



CODE OF FEDERAL REGULATIONS

Title 40

Protection of Environment

Parts 79 to 80

Revised as of July 1, 2025

Containing a codification of documents
of general applicability and future effect

As of July 1, 2025

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Cite this Code: CFR

*To cite the regulations in
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part and section num-
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refers to title 40, part
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Each volume of the Code is revised at least once each calendar year and issued on a quarterly basis approximately as follows:

Title 1 through Title 16.....	as of January 1
Title 17 through Title 27.....	as of April 1
Title 28 through Title 41.....	as of July 1
Title 42 through Title 50.....	as of October 1

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OLIVER A. POTTS,
Director,
Office of the Federal Register
July 1, 2025

THIS TITLE

Title 40—PROTECTION OF ENVIRONMENT is composed of thirty-seven volumes. The parts in these volumes are arranged in the following order: Parts 1–49, parts 50–51, part 52 (52.01–52.1018), part 52 (52.1019–52.2019), part 52 (52.2020–end of part 52), parts 53–59, part 60 (60.1–60.499), part 60 (60.500–end of part 60, sections), part 60 (Appendices), parts 61–62, part 63 (63.1–63.599), part 63 (63.600–63.1199), part 63 (63.1200–63.1439), part 63 (63.1440–63.6175), part 63 (63.6580–63.8830), part 63 (63.8980–end of part 63), parts 64–71, parts 72–78, parts 79–80, part 81, parts 82–84, parts 85–96, parts 97–99, parts 100–135, parts 136–149, parts 150–189, parts 190–259, parts 260–265, parts 266–299, parts 300–399, parts 400–424, parts 425–699, parts 700–722, parts 723–789, parts 790–999, parts 1000–1059, and part 1060 to end. The contents of these volumes represent all current regulations codified under this title of the CFR as of July 1, 2025.

Chapter I—Environmental Protection Agency appears in all thirty-seven volumes. OMB control numbers for title 40 appear in §9.1 of this chapter.

Chapters IV–IX—Regulations issued by the Environmental Protection Agency and Department of Justice, Council on Environmental Quality, Chemical Safety and Hazard Investigation Board, Environmental Protection Agency and Department of Defense; Uniform National Discharge Standards for Vessels of the Armed Forces, Gulf Coast Ecosystem Restoration Council, and the Federal Permitting Improvement Steering Council appear in volume thirty-seven.

For this volume, Gabrielle E. Burns was Chief Editor. The Code of Federal Regulations publication program is under the direction of John Hyrum Martinez, assisted by Stephen J. Frattini.

Title 40—Protection of Environment

(This book contains parts 79 to 80)

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CHAPTER I—ENVIRONMENTAL PROTECTION AGENCY (CONTINUED)

EDITORIAL NOTE: Nomenclature changes to chapter I appear at 65 FR 47324, 47325, Aug. 2, 2000; 66 FR 34375, 34376, June 28, 2001; and 69 FR 18803, Apr. 9, 2004.

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SUBCHAPTER C—AIR PROGRAMS (CONTINUED)

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AUTHORITY: 42 U.S.C. 7414, 7524, 7545 and 7601.

SOURCE: 40 FR 52011, Nov. 7, 1975, unless otherwise noted.

Subpart A—General Provisions

§ 79.1 Applicability.

The regulations of this part apply to the registration of fuels and fuel additives designated by the Administrator, pursuant to section 211 of the Clean Air Act (42 U.S.C. 1857f-6c, as amended by section 9, Pub. L. 91-604).

§ 79.2 Definitions.

As used in this part, all terms not defined herein shall have the meaning given them in the Act:

(a) *Act* means the Clean Air Act (42 U.S.C. 1857 *et seq.*, as amended by Pub. L. 91-604).

(b) *Administrator* means the Administrator of the Environmental Protection Agency.

(c) *Fuel* means any material which is capable of releasing energy or power by combustion or other chemical or physical reaction.

(d) *Fuel manufacturer* means any person who, for sale or introduction into commerce, produces, manufactures, or imports a fuel or causes or directs the alteration of the chemical composition of a bulk fuel, or the mixture of chemical compounds in a bulk fuel, by adding to it an additive, except:

(1) A party (other than a fuel refiner or importer) who adds a quantity of additive(s) amounting to less than 1.0

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percent by volume of the resultant additive(s)/fuel mixture is not thereby considered a fuel manufacturer.

(2) A party (other than a fuel refiner or importer) who adds an oxygenate compound to fuel in any otherwise allowable amount is not thereby considered a fuel manufacturer.

(e) *Additive* means any substance, other than one composed solely of carbon and/or hydrogen, that is intentionally added to a fuel named in the designation (including any added to a motor vehicle's fuel system) and that is not intentionally removed prior to sale or use.

(f) *Additive manufacturer* means any person who produces, manufactures, or imports an additive for use as an additive and/or sells or imports for sale such additive under the person's own name.

(g) *Range of concentration* means the highest concentration, the lowest concentration, and the average concentration of an additive in a fuel.

(h) *Chemical composition* means the name and percentage by weight of each compound in an additive and the name and percentage by weight of each element in an additive.

(i) *Chemical structure* means the molecular structure of a compound in an additive.

(j) *Impurity* means any chemical element present in an additive that is not included in the chemical formula or identified in the breakdown by element in the chemical composition of such additive.

(k) *Oxygenate compound* means an oxygen-containing, ashless organic compound, such as an alcohol or ether, which may be used as a fuel or fuel additive.

[40 FR 52011, Nov. 7, 1975, as amended at 59 FR 33092, June 27, 1994; 62 FR 12571, Mar. 17, 1997]

§ 79.3 Availability of information.

The availability to the public of information provided to, or otherwise obtained by, the Administrator under this part shall be governed by part 2 of this chapter except as expressly noted in subpart F of this part.

[59 FR 33092, June 27, 1994]

§ 79.4 Requirement of registration.

(a) *Fuels*. (1) No manufacturer of any fuel designated under this part shall, after the date prescribed for such fuel in this part, sell, offer for sale, or introduce into commerce such fuel unless the Administrator has registered such fuel.

(2) No manufacturer of a registered fuel shall add or direct the addition to it of an additive which he has not previously reported unless he has notified the Administrator of such intended use, including the expected or estimated range of concentration. If necessary to meet an unforeseen production problem, however, a fuel manufacturer may use an additive that he has not previously reported provided that (i) the additive is on the current list of registered additives and (ii) the fuel manufacturer notifies the Administrator within 30 days regarding such unforeseen use and his plans regarding continued use, including the expected or estimated range of concentration.

(3) Any designated fuel that is (i) in a research, development, or test status; (ii) sold to automobile, engine, or component manufacturers for research, development, or test purposes; or (iii) sold to automobile manufacturers for factory fill, and is not in any case offered for commercial sale to the public, shall be exempt from registration.

(4) A domestic fuel manufacturer may purchase and offer for commercial sale foreign-produced fuel containing unidentified additives provided that within 30 days of his offer for sale he notifies the Administrator of the purchase, the source of purchase, the quantity purchased, and summarized results of any tests performed to determine the acceptability of the purchased fuel to the fuel manufacturer.

(b) *Additives*. (1) No manufacturer of any fuel additive designated under this part shall, after the date by which the additive must be registered under this part, sell, offer for sale, or introduce into commerce such additive for use in any type of fuel designated under this part unless the Administrator has registered that additive for use in that type of fuel.

(2) Any designated additive that is either (i) in a research, development, or test status or (ii) sold to petroleum,

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automobile, engine, or component manufacturers for research, development, or test purposes, and in either case is not offered for commercial sale to the public, shall be exempt from registration.

(3) Process chemicals used by refineries during the refinery process are exempted from the requirement for registration.

(4) If an additive manufacturer prepares for sale only to fuel manufacturers (i) a blend or mixture of two or more registered additives or (ii) a blend or mixture of one or more registered additives with one or more substances containing only carbon and/or hydrogen, he will not be required to register such blend or mixture provided he will, upon request, furnish the Administrator with the names and percentages by weight of all components of such blend or mixture.

[40 FR 52011, Nov. 7, 1975, as amended at 41 FR 21324, May 25, 1976; 59 FR 33092, June 27, 1994]

§ 79.5 Periodic reporting requirements.

(a) *Fuel manufacturers.* (1) For each calendar year (January 1 through December 31) commencing after the date prescribed for any fuel in subpart D of this part, fuel manufacturers must submit to the Administrator a report for each registered fuel showing the range of concentration of each additive reported under § 79.11(a) and the volume of such fuel produced in the year. Reports must be submitted by March 31 for the preceding year, or part thereof, on forms supplied by the Administrator. If the date prescribed for a particular fuel in subpart D of this part, or the later registration of a fuel is between October 1 and December 31, no report will be required for the period to the end of that year.

TABLE 1 TO § 79.5—QUARTERLY REPORTING DEADLINES

Calendar quarter	Time period covered	Quarterly report deadline
Quarter 1	January 1–March 31	June 1.
Quarter 2	April 1–June 30	September 1.
Quarter 3	July 1–September 30	December 1.
Quarter 4	October 1–December 31	March 31.

(2) Fuel manufacturers shall submit to the Administrator a report annually for each registered fuel providing additional data and information as specified in §§ 79.32(c) and (d) and 79.33(c) and (d) in the designation of the fuel in subpart D of this part. Reports shall be submitted by March 31 for the preceding year, or part thereof, on forms supplied by the Administrator upon request. If the date prescribed for a particular fuel in subpart D of this part, or the later registration of a fuel is between October 1 and December 31, no report will be required for the period to the end of that year.

(b) *Additive manufacturers.* Additive manufacturers shall submit to the Administrator a report annually for each registered additive providing additional data and information as specified in § 79.31(c) and (d) in the designation of the additive in subpart D of this

part. Additive manufacturers shall also report annually the volume of each additive produced. Reports shall be submitted by March 31 for the preceding year, or part thereof, on forms supplied by the Administrator upon request. If the date prescribed for a particular additive in subpart D of this part, or the later registration of an additive is between October 1 and December 31, no report will be required for the period to the end of that year. These periodic reports shall not, however, be required for any additive that is:

(1) An additive registered under another name,

(2) A blend or mixture of two or more registered additives, or

(3) A blend or mixture of one or more registered additives with one or more

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substances containing only carbon and/or hydrogen.

[40 FR 52011, Nov. 7, 1975, as amended at 79 FR 23630, Apr. 28, 2014; 85 FR 78463, Dec. 4, 2020]

§ 79.6 Requirement for testing.

Provisions regarding testing that is required for registration of a designated fuel or fuel additive are contained in subpart F of this part.

[59 FR 33092, June 27, 1994]

§ 79.7 Samples for test purposes.

When the Administrator requires for test purposes a fuel or additive which is not readily available in the open market, he may request the manufacturer of such fuel or additive to furnish a sample in a reasonable quantity. The fuel or additive manufacturer shall comply with such request within 30 days.

§ 79.8 Penalties.

Any person who violates section 211(a) of the Act or who fails to furnish any information or conduct any tests required under this part shall be liable to the United States for a civil penalty of not more than the sum of \$25,000 for every day of such violation and the amount of economic benefit or savings resulting from the violation. Civil penalties shall be assessed in accordance with paragraphs (b) and (c) of section 205 of the Act. The civil monetary penalty amount listed in this section may not reflect recent inflation adjustments EPA is required to make. The current maximum and minimum statutory civil penalty amounts are located in § 19.4.

[58 FR 65554, Dec. 15, 1993, as amended at 89 FR 88655, Nov. 8, 2024]

Subpart B—Fuel Registration Procedures

§ 79.10 Application for registration by fuel manufacturer.

Any manufacturer of a designated fuel who wishes to register that fuel shall submit an application for registration including all of the information set forth in § 79.11. If the manufacturer produces more than one grade or brand of a designated fuel, a manufac-

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turer may include more than one grade or brand in a single application, provided that the application includes all information required for registration of each such grade or brand by this part. Each application shall be signed by the fuel manufacturer and shall be submitted on such forms as the Administrator will supply on request.

[59 FR 33092, June 27, 1994]

§ 79.11 Information and assurances to be provided by the fuel manufacturer.

Each application for registration submitted by the manufacturer of a designated fuel shall include the following:

(a) The commercial identifying name of each additive that will or may be used in a designated fuel subsequent to the date prescribed for such fuel in subpart D;

(b) The name of the additive manufacturer of each additive named;

(c) The range of concentration of each additive named, as follows:

(1) In the case of an additive which has been or is being used in the designated fuel, the range during any 3-month or longer period prior to the date of submission;

(2) In the case of an additive which has not been used in the designated fuel, the expected or estimated range;

(d) The purpose-in-use of each additive named;

(e) The description (or identification, in the case of a generally accepted method) of a suitable analytical technique (if one is known) that can be used to detect the presence of each named additive in the designated fuel and/or to measure its concentration therein;

(f) Such other data and information as are specified in the designation of the fuel in subpart D;

(g) Assurances that the fuel manufacturer will notify the Administrator in writing and within a reasonable time of any change in:

(1) The name of any additive previously reported;

(2) The name of the manufacturer of any additive being used;

(3) The purpose-in-use of any additive;

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(4) Information submitted pursuant to paragraph (e) of this section;

(h) Assurances that the fuel manufacturer will not represent, directly or indirectly, in any notice, circular, letter, or other written communication, or any written, oral, or pictorial notice or other announcement in any publication or by radio or television, that registration of the fuel constitutes endorsement, certification, or approval by any agency of the United States;

(i) The manufacturer of any fuel which will be sold, offered for sale, or introduced into commerce for use in motor vehicles manufactured after model year 1974 shall demonstrate that the fuel is substantially similar to any fuel utilized in the certification of any 1975 or subsequent model year vehicle or engine, or that the manufacturer has obtained a waiver under 42 U.S.C. 7545(f)(4); and

(j) The manufacturer shall submit, or shall reference prior submissions, including all of the test data and other information required prior to registration of the fuel by the provisions of subpart F of this part.

[40 FR 52011, Nov. 7, 1975, as amended at 59 FR 33092, June 27, 1994]

§ 79.12 Determination of noncompliance.

If the Administrator determines that an applicant for registration of a designated fuel has failed to submit all of the information required by § 79.11, or determines within the applicable period provided for Agency review that the applicant has not satisfactorily completed any testing which is required prior to registration of the fuel by any provision of subpart F of this part, he shall return the application to the manufacturer, along with an explanation of all deficiencies in the required information.

[59 FR 33093, June 27, 1994]

§ 79.13 Registration.

(a) If the Administrator determines that a manufacturer has submitted an application for registration of a designated fuel which includes all of the information and assurances required by § 79.11 and has satisfactorily completed all of the testing required by subpart F

of this part, the Administrator shall promptly register the fuel and notify the fuel manufacturer of such registration.

(b) The Administrator shall maintain a list of registered fuels, which shall be available to the public upon request.

[40 FR 52011, Nov. 7, 1975, as amended at 41 FR 21324, May 25, 1976; 59 FR 33093, June 27, 1994]

§ 79.14 Termination of registration of fuels.

Registration may be terminated by the Administrator if the fuel manufacturer requests such termination in writing.

Subpart C—Additive Registration Procedures

§ 79.20 Application for registration by additive manufacturer.

Any manufacturer of a designated fuel additive who wishes to register that additive shall submit an application for registration including all of the information set forth in § 79.21. Each application shall be signed by the fuel additive manufacturer and shall be submitted on such forms as the Administrator will supply on request.

[59 FR 33093, June 27, 1994]

§ 79.21 Information and assurances to be provided by the additive manufacturer.

Each application for registration submitted by the manufacturer of a designated fuel additive shall include the following:

(a) The chemical composition of the additive with the methods of analysis identified, except that

(1) If the chemical composition is not known, full disclosure of the chemical process of manufacture will be accepted in lieu thereof;

(2) In the case of an additive for engine oil, only the name, percentage by weight, and method of analysis of each element in the additive are required provided, however, that a percentage figure combining the percentages of carbon, hydrogen, and/or oxygen may be provided unless the breakdown into

percentages for these individual elements is already known to the registrant.

(3) In the case of a purchased component, only the name, manufacturer, and percent by weight of such purchased component are required if the manufacturer of the component will, upon request, furnish the Administrator with the chemical composition thereof.

(b) The chemical structure of each compound in the additive if such structure is known and is not adequately specified by the name given under “chemical composition.” Nominal identification is adequate if mixed isomers are present.

(c) The description (or identification, in the case of a generally accepted method) of a suitable analytical technique (if one is known) that can be used to detect the presence of the additive in any fuel named in the designation and/or to measure its concentration therein.

(d) The specific types of fuels designated under § 79.32 for which the fuel additive will be sold, offered for sale, or introduced into commerce, and the fuel additive manufacturer’s recommended range of concentration and purpose-in-use for each such type of fuel.

(e) Such other data and information as are specified in the designation of the additive in subpart D.

(f) Assurances that any change in information submitted pursuant to:

(1) Paragraphs (a), (b), (c), (d), and (j) of this section will be provided to the Administrator in writing within 30 days of such change; and

(2) Paragraph (e) of this section as provided in § 79.5(b).

(g)(1) Assurances that the additive manufacturer will not represent, directly or indirectly, in any notice, circular, letter, or other written communication or any written, oral, or pictorial notice or other announcement in any publication or by radio or television, that registration of the additive constitutes endorsement, certification, or approval by any agency of the United States, except as specified in paragraph (g)(2) of this section.

(2) In the case of an additive that has its purpose-in-use identified as a deposit control additive for use in gaso-

line pursuant to the requirements of paragraph (d) of this section, the additive manufacturer may publicly represent that the additive meets the EPA’s gasoline deposit control requirements, provided that the additive manufacturer is in compliance with the requirements of 40 CFR 1090.260.

(h) The manufacturer of any fuel additive which will be sold, offered for sale, or introduced into commerce for use in any type of fuel intended for use in motor vehicles manufactured after model year 1974 shall demonstrate that the fuel additive, when used at the recommended range of concentration, is substantially similar to any fuel additive included in a fuel utilized in the certification of any 1975 or subsequent model year vehicle or engine, or that the manufacturer has obtained a waiver under 42 U.S.C. 7545(f)(4).

(i) The manufacturer shall submit, or shall reference prior submissions, including all of the test data and other information required prior to registration of the fuel additive by the provisions of subpart F of this part.

(j) If the purpose-in-use of the additive identified pursuant to the requirements of paragraph (d) of this section is a deposit control additive for use in gasoline, the manufacturer must submit the following in addition to the other information specified in this section:

(1) The lowest additive concentration (LAC) that is compliant with the gasoline deposit control requirements of 40 CFR 1090.260.

(2) The deposit control test method in 40 CFR 1090.1395 that the additive is compliant with.

(3) A complete listing of the additive’s components and the weight or volume percent (as applicable) of each component.

(i) *Nomenclature.* When possible, standard chemical nomenclature must be used or the chemical structure of the component must be given. Polymeric components may be reported as the product of other chemical reactants, provided that the supporting data specified in paragraph (j)(3) of this section is also reported.

(ii) *Designation.* Each detergent-active component of the package must be

classified into one of the following designations:

- (A) Polyalkyl amine.
- (B) Polyether amine.
- (C) Polyalkylsuccinimide.
- (D) Polyalkylaminophenol.
- (E) Detergent-active petroleum-based carrier oil.

(F) Detergent-active synthetic carrier oil.

(G) Other detergent-active component (identify category, if feasible).

(iii) *Composition variability.* (A) The composition of a detergent additive reported in a single additive registration (and the detergent additive product sold under a single additive registration) may not include the following:

(1) Detergent-active components that differ in identity from those contained in the detergent additive package at the time of deposit control testing.

(2) A range of concentrations for any detergent-active component such that, if the component were present in the detergent additive package at the lower bound of the reported range, the deposit control effectiveness of the additive package would be reduced as compared with the level of effectiveness demonstrated pursuant to the requirements of 40 CFR 1090.260. Subject to the foregoing constraint, a gasoline detergent additive sold under a particular additive registration may contain a higher concentration of the detergent-active component(s) than the concentration(s) of such component(s) reported in the registration for the additive.

(B) The identity or concentration of non-detergent-active components of the detergent additive package may vary under a single registration provided that such variability does not reduce the deposit control effectiveness of the additive package as compared with the level of effectiveness demonstrated pursuant to the requirements of 40 CFR 1090.260.

(C) Unless the additive manufacturer provides EPA with data to substantiate that a carrier oil does not act to enhance the detergent additive's ability to control deposits, any carrier oil contained in the detergent additive, whether petroleum-based or synthetic, must be treated as a detergent-active component in accordance with the re-

quirements in paragraph (j)(3)(ii) of this section.

(D) Except as provided in paragraph (j)(3)(iii)(E) of this section, detergent additive packages that do not satisfy the requirements in paragraphs (j)(3)(iii)(A) through (C) must be separately registered. EPA may disqualify an additive for use in satisfying the requirements of this subpart if EPA determines that the variability included within a given detergent additive registration may reduce the deposit control effectiveness of the detergent package such that it may invalidate the lowest additive concentration reported in accordance with the requirements of paragraph (j)(1) of this section and 40 CFR 1090.260.

(E) A change in minimum concentration requirements resulting from a modification of detergent additive composition does not require a new detergent additive registration or a change in existing registration if the modification is affected by a detergent blender pursuant to the requirements of 40 CFR 1090.1240.

(4) For detergent-active polymers and detergent-active carrier oils that are reported as the product of other chemical reactants:

(i) Identification of the reactant materials and the manufacturer's acceptance criteria for determining that these materials are suitable for use in synthesizing detergent components. The manufacturer must maintain documentation, and submit it to EPA upon request, demonstrating that the acceptance criteria reported to EPA are the same criteria which the manufacturer specifies to the suppliers of the reactant materials.

