* § 80.395(a)(11).

Similarly, where refineries are owned by subsidiaries of a foreign parent company, the foreign parent company may demonstrate compliance with the corporate pool standards for all of the gasoline produced at refineries owned by the foreign parent company's wholly-owned U.S. subsidiaries, or each U.S. subsidiary owned by the foreign parent company may demonstrate compliance with the corporate pool standards for its own refineries. As indicated above, in any case, the foreign parent company would remain liable for any violations by the subsidiary. Where the foreign parent company demonstrates compliance with the corporate pool standards for its U.S. subsidiaries, any gasoline imported into the U.S. that was produced at the foreign parent company's foreign refineries, or at refineries owned by foreign subsidiaries of the foreign parent company, would not be included in the parent company's compliance calculations, since the regulations provide that the sulfur standards, including the corporate pool average standards, are met by the importer for all imported gasoline. *See* § 80.195(a)(4).

2. **Question:** The regulations state that a partner to a joint venture may include the joint venture refinery in its corporate pool. If a foreign corporation is a partner in a U.S. refinery joint venture, and also owns a U.S. subsidiary which has several refineries, can the U.S. subsidiary establish a corporate pool composed of its refineries and the foreign parent's U.S. joint venture refinery?

Answer: Section 80.195(c) provides that a partner to a joint venture may include one or more of the joint venture refineries in its corporate pool. As discussed in Question 1 above, a parent company, domestic or foreign, may demonstrate compliance with the corporate pool average standards for the refineries owned by its wholly-owned subsidiaries, or each subsidiary

can individually demonstrate compliance with the corporate pool average standards for its own refineries. As a result, in the scenario described above, if the parent company demonstrates compliance with the corporate pool standards for its subsidiary, the parent company may include its joint venture refinery in its corporate pool. However, if the parent company's subsidiary individually demonstrates compliance with the corporate pool average standards for its refineries, rather than the parent company demonstrating compliance for the subsidiary's refineries, then the subsidiary may only include in its pool a refinery or refineries owned by a joint venture to which the subsidiary itself is a partner. Such subsidiary may not include refineries owned by a joint venture to which the parent, but not the subsidiary, is a partner.

3. **Question:** The sulfur regulations allow refiners and importers to include ethanol added downstream in compliance calculations. The denaturants used in ethanol usually contain some amount of sulfur. Should the sulfur content of the denatured ethanol be included in calculations for purposes of compliance and credit generation?

Answer: Section 80.205(c) provides that a refiner or importer may include oxygenates added downstream from the refinery or import facility when calculating the refinery's or importer's annual average sulfur content, provided that the refiner or importer complies with the requirements under § 80.69(a) or § 80.101(d)(4)(ii) of the RFG/anti-dumping regulations, as applicable, for including such oxygenates. These sections of the RFG/anti-dumping regulations do not require refiners to include in compliance calculations the properties of the denaturant added to the ethanol downstream. Therefore, for purposes of demonstrating compliance with the sulfur standards or generating credits or allotments, the sulfur content of the denaturant in ethanol is not required to be included in the calculations under § 80.205. As indicated in the preamble to the final sulfur rule, where ethanol is included in the refinery compliance calculations, refiners assume this ethanol has no sulfur content. *See* 65 FR at 6800. Section 80.385(e) prohibits any party from blending into gasoline denatured ethanol with a sulfur content higher than 30 ppm. In amounts of 30 ppm or below, we believe that the sulfur in the denatured ethanol will not have a measurable impact on the sulfur level of the gasoline to which the ethanol is added.

4. **Question:** In the preamble to the final sulfur rule, EPA stated that an oxygenate blender who uses blendstock as a denaturant, instead of gasoline, is a refiner under the regulations. Does this mean that such an oxygenate blender is subject to all of the requirements for refiners under the sulfur rule?

Answer: The preamble to the final rule states that an oxygenate blender who uses blendstock instead of finished gasoline as a denaturant for ethanol is a "refiner" under the regulations. As such, the oxygenate blender is required to demonstrate compliance with the sulfur standards for the denatured ethanol added to the gasoline. 65 FR at 6800.