(ii) A Gel Permeation Chromatograph (GPC), providing the molecular weight distribution of the polymer or detergent-active carrier oil components and the concentration of each chromatographic peak representing more than one percent of the total mass. For these results to be acceptable, the GPC test procedure must include equipment calibration with a polystyrene standard or other readily attainable and generally accepted calibration standard. The identity of the calibration standard must be provided,

together with the GPC characterization of the standard.

(5) For non-detergent-active carrier oils, the following parameters:

(i) T10, T50, and T90 distillation points, and end boiling point, measured according to applicable test procedures cited in 40 CFR 1090.1350.

(ii) API gravity and viscosity.

(iii) Concentration of oxygen, sulfur, and nitrogen, if greater than or equal to 0.5 percent (by weight) of the carrier oil.

(6) Description of an FTIR-based method appropriate for identifying the detergent additive package and its detergent-active components (polymers, carrier oils, and others) both qualitatively and quantitatively, together with the actual infrared spectra of the detergent additive package and each detergent-active component obtained by this test method. The FTIR infrared spectra submitted in connection with the registration of a detergent additive package must reflect the results of a test conducted on a sample of the additive containing the detergent-active component(s) at a concentration no lower than the concentration(s) (or the lower bound of a range of concentration) reported in the registration pursuant to paragraph (j)(1) of this section.

(7) Specific physical parameters must be identified which the manufacturer considers adequate and appropriate, in combination with other information in this section, for identifying the detergent additive package and monitoring its production quality control.

(i) Such parameters must include (but need not be limited to) viscosity, density, and basic nitrogen content, unless the additive manufacturer specifically requests, and EPA approves, the substitution of other parameter(s) which the manufacturer considers to be more appropriate for a particular additive package. The request must be made in writing and must include an explanation of how the requested physical parameter(s) are helpful as indicator(s) of detergent production quality control. EPA will respond to such requests in writing; the additional parameters are not approved until the manufacturer receives EPA's written approval.

(ii) The manufacturer must identify a standardized measurement method, consistent with the chemical and physical nature of the detergent product, which will be used to measure each parameter. The documented ASTM repeatability for the method must also be cited. The manufacturer's target value for each parameter in the additive, and the expected range of production values for each parameter, must be specified.

(iii) The expected range of variability must differ from the target value by an amount no greater than five times the standard repeatability of the test procedure, or by no more than 10 percent of the target value, whichever is less. However, in the case of nitrogen analysis or other procedures for measuring concentrations of specific chemical compounds or elements, when the target value is less than 10 parts per million, a range of variability up to 50 percent of the target value will be considered acceptable.

(iv) If a manufacturer wishes to rely on measurement methods or production variability ranges which do not conform to the above limitations, then the manufacturer must receive prior written approval from EPA. A request for such allowance must be made in writing. It must fully justify the adequacy of the test procedure, explain why a broader range of variability is required, and provide evidence that the production detergent will perform adequately throughout the requested range of variability pursuant to the requirements of 40 CFR 1090.1395.

[40 FR 52011, Nov. 7, 1975, as amended at 41 FR 21324, May 25, 1976; 59 FR 33093, June 27, 1994; 85 FR 78463, Dec. 4, 2020]

§ 79.22 Determination of noncompliance.

If the Administrator determines that an applicant for registration of a designated fuel additive has failed to submit all of the information required by § 79.21, or determines within the applicable period provided for Agency review that the applicant has not satisfactorily completed any testing which is required prior to registration of the fuel additive by any provision of subpart F of this part, he shall return the application to the manufacturer, along

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with an explanation of all deficiencies in the required information.

[59 FR 33093, June 27, 1994]

§ 79.23 Registration.

(a) If the Administrator determines that a manufacturer has submitted an application for registration of a designated fuel additive which includes all of the information and assurances required by § 79.21 and has satisfactorily completed all of the testing required by subpart F of this part, the Administrator shall promptly register the fuel additive and notify the fuel manufacturer of such registration.

(b) The Administrator shall maintain a list of registered additives, which shall be available to the public upon request.

[40 FR 52011, Nov. 7, 1975, as amended at 41 FR 21324, May 25, 1976; 59 FR 33093, June 27, 1994]

§ 79.24 Termination of registration of additives.

(a) Registration may be terminated by the Administrator if the additive manufacturer requests such termination in writing.

(b) Registration for an additive that has its purpose-in-use identified as a deposit control additive for use in gasoline pursuant to the requirements of § 79.21(d) may be terminated by the Administrator if the EPA determines that the detergent additive is not compliant with the gasoline deposit control requirements of 40 CFR 1090.260.

[85 FR 78465, Dec. 4, 2020]

Subpart D—Designation of Fuels and Additives

§ 79.30 Scope.

Fuels and additives designated and dates prescribed by the Administrator for the registration of such fuels and additives, pursuant to section 211 of the Act, are listed in this subpart. In addition, specific informational requirements under §§ 79.11(f) and 79.21(e) are set forth for each designated fuel or additive. Additional fuels and/or additives may be designated and pertinent dates and additional specific informational requirements prescribed as the Administrator deems advisable.

§ 79.31 Additives.

(a) All additives produced or sold for use in motor vehicle gasoline and/or motor vehicle diesel fuel are hereby designated. The Act defines the term “*motor vehicle*” to mean any self-propelled vehicle designed for transporting persons or property on a street or highway. For purposes of this registration, however, additives specifically manufactured and marketed for use in motorcycle fuels are excluded.

(b) All designated additives must be registered by July 7, 1976.

(c) In accordance with §§ 79.5(b) and 79.21(e), and to the extent such information is known to the additive manufacturer as a result of testing conducted for reasons other than additive registration or reporting purposes, the additive manufacturer shall furnish the highest, lowest, and average values of the impurities in each designated additive, if greater than 0.1 percent by weight. The methods of analysis in making the determinations shall also be given.

(d) In accordance with §§ 79.5(b) and 79.21(e), and to the extent such information is known to the additive manufacturer, he shall furnish summaries of any information developed by or specifically for him concerning the following items:

(1) Mechanisms of action of the additive;

(2) Reactions between the additive and the fuels listed in paragraph (a) of this section;

(3) Identification and measurement of the emission products of the additive when used in the fuels listed in paragraph (a) of this section;

(4) Effects of the additive on all emissions;

(5) Toxicity and any other public health or welfare effects of the emission products of the additive;

(6) Effects of the emission products of the additive on the performance of emission control devices/systems. Such submissions shall be accompanied by a description of the test procedures used in obtaining the information. Information will be considered to be known to the additive manufacturer if a report

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thereon has been prepared and circulated or distributed outside the research department or division.

(Secs. 211, 301(a), Clean Air Act as amended (40 U.S.C. 7545, 7601(a)))

[40 FR 52011, Nov. 7, 1975, as amended at 41 FR 21324, May 25, 1976; 43 FR 28490, June 30, 1978; 59 FR 33093, June 27, 1994]

§ 79.32 Motor vehicle gasoline.

(a) The following fuels commonly or commercially known or sold as motor vehicle gasoline are hereby individually designated:

(1) Motor vehicle gasoline, unleaded—motor vehicle gasoline that contains no more than 0.05 gram of lead per gallon;

(2) Motor vehicle gasoline, leaded, premium—motor vehicle gasoline that contains more than 0.05 gram of lead per gallon and is sold as “premium;”

(3) Motor vehicle gasoline, leaded, non-premium—motor vehicle gasoline that contains more than 0.05 gram of lead per gallon but is not sold as “premium.”

The Act defines the term “motor vehicle” to mean any self-propelled vehicle designed for transporting persons or property on a street or highway. For purposes of this registration, however, gasoline specifically blended and marketed for motorcycles is excluded.

(b) All designated motor vehicle gasolines must be registered by September 7, 1976.

(c) Fuel manufacturers must submit the reports specified in 40 CFR part 1090, subpart J.

(d) In accordance with §§ 79.5(a)(2) and 79.11(f), and to the extent such information is known to the fuel manufacturer, he shall furnish summaries of any information developed by or specifically for him concerning the following items:

(1) Mechanisms of action of each additive he reports;

(2) Reactions between such additives and motor vehicle gasoline;

(3) Identification and measurement of the emission products of such additives when used in motor vehicle gasoline;

(4) Effects of such additives on all emissions;

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(5) Toxicity and any other public health or welfare effects of the emission products of such additives;

(6) Effects of the emission products of such additives on the performance of emission control devices/systems. Such submissions shall be accompanied by a description of the test procedures used in obtaining the information. Information will be considered to be known to the fuel manufacturer if a report thereon has been prepared and circulated or distributed outside the research department or division.

[40 FR 52011, Nov. 7, 1975, as amended at 41 FR 21324, May 25, 1976; 85 FR 78465, Dec. 4, 2020]

§ 79.33 Motor vehicle diesel fuel.

(a) The following fuels commonly or commercially known or sold as motor vehicle diesel fuel are hereby individually designated:

(1) Motor vehicle diesel fuel, grade 1–D;

(2) Motor vehicle diesel fuel, grade 2–D.

The Act defines the term “motor vehicle” to mean any self-propelled vehicle designed for transporting persons or property on a street or highway.

(b) All designated motor vehicle diesel fuels must be registered within 12 months after promulgation of this part.

(c) Fuel manufacturers must submit the reports specified in 40 CFR part 1090, subpart J.

(d) In accordance with §§ 79.5(a)(2) and 79.11(f), and to the extent such information is known to the fuel manufacturer, he shall furnish summaries of any information developed by or specifically for him concerning the following items:

(1) Mechanisms of action of each additive he reports;

(2) Reactions between such additives and motor vehicle diesel fuel;

(3) Identification and measurement of the emission products of such additives when used in motor vehicle diesel fuel;

(4) Effects of such additives on all emissions;

(5) Toxicity and any other public health or welfare effects of the emission products of such additives.

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Such submission shall be accompanied by a description of the test procedures used in obtaining the information. Information will be considered to be known to the fuel manufacturer if a report thereon has been prepared and circulated or distributed outside the research department or division.

[40 FR 52011, Nov. 7, 1975, as amended at 85 FR 78465, Dec. 4, 2020]

Subpart E [Reserved]

Subpart F—Testing Requirements for Registration

SOURCE: 59 FR 33093, June 27, 1994, unless otherwise noted.

§ 79.50 Definitions.

The definitions listed in this section apply only to subpart F of this part.

Additive/base fuel mixture means the mixture resulting when a fuel additive is added in specified proportion to the base fuel of the fuel family to which the additive belongs.

Aerosol additive means a chemical mixture in aerosol form generally used as a motor vehicle engine starting aid or carburetor cleaner and not recommended to be placed in the fuel tank.

Aftermarket fuel additive means a product which is added by the end-user directly to fuel in a motor vehicle or engine to modify the performance or other characteristics of the fuel, the engine, or its emissions.

Atypical element means any chemical element found in a fuel or additive product which is not allowed in the baseline category of the associated fuel family, and an “atypical fuel or fuel additive” is a product which contains such an atypical element.

Base fuel means a generic fuel formulated from a set of specifications to be representative of a particular fuel family.

Basic emissions means the total hydrocarbons, carbon monoxide, oxides of nitrogen, and particulates occurring in motor vehicle or engine emissions.

Bulk fuel additive means a product which is added to fuel at the refinery as part of the original blending stream or after the fuel is transported from

the refinery but before the fuel is purchased for introduction into the fuel tank of a motor vehicle.

Emission characterization means the determination of the chemical composition of emissions.

Emission generation means the operation of a vehicle or engine or the vaporization of a fuel or additive/fuel mixture under controlled conditions for the purpose of creating emissions to be used for testing purposes.

Emission sampling means the removal of a fraction of collected emissions for testing purposes.

Emission speciation means the analysis of vehicle or engine emissions to determine the individual chemical compounds which comprise those emissions.

Engine Dynamometer Schedule (EDS) means the transient engine speed versus torque time sequence commonly used in heavy-duty engine evaluation. The EDS for heavy-duty diesel engines is specified in 40 CFR part 86, appendix I(f)(2).

Evaporative Emission Generator (EEG) means a fuel tank or vessel to which heat is applied to cause a portion of the fuel to evaporate at a desired rate.

Evaporative emissions means chemical compounds emitted into the atmosphere by vaporization of contents of a fuel or additive/fuel mixture.

Evaporative fuel means a fuel which has a Reid Vapor Pressure (RVP, pursuant to 40 CFR part 80, appendix “E”) of 2.0 pounds per square inch or greater and is not supplied to motor vehicle engines by way of sealed containment and delivery systems.

Evaporative fuel additive means a fuel additive which, when mixed with its specified base fuel, causes an increase in the RVP of the base fuel by 0.4 psi or more relative to the RVP of the base fuel alone and results in an additive/base fuel mixture whose RVP is 2.0 psi, or greater. Excluded from this definition are fuel additives used with fuels which are supplied to motor vehicle engines by way of sealed containment and delivery systems.

Federal Test Procedure (FTP) means the body of exhaust and evaporative emissions test procedures described in 40 CFR 86 for the certification of new

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motor vehicles to Federal motor vehicle emissions standards.

Fuel family means a set of fuels and fuel additives which share basic chemical and physical formulation characteristics and can be used in the same engine or vehicle.

Manufacturer means a person who is a fuel manufacturer or additive manufacturer as defined in § 79.2 (d) and (f).

Nitrated polycyclic aromatic hydrocarbons (NPAH) means the class of compounds whose molecular structure includes two or more aromatic rings and contains one or more nitrogen substitutions.

Non-catalyzed emissions means exhaust emissions not subject to an effective aftertreatment device such as a functional catalyst or particulate trap.

Oxygenate compound means an oxygen-containing, ashless organic compound, such as an alcohol or ether, which may be used as a fuel or fuel additive.

Polycyclic aromatic hydrocarbons (PAH) means the class of hydrocarbon compounds whose molecular structure includes two or more aromatic rings.

Relabeled additive means a fuel additive which is registered by its original manufacturer with EPA and is also registered and sold, unchanged in composition, under a different label and/or by a different entity.

Semi-volatile organic compounds means that fraction of gaseous combustion emissions which consists of compounds with greater than twelve carbon atoms and can be trapped in sorbent polymer resins.

Urban Dynamometer Driving Schedule (UDDS) means the 1372 second transient speed driving sequence used by EPA to simulate typical urban driving. The UDDS for light-duty vehicles is described in 40 CFR part 86, appendix I(a).

Vapor phase means the gaseous fraction of combustion emissions.

Vehicle classes/subclasses means the divisions of vehicle groups within a vehicle type, including light-duty vehicles, light-duty trucks, and heavy-duty vehicles as specified in 40 CFR part 86.

Vehicle type means the divisions of motor vehicles according to combustion cycle and intended fuel class, including, but not necessarily limited to, Otto cycle gasoline-fueled vehicles,

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Otto cycle methanol-fueled vehicles, diesel cycle diesel-fueled vehicles, and diesel cycle methanol-fueled vehicles.

Whole emissions means all components of unfiltered combustion emissions or evaporative emissions.

§ 79.51 General requirements and provisions.

(a) *Overview of requirements.* (1) All manufacturers of fuels and fuel additives that are designated for registration under this part are required to comply with the requirements of subpart F of this part either on an individual basis or as a participant in a group of manufacturers of the same or similar fuels and fuel additives, as defined in § 79.56. If manufacturers elect to comply by participation in a group, each manufacturer continues to be individually subject to the requirements of subpart F of this part, and responsible for testing under this subpart. Each manufacturer, subject to the provisions for group applications in § 79.51(b) and the special provisions in § 79.58, shall submit all Tier 1 and Tier 2 information required by §§ 79.52, 79.53 and 79.59 for each fuel or additive, except that the Tier 1 emission characterization requirements in § 79.52(b) and/or the Tier 2 testing requirements in § 79.53 may be satisfied by adequate existing information pursuant to the Tier 1 literature search requirements in § 79.52(d). The adequacy of existing information to serve in compliance with specific Tier 1 and/or Tier 2 requirements shall be determined according to the criteria and procedures specified in §§ 79.52(b) and 79.53 (c) and (d). In all cases, EPA reserves the right to require, based upon the information contained in the application or any other information available to the Agency, that manufacturers conduct additional testing of any fuel or additive (or fuel/additive group) if EPA determines that there is inadequate information upon which to base regulatory decisions for such product(s). In any case where EPA determines that the requirements of Tiers 1 and 2 have been satisfied but that further testing is required, the provisions of Tier 3 (§ 79.54) shall apply.

(2) Laboratory facilities shall perform testing in compliance with Good

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Laboratory Practice (GLP) requirements as those requirements apply to inhalation toxicology studies. All studies shall be monitored by the facilities' Quality Assurance units (as specified in § 79.60).

(b) *Group Applications.* Subject to the provisions of § 79.56 (a) through (c), EPA will consider any testing requirements of this subpart to have been met for any fuel or fuel additive when a fuel or fuel additive which meets the criteria for inclusion in the same group as the subject fuel or fuel additive has met that testing requirement, provided that all fuels and additives must be individually registered as described in § 79.59(b). For purposes of this subpart, a determination of which group contains a particular fuel or additive will be made pursuant to the provisions of § 79.56 (d) and (e). Nothing in this subsection (b) shall be deemed to require a manufacturer to rely on another manufacturer's testing.

(c) *Application Procedures and Dates.* Each application submitted in compliance with this subpart shall be signed by the manufacturer of the designated fuel or additive, or by the manufacturer's agent, and shall be submitted to the address and in the format prescribed in § 79.59. A manufacturer who chooses to comply as part of a group pursuant to § 79.56 shall be covered by the group's joint application. Subject to any modifications pursuant to the special provisions in §§ 79.51(f) or 79.58, the schedule for compliance with the requirements of this subpart is as follows:

(1) *Fuels and fuel additives with existing registrations.* (i) The manufacturer of a fuel or fuel additive product which, pursuant to subpart B or C of this part, is registered as of May 27, 1994 must submit the additional basic registration data specified in § 79.59(b) before November 28, 1994.

(ii) Except as provided in paragraphs (c)(1)(vi) and (vii) of this section, the manufacturer of such products must also satisfy the requirements and time schedules in either of the following paragraphs (c)(1)(ii) (A) or (B) of this section:

(A) No later than May 27, 1997, all applicable Tier 1 and Tier 2 requirements

must be submitted to EPA, pursuant to §§ 79.52, 79.53, and 79.59; or

(B) No later than May 27, 1997, all applicable Tier 1 requirements (pursuant to §§ 79.52 and 79.59), plus evidence of a contract with a qualified laboratory (or other suitable arrangement) for completion of all applicable Tier 2 requirements, must be submitted to EPA. For this purpose, a qualified laboratory is one which can demonstrate the capabilities and credentials specified in § 79.53(c)(1). In addition, by May 26, 2000, all applicable Tier 2 requirements (pursuant to §§ 79.53 and 79.59) must be submitted to EPA.

(iii) In the case of such fuels and fuel additives which, pursuant to applicable special provisions in § 79.58, are not subject to Tier 2 requirements, all other requirements (except Tier 3) must be submitted to EPA before May 27, 1997.

(iv) In the event that Tier 3 testing is also required (under § 79.54), EPA shall determine an appropriate timeline for completion of the additional requirements and shall communicate this schedule to the manufacturer according to the provisions of § 79.54(b).

(v) The manufacturer may at any time modify an existing fuel registration by submitting a request to EPA to add or delete a bulk additive to the existing registration information for such fuel product, provided that any additional additive must be registered by EPA for use in the specific fuel family to which the fuel product belongs. However, the addition or deletion of a bulk additive to a fuel registration may effect the grouping of such registered fuel under the criteria of § 79.56, and thus may effect the testing responsibilities of the fuel manufacturer under this subpart.

(vi) In regard to atypical fuels or additives in the gasoline and diesel fuel families (pursuant to the specifications in § 79.56(e)(4)(iii)(A) (1) and (2)):

(A) All applicable Tier 1 requirements, pursuant to §§ 79.52 and 79.59, must be submitted to EPA by May 27, 1997.

(B) Tier 2 requirements, pursuant to §§ 79.53 and 79.59, must be satisfied according to the deadlines in either of the following paragraphs (c)(1)(vi)(B) (1) or (2) of this section:

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(1) All applicable Tier 2 requirements shall be submitted to EPA by November 27, 1998; or

(2) Evidence of a contract with a qualified laboratory (or other suitable arrangement) for completion of all applicable Tier 2 requirements shall be submitted to EPA by November 27, 1998. For this purpose, a qualified laboratory is one which can demonstrate the capabilities and credentials specified in § 79.53(c)(1). In addition, all applicable Tier 2 requirements must be submitted to EPA by November 27, 2001.

(vii) In regard to nonbaseline diesel products formulated with mixed alkyl esters of plant and/or animal origin (i.e., “biodiesel” fuels, pursuant to § 79.56(e)(4)(ii)(B)(2)):

(A) All applicable Tier 1 requirements, pursuant to §§ 79.52 and 79.59, must be submitted to EPA by March 17, 1998.

(B) Tier 2 requirements, pursuant to §§ 79.53 and 79.59, must be satisfied according to the deadlines in either of the following paragraphs (c)(1)(vii)(B)(1) or (2) of this section:

(1) All applicable Tier 2 requirements shall be submitted to EPA by March 17, 1998; or

(2) Evidence of a contract with a qualified laboratory (or other suitable arrangement) for completion of all applicable Tier 2 requirements shall be submitted to EPA by March 17, 1998. For this purpose, a qualified laboratory is one which can demonstrate the capabilities and credentials specified in § 79.53(c)(1). In addition, all applicable Tier 2 requirements must be submitted to EPA by May 27, 2000.

(2) *Registrable fuels and fuel additives.*

(i) A fuel product which is not registered pursuant to subpart B of this part as of May 27, 1994 shall be considered registrable if, under the criteria established by § 79.56, the fuel can be enrolled in the same fuel/additive group with one or more currently registered fuels. A fuel additive product which is not registered for a specific type of fuel pursuant to subpart C of this part as of May 27, 1994 shall be considered registrable for that type of fuel if, under the criteria established by § 79.56, the fuel/additive mixture resulting from use of the additive product in

the specific type of fuel can be enrolled in the same fuel/additive group with one or more currently registered fuels or bulk fuel additives. For the purpose of this determination, currently registered fuels and bulk additives are those with existing registrations as of the date on which EPA receives the basic registration data (pursuant to § 79.59(b)) for the product in question.

(ii) A manufacturer seeking to register under subpart B of this part a fuel product which is deemed registrable under this section, or to register under subpart C of this part a fuel additive product for a specific type of fuel for which it is deemed registrable under this section, shall submit the basic registration data (pursuant to § 79.59(b)) for that product as part of the application for registration. If the Administrator determines that the product is registrable under this section, then the Administrator shall promptly register the product, provided that the applicant has satisfied all of the other requirements for registration under subpart B or subpart C of this part, and contingent upon satisfactory submission of required information under paragraph (c)(2)(iii) of this section.

(iii) Registration of a registrable fuel or additive shall be subject to the same requirements and compliance schedule as specified in paragraph (c)(1) of this section for existing fuels and fuel additives. Accordingly, manufacturers of registrable fuels or additives may be granted and may retain registration for such products only if any applicable and due Tier 1, 2, and 3 requirements have also been satisfied by either the manufacturer of the product or the fuel/additive group to which the product belongs.

(3) *New fuels and fuel additives.* A fuel product shall be considered new if it is not registered pursuant to subpart B of this part as of May 27, 1994 and if, under the criteria established by § 79.56, it cannot be enrolled in the same fuel/additive group with one or more currently registered fuels. A fuel additive product shall be considered new with respect to a specific type of fuel if it is not expressly registered for that type of fuel pursuant to subpart C of this part as of May 27, 1994 and if, under the criteria established by § 79.56, the fuel/

additive mixture resulting from use of the additive product in the specific type of fuel cannot be enrolled in the same fuel/additive group with one or more currently registered fuels or bulk fuel additives. For the purpose of this determination, currently registered fuels and bulk additives are those with existing registrations as of the date on which EPA receives the basic registration data (pursuant to § 79.59(b)) for the product in question. For such new product, the manufacturer must satisfactorily complete all applicable Tier 1 and Tier 2 requirements, followed by any Tier 3 testing which the Administrator may require, before registration will be granted.

(d) *Notifications.* Upon receipt of a manufacturer's (or group's) submittal in compliance with the requirements of this subpart, EPA will notify such manufacturer (or group) that the application has been received and what, if any, information, testing, or retesting is necessary to bring the application into compliance with the requirements of this subpart. EPA intends to provide such notification of receipt in a timely manner for each such application.

(1) *Registered fuel and fuel additive notification.* (i) The manufacturer of a registered fuel or fuel additive product who is notified that the submittal for such product contains adequate information pursuant to the Tier 1 and Tier 2 testing and reporting requirements (§§ 79.52, 79.53, and 79.59 (a) through (c)) may continue to sell, offer for sale, or introduce into commerce the registered product as permitted by the existing registration for the product under § 79.4.

(ii) If the manufacturer of a registered fuel or fuel additive product is notified that testing or retesting is necessary to bring the Tier 1 and/or Tier 2 submittal into compliance, the continued sale or importation of the product shall be conditional upon satisfactorily completing the requirements within the time frame specified in paragraph (c)(1) of this section.

(iii) EPA intends to notify the manufacturer of the adequacy of the submitted data within two years of EPA's receipt of such data. However, EPA retains the right to require that adequate data be submitted to EPA if,

upon subsequent review, EPA finds that the original Tier 1 and/or Tier 2 submittal is not consistent with the requirements of this subpart. If EPA does not notify the manufacturer of the adequacy of the Tier 1 and/or Tier 2 data within two years, EPA will not hold the manufacturer liable for penalties for violating this rule for the period beginning when the data was due until the time EPA notifies the manufacturer of the violation.

(iv) If the manufacturer of a registered fuel or fuel additive product is notified (pursuant to § 79.54(b)) that Tier 3 testing is required for its product, then the manufacturer may continue to sell, offer for sale, introduce into commerce the registered product as permitted by the existing registration for the product under § 79.4. However, if the manufacturer fails to complete the specified Tier 3 requirements within the specified time, the registration of the product will be subject to cancellation under § 79.51(f)(6).

(v) EPA retains the right to require additional Tier 3 testing pursuant to the procedures in § 79.54.

(2) *New fuel and fuel additive notification.* (i) Within six months following its receipt of the Tier 1 and Tier 2 submittal for a new product (as defined in paragraph (c)(3) of this section), EPA shall notify the manufacturer of the adequacy of such submittal in compliance with the requirements of §§ 79.52, 79.53, and 79.59 (a) through (c).

(A) If EPA notifies the manufacturer that testing, retesting, or additional information is necessary to bring the Tier 1 and Tier 2 submittal into compliance, the manufacturer shall remedy all inadequacies and provide Tier 3 data, if required, before EPA shall consider the requirements for registration to have been met for the product in question.

(B) If EPA does not notify the manufacturer of the adequacy of the Tier 1 and Tier 2 submittal within six months following the submittal, the manufacturer shall be deemed to have satisfactorily completed Tiers 1 and 2.

(ii) Within six months of the date on which EPA notifies the manufacturer of satisfactory completion of Tiers 1 and 2 for a new product, or within one year of the submittal of the Tier 1 and

Tier 2 data (whichever is earlier), EPA shall determine whether additional testing is currently needed under the provisions of Tier 3 and, pursuant to § 79.54(b), shall notify the manufacturer of its determination.

(A) If the manufacturer of a new fuel or fuel additive product is notified that Tier 3 testing is required for such product, then EPA shall have the authority to withhold registration until the specified Tier 3 requirements have been satisfactorily completed. EPA shall determine whether the Tier 3 requirements have been met, and shall notify the manufacturer of this determination, within one year of receiving the manufacturer's Tier 3 submittal.

(B) If EPA does not notify the manufacturer of potential Tier 3 requirements within the prescribed time-frame, then additional testing at the Tier 3 level is deemed currently unnecessary and the manufacturer shall be considered to have complied with all current registration requirements for the new fuel or additive product.

(iii) Upon completion of all current Tier 1, Tier 2, and Tier 3 requirements, and submission of an application for registration which includes all of the information and assurances required by § 79.11 or § 79.21, the registration of the new fuel or additive shall be granted, and the registrant may then sell, offer for sale, or introduce into commerce the registered product as permitted by § 79.4.

(iv) Once the new product becomes registered, EPA reserves the right to require additional Tier 3 testing pursuant to the procedures specified in § 79.54.

(e) *Inspection of a testing facility.* (1) A testing facility, whether engaged in emissions analysis or health and/or welfare effects testing under the regulations in this subpart, shall permit an authorized employee or duly designated representative of EPA, at reasonable times and in a reasonable manner, to inspect the facility and to inspect (and in the case of records also to copy) all records and specimens required to be maintained regarding studies to which this subpart applies. The records inspection and copying requirements shall not apply to quality assurance unit records of findings and

problems, or to actions recommended and taken, except the EPA may seek production of these records in litigation or informal hearings.

(2) EPA will not consider reliable for purposes of showing that a test substance does or does not present a risk of injury to health or the environment any data developed by a testing facility or sponsor that refuses to permit inspection in accordance with this section. The determination that a study will not be considered reliable does not, however, relieve the sponsor of a required test of any obligation under any applicable statute or regulation to submit the results of the study to EPA.

(3) Effects of non-compliance. Pursuant to sections 114, 208, and 211(d) of the CAA, it shall be a violation of this section and a violation of 40 CFR part 79, subpart F to deny entry to an authorized employee or duly designated representative of EPA for the purpose of auditing a testing facility or test data.

(f) *Penalties and Injunctive Relief.* (1) Any person who violates these regulations shall be subject to a civil penalty of up to \$25,000 for each and every day of the continuance of the violation and the economic benefit or savings resulting from the violation. Action to collect such civil penalties shall be commenced in accordance with paragraph (b) of section 205 of the Clean Air Act or assessed in accordance with paragraph (c) of section 205 of the Clean Air Act, 42 U.S.C. 7524 (b) and (c).

(2) Under section 205(b) of the CAA, the Administrator may commence a civil action for violation of this subpart in the district court of the United States for the district in which the violation is alleged to have occurred or in which the defendant resides or has a principal place of business.

(3) Under section 205(c) of the CAA, the Administrator may assess a civil penalty of \$25,000 for each and every day of the continuance of the violation and the economic benefit or savings resulting from the violation, except that the maximum penalty assessment shall not exceed \$200,000, unless the Administrator and the Attorney General jointly determine that a matter involving a larger penalty amount is appropriate for administrative penalty assessment.

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Any such determination by the Administrator and the Attorney General shall not be subject to judicial review.

(4) The Administrator may, upon application by the person against whom any such penalty has been assessed, remit or mitigate, with or without conditions, any such penalty.

(5) The district courts of the United States shall have jurisdiction to compel the furnishing of information and the conduct of tests required by the Administrator under these regulations and to award other appropriate relief. Actions to compel such actions shall be brought by and in the name of the United States. In any such action, subpoenas for witnesses who are required to attend a district court in any district may run into any other district.

(6) *Cancellation.* (i) The Administrator of EPA may issue a notice of intent to cancel a fuel or fuel additive registration if the Administrator determines that the registrant has failed to submit in a timely manner any data required to maintain registration under this part or under section 211(b) or 211(e) of the Clean Air Act.

(ii) Upon issuance of a notice of intent to cancel, EPA will forward a copy of the notice to the registrant by certified mail, return receipt requested, at the address of record given in the registration, along with an explanation of the reasons for the proposed cancellation.

(iii) The registrant will be afforded 60 days from the date of receipt of the notice of intent to cancel to submit written comments concerning the notice, and to demonstrate or achieve compliance with the specific data requirements which provide the basis for the proposed cancellation. If the registrant does not respond in writing within 60 days from the date of receipt of the notice of intent to cancel, the cancellation of the registration shall become final by operation of law and the Administrator shall notify the registrant of such cancellation. If the registrant responds in writing within 60 days from the date of receipt of the notice of intent to cancel, the Administrator shall review and consider all comments submitted by the registrant before taking final action concerning the proposed cancellation. The registrants' commu-

nications should be sent to the following address: Attn: Fuel/Additives Registration, U.S. Environmental Protection Agency, 1200 Pennsylvania Ave. NW, Mail Code 6405A, Washington, DC 20460.

(iv) As part of a written response to a notice of intent to cancel, a registrant may request an informal hearing concerning the notice. Any such request shall state with specificity the information the registrant wishes to present at such a hearing. If an informal hearing is requested, EPA shall schedule such a hearing within 60 days from the date of receipt of the request. If an informal hearing is held, the subject matter of the hearing shall be confined solely to whether or not the registrant has complied with the specific data requirements which provide the basis for the proposed cancellation. If an informal hearing is held, the designated presiding officer may be any EPA employee, the hearing procedures shall be informal, and the hearing shall not be subject to or governed by 40 CFR part 22 or by 5 U.S.C. 554, 556, or 557. A verbatim transcript of each informal hearing shall be kept and the Administrator shall consider all relevant evidence and arguments presented at the hearing in making a final decision concerning a proposed cancellation.

(v) If a registrant who has received a notice of intent to cancel submits a timely written response, and the Administrator decides after reviewing the response and the transcript of any informal hearing to cancel the registration, the Administrator shall issue a final cancellation order, forward a copy of the cancellation order to the registrant by certified mail, and promptly publish the cancellation order in the FEDERAL REGISTER. Any cancellation order issued after receipt of a timely written response by the registrant shall become legally effective five days after it is published in the FEDERAL REGISTER.

(7) The civil monetary penalty amounts listed in this section may not reflect recent inflation adjustments EPA is required to make. The current maximum and minimum statutory civil penalty amounts are located in § 19.4.

(g) *Modification of Regulation.* (1) In special circumstances, a manufacturer subject to the registration requirements of this rule may petition the Administrator to modify the mandatory testing requirements in the test standard for any test required by this rule by application to Director, Field Operations and Support Division, at the address in paragraph (f)(6)(iii) of this section.

(i) Such request shall be made as soon as the test sponsor is aware that the modification is necessary, but in no event shall the request be made after 30 days following the event which precipitated the request.

(ii) Upon such request, the Administrator may, in circumstances which are outside the control of the manufacturer(s) or his/their agent and which could not have been reasonably foreseen or avoided, modify the mandatory testing requirements in the rule if such requirements are infeasible.

(iii) If the Administrator determines that such modifications would not significantly alter the scope of the test, EPA will not ask for public comment before approving the modification. The Administrator will notify the test sponsor by certified mail of the response to the request. EPA will place copies of each application and EPA response in the public docket. EPA will publish a notice in the FEDERAL REGISTER annually describing such changes which have occurred during the previous year. Until such FEDERAL REGISTER notice is published, any modification approved by EPA shall apply only to the person or group who requested the modification; EPA shall state the applicability of each modification in such notice.

(iv) Where, in EPA's judgment, the requested modification of a test standard would significantly change the scope of the test, EPA will publish a notice in the FEDERAL REGISTER requesting comment on the request and proposed modification. However, EPA may approve a requested modification of a test standard without first seeking public comment if necessary to preserve the validity of an ongoing test undertaken in good faith.

(2) [Reserved]

(h) *Special Requirements for Additives.* When an additive is the test subject, the following rules apply:

(1) All required emission characterization and health effects testing procedures shall be performed on the mixture which results when the additive is combined with the base fuel for the appropriate fuel family (as specified in § 79.55) at the maximum concentration recommended by the additive manufacturer pursuant to § 79.21(d). This combination shall be known as the additive/base fuel mixture.

(i) The appropriate fuel family to be utilized for the additive/base fuel mixture is the fuel family which contains the specific type(s) of fuel for which the additive is presently registered or for which the manufacturer of the additive is seeking registration.

(ii) Additives belonging to more than one fuel family.

(A) If an additive product is registered in two or more fuel families as of May 27, 1994, then the manufacturer of that additive is responsible for testing (or participating in group testing of) the respective additive/base fuel mixtures in compliance with the requirements of this subpart for each fuel family in which the manufacturer wishes to maintain a registration for its additive.

(B) If a manufacturer is seeking to register such additive in two or more fuel families then, for testing and registration purposes, the additive shall be considered to be a member of each fuel family in which the manufacturer is seeking registration. The manufacturer is responsible for testing (or participating in group testing of) the respective additive/base fuel mixture in compliance with the requirements of this subpart for each fuel family in which the manufacturer wishes to obtain a product registration for its additive.

(iii) In the case of the methanol fuel family, which contains two base fuels (M100 and M85 base fuels, pursuant to § 79.55(d)), the applicable base fuel is the one which represents the fuel/additive group (specified in § 79.56(e)(4)(i)(C)) containing fuels of which the most gallons are sold annually.

(iv) Aftermarket additives which are intended by the manufacturer to be added to the fuel tank only at infrequent intervals shall be applied according to the manufacturer's specifications during mileage accumulation, pursuant to § 79.57(c). However, during emission generation and testing, each tankful of fuel used must contain the fuel additive at its maximum recommended level. If the additive manufacturer believes that this maximum treatment rate will cause adverse effects to the test engine and/or that the engine's emissions may be subject to artifacts due to overuse of the additive, then the manufacturer may submit a request to EPA for modification of this requirement and related test procedures. Such request must include objective evidence that the modification(s) are needed, along with data demonstrating the maximum concentration of the additive which may actually reach the fuel tanks of vehicles in use.

(v) Additives produced exclusively for use in #1 diesel fuel shall be tested in the diesel base fuel specified in § 79.55(c), even though that base fuel is formulated with #2 diesel fuel. If a manufacturer is concerned that emissions generated from this combination of fuel and additive are subject to artifacts due to this blending, then that manufacturer may submit a request for a modification in test procedure requirements to the EPA. Any such request must include supporting test results and suggested test modifications.

(vi) Bulk additives which are used intermittently for the direct purpose of conditioning or treating a fuel during storage or transport, or for treating or maintaining the storage, pipeline, and/or other components of the fuel distribution system itself and not the vehicle/engine for which the fuel is ultimately intended, shall, for purposes of this program, be added to the base fuel at the maximum concentration recommended by the additive manufacturer for treatment of the fuel or distribution system component. However, if the additive manufacturer believes that this treatment rate will cause adverse effects to the test engine and/or that the engine's emissions may be subject to artifacts due to overuse of

the additive, then the manufacturer may submit a request to EPA for modification of this requirement and related test procedures. Such request must include objective evidence that the modification(s) are needed, along with data demonstrating the maximum concentration of the additive which may actually reach the fuel tanks of vehicles in use.

(2) EPA shall use emissions specification and health effects data generated in the analysis of the applicable base fuel as control data for comparison with data generated for the additive/base fuel mixture.

(i) The base fuel control data may be:

(A) Generated internally as an experimental control in conjunction with testing done in compliance with registration requirements for a specific additive; or

(B) Generated externally in the course of testing different additive(s) belonging to the same fuel family, or in the testing of a base fuel serving as representative of the baseline group for the respective fuel family pursuant to § 79.56(e)(4)(i).

(ii) Control data generated using test equipment (including vehicle model and/or engine, or Evaporative Emissions Generator specifications, as appropriate) and protocols identical or nearly identical to those used in emissions and health effects testing of the subject additive/base fuel mixture would be most relevant for comparison purposes.

(iii) If an additive manufacturer chooses the same vehicle/engine to independently test the base fuel as an experimental control prior to testing the additive/base fuel mixture, then the test vehicle/engine shall undergo two mileage accumulation periods, pursuant to § 79.57(c). The initial mileage accumulation period shall be performed using the base fuel alone. After base fuel testing, and prior to testing of the additive/base fuel mixture, a second mileage accumulation period shall be performed using the additive/base fuel mixture. The procedures outlined in this paragraph shall not preclude a manufacturer from testing a base fuel and the manufacturer's additive/base fuel mixture separately in identical, or nearly identical, vehicles/engines.

(i) *Multiple Test Potential for Non-Baseline Products.* (1) When the composition information reported in the registration application or basic registration data for a gasoline or diesel product meets criteria for classification as a non-baseline product (pursuant to § 79.56(e)(3)(i)(B) or § 79.56(e)(3)(ii)(B)), then the manufacturer is responsible for testing (or participating in group testing) of a separate formulation for each reported oxygenating compound, specified class of oxygenating compounds, or other substance which defines a separate non-baseline fuel/additive group pursuant to § 79.56(e)(4)(ii)(A) or (B). For each such substance, testing shall be performed on a mixture of the relevant substance in the appropriate base fuel, formulated according to the specifications for the corresponding group representatives in § 79.56(e)(4)(ii).

(2) When the composition information reported in the registration application or basic registration data for a non-baseline gasoline product contains a range of total oxygenate concentration-in-use which encompasses gasoline formulations with less than 1.5 weight percent oxygen as well as gasoline formulations with 1.5 weight percent oxygen or more, then the manufacturer is required to test (or participate in applicable group testing of) a baseline gasoline formulation as well as one or more non-baseline gasoline formulations as described in paragraph (h)(1) of this section.

(3) When the composition information reported in the registration application or basic registration data for a non-baseline diesel product contains a range of total oxygenate concentration-in-use which encompasses diesel formulations with less than 1.0 weight percent oxygen as well as diesel formulations with 1.0 weight percent oxygen or more, then the manufacturer is required to test (or participate in applicable group testing) of a baseline diesel formulation as well as one or more non-baseline diesel formulations as described in paragraph (h)(1) of this section.

(4) The presence in a particular oxygenating additive of small amounts of other unintended oxygenate compounds as byproducts of the manufac-

turing process of the given oxygenating additive does not affect the grouping of that additive and does not create multiple testing responsibilities for manufacturers who blend that additive into fuel.

(j) *Multiple Test Potential for Atypical Fuel Formulations.* When the composition information reported in the registration application or basic registration data for a fuel product includes more than one atypical bulk additive product (pursuant to § 79.56(e)(2)(iii)), and when these additives belong to different fuel/additive groups (pursuant to § 79.56(e)(4)(iii)), then:

(1) When such disparate additive products are for the same purpose-in-use and are not ordinarily used in the fuel simultaneously, the fuel manufacturer shall be responsible for testing (or participating in the group testing of) a separate formulation for each such additive product. Testing related to each additive product shall be performed on a mixture of the additive in the applicable base fuel, as described in paragraph (g)(1) of this section, or by participation in the costs of testing the designated representative of the fuel/additive group to which each separate atypical additive product belongs.

(2) When the disparate additive products are not for the same purpose-in-use, the fuel manufacturer shall nevertheless be responsible for testing a separate formulation for each such additive product, as described in paragraph (g)(1) of this section, if these additives are not ordinarily blended together in the same commercial formulation of the fuel.

(3) When the disparate additive products are ordinarily blended together in the same commercial formulation of the fuel, then the fuel manufacturer shall be responsible for the testing of a single test formulation containing all such simultaneously used atypical additive products. Alternatively, this responsibility can be satisfied by enrolling such fuel product in a group which includes other fuel or additive products with the same total combination of atypical elements as that occurring in the fuel product in question. If the basic registration data for the subject fuel includes any alternative additives which contain atypical elements not

represented in the test formulation, then the fuel manufacturer is also responsible for testing a separate formulation for each such additional disparate additive product.