The preamble discussion cited above reflects a concern that a blendstock used as a denaturant could have a much higher sulfur content than finished gasoline, which is subject to the 30 ppm average sulfur standard. The final rule, however, contains a provision which prohibits an

ethanol blender from blending into gasoline denatured ethanol with a sulfur content higher than 30 ppm. § 80.385(e). This prohibition applies regardless of whether the denaturant used is finished gasoline or a blendstock.

We believe that the prohibition in § 80.385(e) adequately addresses the concern raised in the preamble regarding the use of a blendstock as a denaturant rather than finished gasoline. As a result, we do not believe there is a necessity for such oxygenate blenders to demonstrate compliance with the sulfur standards for the blendstock used as a denaturant, or to fulfill the requirements for refiners under the regulations. Therefore, we are withdrawing the preamble discussion as guidance for interpreting the regulations on this particular issue. However, all oxygenate blenders, regardless of the type of denaturant used, are subject to the requirements and prohibitions applicable to downstream parties, as well as the prohibition specified in § 80.385(e). *See* § 80.212. If a blendstock used as a denaturant causes a violation, the oxygenate blender would be liable for that violation. Oxygenate blenders, therefore, may wish to obtain information regarding the sulfur content of any blendstock used as a denaturant to avoid liability under § 80.385(e).

SMALL REFINERS

1. **Question:** The sulfur regulations require small refiners to include in their small refiner application the crude oil capacity of their refineries as reported to the Energy Information Administration (EIA). Foreign refiners, however, do not report to the EIA. What should these refiners include in their applications regarding crude oil capacity?

Answer: As indicated in the question, § 80.235(c)(2) provides that a refiner's small refiner status application must contain the total corporate crude oil capacity of each refinery as reported to the EIA. Since foreign refiners do not report their crude oil capacity to the EIA, the small refiner status application for a foreign refiner must contain the total crude capacity of each refinery as documented by a comparable reputable source, such as a professional publication or trade journal. We intend to clarify this in a future rulemaking.

2. **Question:** Section 80.250 provides the equations to be used in determining small refiner sulfur baselines and baseline volumes. This section, however, does not address whether oxygenates added downstream from the refinery are to be included in the calculations. Section 80.295 requires such oxygenates to be included in calculations for a baseline for early credit generation. Should oxygenates added downstream also be included in calculations for a small refinery baseline?

Answer: We intended the provisions of § 80.250 for determining a baseline under the small refiner program to be consistent with the provisions of § 80.295, since both baselines are intended to represent current sulfur levels, and they are based on the same calculation. As indicated in the question, under § 80.295, any refiner who included oxygenates blended

downstream in compliance calculations for 1997-1998 under the RFG and anti-dumping regulations must include this oxygenate in the calculations for sulfur content under § 80.295 for purposes of establishing a baseline for early credit generation. Consistent with this requirement, small refiners who included oxygenates blended downstream in compliance calculations for 1997-1998 under the RFG/anti-dumping regulations must include this oxygenate in the baseline calculations under § 80.250. We intend to clarify this requirement in a future rulemaking.

ALLOTMENTS AND CREDITS

1. Question: In 2003, a refiner has the ability to generate Type A allotments if his individual refinery sulfur content is 60 ppm or lower. For a refinery with a baseline under 120 ppm, a 0.8 factor is applied to calculate allotments. For 2003, can the refiner specify a portion of the eligible sulfur reduction as credits instead of allotments? If so, would the calculation for the credit portion be the same as the credit calculation in 2000-2002; i.e., without the 0.8 factor used to calculate allotments?

Answer: The regulations provide refiners, in 2003, with the option to generate credits in accordance with the provisions of § 80.305, or generate allotments (and credits where applicable) in accordance with the provisions of § 80.275. *See* § 80.275(a). The regulations do not allow a refiner to generate some credits using the provisions of § 80.305 and some allotments/credits using the provisions of § 80.275 in 2003. Under § 80.305, credits are generated based on the total volume of gasoline produced at the refinery during the annual averaging period. Similarly, under § 80.275, allotments are generated based on the total volume of gasoline produced at the refinery during the annual averaging period. These sections do not provide for credits or allotments to be calculated based on a portion of a refinery's gasoline production.