(k) *Emission Control System Testing.* If any information submitted in accordance with this subpart or any other information available to EPA shows that a fuel or fuel additive may have a deleterious effect on the performance of any emission control system or device currently in use or which has been developed to a point where in a reasonable time it would be in general use were such effect avoided, EPA may, in its judgment, require testing to determine whether such effects in fact exist. Such testing will be required in accordance with such protocols and schedules as the Administrator shall reasonably require and shall be paid for by the fuel or fuel additive manufacturer.

[59 FR 33093, June 27, 1994, as amended at 61 FR 36511, July 11, 1996; 62 FR 12575, Mar. 17, 1997; 85 FR 7069, Feb. 6, 2020; 89 FR 88655, Nov. 8, 2024]

§ 79.52 Tier 1.

(a) *General Specifications.* Tier 1 requires manufacturers of designated fuels or fuel additives (or groups of manufacturers pursuant to § 79.56) to supply to the Administrator the identity and concentration of certain emission products of such fuels or additives and any available information regarding the health and welfare effects of the whole and speciated emissions of such fuels or additives. In addition to any information required under § 79.59 and in conformance with the reporting requirements thereof, manufacturers shall provide, pursuant to the timing provisions of § 79.51(c), the following information.

(b) *Emissions Characterization.* Manufacturers must provide a characterization of the emission products which are generated by evaporation (if required pursuant to § 79.58(b)) and by combustion of the fuel or additive/base fuel mixture in a motor vehicle. For this purpose, manufacturers may perform the characterization procedures described in this section or may rely on existing emission characterization data. To be considered adequate in lieu of performing new emission character-

ization procedures, the data must be the result of tests using the product in question or using a fuel or additive/base fuel mixture meeting the same grouping criteria as the product in question. In addition, the emissions must be generated in a manner reasonably similar to those described in § 79.57, and the characterization procedures must be adequately performed and documented and must give results reasonably comparable to those which would be obtained by performing the procedures described herein. Reports of previous tests must be sufficiently detailed to allow EPA to judge the adequacy of protocols, techniques, and conclusions. After the manufacturer's submittal of such data, if EPA finds that the manufacturer has relied upon inadequate test data, then the manufacturer will not be considered to be in compliance until the corresponding tests have been conducted and the results submitted to EPA.

(1) *General Provisions.* (i) The emissions to be characterized shall be generated, collected, and stored according to the processes described in § 79.57. Characterization of combustion and evaporative emissions shall be performed separately on each emission sample collected during the applicable emission generation procedure.

(ii) As provided in § 79.57(d), if the emission generation vehicle/engine is ordinarily equipped with an emission aftertreatment device, then all requirements in this section for the characterization of combustion emissions must be completed both with and without the aftertreatment device in a functional state. The emissions shall be generated three times (on three different days) without a functional aftertreatment device and, if applicable, three times (on three different days) with a functional aftertreatment device, and each such time shall be analyzed according to the remaining provisions in this paragraph (b) of this section.

(iii) *Measurement of background emissions:* It is required that ambient/dilution air be analyzed for levels of background chemical species present at the time of emissions sampling (for

both combustion and evaporative emissions) and that sample values be corrected by subtracting the concentrations contributed by the ambient/dilution air. Background chemical species measurement/analysis during the FTP is specified in §§ 86.109–94(c)(5) and 86.135–94 of this chapter.

(iv) Concentrations of emission products shall be reported either in units of grams per mile (g/mi) or grams per brake-horsepower/hour (g/bhp-hr) (for chassis dynamometer and engine dynamometer test configurations, respectively), as well as in units of weight percent of measured total hydrocarbons.

(v) Laboratory practice must be of high quality and must be consistent with state-of-the-art methods as presented in current environmental and analytical chemistry literature. Examples of analytical procedures which may be used in conducting the emission characterization/speciation requirements of this section can be found among the references in paragraph (b)(5) of this section.

(2) Characterization of the combustion emissions shall include, for products in all fuel families (except when expressly noted in this section):

(i) Determination of the concentration of the basic emissions as follows: total hydrocarbons, carbon monoxide, oxides of nitrogen, and particulates. Manufacturers are referred to the vehicle certification procedures in 40 CFR part 86, subparts B and D (§§ 86.101 through 86.145 and §§ 86.301 through 86.348) for guidance on the measurement of the basic emissions of interest to this subpart.

(ii) Characterization of the vapor phase of combustion emissions, as follows:

(A) Determination of the identity and concentration of individual species of hydrocarbon compounds containing 12 or fewer carbon atoms. Such characterization shall begin within 30 minutes after emission collection is completed.

(B) Determination of the identity and concentration of individual species of aldehyde and ketone compounds containing eight or fewer carbon atoms. Characterization of these emissions captured in cartridges shall be per-

formed within two weeks if the cartridge is stored at room temperature, and one month if the cartridge is stored at 0 °C or less. If the emissions are sampled using the impinger method, the sample must be stored in a capped sample vial at 0 °C or less and characterized within one week.

(C) Determination of the identity and concentration of individual species of alcohol and ether compounds containing six or fewer carbon atoms, for those fuels and additive/base fuel mixtures which contain alcohol and/or ether compounds containing from one to six carbon atoms in the uncombusted state. For fuel and additive formulations containing alcohols or ethers with more than six carbon atoms in the uncombusted state, alcohol and ether species with that higher number of carbon atoms or less must be identified and measured in the emissions. Such characterization shall begin within four hours after emission collection is completed.

(iii) Characterization of the semi-volatile and particulate phases of combustion emissions to identify and measure polycyclic aromatic compounds, as follows:

(A) Analysis for polycyclic aromatic compounds shall not be conducted at or soon after the start of a recommended engine lubricant change interval.

(B) Analysis for polycyclic aromatic hydrocarbons (PAHs) and nitrated polycyclic aromatic hydrocarbons (NPAHs), specified in paragraph (b)(2)(iii)(D) of this section, need not be done for any fuels and additives in the methane or propane fuel families, nor for fuels and additives in the atypical categories of any other fuel families, pursuant to the definitions of such families and categories in § 79.56.

(C) Analysis for poly-chlorinated dibenzodioxins and dibenzofurans (PCDD/PCDFs), specified in paragraph (b)(2)(iii)(E) of this section, is required only for fuels and additives which contain chlorine as an atypical element, pursuant to paragraph (b)(2)(iv) of this section, which requires all individual emission products containing atypical elements to be determined for atypical fuels and additives. However, manufacturers of baseline and nonbaseline fuels and fuel additives in all fuel families,

except those in the methane and propane fuel families, are strongly encouraged to conduct these analyses on a voluntary basis.

(D) The analytical method used to measure species of PAHs and NPAHs should be capable of detecting at least 1 ppm (equivalent to 0.001 microgram (μg) of compound per milligram of organic extract) of these compounds in the extractable organic matter. The concentration of each individual PAH or NPAH compound identified shall be reported in units of microgram per mile or nanograms per brake-horsepower/hour (for chassis dynamometer and engine dynamometer test configurations, respectively). Each compound which is present at 0.001 μg per mile (0.5 nanograms per brake-horsepower/hour) or more must be identified, measured, and reported. The following individual species shall be measured:

(1) PAHs:

- (i) Benzo(a)anthracene;
- (ii) Benzo(b)fluoranthene;
- (iii) Benzo(k)fluoranthene;
- (iv) Benzo(a)pyrene;
- (v) Chrysene;
- (vi) Dibenzo[a,h]anthracene; and
- (vii) Indeno[1,2,3-c,d]pyrene.

(2) NPAHs:

- (i) 7-Nitrobenzo[a]anthracene;
- (ii) 6-Nitrobenzo[a]pyrene;
- (iii) 6-Nitrochrysene;
- (iv) 2-Nitrofluorene; and
- (v) 1-Nitropyrene.

(E) The analytical method used to measure species and classes of PCDD/PCDFs should be capable of detecting at least 1 part per trillion (ppt) (equivalent to 0.001 picogram (pg) of compound per milligram of organic extract) of these compounds in the extractable organic matter. The concentration of each individual PCDD/PCDF compound identified shall be reported in units of picograms (pg) per mile or picograms per brake-horsepower/hour (for chassis dynamometer and engine dynamometer test configurations, respectively). Each compound which is present at 0.5 pg/mile (0.3 pg/bhp-hr) or more must be identified, measured, and reported.

(1) With respect to measurement of PCDD/PCDFs only, the liquid extracts from the particulate and semi-volatile

emissions fractions may be combined into one sample for analysis.

(2) The manufacturer is referred to 40 CFR part 60, appendix A, Method 23 for a protocol which may be used to identify and measure any potential PCDD/PCDFs which might be present in exhaust emissions from a fuel or additive/base fuel mixture.

(3) The following individual compounds and classes of compounds of PCDD/PCDFs shall be identified and measured:

- (i) Individual tetra-chloro-substituted dibenzodioxins (tetra-CDDs);
- (ii) Individual tetra-chloro-substituted dibenzofurans (tetra-CDFs);
- (iii) Penta-CDDs and penta-CDFs, as one class;
- (iv) Hexa-CDDs and hexa-CDFs, as one class;
- (v) Hepta-CDDs and hepta-CDFs as one class; and
- (vi) Octo-CDDs and octo-CDFs as one class.

(iv) With respect to all phases (vapor, semi-volatile, and particulate) of combustion emissions generated from those fuels and additive/base fuel mixtures classified in the atypical categories (pursuant to § 79.56), the identity and concentration of individual emission products containing such atypical elements shall also be determined.

(3) For evaporative fuels and evaporative fuel additives, characterization of the evaporative emissions shall include:

(i) Determination of the concentration of total hydrocarbons for the applicable vehicle type and class in 40 CFR part 86, subpart B (§§ 86.101 through 86.145).

(ii) Determination of the identity and concentration of individual species of hydrocarbon compounds containing 12 or fewer carbon atoms. Such characterization shall begin within 30 minutes after emission collection is completed.

(iii) In the case of those fuels and additive/base fuel mixtures which contain alcohol and/or ether compounds in the uncombusted state, determination of the identity and concentration of individual species of alcohol and ether compounds containing six or fewer carbon atoms. For fuel and additive formulations containing alcohols or ethers with more than six carbon

atoms in the uncombusted state, alcohol and ether species with that higher number of carbon atoms or less must be identified and measured in the emissions. Such characterization shall begin within four hours after emission collection is completed.

(iv) In the case of those fuels and additive/base fuel mixtures which contain atypical elements, determination of the identity and concentration of individual emission products containing such atypical elements.

(4) *Laboratory quality control.* (i) At a minimum, laboratories performing the procedures specified in this section shall conduct calibration testing of their emissions characterization equipment before each new fuel/additive product test start-up. Known samples representative of the compounds potentially to be found in emissions from the product to be characterized shall be used to calibrate such equipment.

(ii) Laboratories performing the procedures specified in this section shall agree to permit quality control inspections by EPA, and for this purpose shall admit any EPA Enforcement Officer, upon proper presentation of credentials, to any facility where vehicles are conditioned or where emissions are generated, collected, stored, sampled, or characterized in meeting the requirements of this section. Such laboratory audits may include EPA distribution of "blind" samples for analysis by participating laboratories.

(5) *References.* For additional background information on the emission characterization procedures outlined in this paragraph, the following references may be consulted:

(i) "Advanced Emission Speciation Methodologies for the Auto/Oil Air Quality Improvement Program—I. Hydrocarbons and Ethers," Auto Oil Air Quality Improvement Research Program, SP-920, 920320, SAE, February 1992.

(ii) "Advanced Speciation Methodologies for the Auto/Oil Air Quality Improvement Research Program—II. Aldehydes, Ketones, and Alcohols," Auto Oil Air Quality Improvement Research Program, SP-920, 920321, SAE, February 1992.

(iii) ASTM D 5197-91, "Standard Test Method for Determination of Form-

aldehyde and Other Carbonyl Compounds in Air (Active Sampler Methodology)."

(iv) Johnson J. H., Bagley, S. T., Gratz, L. D., and Leddy, D. G., "A Review of Diesel Particulate Control Technology and Emissions Effects—1992 Horning Memorial Award Lecture," SAE Technical Paper Series, SAE 940233, 1994.

(v) Keith *et al.*, ACS Committee on Environmental Improvement, "Principles of Environmental Analysis," The Journal of Analytical Chemistry, Volume 55, pp. 2210-2218, 1983.

(vi) Perez, J.M., Jabs, R.E., Leddy, D.G., eds. "Chemical Methods for the Measurement of Unregulated Diesel Emissions (CRC-APRAC Project No. CAPI-1-64), Coordinating Research Council, CRC Report No. 551, August, 1987.

(vii) Schuetzle, D., "Analysis of Nitrated Polycyclic Aromatic Hydrocarbons in Diesel Particulates," Analytical Chemistry, Volume 54, pp. 265-271, 1982.

(viii) Siegl, W.O., *et al.*, "Improved Emissions Speciation Methodology for Phase II of the Auto/Oil Air Quality Improvement Research Program—Hydrocarbons and Oxygenates", SAE Technical Paper Series, SAE 930142, 1993.

(ix) Tejada, S. B. *et al.*, "Analysis of Nitroaromatics in Diesel and Gasoline Car Emissions," SAE Paper No. 820775, 1982.

(x) Tejada, S. B. *et al.*, "Fluorescence Detection and Identification of Nitro Derivatives of Polynuclear Aromatic Hydrocarbons by On-Column Catalytic Reduction to Aromatic Amines," Analytical Chemistry, Volume 58, pp. 1827-1834, July 1986.

(xi) "Test Method for Determination of C1-C4 Alcohols and MTBE in Gasoline by Gas Chromatography," 40 CFR part 80, appendix F.

(c) [Reserved]

(d) *Literature Search.* (1) Manufacturers of fuels and fuel additives shall conduct a literature search and compilation of information on the potential toxicologic, environmental, and other public welfare effects of the emissions of such fuels and additives. The literature search shall include all available relevant information from in-

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house, industry, government, and public sources pertaining to the emissions of the subject fuel or fuel additive or the emissions of similar fuels or additives, with such similarity determined according to the provisions of § 79.56.

(2) The literature search shall address the potential adverse effects of whole combustion emissions, evaporative emissions, relevant emission fractions, and individual emission products of the subject fuel or fuel additive except as specified in the following paragraph. The individual emission products to be included are those identified pursuant to the emission characterization procedures specified in paragraph (b) of this section, other than carbon monoxide, carbon dioxide, nitrogen oxides, benzene, 1,3-butadiene, acetaldehyde, and formaldehyde.

(3) In the case of the individual emission products of non-baseline or atypical fuels and additives (pursuant to § 79.56(e)(2)), the literature data need not be submitted for those emission products which are the same as the combustion emission products of the respective base fuel for the product's fuel family (pursuant to § 79.55). For this purpose, data on the base fuel emission products for the product's fuel family:

(i) May be found in the literature of previously-conducted, adequate emission speciation studies for the base fuel, or for a fuel or additive/fuel mixture capable of grouping with the base fuel (see, for example, the references in paragraph (b)(5) of this section).

(ii) May be compiled while gathering internal control data during emissions characterization studies on the manufacturer's non-baseline or atypical product; or

(iii) May be obtained from various manufacturers in the course of their testing different additive(s) belonging to the same fuel family, or in the testing of a base fuel serving as representative of the baseline group for the respective fuel family.

(e) *Data bases.* The literature search must include the results of searching appropriate commercially available chemical, toxicologic, and environmental databases. The databases shall be searched using, at a minimum, CAS

numbers (when applicable), chemical names, and common synonyms.

(f) *Search period.* The literature search shall cover a time period beginning at least thirty years prior to the date of submission of the reports specified in §§ 79.59(b) through (c) and ending no earlier than six months prior to the date on which testing is commenced or reports are submitted in compliance with this subpart.

(g) *References.* Information on base fuel emission inventories may be found in references in paragraphs (b)(5)(i) through (xi) of this section, as well as in the following:

(1) Auto/Oil Air Quality Improvement Research Program, Technical Bulletin #1, December 1990.

(2) Keith *et al.*, ACS Committee on Environmental Improvement, "Principles of Environmental Analysis," The Journal of Analytical Chemistry, Volume 55, pp. 2210-2218, 1983.

(3) "The Composition of Gasoline Engine Hydrocarbon Emissions—An Evaluation of Catalyst and Fuel Effects"—SAE 902074 and "Speciated Hydrocarbon Emissions from Aromatic, Olefin, and Paraffinic Model Fuels"—SAE 930373.

[59 FR 33093, June 27, 1994, as amended at 61 FR 36511, July 11, 1996; 62 FR 12571, Mar. 17, 1997]

§ 79.53 Tier 2.

(a) *Generally.* Subject to the provisions of § 79.53(b) through (d), the combustion emissions of each fuel or fuel additive subject to testing under this subpart must be tested in accordance with each of the testing guidelines in §§ 79.60 through 79.68, except that fuels and additives in the methane and propane fuel families (pursuant to § 79.56(e)(1)(v) and (vi)) need not undergo the *Salmonella* mutagenicity assay in § 79.68). Similarly, subject to the provisions of § 79.53(b) through (d), the evaporative emissions of each designated evaporative fuel and each designated evaporative fuel additive subject to testing under this subpart must be tested according to each of the testing guidelines in §§ 79.60 through 79.67 (excluding § 79.68, *Salmonella typhimurium* Reverse Mutation Assay).

(b) *Manufacturer Determination.* Manufacturers shall determine whether the

information gathered pursuant to the literature search in § 79.52(d) contains the results of adequately performed and adequately documented previous testing which provides information reasonably comparable to that supplied by the health tests described in §§ 79.62 through 79.68 regarding the carcinogenicity, mutagenicity, neurotoxicity, teratogenicity, reproductive/fertility measures, and general toxicity effects of the emissions of the fuel or additive. When manufacturers make an affirmative determination, they need submit only the information gathered pursuant to § 79.52(d) for such tests. EPA maintains final authority in judging whether the information is an adequate substitution in lieu of conducting the associated tests. EPA's determination of the adequacy of existing information shall be guided by the considerations described in paragraph (d) of this section. If EPA finds that the manufacturer has relied upon inadequate test data, then the manufacturer will not be considered to be in compliance until the corresponding tests have been conducted and the results submitted to EPA.

(c) *Testing.* (1) All testing required pursuant to this section must be done in accordance with the procedures, equipment, and facility requirements described in §§ 79.57, 79.60, and 79.61 regarding emissions generation, good laboratory practices, and inhalation exposure testing, respectively, as well as any other requirements described in this subpart. The laboratory conducting the animal studies shall be registered and in good standing with the United States Department of Agriculture and regularly inspected by United States Department of Agriculture veterinarians. In addition, the facility must be accredited by a generally recognized independent organization which sets laboratory animal care standards. Use of inadequate test protocols or substandard laboratory techniques in performing any testing required by this subpart may result in cancellation of all affected registrations.

(2) Carcinogenic or mutagenic effects in animals from emissions exposures shall be determined pursuant to § 79.64 *In vivo* Micronucleus Assay, § 79.65 *In*

vivo Sister Chromatid Exchange Assay, and § 79.68 *Salmonella typhimurium* Reverse Mutation Assay. Teratogenic effects and reproductive toxicity shall be examined pursuant to § 79.63 Fertility Assessment/Teratology. General toxicity and pulmonary effects shall be determined pursuant to § 79.62 Subchronic Toxicity Study with Specific Health Effect Assessments. Neurotoxic effects shall be determined pursuant to § 79.66 Neuropathology Assessment and § 79.67 Glial Fibrillary Acidic Protein Assay.

(d) *EPA Determination.* (1) After submission of all information and testing, EPA in its judgment shall determine whether previously conducted tests relied upon in the registration submission are adequately performed and documented and provide information reasonably comparable to that which would be provided by the tests described herein. Manufacturers' submissions shall be sufficiently detailed to allow EPA to judge the adequacy of protocols, techniques, experimental design, statistical analyses, and conclusions. Studies shall be performed using generally accepted scientific principles, good laboratory techniques, and the testing guidelines specified in these regulations.

(2) EPA shall give appropriate weight when making this determination to the following factors:

- (i) The age of the data;
- (ii) The adequacy of documentation of procedures, findings, and conclusions;
- (iii) The extent to which the testing conforms to generally accepted scientific principles and practices;
- (iv) The type and number of test subjects;
- (v) The number and adequacy of exposure concentrations, *i.e.*, emission dilutions;
- (vi) The degree to which the tested emissions were generated by procedures and under conditions reasonably comparable to those set forth in § 79.57; and
- (vii) The degree to which the test procedures conform to the testing guidelines set forth in §§ 79.60 through 79.68 and/or furnish information comparable to that provided by such testing.

(3) The test animals shall be rodents, preferably a strain of rat, and testing shall include all of the endpoints covered in §§ 79.62 through 79.68. All studies shall be properly executed, with appropriate documentation, and in accord with the individual health testing guidelines (§§ 79.60 through 79.68) of this part, e.g., 90-day, 6-hour per day exposure, minimum.

(4) In general, the data in a manufacturer's registration submittal shall be adequate if the duration of a test's exposure period is at least as long, in days and hours, as the inhalation exposure specified in the related health test guideline(s). Data from tests with shorter exposure durations than those specified in the guidelines may be acceptable if the test results are positive (i.e., exhibit adverse effects) and/or include a demonstrable concentration-response relationship.

(5) Data in support of a manufacturer's registration submittal shall directly address the effects of inhalation exposure to the whole evaporative and exhaust emissions of the respective fuel or additive or to the whole evaporative and exhaust emissions of other fuels or additives which satisfy the criteria in § 79.56 for classification into the same group as the subject fuel or fuel additive. Data obtained in the testing of a raw liquid fuel or additive/base fuel mixture or a raw, aerosolized fuel or additive/base fuel mixture shall not be adequate to support a manufacturer's registration submittal. Data from testing of evaporative emissions cannot substitute for test data on combustion emissions. Data from testing of combustion emissions cannot substitute for test data on evaporative emissions.

§ 79.54 Tier 3.

(a) *General Criteria for Requiring Tier 3 Testing.* (1) Tier 3 testing shall be required of a manufacturer or group of manufacturers at EPA's discretion when remaining uncertainties as to the significance of observed health effects, welfare effects, and/or emissions exposures from a fuel or fuel/additive mixture interfere with EPA's ability to make reasonable estimates of the potential risks posed by emissions from the fuel or additive products. Tier 3

testing may be conducted either on an individual basis or a group basis. If performed on a group basis, EPA may require either the same representative to be used in Tier 3 testing as was used in Tier 2 testing or may select a different member or members of the group to represent the group in the Tier 3 tests.

(2) In addition to the criteria specific to particular tests as summarized and detailed in the testing guidelines (§§ 79.62 through 79.68), EPA may consider a number of factors (including, but not limited to):

(i) The number of positive and negative outcomes related to each endpoint;

(ii) The identification of concentration-effect relationships;

(iii) The statistical sensitivity and significance of such studies;

(iv) The severity of the observed effects (e.g., whether the effects would be likely to lead to incapacitating or irreversible conditions);

(v) The type and number of species included in the reported tests;

(vi) The consistency and clarity of apparent mechanisms, target organs, and outcomes;

(vii) The presence or absence of effective health test control data for base-fuel-only versus additive/base fuel mixture comparisons;

(viii) The nature and amount of known toxic agents in the emissions stream; and

(ix) The observation of lesions which specifically implicate inhalation as an important exposure route.

(3) *Consideration of exposure.* EPA retains discretion to consider, in addition to available toxicity data, any Tier 1 data on potential exposures to emissions from a particular fuel or fuel additive (or group of fuels and/or fuel additives) in determining whether to require Tier 3 testing. EPA may consider, but is not limited to, the following factors:

(i) Types and emission rates of specified emission components;

(ii) Types and emission rates of combinations of compounds or elements of concern;

(iii) Historical and/or projected production volumes and market distributions; and

(iv) Estimated population and/or environmental exposures obtained

through extrapolation, modeling, or literature search findings on ambient, occupational, or epidemiological exposures.

(b) *Notice.* (1) EPA will determine whether Tier 3 testing is necessary upon receipt of a manufacturer's (or group's) submittal as prescribed under § 79.51(d). If EPA determines on the basis of the Tier 1 and 2 data submission and any other available information that further testing is necessary, EPA will require the responsible manufacturer(s) to conduct testing as described elsewhere in this section. EPA will notify the manufacturer (or group) by certified letter of the purpose and nature of any proposed testing and of the proposed deadline for completing the testing. A copy of the letter will be placed in the public record. EPA will provide the manufacturer a 60-day comment period after the manufacturer's receipt of such notice. EPA may extend the comment period if it appears from the nature of the issues raised that further discussion is warranted. In the event that no comment is received by EPA from the manufacturer (or group) within the comment period, the manufacturer (or group) shall be deemed to have consented to the adoption by EPA of the proposed Tier 3 requirements.

(2) EPA will issue a notice in the FEDERAL REGISTER of its intent to require testing under Tier 3 for a particular fuel or additive manufacturer and that a copy of the letter to the manufacturer outlining the Tier 3 testing for that manufacturer is available in the public record for review and comment. The public shall have a minimum of thirty (30) days after the publication of this notice to comment on the proposed Tier 3 testing.

(3) EPA will include in the public record a copy of any timely comments concerning the proposed Tier 3 testing requirements received from the affected manufacturer or group or from the public, and the responses of EPA to such comments. After reviewing all such comments received, EPA will adopt final Tier 3 requirements by sending a certified letter describing such final requirements to the manufacturer or group. EPA will also issue a notice in the FEDERAL REGISTER an-

nouncing that it has adopted such final Tier 3 requirements and that a copy of the letter adopting the requirements has been included in the public record.

(4) Prior to beginning any required Tier 3 testing, the manufacturer shall submit detailed test protocols to EPA for approval. Once EPA has determined the Tier 3 testing requirements and approves the test protocols, any modification to the requirements shall be governed by § 79.51(f).

(c) *Carcinogenicity and Mutagenicity Testing.* (1) A potential need for Tier 3 carcinogenicity and/or mutagenicity testing may be indicated if the results of the *In vivo* Micronucleus Assay, required under § 79.64, the *In vivo* Sister Chromatid Exchange Assay, required under § 79.65, the Salmonella mutagenicity assay required under § 79.68, or relevant pathologic findings under § 79.62 demonstrate a statistically significant dose-related positive response as compared with appropriate controls. Alternatively, Tier 3 carcinogenicity testing and/or mutagenicity testing may be required if there are positive outcomes for at least one concentration in two or more of the tests required under §§ 79.64, 79.65, and 79.68.

(2) The testing for carcinogenicity required under this paragraph may, at EPA's discretion, be conducted in accordance with 40 CFR 798.3300 or 798.3320, or their equivalents (see suggested references following each health effects testing guideline). The testing for mutagenicity required under this paragraph may likewise be conducted in accordance with 40 CFR 798.5195, 798.5500, 798.5955, 798.7100, and/or other suitable equivalent testing (see suggested references following each health effects testing guideline). EPA may supplement or modify guidelines as required to ensure that the prescribed testing addresses the identified areas of concern.

(d) *Reproductive and Teratological Effects Testing.* (1) A potential need for Tier 3 testing may be indicated if the results of the Fertility Assessment/Teratology study required under § 79.63 or relevant findings under § 79.62 demonstrate, in comparison with appropriate controls, a statistically significant dose-related positive response in

one or more of the possible test outcomes. Similarly, Tier 3 testing may be indicated if statistically significant positive results are confined to either sex, or to the fetus as opposed to the pregnant adult.

(2) The testing for reproductive and teratological effects required under this paragraph may, at EPA's discretion, be conducted in accordance with 40 CFR 798.4700 and/or by performance of a reproductive assay by continuous breeding. These guidelines may be modified or supplemented by EPA as required to ensure that the prescribed testing addresses the identified areas of concern.

(e) *Neurotoxicity Testing.* (1) A potential need for Tier 3 neurotoxicity testing may be indicated if either the results of the Neuropathology Assessment required under § 79.67 shows concentration-related effects in exposed animals or the Glial Fibrillary Acidic Protein Assay required under § 79.66 demonstrates a statistically significant concentration-related positive response as compared with appropriate controls. Similarly, Tier 3 neurotoxicity testing may be indicated if relevant results under § 79.62 demonstrate a statistically significant positive response in comparison to appropriate controls.

(2) The testing for neurotoxicity required under this paragraph may, at EPA's discretion, be conducted in accordance with 40 CFR 798.3260 and 40 CFR part 798 subpart G. These guidelines may be modified or supplemented by EPA as required to ensure that the prescribed testing addresses the identified areas of concern.

(f) *General and Pulmonary Toxicity Testing.* (1) A potential need for Tier 3 general and/or pulmonary toxicity testing may be indicated if, in comparison with appropriate controls, the results of the Subchronic Toxicity Study, pursuant to § 79.62, demonstrate abnormal gross analysis or histopathological findings (especially as relates to lung pathology from whole-body preserved test animals) or persistence or delayed occurrence of toxic effects beyond the exposure period.

(2) A potential need for Tier 3 testing with respect to other organ systems or endpoints not addressed by specific

Tier 2 tests, e.g., hepatic, renal, or endocrine toxicity, may be demonstrated by findings in the Tier 2 Subchronic Toxicity Study (pursuant to § 79.62) or by findings in the Tier 1 literature search of adverse functional, physiologic, metabolic, or histopathologic effects of fuel or additive emissions to such other organ systems or any other information available to EPA. In addition, findings in the Tier 1 emission characterization of significant levels of a known toxicant to such other organ systems and endpoints may also indicate a need for relevant health effects testing. The testing required under this paragraph may include tests conducted in accordance with 40 CFR 798.3260 or 798.3320. These guidelines may be modified or supplemented by EPA as necessary to ensure that the prescribed testing addresses the identified areas of concern.

(3) The testing for general/pulmonary toxicity required under this paragraph may, at EPA's discretion, be conducted in accordance with 40 CFR 798.2450 or 798.3260. These guidelines may be modified or supplemented by EPA as necessary to ensure that the prescribed testing addresses the identified areas of concern. Pulmonary function measurements, host defense assays, immunotoxicity tests, cell morphology/morphometry, and/or enzyme assays of lung lavage cells and fluids may be specifically required.

(g) *Other Tier 3 Testing.* (1) A manufacturer or group may be required to use up-to-date modeling, sampling, monitoring, and/or analytic approaches at the Tier 3 level to provide:

(i) Estimates of exposures to the emission products of a fuel or fuel additive or group of products;

(ii) The expected atmospheric transformation products of such emissions; and

(iii) The environmental partitioning of such emissions to the air, soil, water, and biota.

(2) Additional emission characterization may be required if uncertainty over the identity of chemical species or rate of their emission interferes with reasonable judgments as to the presence and/or concentration of potentially toxic substances in the emissions of a fuel or fuel additive. The required

tests may include characterization of additional classes of emissions, the characterization of emissions generated by additional vehicles/engines of various technology mixes (e.g., catalyzed versus non-catalyzed emissions), and/or other more precise analytic procedures for identification or quantification of emissions compounds. Additional emissions testing may also be required to evaluate concerns which may arise regarding the potential effects of a fuel or fuel additive on the performance of emission control equipment.

(3) A manufacturer or group may be required to conduct biological and/or exposure studies at the Tier 3 level to evaluate directly the potential public welfare or environmental effects of the emissions of a fuel or additive, if significant concerns about such effects arise as a result of EPA's review of the literature search or emission characterization findings in Tier 1 or the results of the toxicological tests in Tier 2.

(4) With regard to group submittals, Tier 3 studies on a fuel or additive product(s) other than the originally specified group representative may be required if specific differences in the product's composition indicate that its emissions may have different toxicologic properties from those of the original group representative.

(5) Additional emission characterization and/or toxicologic tests may be required to evaluate the impact of different vehicle, engine, or emission control technologies on the observed composition or health or welfare effects of the emissions of a fuel or additive.

(6) Toxicological tests on individual emission products may be required.

(7) Upon review of information submitted for an aerosol product under § 79.58(e), emissions characterization, exposure, and/or toxicologic testing at a Tier 3 level may be required.

(8) A manufacturer which qualifies for and has elected to use the special provisions for the products of small businesses (pursuant to § 79.58(d)) may be required to conduct emission characterization, exposure, and/or toxicologic studies at the Tier 3 level for such products, as specified in § 79.58(d)(4).

(9) The examples of potential Tier 3 tests described in this section do not in any way limit EPA's broad discretion and authority under Tier 3.

§ 79.55 Base fuel specifications.

(a) *General Characteristics.* (1) The base fuel(s) in each fuel family shall serve as the group representative(s) for the baseline group(s) in each fuel family pursuant to § 79.56. Also, as specified in § 79.51(h)(1), for fuel additives undergoing testing, the designated base fuel for the respective fuel family shall serve as the substrate in which the additive shall be mixed prior to the generation of emissions.

(2) Base fuels shall contain a limited complement of the additives which are essential for the fuel's production or distribution and/or for the successful operation of the test vehicle/engine throughout the mileage accumulation and emission generation periods. Such additives shall be used at the minimum effective concentration-in-use for the base fuel in question.

(3) Unless otherwise restricted, the presence of trace contaminants does not preclude the use of a fuel or fuel additive as a component of a base fuel formulation.

(4) When an additive is the test subject, any additive normally contained in the base fuel which serves the same function as the subject additive shall be removed from the base fuel formulation. For example, if a corrosion inhibitor were the subject of testing and if this additive were to be tested in a base fuel which normally contained a corrosion inhibitor, this test additive would replace the corrosion inhibitor normally included as a component of the base fuel.

(5) Additive components of the methanol, ethanol, methane, and propane base fuels in addition to any such additives included below shall be limited to those recommended by the manufacturers of the vehicles and/or engines used in testing such fuels. For this purpose, EPA will review requests from manufacturers (or their agents) to modify the additive specifications for the alternative fuels and, if necessary, EPA shall change these specifications based on consistency of those changes

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with the associated vehicle manufacturer's recommendations for the operation of the vehicle. EPA shall publish notice of any such changes to a base fuel and/or its base additive package specifications in the FEDERAL REGISTER.

(b) *Gasoline Base Fuel*. (1) The gasoline base fuel is patterned after the reformulated gasoline summer baseline fuel as specified in CAA section 211(k)(10)(B)(i). The specifications and blending tolerances for the gasoline base fuel are listed in table F94-1. The additive types which shall be required and/or permissible in the gasoline base fuel are listed in table 1 as well.

TABLE F94-1—GASOLINE BASE FUEL PROPERTIES

API Gravity	57.4±0.3
Sulfur, ppm	339±25
Benzene, vol%	1.53±0.3
RVP, psi	8.7±0.3
Octane, (R + M)/2	87.3±0.5
Distillation Parameters:	
10%, °F	128±5
50%, °F	218±5
90%, °F	330±5
Aromatics, vol%	32.0±2.7
Olefins, vol%	9.2±2.5
Saturates, vol%	58.8±2.0
Additive Types:	
Required	Deposit Control Corrosion Inhibitor Demulsifier Anti-oxidant Metal Deactivator
Permissible	Anti-static

(2) The additive components of the gasoline base fuel shall contain compounds comprised of no elements other than carbon, hydrogen, oxygen, nitrogen, and sulfur. Additives shall be used at the minimum concentration needed to perform effectively in the gasoline base fuel. In no case shall their concentration in the base fuel exceed the maximum concentration recommended by the additive manufacturer. The increment of sulfur contributed to the formulation by any additive shall not exceed 15 parts per million sulfur by weight and shall not cause the gasoline base fuel to exceed the sulfur specifications in table F94-1 of this section.

(c) *Diesel Base Fuel*. (1) The diesel base fuel shall be a #2 diesel fuel having the properties and blending tolerances shown in table F94-2 of this section. The additive types which shall be

permissible in diesel base fuel are presented in table F94-2 as well.

TABLE F94-2—DIESEL BASE FUEL PROPERTIES

API Gravity	33±1
Sulfur, wt%	0.05±0.0025
Cetane Number	45.2±2
Cetane Index	45.7±2
Distillation Parameters:	
10%, °F	433±5
50%, °F	516±5
90%, °F	606±5
Aromatics, vol%	38.4±2.7
Olefins, vol%	1.5±0.4
Saturates, vol%	60.1±2.0
Additive Types:	
Required	Corrosion Inhibitor Demulsifier Anti-oxidant Metal Deactivator
Permitted	Anti-static Flow Improver
Not Permitted	Deposit Control

(2) The additive components of the diesel base fuel shall contain compounds comprised of no elements other than carbon, hydrogen, oxygen, nitrogen, and sulfur. Additives shall be used at the minimum concentration needed to perform effectively in the diesel base fuel. In no case shall their concentration in the base fuel exceed the maximum concentration recommended by the additive manufacturer. The increment of sulfur contributed to the base fuel by additives shall not cause the diesel base fuel to exceed the sulfur specifications in table F94-2 of this section.

(d) *Methanol Base Fuels*. (1) The methanol base fuels shall contain no elements other than carbon, hydrogen, oxygen, nitrogen, sulfur, and chlorine.

(2) The M100 base fuel shall consist of 100 percent by volume chemical grade methanol.

(3) The M85 base fuel is to contain 85 percent by volume chemical grade methanol, blended with 15 percent by volume gasoline base fuel meeting the gasoline base fuel specifications outlined in paragraph (b)(1) of this section. Manufacturers shall ensure the methanol compatibility of lubricating oils as well as fuel additives used in the gasoline portion of the M85 base fuel.

(4) The methanol base fuels shall meet the specifications listed in table F94-3.

TABLE F94–3—METHANOL BASE FUEL
PROPERTIES

M100:	Chemical Grade MeOH, vol%	100
	Chlorine (as chlorides), wt%, max	0.0001
	Water, wt%, max	0.5
	Sulfur, wt%, max	0.002
M85	Chemical Grade MeOH, vol%, ...	85
	Gasoline Base Fuel, vol%	15
	Chlorine (as chlorides), wt%, max	0.0001
	Water, wt%, max	0.5
	Sulfur, wt%, max	0.004

(e) *Ethanol Base Fuel.* (1) The ethanol base fuel, E85, shall contain no elements other than carbon, hydrogen, oxygen, nitrogen, sulfur, chlorine, and copper.

(2) The ethanol base fuel shall contain 85 percent by volume chemical grade ethanol, blended with 15 percent by volume gasoline base fuel that meets the specifications listed in paragraph (b)(1) of this section. Additives used in the gasoline component of E85 shall be ethanol-compatible.

(3) The ethanol base fuel shall meet the specifications listed in table F94–4.

TABLE F94–4—ETHANOL BASE FUEL
PROPERTIES

E85:	Chemical Grade EtOH, vol%, min	85
	Gasoline Base Fuel, vol%	15
	Chlorine (as chloride), wt%, max	0.0004
	Copper, mg/L, max	0.07
	Water, wt%, max	0.5
	Sulfur, wt%, max	0.004

(f) *Methane Base Fuel.* (1) The methane base fuel is a gaseous motor vehicle fuel marketed commercially as compressed natural gas (CNG), whose primary constituent is methane.

(2) The methane base fuel shall contain no elements other than carbon, hydrogen, oxygen, nitrogen, and sulfur. The fuel shall contain an odorant additive for leak detection purposes. The added odorant shall be used at a level such that, at ambient conditions, the fuel must have a distinctive odor potent enough for its presence to be detected down to a concentration in air of not over $\frac{1}{5}$ (one-fifth) of the lower limit of flammability. After addition of the odorant, the methane base fuel shall contain no more than 16 ppm sulfur by volume.

(3) The methane base fuel shall meet the specifications listed in table F94–5.

TABLE F94–5—METHANE BASE FUEL
SPECIFICATIONS

Methane, mole%, min	89.0
Ethane, mole%, max	4.5
Propane and higher HC, mole%, max	2.3
C6 and higher HC, mole%, max	0.2
Oxygen, mole%, max	0.6
Sulfur (including odorant additive) ppmv, max	16
Inert gases:	
Sum of CO ₂ and N ₂ , mole%, max	4.0

(g) *Propane Base Fuel.* (1) The propane base fuel is a gaseous motor vehicle fuel, marketed commercially as liquified petroleum gas (LPG), whose primary constituent is propane.

(2) The propane base fuel may contain no elements other than carbon, hydrogen, oxygen, nitrogen, and sulfur. The fuel shall contain an odorant additive for leak detection purposes. The added odorant shall be used at a level such that at ambient conditions the fuel must have a distinctive odor potent enough for its presence to be detected down to a concentration in air of not over $\frac{1}{5}$ (one-fifth) of the lower limit of flammability. After addition of the odorant, the propane base fuel shall contain no more than 120 ppm sulfur by weight.

(3) The propane base fuel shall meet the specifications listed in table F94–6.

TABLE F94–6—PROPANE BASE FUEL
SPECIFICATIONS

Vapor pressure at 100–F, psig, max	208
Evaporative temperature, 95%, °F, max	–37
Propane, vol%, min	92.5
Propylene, vol%, max	5.0
Butane and heavier, vol%, max	2.5
Residue-evaporation of 100mL, max, mL	0.05
Sulfur (including odorant additive) ppmw, max	123

§ 79.56 Fuel and fuel additive grouping system.

(a) Manufacturers of fuels and fuel additives are allowed to satisfy the testing requirements in §§ 79.52, 79.53, and 79.54 and the associated reporting requirements in § 79.59 on an individual or group basis, provided that such products meet the criteria in this section for enrollment in the same fuel/additive group. However, each manufacturer of a fuel or fuel additive must individually comply with the notification requirements of § 79.59(b). Further, if a manufacturer elects to comply by

participation in a group, each manufacturer continues to be individually subject to the information requirements of this subpart.

(1) The use of the grouping provision to comply with Tier 1 and Tier 2 testing requirements is voluntary. No manufacturer is prohibited from testing and submitting its own data for its own product registration, despite its qualification for membership in a particular group.

(2) The only groups permitted are those established in this section.

(b) Each manufacturer who chooses to enroll a fuel or fuel additive in a group of similar fuels and fuel additives as designated in this section may satisfy the registration requirements through a group submission of jointly-sponsored testing and analysis conducted on a product which is representative of all products in that group, provided that the group representative is chosen according to the specifications in this section.

(1) The health effects information submitted by a group shall be considered applicable to all fuels and fuel additives in the group. A fuel or fuel additive manufacturer who has chosen to participate in a group may subsequently choose to perform testing of such fuel or fuel additive on an individual basis; however, until such independent registration information has been received and reviewed by EPA, the information initially submitted by the group on behalf of the manufacturer's fuel or fuel additive shall be considered applicable and valid for that fuel or fuel additive. It could therefore be used to support requirements for further testing under the provisions of Tier 3 or to support regulatory decisions affecting that fuel or fuel additive.

(2) Manufacturers are responsible for determining the appropriate groups for their products according to the criteria in this section and for enrolling their products into those groups under industry-sponsored or other independent brokering arrangements.

(3) Manufacturers who enroll a fuel or fuel additive into a group shall share the applicable costs according to appropriate arrangements established by the group. The organization and ad-

ministration of group functions and the development of cost-sharing arrangements are the responsibility of the participating manufacturers. If manufacturers are unable to agree on fair and equitable cost sharing arrangements and if such dispute is referred by one or more manufacturers to EPA for resolution, then the provisions in § 79.56(c) (1) and (2) shall apply.