2. Question: Foreign refiners who have an approved anti-dumping refinery baseline under § 80.94, like domestic refiners, are required to fulfill the requirements for applying for a sulfur baseline under § 80.245 or § 80.290, including the submission of 1997-1998 batch information as reported to EPA under the RFG/anti-dumping regulations. However, in some cases, a foreign refiner may have an approved baseline under § 80.94, but this baseline may not have been in effect until after 1998. As a result, such foreign refiner would not have submitted batch reports to EPA in 1997-1998. How should this foreign refiner comply with the requirements of § 80.245 or § 80.290?

Answer: To establish a sulfur baseline for purposes of the small refinery standards or generating early sulfur credits, the regulations require refiners to submit to EPA sulfur baseline data for 1997-1998, including information on each batch of gasoline produced and the batch number assigned to the batch for purposes of compliance with the RFG/anti-dumping regulations. *See* §§ 80.245(a) and 80.290(c). The data in the refiner's sulfur baseline submission may then be verified by EPA by comparing it with the data submitted to EPA in the refiner's 1997-1998 annual reports. Foreign refiners who do not have an approved individual baseline for

purposes of compliance with the anti-dumping regulations are required to follow the procedures under §§ 80.91 through 80.93 (provisions for establishing an individual anti-dumping baseline) to establish the volume and sulfur content of gasoline that was produced at the foreign refinery and imported into the United States during 1997-1998, for purposes of calculating a sulfur baseline under § 80.250 or § 80.295. *See* §§ 80.250(b), 80.290(d) and 80.410(b)(1). This is in addition to the other baseline establishment requirements under § 80.245 and § 80.290.

However, as indicated in the question, a foreign refiner who has an approved individual anti-dumping baseline, but one that did not apply for purposes of compliance with the anti-dumping regulations until after 1998, also would not have submitted annual reports to EPA in 1997-1998. In such a case, we believe that the foreign refinery's baseline may be based on the gasoline produced at the foreign refinery and imported into the United States during the period of time that the refinery was subject to its individual anti-dumping baseline. As a result, the foreign refiner should submit in the sulfur baseline application under § 80.245 or § 80.290 information and data for the gasoline produced at the refinery and imported into the United States during each annual averaging period that the refinery was subject to its individual anti-dumping baseline. EPA will evaluate all of the data submitted by the foreign refiner in determining the appropriate sulfur baseline for the refinery. Where we conclude that the data submitted reasonably reflects current sulfur levels, the refinery's baseline will be determined based on the average sulfur content of gasoline produced by the foreign refinery and imported into the United States during the most recent annual averaging period in which the foreign refinery was subject to its individual anti-dumping baseline. We intend to clarify this requirement in a future rulemaking.

4. **Question:** Accumulated Type A allotments generated in 2003 and 2004 would only have 50% of their value as allotments if they are consumed in 2005. Type A allotments can be converted to credits in 2005 and 2006. What value do the Type A allotments that were generated in 2003 and 2004 have as credits in 2005 and 2006? Can they be converted on a 1 to 1 basis, or do they have to be converted to 2005 allotments first (at 50% value) and then be converted to credits?

Answer: The preamble to the final rule states that allotments generated in 2003 or 2004 which are carried over to 2005 are discounted by 50%. The discounted allotments may then be used to achieve compliance with the corporate pool average standard in 2005 or converted into credits for compliance with the refinery average standard in 2005 (or beyond). As a result, where allotments generated in 2003 or 2004 are carried over to 2005 and then converted into credits, such credits would retain only 50% of the value of the original allotments generated in 2003 or 2004. However, if the allotments are converted into credits before being carried over to 2005, such credits would not be discounted when they are carried over, and, therefore, would retain 100% of the value of the original allotments. An allotment that is converted into a credit before being carried over to 2005 may be reconverted into an allotment for use in achieving compliance with the corporate pool average in 2005, but the allotment will be discounted 50%. *See* 65 FR at 6765. We intend to clarify these requirements in § 80.275 in a future rulemaking.

5. Question: Under the GPA provisions, a refiner's annual average GPA standard is the lesser of 150 ppm, the refinery's 1997-1998 sulfur baseline plus 30 ppm, or the lowest average sulfur content for any year in which the refinery generated early credits or allotments plus 30 ppm. Section 80.310 provides an equation for determining credit generation in 2004 and thereafter based on the refinery's sulfur standard. However, this section does not include the term "plus 30 ppm" in the GPA standard. Is this an error in § 80.310?