(c) In complying with the registration requirements for a given fuel or fuel additive, notwithstanding the enrollment of such fuel or additive in a group, a manufacturer may make use of available information for any product which conforms to the same grouping criteria as the given product. If, for this purpose, a manufacturer wishes to rely upon the information previously submitted by another manufacturer (or group of manufacturers) for registration of a similar product (or group of products), then the previous submitter is entitled to reimbursement by the manufacturer for an appropriate portion of the applicable costs incurred to obtain and report such information. Such entitlement shall remain in effect for a period of fifteen years following the date on which the original information was submitted. Pursuant to § 79.59(b)(4)(ii), the manufacturer who relies on previously-submitted registration data shall certify to EPA that the original submitter has been notified and that appropriate reimbursement arrangements have been made.

(1) When private efforts have failed to resolve a dispute about a fair amount or method of cost-sharing or reimbursement for testing costs incurred under this subpart, then any party involved in that dispute may initiate a hearing by filing two signed copies of a request for a hearing with a regional office of the American Arbitration Association and mailing a copy of the request to EPA. A copy must also be sent to each person from whom the filing party seeks reimbursement or who seeks reimbursement from that party. The information and fees to be included in the request for hearing are specified in 40 CFR 791.20(b) and (c).

(2) Additional procedures and requirements governing the hearing process are those specified in 40 CFR 791.22 through 791.50, 791.60, 791.85, and 791.105,

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excluding 40 CFR 791.39(a)(3) and 791.48(d).

(d) *Basis for classification.* (1) Rather than segregating fuels and fuel additives into separate groups, the grouping system applies the same grouping criteria and creates a single set of groups applicable both to fuels and fuel additives.

(2) Fuels shall be classified pursuant to § 79.56(e) into categories and groups of similar fuels and fuel additives according to the components and characteristics of such fuels in their uncombusted state. The classification of a fuel product must take into account the components of all bulk fuel additives which are listed in the registration application or basic registration data submitted for the fuel product.

(3) Fuel additives shall be classified pursuant to § 79.56(e) into categories and groups of similar fuels and fuel additives according to the components and characteristics of the respective uncombusted additive/base fuel mixture pursuant to § 79.51(h)(1).

(4) In determining the category and group to which a fuel or fuel additive belongs, impurities present in trace amounts shall be ignored unless otherwise noted. Impurities are those substances which are present through contamination or which remain in the fuel or additive naturally after processing is completed.

(5) *Reference standards.* (i) American Society for Testing and Materials (ASTM) standard D 4814–93a, “Standard

Specification for Automotive Spark-Ignition Engine Fuel”, used to define the general characteristics of gasoline fuels (paragraph (e)(3)(i)(A)(3) of this section) and ASTM standard D 975–93, “Standard Specification for Diesel Fuel Oils”, used to define the general characteristics of diesel fuels (paragraph (e)(3)(ii)(A)(3) of this section) have been incorporated by reference.

(ii) This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from the American Society for Testing and Materials (ASTM), 1916 Race Street, Philadelphia, PA 19103. Copies may be inspected at U.S. EPA, OAR, 401 M Street SW., Washington, DC 20460 or at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202–741–6030, or go to: http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html.

(e) *Grouping criteria.* The grouping system is represented by a matrix of three fuel/additive categories within six specified fuel families (see table F94–7, Grouping System for Fuels and Fuel Additives). Each category may include one or more groups. Within each group, a representative may be designated based on the criteria in this section and joint registration information may be developed and submitted for member fuels and fuel additives.

TABLE F94-7—GROUPING SYSTEM FOR FUELS AND FUEL ADDITIVES

Category	Conventional Fuel Families		Alternative Fuel Families			
	Gasoline (A)	Diesel (B)	Methanol (C)	Ethanol (D)	Methane (CNG, LNG) (E)	Propane (LPG) (F)
Baseline ..	One group represented by gasoline base fuel.	One group represented by diesel base fuel.	Two groups: (1) M100 group (includes methanol-gasoline formulations with at least 96% methanol) represented by M100 base fuel (2) M85 (includes methanol-gasoline formulations with 50–95% methanol) represented by M85 base fuel.	One group (includes ethanol-gasoline formulations with at least 50% ethanol) represented by E85 base fuel.	One group (includes both CNG and LNG), represented by CNG base fuel.	One group represented by LPG base fuel.
Non-base-line.	One group for each gasoline-oxygenate blend or each gasoline-methanol/co-solvent blend; one group for each synthetic crude-derived fuel.	One group for each oxygen-contributing compound or class of compounds; one group for each synthetic crude-derived fuel.	One group for each individual non-methanol, non-gasoline component and one group for each unique combination of such components.	One group for each individual non-ethanol, non-gasoline component and one group for each unique combination of such components.	One group to include methane formulations exceeding the specified limit for non-methane hydrocarbons.	One group to include propane formulations exceeding the specified limit for butane and higher hydrocarbons.
Atypical ...	One group for each atypical element/characteristic, or unique combination of atypical elements/characteristics.	One group for each atypical element/characteristic, or unique combination of atypical elements/characteristics.	One group for each atypical element/characteristic, or unique combination of atypical elements/characteristics.	One group for each atypical element/characteristic, or unique combination of atypical elements/characteristics.	One group for each atypical element/characteristic, or unique combination of atypical elements/characteristics.	One group for each atypical element/characteristic, or unique combination of atypical elements/characteristics.

(1) *Fuel families.* Each of the following six fuel families (Table F94-7, columns A-F) includes fuels of the type referenced in the name of the family as well as bulk and aftermarket additives which are intended for use in those fuels. When applied to fuel additives, the criteria in these descriptions refer to the associated additive/base fuel mixture, pursuant to § 79.51(h)(1). One or more base fuel formulations are specified for each fuel family pursuant to § 79.55.

(i) The Gasoline Family includes fuels composed of more than 50 percent gasoline by volume and their associated fuel additives. The base fuel for this family is specified in § 79.55(b).

(ii) The Diesel Family includes fuels composed of more than 50 percent diesel fuel by volume and their associated

fuel additives. The Diesel fuel family includes both Diesel #1 and Diesel #2 formulations. The base fuel for this family is specified in § 79.55(c).

(iii) The Methanol Family includes fuels composed of at least 50 percent methanol by volume and their associated fuel additives. The M100 and M85 base fuels are specified in § 79.55(d).

(iv) The Ethanol Family includes fuels composed of at least 50 percent ethanol by volume and their associated fuel additives. The base fuel for this family is E85 as specified in § 79.55(e).

(v) The Methane Family includes compressed natural gas (CNG) and liquefied natural gas (LNG) fuels containing at least 50 mole percent methane and their associated fuel additives. The base fuel for the family is a CNG formulation specified in § 79.55(f).

(vi) The Propane Family includes propane fuels containing at least 50 percent propane by volume and their associated fuel additives. The base fuel for this family is a liquefied petroleum gas (LPG) as specified in § 79.55(g).

(vii) A manufacturer seeking registration for formulation(s) which do not fit the criteria for inclusion in any of the fuel families described in this section shall contact EPA at the address in § 79.59(a)(1) for further guidance in classifying and testing such formulation(s).

(2) *Fuel/additive categories.* Fuel/additive categories (Table F94-7, rows 1-3) are subdivisions of fuel families which represent the degree to which fuels and fuel additives in the family resemble the base fuel(s) designated for the family. Three general category types are defined in this section. When applied to fuel additives, the criteria in these descriptions refer to the associated additive/base fuel mixture, pursuant to § 79.51(h)(1).

(i) Baseline categories consist of fuels and fuel additives which contain no elements other than those permitted in the base fuel for the respective fuel family and conform to specified limitations on the amounts of certain components or characteristics applicable to that fuel family.

(ii) Non-Baseline Categories consist of fuels and fuel additives which contain no elements other than those permitted in the base fuel for the respective fuel family, but which exceed one or more of the limitations for certain specified components or characteristics applicable to baseline formulations in that fuel family.

(iii) Atypical Categories consist of fuels and fuel additives which contain elements or classes of compounds other than those permitted in the base fuel for the respective fuel family or which otherwise do not meet the criteria for either baseline or non-baseline formulations in that fuel family. A fuel or fuel additive product having both non-baseline and atypical characteristics pursuant to § 79.56(e)(3), shall be considered to be an atypical product.

(3) This section defines the specific categories applicable to each fuel family. When applied to fuel additives, the criteria in these descriptions refer to

the associated additive/base fuel mixture, pursuant to § 79.51(h)(1).

(i) *Gasoline Categories.* (A) The Baseline Gasoline category contains gasoline fuels and associated additives which satisfy all of the following criteria:

(1) Contain no elements other than carbon, hydrogen, oxygen, nitrogen, and/or sulfur.

(2) Contain less than 1.5 percent oxygen by weight.

(3) Sulfur concentration is limited to 1000 ppm per the specifications cited in the following paragraph.

(4) Possess the physical and chemical characteristics of unleaded gasoline as specified by ASTM standard D 4814-93a (incorporated by reference, pursuant to paragraph (d)(5) of this section), in at least one Seasonal and Geographical Volatility Class.

(5) Derived only from conventional petroleum, heavy oil deposits, coal, tar sands, and/or oil sands.

(B) The Non-Baseline Gasoline category is comprised of gasoline fuels and associated additives which conform to the specifications in paragraph (e)(3)(i)(A) of this section for the Baseline Gasoline category except that they contain 1.5 percent or more oxygen by weight and/or may be derived from sources other than those listed in paragraph (e)(3)(i)(A)(5) of this section.

(C) The Atypical Gasoline category is comprised of gasoline fuels and associated additives which contain one or more elements other than carbon, hydrogen, oxygen, nitrogen, and sulfur.

(ii) *Diesel Categories.* (A) The Baseline Diesel category is comprised of diesel fuels and associated additives which satisfy all of the following criteria:

(1) Contain no elements other than carbon, hydrogen, oxygen, nitrogen, and/or sulfur. Pursuant to 40 CFR 80.29, highway diesel sold after October 1, 1993 shall contain 0.05 percent or less sulfur by weight;

(2) Contain less than 1.0 percent oxygen by weight;

(3) Diesel formulations containing more than 0.05 percent sulfur by weight are precluded by 40 CFR 80.29;

(4) Possess the characteristics of diesel fuel as specified by ASTM standard D 975-93 (incorporated by reference,

pursuant to paragraph (d)(5) of this section); and

(5) Derived only from conventional petroleum, heavy oil deposits, coal, tar sands, and/or oil sands.

(B) The Non-Baseline Diesel category is comprised of diesel fuels and associated additives which conform to the specifications in paragraph (e)(3)(ii)(A) of this section for the Baseline Diesel category except that they contain 1.0 percent or more oxygen by weight and/or may be derived from sources other than those listed in paragraph (e)(3)(ii)(A)(5) of this section.

(C) The Atypical Diesel category is comprised of diesel fuels and associated additives which contain one or more elements other than carbon, hydrogen, oxygen, nitrogen, and sulfur.

(iii) *Methanol categories.* (A) The Baseline Methanol category is comprised of methanol fuels and associated additives which contain at least 50 percent methanol by volume, no more than 4.0 percent by volume of substances other than methanol and gasoline, and no elements other than carbon, hydrogen, oxygen, nitrogen, sulfur, and/or chlorine. Baseline methanol shall contain no more than 0.004 percent by weight of sulfur or 0.0001 percent by weight of chlorine.

(B) The Non-Baseline Methanol category is comprised of fuel blends which contain at least 50 percent methanol by volume, more than 4.0 percent by volume of a substance(s) other than methanol and gasoline, and meet the baseline limitations on elemental composition in paragraph (e)(3)(iii)(A) of this section.

(C) The Atypical Methanol category consists of methanol fuels and associated additives which do not meet the criteria for either the Baseline or the Non-Baseline Methanol category.

(iv) *Ethanol categories.* (A) The Baseline Ethanol category is comprised of ethanol fuels and associated additives which contain at least 50 percent ethanol by volume, no more than five (5) percent by volume of substances other than ethanol and gasoline, and no elements other than carbon, hydrogen, oxygen, nitrogen, sulfur, chlorine, and copper. Baseline ethanol formulations shall contain no more than 0.004 percent by weight of sulfur, 0.0004 percent

by weight of chlorine, and/or 0.07 mg/L of copper.

(B) The Non-Baseline Ethanol category is comprised of fuel blends which contain at least 50 percent ethanol by volume, more than five (5) percent by volume of a substance(s) other than ethanol and gasoline, and meet the baseline limitations on elemental composition in paragraph (e)(3)(iv)(A) of this section.

(C) The Atypical Ethanol category consists of ethanol fuels and associated additives which do not meet the criteria for either the Baseline or the Non-Baseline Ethanol categories.

(v) *Methane categories.* (A) The Baseline Methane category is comprised of methane fuels and associated additives (including at least an odorant additive) which contain no elements other than carbon, hydrogen, oxygen, nitrogen, and/or sulfur, and contain no more than 20 mole percent non-methane hydrocarbons. Baseline methane formulations shall not contain more than 16 ppm by volume of sulfur, including any sulfur which may be contributed by the odorant additive.

(B) The Non-Baseline Methane category consists of methane fuels and associated additives which conform to the specifications in paragraph (e)(3)(v)(A) of this section for the Baseline Methane category except that they exceed 20 mole percent non-methane hydrocarbons.

(C) The Atypical Methane category consists of methane fuels and associated additives which contain one or more elements other than carbon, hydrogen, oxygen, nitrogen, and/or sulfur, or exceed 16 ppm by volume of sulfur.

(vi) *Propane categories.* (A) The Baseline Propane category is comprised of propane fuels and associated additives (including at least an odorant additive) which contain no elements other than carbon, hydrogen, oxygen, nitrogen, and/or sulfur, and contain no more than 20 percent by volume non-propane hydrocarbons. Baseline Propane formulations shall not contain more than 123 ppm by weight of sulfur, including any sulfur which may be contributed by the odorant additive.

(B) The Non-Baseline Propane category consists of propane fuels and associated additives which conform to

the specifications in paragraph (e)(3)(vi)(A) of this section for the Baseline Propane category, except that they exceed the 20 percent by volume limit for butane and higher hydrocarbons.

(C) The Atypical Propane category consists of propane fuels and associated additives which contain elements other than carbon, hydrogen, oxygen, nitrogen, and/or sulfur, or exceed 123 ppm by weight of sulfur.

(4) *Fuel/additive groups.* Fuel/additive groups are subdivisions of the fuel/additive categories. One or more group(s) are defined within each category in each fuel family according to the presence of differing characteristics in the fuel or additive/base fuel mixture. For each group, one formulation (either a base fuel or a member fuel or additive product) is chosen to represent all the member products in the group in any tests required under this subpart. The section which follows describes the fuel/additive groups.

(i) *Baseline groups.* (A) The Baseline Gasoline category comprises a single group. The gasoline base fuel specified in § 79.55(b) shall serve as the representative of this group.

(B) The Baseline Diesel category comprises a single group. The diesel base fuel specified in § 79.55(c) shall serve as the representative of this group.

(C) The Baseline Methanol category includes two groups: M100 and M85. The M100 group consists of methanol-gasoline formulations containing at least 96 percent methanol by volume. These formulations must contain odorants and bitterants (limited in elemental composition to carbon, hydrogen, oxygen, nitrogen, sulfur, and chlorine) for prevention of purposeful or inadvertent consumption. The M100 base fuel specified in § 79.55(d) shall serve as the representative for this group. The M85 group consists of methanol-gasoline formulations containing at least 50 percent by volume but less than 96 percent by volume methanol. The M85 base fuel specified in § 79.55(d) shall serve as the representative of this group.

(D) The Baseline Ethanol category comprises a single group. The E85 base fuel specified in § 79.55(e) shall serve as the representative of this group.

(E) The Baseline Methane category comprises a single group. The CNG base fuel specified in § 79.55(f) shall serve as the representative of this group.

(F) The Baseline Propane category comprises a single group. The LPG base fuel specified in § 79.55(g) shall serve as the representative of this group.

(ii) *Non-baseline groups—*(A) *Non-Baseline Gasoline.* The Non-Baseline gasoline fuels and associated additives shall sort into groups according to the following criteria:

(1) For gasoline fuel and additive products which contain 1.5 percent oxygen by weight or more, a separate non-baseline gasoline group shall be defined by each oxygenate compound or methanol/co-solvent blend listed as a component in the registration application or basic registration data of any such fuel or additive.

(i) Examples of oxygenates occurring in non-baseline gasoline formulations include ethanol, methyl tertiary butyl ether (MTBE), ethyl tertiary butyl ether (ETBE), tertiary amyl methyl ether (TAME), diisopropyl ether (DIPE), dimethyl ether (DME), tertiary amyl ethyl ether (TAEE), and any other compound(s) which increase the oxygen content of the gasoline formulation. A separate non-baseline gasoline group is defined for each such oxygenating compound.

(ii) Each unique methanol and co-solvent combination (whether one, two, or more additional oxygenate compounds) used in a non-baseline fuel shall also define a separate group. An oxygenate compound used as a co-solvent for methanol in a non-baseline gasoline formulation must be identified as such in its registration. If the oxygenate is not identified as a methanol co-solvent, then the compound shall be regarded by EPA as defining a separate non-baseline gasoline group. Examples of methanol/co-solvent combinations occurring in non-baseline gasoline formulations include methanol/isopropyl alcohol, methanol/butanol, and methanol with alcohols up to C8/octanol (Octamix).

(iii) For each such group, the representative to be used in testing shall

be a formulation consisting of the gasoline base fuel blended with the relevant oxygenate compound (or methanol/co-solvent combination) in an amount equivalent to the highest actual or recommended concentration-in-use of the oxygenate (or methanol/co-solvent combination) recorded in the basic registration data of any member fuel or additive product. In the event that two or more products in the same group contain the same and highest amount of the oxygenate or methanol/co-solvent blend, then the representative shall be chosen at random for such candidate products.

(2) An oxygenate compound or methanol/co-solvent combination to be blended with the gasoline base fuel for testing purposes shall be chemical-grade quality, at a minimum, and shall not contain a significant amount of other contaminating oxygenate compounds.

(3) Separate non-baseline gasoline groups shall also be defined for gasoline formulations derived from each particular petroleum source not listed in paragraph (e)(3)(i)(A)(5) of this section.

(i) Such groups may include, but are not limited to, those derived from shale, used oil, waste plastics, and other recycled chemical/petrochemical products.

(4) Pursuant to § 79.51(i), non-baseline gasoline products may belong to more than one fuel/additive group.

(B) *Non-Baseline Diesel.* The Non-Baseline diesel fuels and associated additives shall sort into groups according to the following criteria:

(1) For diesel fuel and additive products which contain 1.0 percent or more oxygen by weight in the form of alcohol(s) and/or ether(s):

(i) A separate non-baseline diesel group shall be defined by each individual alcohol or ether listed as a component in the registration application or basic registration data of any such fuel or additive.

(ii) For each such group, the representative to be used in testing shall be a formulation consisting of the diesel base fuel blended with the relevant alcohol or ether in an amount equivalent to the highest actual or recommended concentration-in-use of the

alcohol or ether recorded in the basic registration data of any member fuel or additive product.

(2) A separate non-baseline diesel group is also defined for each of the following classes of oxygenating compounds: mixed nitroso-compounds; mixed nitro-compounds; mixed alkyl nitrates; mixed alkyl nitrites; peroxides; furans; mixed alkyl esters of plant and/or animal origin (biodiesel). For each such group, the representative to be used in testing shall be formulated as follows:

(i) From the class of compounds which defines the group, a particular oxygenate compound shall be chosen from among all such compounds recorded in the registration application or basic registration data of any fuel or additive in the group.

(ii) The selected compound shall be the one recorded in any member product's registration application with the highest actual or recommended maximum concentration-in-use.

(iii) In the event that two or more oxygenate compounds in the relevant class have the highest recorded concentration-in-use, then the oxygenate compound to be used in the group representative shall be chosen at random from the qualifying candidate compounds.

(iv) The compound thus selected shall be the group representative, and shall be used in testing at the following concentration:

(A) For biodiesel groups, the representative shall be 100 percent biodiesel fuel.

(B) Otherwise, the group representative shall be the selected compound mixed into diesel base fuel at the maximum recommended concentration-in-use.

(3) Separate non-baseline diesel groups shall also be defined for diesel formulations derived from each particular petroleum source not listed in paragraph (e)(3)(i)(A)(5) of this section.

(i) Such groups may include, but are not limited to, those derived from shale, used oil, waste plastics, and other recycled chemical/petrochemical products.

(ii) In any such group, the first product to be registered or to apply for

EPA registration shall be the representative of that group. If two or more products are registered or apply for first registration simultaneously, then the representative shall be chosen by a random method from among such candidate products.

(4) Pursuant to § 79.51(i), non-baseline diesel products may belong to more than one fuel/additive group.

(C) *Non-baseline methanol.* The Non-Baseline methanol formulations are sorted into groups based on the non-methanol, non-gasoline component(s) of the blended fuel. Each such component occurring separately and each unique combination of such components shall define a separate group.

(1) The representative of each such non-baseline methanol group shall be the group member with the highest percent by volume of non-methanol, non-gasoline component(s).

(2) In case two or more such members have the same and highest concentration of non-methanol, non-gasoline component(s), the representative of the group shall be chosen at random from among such equivalent member products.

(D) *Non-Baseline Ethanol.* The Non-Baseline ethanol formulations are sorted into groups based on the non-ethanol, non-gasoline component(s) of the blended fuel. Each such component occurring separately and each unique combination of such components shall define a separate group.

(1) The representative of each such non-baseline ethanol group shall be the group member with the highest percent by volume of non-ethanol, non-gasoline component(s).

(2) In case two or more such members have the same and highest concentration of non-ethanol, non-gasoline component(s), the representative of the group shall be chosen at random from among such equivalent member products.

(E) *Non-Baseline Methane.* The Non-Baseline methane category consists of one group. The group representative shall be the member fuel or fuel/additive formulation containing the highest concentration-in-use of non-methane hydrocarbons. If two or more member products have the same and the highest concentration-in-use, then the

representative shall be chosen at random from such products.

(F) *Non-baseline propane.* The Non-Baseline propane category consists of one group. The group representative shall be the member fuel or fuel/additive formulation containing the highest concentration-in-use of butane and higher hydrocarbons. If two or more products have the same and the highest concentration-in-use, then the representative shall be chosen at random from such products.

(iii) *Atypical groups.* (A) As defined for each individual fuel family in § 79.56(e)(3), fuels and additives meeting any one of the following criteria are considered atypical.

(1) Gasoline Atypical fuels and additives contain one or more elements in addition to carbon, hydrogen, oxygen, nitrogen, and sulfur.

(2) Diesel Atypical fuels and additives contain one or more element in addition to carbon, hydrogen, oxygen, nitrogen, and sulfur.

(3) Methanol Atypical fuels and additives contain:

(i) one or more element in addition to carbon, hydrogen, oxygen, nitrogen, sulfur, and chlorine, and/or

(ii) sulfur in excess of 0.004 percent by weight, and/or

(iii) chlorine in excess of 0.0001 percent by weight.

(4) Ethanol Atypical fuels and additives contain:

(i) one or more element in addition to carbon, hydrogen, oxygen, nitrogen, sulfur, chlorine, and copper, and/or

(ii) sulfur in excess of 0.004 percent by weight, and/or

(iii) contain chlorine (as chloride) in excess of 0.0004 percent by weight, and/or

(iv) contain copper in excess of 0.07 mg/L.

(5) Methane Atypical fuels and additives contain:

(i) one or more element in addition to carbon, hydrogen, oxygen, nitrogen, and sulfur, and/or

(ii) sulfur in excess of 16 ppm by volume.

(6) Propane Atypical fuels and additives contain:

(i) one or more element in addition to carbon, hydrogen, oxygen, nitrogen, and sulfur, and/or

(ii) sulfur in excess of 123 ppm by weight.

(B) General rules for sorting these atypical fuels and additives into separate groups are as follows:

(1) Pursuant to § 79.51(j), a given atypical product may belong to more than one atypical group.

(2) Fuels and additives in different fuel families may not be grouped together, even if they contain the same atypical element(s) or other atypical characteristic(s).

(3) A fuel or additive containing one or more atypical elements attached to a polymer compound must be sorted into a separate group from atypical fuels or fuel additives containing the same atypical element(s) in non-polymer form. However, the occurrence of a polymer compound which does not contain an atypical element does not affect the grouping of a fuel or additive.

(C) Specific rules for sorting each family's atypical fuels and additives into separate groups, and for choosing each such group's representative for testing, are as follows:

(1) A separate group is created for each atypical element (or other atypical characteristic) occurring separately, *i.e.*, in the absence of any other atypical element or characteristic, in one or more fuels and/or additives within a given fuel family.

(i) Consistent with the basic grouping guidelines provided in § 79.56(d), a fuel product which is classified as atypical because its basic registration data or application lists a bulk additive containing an atypical characteristic, may be grouped with that additive and/or with other fuels and additives containing the same atypical characteristic.

(ii) Within a group of products containing only one atypical element or characteristic, the fuel or additive/base fuel mixture with the highest concentration-in-use or recommended concentration-in-use of the atypical element or characteristic shall be the designated representative of that group. In the event that two or more fuels or additive/base fuel mixtures within the group contain the same and highest concentration of the single atypical element or characteristic, then the group representative shall be selected

by a random method from among such candidate products.

(2) A separate group is also created for each unique combination of atypical elements (and/or other specified atypical characteristics) occurring together in one or more fuels and/or additives within a given fuel family.

(i) Consistent with the basic grouping guidelines provided in § 79.56(d), a fuel which is classified as atypical because its basic registration data lists one bulk additive containing two or more atypical characteristics, may be grouped with that additive and/or with other fuels and/or additives containing the same combination of atypical characteristics. Grouping of fuels containing more than one atypical additive shall be guided by provisions of § 79.51(j).

(ii) Within a group of such products containing a unique combination of two or more atypical elements or characteristics, the designated representative shall be the product within the group which contains the highest total concentration of the atypical elements or characteristics.

(iii) In the event that two or more products within a given atypical group contain the same and highest concentration of the same atypical elements or characteristics then, among such candidate products, the designated representative shall be the product which, first, has the highest total concentration of metals, followed in order by highest total concentration of halogens, highest total concentration of other atypical elements (including sulfur concentration, as applicable), highest total concentration of polymers containing atypical elements, and, lastly, highest total concentration of oxygen.

(iv) If two or more products have the same and highest concentration of the variable identified in the preceding paragraph, then, among such products, the one with the greatest concentration of the next highest variable on the list shall be the group representative.

(v) This decision-making process shall continue until a single product is determined to be the representative. If two or more products remain tied at

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the end of this process, then the representative shall be chosen by a random method from among such remaining products.

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§ 79.57 Emission generation.

This section specifies the equipment and procedures that must be used in generating the emissions which are to be subjected to the characterization procedures and/or the biological tests specified in §§ 79.52(b) and 79.53 of these regulations. When applicable, they may also be required in conjunction with testing under §§ 79.54 and 79.58(c). Additional requirements concerning emission generation, delivery, dilution, quality control, and safety practices are outlined in § 79.61.

(a) *Vehicle and engine selection criteria.*

(1) All vehicles and engines used to generate emissions for testing a fuel or additive/fuel mixture must be new (i.e., never before titled) and placed into the program with less than 500 miles on the odometer or 12 hours on the engine chronometer. The vehicles and engines shall be unaltered from the specifications of the original equipment manufacturer.

(2) The vehicle/engine type, vehicle/engine class, and vehicle/engine subclass designated to generate emissions for a given fuel or additive shall be the same type, class, and subclass which, over the previous three years, has consumed the most gallons of fuel in the fuel family applicable to the given fuel or additive. No distinction shall be made between light-duty vehicles and light-duty trucks for purposes of this classification.

(3) Within this vehicle/engine type, class, and subclass, the specific vehicles and engines acceptable for emission generation are those that represent the most common fuel metering system and the most common of the most important emission control system devices or characteristics with respect to emission reduction performance for the model year in which testing begins. These vehicles will be determined through a survey of the previous model year's vehicle/engine sales within the given subclass. These characteristics shall include, but need not

be limited to, aftertreatment device(s), fuel aspiration, air injection, exhaust gas recirculation, and feedback type.

(4) Within the applicable subclass, the five highest selling vehicle/engine models that contain the most common such equipment and characteristics shall be determined. Any of these five models of the current model year (at the time testing begins) may be selected for emission generation.

(i) If one or more of the five models is not available for the current model year, the choice of model for emission generation shall be limited to those remaining among the five.

(ii) If fewer than five models of the given vehicle/engine type are available for the current model year, all such models shall be eligible.

(5) When the fuel or fuel additive undergoing testing is not commonly used or intended to be used in the vehicle/engine types prescribed by this selection procedure, or when rebuilding or alteration is required to obtain a suitable vehicle/engine for emission generation, the manufacturer may submit a request to EPA for a modification in test procedure requirements. Any such request must include objective test results which support the claim that a more appropriate vehicle/engine type is needed as well as a suggested substitute vehicle/engine type. The vehicle/engine selection in this case shall be approved by EPA prior to the start of testing.

(6) Once a particular model has been chosen on which to test a fuel or additive product, all mileage accumulation and generation of emissions for characterization and biological testing of such product shall be conducted on that same model.

(i) If the initial test vehicle/engine fails or must be replaced for any reason, emission generation shall continue with a second vehicle/engine which is identical to, or resembles to the greatest extent possible, the initial test vehicle/engine. If more than one replacement vehicle/engine is necessary, all such vehicles/engines shall be identical, or resemble to the greatest extent possible, the initial test vehicle/engine.

(ii) Manufacturers are encouraged to obtain, at the start of a test program,

more than one emission generation vehicle/engine of the identical model, to ensure the availability of back-up emission generator(s). All backup vehicles/engines must be conditioned and must have their emissions fully characterized, as done for the initial test vehicle/engine, prior to their use as emission generators for biological testing. Alternating between such vehicles/engines regularly during the course of testing is permissible and advisable, particularly to allow regular maintenance on such vehicles/engines during prolonged health effects testing.

(b) *Vehicle/engine operation and maintenance.* (1) For the purpose of generating combustion emissions from a fuel or additive/base fuel mixture for which the relevant class is light duty, either a light-duty vehicle shall be operated on a chassis dynamometer or a light-duty engine shall be operated on an engine dynamometer. When the relevant class is heavy duty, the emissions shall be generated on a heavy-duty engine operated on an engine dynamometer. In both cases, the vehicle or engine model shall be selected as described in paragraph (a) of this section and shall have all applicable fuel and emission control systems intact.

(2) Except as provided in § 79.51(h)(2)(iii), the fuel or additive/base fuel mixture being tested shall be used at all times during operation of the test vehicle or engine. No other fuels or additives shall be used in the test vehicle or engine once mileage accumulation has begun until emission generation for emission characterization and biological testing purposes is completed.

(i) A vehicle or engine may be used to generate emissions for the testing of more than one fuel or additive, provided that all such fuels and additives belong to the same fuel family pursuant to § 79.56(e)(i), and that, once a vehicle or engine has been used to generate emissions for an atypical fuel or additive (pursuant to § 79.56(e)(2)(iii)), it shall not be used in the testing of any other fuel or additive. Paragraphs (a) (2) and (3) of this section shall apply only to the first fuel or additive tested.

(ii) Prior to being used to generate emissions for testing an additional fuel or additive, a vehicle or engine which

has previously been used for testing a different fuel or additive shall undergo an effective intermediate preconditioning cycle to remove the previously used fuel and its emissions from the vehicle's fuel and exhaust systems and from the combustion emission and evaporative emission control systems, if any.

(iii) Such preconditioning shall include, at a minimum, the following steps:

(A) The canister (if any) shall be removed from the vehicle and purged with 300 °F nitrogen at 20 liters per minute until the incremental weight loss of the canister is less than 1 gram in 30 minutes. This typically takes 3-4 hours and removes 100 to 120 grams of adsorbed gasoline vapors.

(B) The fuel tank shall be drained and filled to capacity with the new test fuel or additive/fuel mixture.

(C) The vehicle or engine shall be operated until at least 95% of the fuel tank capacity is consumed.

(D) The purged canister shall be returned to the vehicle.

(E) The fuel tank shall be drained and filled to 40% capacity with test fuel.

(F) Two-hour fuel tank heat builds from 72-120 °F shall be performed repeatedly as necessary to achieve canister breakthrough. The fuel tank must be drained and filled prior to each heat build.

(3) Scheduled and unscheduled vehicle/engine maintenance. (i) During emission generation, vehicles and engines must be maintained in good condition by following the recommendations of the original equipment manufacturer (OEM) for scheduled service and parts replacement, with repairs performed only as necessary. Modifications, adjustments, and maintenance procedures contrary to procedures found in 40 CFR part 86 for the maintenance of test vehicles/engines or performed solely for the purpose of emissions improvement are not allowed.

(ii) If unscheduled maintenance becomes necessary, the vehicle or engine must be repaired to OEM specifications, using OEM or OEM-approved parts. In addition, the tester is required to measure the basic emissions

pursuant to § 79.52(b)(2)(i) after the unscheduled maintenance and before resuming testing to ensure that the post-maintenance emissions shall be within 20 percent of pre-maintenance emissions levels. If the basic emissions cannot be brought within 20 percent of their previous levels, then the manufacturer shall restart the emissions characterization and health testing of its products combustion emissions using a new vehicle/engine.

(c) *Mileage accumulation.* (1) A vehicle/engine break-in period is required prior to generating emissions for characterization and/or biological testing under this subpart. The required mileage accumulation may be accomplished on a test track, on the street, on a dynamometer, or using any other conventionally accepted method.

(2) Vehicles to be used in the evaluation of baseline and non-baseline fuels and fuel additives shall accumulate 4,000 miles prior to emission testing. Engines to be used in the evaluation of baseline and non-baseline fuels and fuel additives shall accumulate 125 hours of operation on an engine dynamometer prior to emission testing.

(3) When the test formulation is classified as an atypical fuel or fuel additive formulation (pursuant to definitions in § 79.56(e)(4)(iii)), the following additional mileage accumulation requirements apply:

(i) The test vehicle/engine must be operated for a minimum of 4,000 vehicle miles or 125 hours of engine operation.

(ii) Thereafter, at intervals determined by the tester, all emission fractions (*i.e.*, vapor, semi-volatile, and particulate) shall be sampled and analyzed for the presence and amount of the atypical element(s) and/or other atypical constituents. Pursuant to paragraph (d) of this section, the sampled emissions must be generated in the absence of an intact aftertreatment device. Immediately before the samples are taken, a brief warmup period (at least ten miles or the engine equivalent) is required.

(iii) Mileage accumulation shall continue until either 50 percent or more of the mass of each atypical element (or other atypical constituent) entering the engine can be measured in the exhaust emissions (all fractions com-

bined), or the vehicle/engine has accumulated mileage (or hours) equivalent to 40 percent of the average useful life of the applicable vehicle/engine class (pursuant to regulations in 40 CFR part 86). For example, the maximum mileage required for light-duty vehicles is 40 percent of 100,000 miles (*i.e.*, 40,000 miles), while the maximum time of operation for heavy-duty engines is the equivalent of 40 percent of 290,000 miles (*i.e.*, the equivalent in engine hours of 116,000 miles).

(iv) When either condition in paragraph (c)(3)(iii) of this section has been reached, additional emission characterization and biological testing of the emissions may begin.

(d) *Use of exhaust aftertreatment devices.* (1) If the selected test vehicle/engine, as certified by EPA, does not come equipped with an emissions aftertreatment device (such as a catalyst or particulate trap), such device shall not be used in the context of this program.

(2) Except as provided in paragraph (d)(3) of this section for certain specialized additives, the following provisions apply when the test vehicle/engine, as certified by EPA, comes equipped with an emissions aftertreatment device.

(i) For mileage accumulation:

(A) When the test formulation does not contain any atypical elements (pursuant to definitions in § 79.56(e)(4)(iii)), an intact aftertreatment device must be used during mileage accumulation.

(B) When the test formulation does contain atypical elements, then the manufacturer may choose to accumulate the required mileage using a vehicle/engine equipped with either an intact aftertreatment device or with a non-functional aftertreatment device (*e.g.*, a blank catalyst without its catalytic wash coat). In either case, sampling and analysis of emissions for measurement of the mass of the atypical element(s) (as described in § 79.57(c)(3)) must be done on emissions generated with a non-functional (blank) aftertreatment device.

(1) If the manufacturer chooses to accumulate mileage without a functional aftertreatment device, and if the manufacturer wishes to do this outside of a laboratory/test track setting, then a

memorandum of exemption for product testing must be obtained by applying to the Director of the Field Operations and Support Division (see § 79.59(a)(1)).

(2) [Reserved]

(ii) For Tier 1 (§ 79.52), the total set of requirements for the characterization of combustion emissions (§ 79.52(b)) must be completed two times, once using emissions generated with the aftertreatment device intact and a second time with the aftertreatment device rendered nonfunctional or replaced with a non-functional aftertreatment device as described in paragraph (d)(2)(i)(B) of this section.

(iii) For Tier 2 (§ 79.53), the standard requirements for biological testing of combustion emissions shall be conducted using emissions generated with a non-functioning aftertreatment device as described in paragraph (d)(2)(i)(B) of this section.

(iv) For alternative Tier 2 requirements (§ 79.58(c)) or Tier 3 requirements (§ 79.54) which may be prescribed by EPA, the use of functional or nonfunctional aftertreatment devices shall be specified by EPA as part of the test guidelines.

(v) In the case where an intact aftertreatment device is not in place, all other manufacturer-specified combustion characteristics (e.g., back pressure, residence time, and mixing characteristics) of the altered vehicle/engine shall be retained to the greatest extent possible.

(3) Notwithstanding paragraphs (d)(1) and (d)(2) of this section, when the subject of testing is a fuel additive specifically intended to enhance the effectiveness of exhaust aftertreatment devices, the related aftertreatment device may be used on the emission generation vehicle/engine during all mileage accumulation and testing.

(e) *Generation of combustion emissions*—(1) *Generating combustion emissions for emission characterization.* (i) Combustion emissions shall be generated according to the exhaust emission portion of the Federal Test Procedure (FTP) for the certification of new motor vehicles, found in 40 CFR part 86, subpart B for light-duty vehicles/engines, and subparts D, M and N for heavy-duty vehicles/engines. The Urban Dynamometer Driving Schedule

(UDDS), pursuant to 40 CFR part 86, appendix I(a), shall apply to light-duty vehicles/engines and the Engine Dynamometer Driving Schedule (EDS), pursuant to 40 CFR part 86, appendix I(f)(2), shall apply to heavy-duty vehicles/engines. The motoring portion of the heavy-duty test cycle may be eliminated, at the manufacturer's option, for the generation of emissions.

(A) For light-duty engines operated on an engine dynamometer, the tester shall determine the speed-torque equivalencies ("trace") for its test engine from valid FTP testing performed on a chassis dynamometer, using a test vehicle with an engine identical to that being tested. The test engine must then be operated under these speed and torque specifications to simulate the FTP cycle.

(B) Special procedures not included in the FTP may be necessary in order to characterize emissions from fuels and fuel additives containing atypical elements or to collect some types of emissions (e.g., particulate emissions from light-duty vehicles/engines, semi-volatile emissions from both light-duty and heavy-duty vehicles/engines). Such alterations to the FTP are acceptable.

(C) For Tier 2 testing, the engines shall operate on repeated bags 2 and 3 of the UDDS or back to back repeats of the heavy-duty transient cycle of the EDS.

(ii) Pursuant to § 79.52(b)(1)(i) and § 79.57(d)(2)(ii), emission generation and characterization must be repeated three times when the selected vehicle/engine is normally operated without an emissions aftertreatment device and six times when the selected vehicle/engine is normally operated with an emissions aftertreatment device. In the latter case, the emission generation and characterization process shall be repeated three times with the intact aftertreatment device in place and three times with a non-functioning (blank) aftertreatment device in place.

(iii) From both light-duty and heavy-duty vehicles/engines, samples of vapor phase, semi-volatile phase, and particulate phase emissions shall be collected, except that semi-volatile phase, and particulate emissions need not be sampled for fuels and additives in the

methane and propane families (pursuant to § 79.56(e)(1)(v) and (vi)). The number and type of samples to be collected and separately analyzed during one emission generation/characterization process are as follows:

(A) In the case of combustion emissions generated from light-duty vehicles/engines, the samples consist of three bags of vapor emissions (one from each segment of the light-duty exhaust emission cycle) plus one sample of particulate-phase emissions and one sample of semi-volatile-phase emissions (collected over all segments of the exhaust emission cycle). If the mass of particulate emissions or semi-volatile emissions obtained during one driving cycle is not sufficient for characterization, up to three driving cycles may be performed and the extracted fractions combined prior to chemical analysis. Particulate-phase emissions shall not be combined with semi-volatile-phase emissions. The test laboratory should focus on the characterization of the limit of detection for particulates and semi-volatile emissions.

(B) In the case of combustion emissions generated from heavy-duty engines, the samples consist of one sample of each emission phase (vapor, particulate, and semi-volatile) collected over the entire cold-start cycle and a second sample of each such phase collected over the entire hot-start cycle (see 40 CFR 86.334 through 86.342).

(iv) *Emission collection and storage.* (A) Vapor phase emissions shall be collected and stored in Tedlar bags for subsequent chemical analysis. Storage conditions are specified in § 79.52(b)(2).

(B) Particulate phase emissions shall be collected on a particulate filter (or more than one, if required) using methods described in 40 CFR 86.1301 through 86.1344. These methods, ordinarily applied only to heavy-duty emissions, are to be adapted and used for collection of particulates from light-duty vehicles/engines, as well. The particulate matter may be stored on the filter in a sealed container, or the soluble organic fraction may be extracted and stored in a separate sealed container. Both the particulate and the extract shall be shielded from ultraviolet light and stored at -20°C or less. Particulate emissions shall be tested no later than

six months from the date they were generated.

(C) Semi-volatile emissions shall be collected immediately downstream from the particulate collection filters using porous polymer resin beds, or their equivalent, designed for their capture. The soluble organic fraction of semi-volatile emissions shall be extracted immediately and tested within six months of being generated. The extract shall be stored in a sealed container which is shielded from ultraviolet light and stored at -20°C or less.

(D) Particulate and semi-volatile phase emission collection, handling and extraction methods shall not alter the composition of the collected material, to the extent possible.

(v) Additional requirements for combustion emission sampling, storage, and characterization are specified in § 79.52(b).

(2) *Generating whole combustion emissions for biological testing.* (i) Biological tests requiring whole combustion emissions shall be conducted using emissions generated from the test vehicle or engine operated in accordance with general FTP requirements.

(ii) Light-duty test vehicles/engines shall be repeatedly operated over the Urban Dynamometer Driving Schedule (UDDS) (or equivalent engine dynamometer trace, per paragraph (e)(1)(i)(A) of this section) and heavy-duty test engines shall be repeatedly operated over the Engine Dynamometer Schedule (EDS) (see 40 CFR part 86, appendix I).