Answer: The term "plus 30 ppm" in the GPA standard was inadvertently omitted in § 80.310. Under § 80.310, for GPA gasoline, the S_{std} value in the equation should be the applicable refinery or importer standard for GPA gasoline established under § 80.216(a). Under § 80.216(a), the refinery or importer annual average sulfur standard for gasoline produced or imported for use in the GPA is the lesser of 150 ppm or the refinery's or importer's 1997-1998 average sulfur level, calculated in accordance with § 80.295, plus 30 ppm (§ 80.216(a)(1)) ; or, in the case of any refinery whose actual annual sulfur average decreases to a level lower than the refinery's annual average sulfur standard for GPA gasoline established under § 80.216(a)(1) during the period 2000 through 2003, the lowest average sulfur content for any year in which the refinery generated allotments or credits, plus 30 ppm, not to exceed 150 ppm (§ 80.216(a)(2)). We intend to correct this in a future rulemaking.

6. Question: The regulations at § 80.205 require the annual refinery or importer average or corporate pool average calculations to be conducted to two decimal places. However, the regulations at §§ 80.250 and 80.295 for calculating a sulfur baseline for purposes of determining small refinery standards and generating early credits do not have a similar requirement. Should the sulfur baseline submissions be rounded to the nearest ppm or conducted to two decimal places as required for calculating the annual average sulfur level under § 80.205?

Answer: We intended the provisions for calculating a sulfur baseline under §§ 80.250 and 80.295 to be consistent with the provisions for calculating the refinery or importer annual average sulfur level under § 80.205, including the requirement to conduct the calculations to two decimal places. As a result, we intend to modify §§ 80.250 and 80.295 in a future rulemaking to require baseline calculations to be conducted to two decimal places. Note, however, that credits under the sulfur program are in "ppm-gallons." § 80.305(c). We interpret § 80.305(c) to require credits to be rounded to the nearest ppm-gallon. Therefore, in calculating sulfur credits using the equation in § 80.305(a), the refiner should use the refinery's sulfur baseline value established under § 80.250 or § 80.295, conducted to two decimal places, and the refinery's actual annual average sulfur level calculated under § 80.205, conducted to two decimal places. Once the sulfur credits are calculated, the refiner should round the credits to the nearest ppm-gallon.

SAMPLING AND TESTING

1. Question: In a recent Questions and Answers document, EPA indicated that, under the sulfur regulations at § 80.330, a refiner who produces conventional gasoline using in-line

blending equipment cannot participate in the early credit program unless the refiner obtains an in-line blending waiver under § 80.65(f)(4) to address sulfur sampling and analysis. *See* “Gasoline Sulfur Rule Questions and Answers,” EPA420-F-00-018 (May 2000) (Sampling and Testing Question 6). We believe this requirement is unjustified, since there are no downstream sulfur standards prior to January 1, 2004, and early credits are based on an annual sulfur average. Will EPA consider modifying the regulations to allow in-line blenders to generate early credits without obtaining an in-line blending waiver?

Answer: The current regulations at § 80.330(a)(1) require a refiner to collect a representative sample from each batch of gasoline produced and test each sample to determine its sulfur content prior to the gasoline leaving the refinery. The requirements in § 80.330(a)(1) apply beginning on January 1, 2004, or January 1 of the first year of credit or allotment generation, whichever is earlier. Section 80.330(a)(4) provides an exception to the requirement in § 80.330(a)(1) that gasoline be tested prior to leaving the refinery for parties who use computer-controlled in-line blending equipment and are unable to obtain test results prior to the gasoline leaving the refinery. Such refiners may meet the testing requirement under the terms of an in-line blending waiver granted under § 80.65(f)(4). Therefore, as discussed in the May 2000 Questions and Answers document, under the current sulfur regulations, refiners who produce gasoline using in-line blending equipment and who are unable to obtain test results prior to the gasoline leaving the refinery must have an in-line blending waiver under § 80.65(f)(4) in order to generate early credits in 2000-2003. This also applies to early allotment generation in 2003. Under the RFG regulations, refiners who produce RFG by in-line blending are required to obtain a waiver under § 80.65(f)(4). However, refiners who produce conventional gasoline by in-line blending are not required to obtain a waiver under § 80.65(f)(4). The current sulfur regulations would require these conventional gasoline refiners to apply for and receive a waiver under § 80.65(f)(4) in order to generate early credits or allotments.

Upon consideration of the comments we have received, we believe that the requirement under § 80.330(a)(4) to obtain an in-blending waiver, in regard to both RFG and conventional gasoline, is unnecessary for purposes of generating early credits or allotments. The waiver requirement was intended to ensure that batches produced using in-line blending equipment have known sulfur levels at the time of shipment. Since early credit or allotment generation is based on the refinery’s annual average sulfur level, credits and allotments are not calculated until the end of the annual averaging period, after the test results for all batches produced during the averaging period are obtained. Therefore, it is unnecessary for refiners to obtain test data prior to the gasoline leaving the refinery. Moreover, as indicated in the question, there are no per-gallon sulfur standards prior to January 1, 2004, which would necessitate knowing the sulfur content of the gasoline prior to its leaving the refinery. As a result, we intend to modify § 80.330 in a future rulemaking to provide that refiners, including those who produce gasoline using computer-controlled in-line blending equipment, are not required to obtain test results prior to the gasoline leaving the refinery in order to generate early credits in 2000-2003 or early allotments in 2003. In-line blenders, therefore, would not be required to obtain an in-line blending waiver under § 80.65(f)(4) for purposes of generating early credits or early allotments. However, this does not

relieve refiners from meeting the requirements under § 80.330 to obtain a representative sample of each batch of gasoline produced. In the case of in-line blenders who do not obtain a sample of each batch from a storage tank, the sampling method must conform to the methodology set forth in ASTM D 4177-95, as required in § 80.330(b)(2). In the case of in-line blenders who do obtain their batch samples from a storage tank, the sampling for such samples must conform to the appropriate methodology specified in § 80.330(b)(1). We also intend to clarify the requirements for in-line blenders beginning in January 2004 in a future rulemaking.

2. Question: Do the provisions of § 80.330(a)(3) apply to refiners who produce conventional gasoline using in-line blending equipment?

Answer: Yes. Section 80.330(a)(3) provides that, prior to January 1, 2004, for purposes of meeting the sampling and testing requirements of the sulfur rule, any refiner may, prior to analysis, combine samples of gasoline from more than one batch of gasoline or blendstock and treat such composite sample as one batch of gasoline or blendstock pursuant to the requirements of § 80.101(i)(2). The provisions of § 80.330(a)(3) apply to all refiners of conventional gasoline, including those who produce gasoline using in-line blending equipment.

3. Question: Are refiners of conventional gasoline who composite samples under § 80.330(a)(3) required to use the sampling methods in § 80.330(b)?

Answer: Yes. Section 80.330(b), which requires the use of the sampling methods provided in §§ 80.330(b)(1) and (b)(2), applies to all samples taken for purposes of complying with the provisions of § 80.330(a), including § 80.330(a)(3).

4. Question: Section 80.335 describes the sample retention requirements for refiners or importers. However, this section does not indicate how reformulated gasoline blendstock for oxygenate blending (RBOB) samples should be considered. Should a refiner retain neat RBOB samples or handblend samples (RBOB blended with ethanol)?

Answer: Section 80.69(a)(2) of the RFG regulations requires refiners to conduct testing on RBOB by adding the specified type and amount of oxygenate to a representative sample of the RBOB and determining the properties and characteristics of the resulting gasoline (i.e., a “handblend”). Section 80.335(a) requires refiners to collect a representative portion of each sample analyzed and retain sample portions as specified in § 80.335(a)(2).

We interpret § 80.335(a) to require refiners to retain samples of the RBOB batches and samples of the ethanol used to conduct the handblend testing, rather than samples of the actual handblend. Refiners, therefore, are not required to create additional volumes of the handblend samples for purposes of fulfilling the sample retention requirements of § 80.335. We believe that having the RBOB and accompanying ethanol samples available to EPA will allow EPA to determine whether the refiner’s handblend testing was properly conducted. We intend to clarify this sampling and retention requirement for RBOB in a future rulemaking.