(A) The tolerances of the driving cycle shall be two times those of the Federal Test Procedure and must be met 95 percent of the time.

(B) The UDDS or EDS shall be repeated as many times as required for the biological test session.

(C) Light-duty dynamometers shall be calibrated prior to the start of a biological test (40 CFR 86.118–78), verified weekly (40 CFR 86.118–78), and recalibrated as required. Heavy-duty dynamometers shall be calibrated and checked prior to the start of a biological test (40 CFR 86.1318–84), recalibrated every two weeks (40 CFR 86.1318–84(a)) and checked as stated in 40 CFR 86.1318–84(b) and (c).

(D) The fuel reservoir for the test vehicle/engine shall be large enough to operate the test vehicle/engine throughout the daily biological exposure period, avoiding the need for refueling during testing.

(iii) An apparatus to integrate the large concentration swings typical of transient-cycle exhaust is to be used between the source of emissions and the exposure chamber containing the animal test cages(s). The purpose of such apparatus is to decrease the variability of the biological exposure atmosphere and achieve the necessary concentration of CO or NO_x, whichever is limiting.

(A) A large mixing chamber is suggested for this purpose. The mixing chamber would be charged from the CVS at a constant rate determined by the exposure chamber purge rate. Flow to the exposure chamber would begin at the conclusion of the initial transient cycle with the associated mixing chamber charge.

(B) A potential alternative apparatus is a mini-diluter (see, for example, AIGER/CRADA, February, 1994 in § 79.57(g)).

(C) [Reserved]

(iv) *Emission dilution.* (A) Dilution air can be pre-dried to lower the relative humidity, thus permitting a lower dilution rate and a higher concentration of hydrocarbons to be achieved without condensation of water vapor.

(B) These procedures include requirements that the mean exposure concentration in the inhalation test chamber on 90 percent or more of the exposure days shall be controlled as follows:

(1) If the species being controlled is hydrocarbon or particulate, the mean exposure concentration must be within 15 percent of the target concentration for the single species being controlled.

(2) For other species, the mean exposure concentration must be within 10 percent of the target concentration for the single species being controlled.

(3) For all species, daily monitoring of CO, CO₂, NO_x, SO_x, and total hydrocarbons in the exposure chamber shall be required. Analysis of the particle size distribution shall also be performed to establish the stability and consistency of particle size distribution in the test exposure.

(C) After the initial exhaust dilution to preserve the character of the exhaust, the exhaust stream can be further diluted in the mixing chamber (and/or after leaving the chamber) to achieve the desired biological exposure concentrations.

(v) *Verification procedures.* (A) The entire system used to dilute and transport whole combustion emissions (*i.e.*, from exhaust pipe to outlet in the biological testing chamber) shall be verified before any animal exposures begin, and verified at least weekly during testing. (See procedures at 40 CFR 86.119-90 for light-duty vehicles and § 86.1319-90 for heavy-duty engines.) Verification testing shall be accomplished by introducing a known sample at the end of the vehicle/engine exhaust pipe into the dilution system and measuring the amount exiting the system. For example, an injected hydrocarbon sample could be detected with a gas chromatograph (GC) and flame ionization detector (FID) to determine the recovery factor.

(B) [Reserved]

(vi) *Emission exposure quality control.*

(A) The tester shall incorporate the additional quality assurance and safety procedures outlined in § 79.61(d) to control variability of emissions during the generation of exposure emissions during health effect testing.

(B) These procedures include requirements that the mean exposure concentration in the inhalation test chamber on 90 percent or more of the exposure days shall be controlled as follows:

(1) If the species being controlled is hydrocarbon or particulate, the mean exposure concentration must be within 15 percent of the target concentration for the single species being controlled.

(2) For other species, the mean exposure concentration must be within 10 percent of the target concentration for the single species being controlled.

(3) For all species, daily monitoring of CO, CO₂, NO_x, SO_x, and total hydrocarbons in the exposure chamber shall be required. Analysis of the particle size distribution shall also be performed to establish the stability and consistency of particle size distribution in the test exposure.

(C) The testing facility shall allow an audit of its premises, the qualifications, e.g., curriculum vitae, of its staff assigned to testing, and the specimens and records of the testing for registration purposes (as specified in § 79.60).

(vii) To allow for customary laboratory scheduling and unforeseen problems affecting the combustion emission generation or dilution equipment, biological exposures may be interrupted on limited occasions, as specified in § 79.61(d)(5). Interruptions exceeding these limitations shall cause the affected test(s) to be void. Testers shall be aware of concerns for backup vehicles/engines cited in paragraph (a)(7)(ii) of this section.

(3) *Generating particulate and semi-volatile emissions for biological testing.* (i) *Salmonella mutagenicity testing.* (i) *Salmonella mutagenicity testing*, pursuant to § 79.68, shall be conducted on extracts of the particulate and semi-volatile emission phases separately. These emissions shall be generated by operating the test vehicle/engine over the appropriate FTP driving schedule (see paragraph (e)(2)(ii) of this section) and collected and analyzed according to methods described in 40 CFR 86.1301 through 1344 (further information on this subject may be found in Perez, *et al.* CRC Report No. 551, 1987 listed in § 79.57(g)).

(A) Particulate emissions shall be collected on particulate filters and extracted from the collection equipment for use in biological tests. The number of repetitions of the applicable driving schedule required to collect sufficient quantities of the particulate emissions will vary, depending on the characteristics of the engine, the test fuel, and the requirements of the biological test protocol. The particulate sample may be collected on one or more filters, as necessary.

(B) Semi-volatile emissions shall be collected immediately downstream from the particulate collection filters using porous polymer resin beds, or their equivalent, designed for their capture. Semi-volatile phase emissions shall be collected on one apparatus. The time spent collecting sufficient quantities of the test substances in emissions samples will vary, depending on the emission characteristics of the engine and fuel or additive/base fuel

mixture and on the requirements of the biological test protocol.

(ii) The extraction method shall be determined by the specifications of the biological test for which the emissions are used.

(iii) Particulate and semi-volatile emission storage requirements are as specified in § 79.57(e)(1)(iv).

(iv) Particulate and semi-volatile phase emission collection, handling and extraction methods shall not alter the composition of the collected material, to the extent possible.

(v) Particulate emissions shall not be combined with semi-volatile phase emissions.

(f) *Generation of evaporative emissions for characterization and biological testing.* (1) Except as provided in paragraph (f)(5) of this section, an evaporative emissions generator shall be used to volatilize samples of a fuel or additive/base fuel mixture for evaporative emissions characterization and biological testing. Emissions shall be collected and sampled using equipment and methods appropriate for use with the compounds being characterized and the requirements of the emission characterization analysis. In the case of potentially explosive test substance concentrations, care must be taken to avoid generating explosive atmospheres. The tester is referred to § 79.61(d)(8) for considerations involving explosivity.

(2) *Evaporative Emissions Generator (EEG) Description.* An EEG is a fuel tank or vessel to which heat is applied causing a portion of the fuel to evaporate at a desired rate. The manufacturer has flexibility in designing an EEG for testing a particular fuel or fuel additive. The sample used to generate emissions in the EEG shall be renewed at least daily.

(i) The evaporation chamber shall be made from materials compatible with the fuels and additives being tested and shall be equipped with a drain.

(ii) The chamber shall be filled to 40 ±5 percent of its interior volume with the fuel or additive/base fuel mixture being tested, with the remainder of the volume containing air.

(iii) The concentration of the evaporated fuel or additive/base fuel mixture in the vapor space of the evaporation

chamber during the time emissions are being withdrawn for testing shall not vary by more than 10 percent from the equilibrium concentration in the vapor space of emissions generated from the fresh fuel or additive/base fuel mixture in the chamber.

(A) During the course of a day's emission generation period, the level of fuel in the EEG shall be maintained to within 7 percent of its height at the start of the daily exposure period.

(B) The fuel used in the EEG shall be drained at the end of each daily exposure. The EEG shall be refilled with a fresh supply of the test formulation before the start of each daily exposure.

(C) The vapor space of the evaporation chamber shall be well mixed throughout the time emissions are being withdrawn for testing.

(iv) The size of the evaporation chamber shall be determined by the rate at which evaporative emissions shall be needed in the test animal exposure chambers and the rate at which the fuel or the additive/base fuel mixture evaporates. The rate of evaporative emissions may be adjusted by altering the size of the EEG or by using one or more additional EEG(s). Emission rate modifications shall not be adjusted by temperature control or pressure control.

(v) The temperature of the fuel or additive/base fuel mixture in the evaporation chamber shall be $130^{\circ}\text{F} \pm 5^{\circ}\text{F}$. The vapors shall maintain this temperature up to the point in the system where the vapors are diluted.

(vi) The pressure in the vapor space of the evaporation chamber and the dilution and sampling apparatus shall stay within 10 percent of ambient atmospheric pressure.

(vii) There shall be no controls or equipment on the evaporation chamber system that change the concentration or composition of the vapors generated for testing.

(viii) Manufacturers shall perform verification testing of evaporative emissions in a manner analogous to the verification testing performed for combustion emissions.

(3) For biological testing, vapor shall be withdrawn from the EEG at a constant rate, diluted with air as required for the particular study, and conducted

immediately to the biological testing chamber(s) in a manner similar to the method used in § 79.57(e), excluding the mixing chamber therein. The rate of emission generation shall be high enough to supply the biological exposure chamber with sufficient emissions to allow for a minimum of fifteen air changes per exposure chamber per hour. To allow for customary laboratory scheduling and for unforeseen problems with the evaporative emission generation or dilution equipment, biological exposures may be interrupted on limited occasions, as specified in § 79.61(d)(5). Interruptions exceeding these limitations shall cause the affected test(s) to be void.

(4) For characterization of evaporative emissions, samples of equilibrated emissions to the vapor space of the EEG shall be withdrawn into Tedlar bags, then stored and analyzed as specified in § 79.52(b).

(5) A manufacturer (or group of manufacturers) may submit to EPA a request for approval of an alternative method of generating evaporative emissions for use in emission characterization and biological tests required under this subpart.

(i) To be approved by EPA, the request must fully explain the rationale for the proposed method as well as the technical procedures, quality control, and safety precautions to be used, and must demonstrate that the proposed method will meet the following criteria:

(A) The emission mixture generated by the proposed procedures must be reasonably similar to the equilibrium composition of the vapor which occurs in the vehicle fuel tank head space when the subject fuel or additive/base fuel mixture is in use and near-maximum in-use temperatures are encountered.

(B) The emissions mixture generated by the proposed method must be sufficiently concentrated to provide adequate exposure levels in the context of the required toxicologic tests.

(C) The proposed method must include procedures to ensure that the emissions delivered to the biologic exposure chambers will provide a reasonably constant exposure atmosphere over time.

(ii) If EPA approves the request, EPA will place in the public record a copy of the request, together with all supporting procedural descriptions and justifications, and will notify the public of its availability by publishing a notice in the FEDERAL REGISTER.

(g) *References.* For additional background information on the emission generation procedures outlined in this paragraph (g), the following references may be consulted. Additional references can be found in § 79.61(f).

(1) AIGER/CRADA (American Industry/Government Emissions Research Cooperative Research and Development Agreement, “Specifications for Advanced Emissions Test Instrumentation” AIGER PD-94-1, Revision 5.0, February, 1994

(2) Black, F. and R. Snow, “Constant Volume Sampling System Water Condensation” SAE #940970 in “Testing and Instrumentation” SP-1039, Society of Automotive Engineers, Feb. 28–Mar. 3, 1994.

(3) Perez, J.M., Jass, R.E., Leddy, D.G., eds. “Chemical Methods for the Measurement of Unregulated Diesel Emissions (CRC-APRAC Project No. CAPI-1-64), Coordinating Research Council, CRC Report No. 551, August, 1987.

(4) Phalen, R.F., “Inhalation Studies: Foundations and Techniques”, CRC Press, Inc., Boca Raton, Florida, 1984.

[59 FR 33093, June 27, 1994, as amended at 61 FR 36511, July 11, 1996; 63 FR 63792, Nov. 17, 1998]

§ 79.58 Special provisions.

(a) *Relabeled Additives.* Sellers of relabeled additives (pursuant to § 79.50) are not required to comply with the provisions of § 79.52, 79.53 or 79.59, except that such sellers are required to comply with § 79.59(b).

(b) *Low Vapor Pressure Fuels and Additives.* Fuels which are not designated as “evaporative fuels” and fuel additives which are not designated as “evaporative fuel additives” pursuant to the definitions in § 79.50 need not undergo the emission characterization or health effects testing specified in §§ 79.52 and 79.53 for evaporative emissions. At EPA’s discretion, the evaporative emissions of such fuels and addi-

tives may be required to undergo Tier 3 testing, pursuant to § 79.54.

(c) *Alternative Tier 2 Provisions.* At EPA’s discretion, EPA may modify the standard Tier 2 health effects testing requirements for a fuel or fuel additive (or group). Such modification may encompass substitution, addition, or deletion of Tier 2 studies or study specifications, and/or changes in underlying engine or equipment requirements, except that a Tier 2 endpoint will not be deleted in the absence of existing information deemed adequate by EPA or alternative testing requirements for such endpoint. If warranted by the particular requirements, EPA will allow additional time for completion of the alternative Tier 2 testing program.

(1) When EPA intends to require testing in lieu of or in addition to standard Tier 2 health testing, EPA will notify the responsible manufacturer (or group) by certified letter of the specific tests which EPA is proposing to require in lieu of or in addition to Tier 2, and the proposed schedule for completion and submission of such tests. A copy of the letter will be placed in the public record. EPA intends to send the notification prior to November 27, 1995, or in the case of new fuels and additives (as defined in § 79.51(c)(3)), within 18 months of EPA’s receipt of an intent to register such product. However, EPA’s notification to the manufacturer (or group) may occur at any time up to EPA’s receipt of Tier 2 data for the product(s) in question. EPA will provide the manufacturer with 60 days from the date of receipt of the notice to comment on the tests which EPA is proposing to require and on the proposed schedule. If the manufacturer believes that undue costs or hardships will occur as a result of EPA’s delay in providing notification of alternative Tier 2 requirements, then the manufacturer’s comments should describe and include evidence of such hardship. In particular, if the standard Tier 2 toxicology testing for the fuel or additive in question has already begun at the time the manufacturer receives EPA’s notification of proposed alternative Tier 2 requirements, then EPA shall refrain from requiring alternative Tier 2 tests provided that EPA receives the

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standard Tier 2 data and report (pursuant to § 79.59(c)) within one year of the date on which the toxicology testing began.

(2) EPA will issue a notice in the FEDERAL REGISTER announcing its intent to require special testing in lieu of or in addition to the standard Tier 2 testing for a particular fuel or additive manufacturer or group, and that a copy of the letter to the manufacturer or group describing the proposed alternative Tier 2 testing for that manufacturer or group is available in the public record for review and comment. The public shall have a minimum of 30 days after the publication of this notice to comment on the proposed alternative Tier 2 testing.

(3) EPA will include in the public record a copy of any timely comments concerning the proposed alternative Tier 2 testing requirements received from the affected manufacturer or group or from the public, and the responses of EPA to such comments. After reviewing all such comments received, EPA may adopt final alternative Tier 2 requirements by sending a certified letter describing such final requirements to the manufacturer or group. In that event, EPA will also issue a notice in the FEDERAL REGISTER announcing that it has adopted final alternative Tier 2 requirements and that a copy of the letter adopting the requirements has been included in the public record.

(4) After EPA's receipt of a manufacturer's (or group's) submittals, EPA will notify the responsible manufacturer (or group) regarding the adequacy of the submittal and potential Tier 3 testing requirements according to the same relative time intervals and by the same procedures as specified in § 79.51 (c) and (d) for routine Tier 1 and Tier 2 submittals.

(d) *Small Business Provisions.* (1) For purposes of these provisions, when subsidiary, divisional, or other complex business arrangements exist, *manufacturer* is defined as the business entity with ultimate ownership of all related parents, subsidiaries, divisions, branches, or other operating units. *Total annual sales* means the average of the manufacturer's total sales revenue, excluding any revenue which rep-

resents the collection of Federal, State, or local excise taxes or sales taxes, in each of the three years prior to such manufacturer's submittal to EPA of the basic registration information pursuant to § 79.59(b)(2) through (b)(5).

(2) *Provisions Applicable to Baseline and Non-baseline Products.* A manufacturer with total annual sales less than \$50 million is not required to meet the requirements of Tier 1 and Tier 2 (specified in §§ 79.52 and 79.53) with regard to such manufacturer's fuel and/or additive products which meet the criteria for inclusion in a Baseline or Non-baseline group pursuant to § 79.56. Upon such manufacturer's satisfactory completion and submittal to EPA of basic registration data specified in § 79.59(b), the manufacturer may request and EPA shall issue a registration for such product, subject to § 79.51(c) and paragraphs (d)(4) and (d)(5) of this section.

(3) *Provisions Applicable to Atypical Products.* A manufacturer with total annual sales less than \$10 million is not required to meet the requirements of Tier 2 (specified in § 79.53) in regard to such manufacturer's fuel and/or additive products which meet the criteria for inclusion in an Atypical group pursuant to § 79.56. Upon such manufacturer's satisfactory completion and submittal to EPA of basic registration data specified in § 79.59(b) and Tier 1 information specified in § 79.52 for an Atypical fuel or additive, the manufacturer may request and EPA shall issue a registration for such product, subject to § 79.51(c) and paragraphs (d)(4) and (d)(5) of this section. Compliance with Tier 1 requirements under this paragraph may be accomplished by the individual manufacturer or as a part of a group pursuant to § 79.56.

(4) Any registration granted by EPA under the provisions of this section are conditional upon satisfactory completion of any Tier 3 requirements which EPA may subsequently impose pursuant to § 79.54. In such circumstances, the Tier 3 requirements might include (but would not necessarily be limited to) information which would otherwise have been required under the provisions of Tier 1 and/or Tier 2.

(5) The provisions in paragraphs (d)(2) and (d)(3) of this section are voluntary

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on the part of qualifying small manufacturers. Such manufacturers may choose to fulfill the standard requirements for their fuels and additives, individually or as a part of a group, rather than satisfying only the requirements specified in paragraphs (d)(2) and/or (d)(3) of this section. If a qualifying small manufacturer elects these special provisions rather than the standard requirements for a product, then EPA will generally assume that any additional information submitted by other manufacturers, for fuels and additives meeting the same grouping criteria (under § 79.56) as that of the small manufacturer's product, is pertinent to further testing and/or regulatory decisions that may affect the small manufacturer's product.

(6) In the case of an additive for which the manufacturer is not required to meet the requirements of Tier 2 pursuant to paragraph (d)(3) of this section:

(i) A fuel manufacturer which blends such an additive into fuel shall not be required to meet the requirements of Tier 2 with respect to such additive/fuel mixture.

(ii) An additive manufacturer which blends such an additive with one or more other registered additive products and/or with substances containing only carbon and/or hydrogen shall not be required to meet the requirements of Tier 2 with respect to such additive or additive blend.

(e) *Aftermarket Aerosol Additives.* (1) To obtain registration for an aftermarket aerosol fuel additive, the manufacturer shall provide existing information in the form of a literature search, a discussion of the potential exposure(s) to such product, and the basic registration data specified in § 79.59(b).

(2) The literature search shall include existing data on potential health and welfare effects due to exposure to the aerosol product itself and its raw (uncombusted) components. The analysis for potential exposures shall be based on the actual or anticipated production volume and market distribution of the particular aerosol product, and its estimated frequency of use. Other Tier 1 and Tier 2 requirements are not routinely required for aerosol products. EPA will review the sub-

mitted information and, at EPA's discretion, may require from the manufacturer further information and/or testing under Tier 3 on a case-by-case basis.

[59 FR 33093, June 27, 1994, as amended at 62 FR 12571, Mar. 17, 1997]

§ 79.59 Reporting requirements.

(a) *Timing.* (1) The manufacturer of each designated fuel or fuel additive shall submit to EPA the basic registration data detailed in paragraph (b) of this section. Forms for submitting this data may be obtained from EPA at the following address: Attn: Fuel/Additives Registration, U.S. Environmental Protection Agency, 1200 Pennsylvania Ave., NW, Mail Code 6405A, Washington, DC 20460.

(i) For existing products (pursuant to § 79.51(c)(1)), manufacturers shall submit the basic registration data as specified in § 79.59(b) to EPA by November 28, 1994.

(ii) For registrable products (pursuant to § 79.51(c)(2)), manufacturers shall submit the basic registration data as specified in § 79.59(b) to apply for registration for such product.

(iii) For new products (pursuant to § 79.51(c)(3)), manufacturers are strongly encouraged to notify EPA of an intent to obtain product registration by submitting the basic registration data as specified in § 79.59(b) prior to starting Tiers 1 and 2.

(2) The information specified in paragraph (c) of this section shall be submitted to the address in paragraph (a)(1) of this section at the conclusion of activities performed in compliance with Tiers 1 and 2 under the provisions of §§ 79.52 and 79.53, according to the time constraints specified in § 79.51 (c) through (d).

(3) The information specified in paragraph (d) of this section shall be submitted to EPA at the address in paragraph (a)(1) of this section at the conclusion of activities performed in compliance with Tier 3 under the provisions of § 79.54.

(b) *Basic Registration Data.* Each manufacturer of a designated fuel or fuel additive shall submit the following data in regard to such fuel or fuel additive:

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(1) The information specified in § 79.11 or § 79.21. If such information has already been submitted to EPA in compliance with subpart B or C of this part, and if such previous information is accurate and up-to-date, the manufacturer need not resubmit this information.

(2) Annual production volume of the fuel or fuel additive product, in units of gallons per year if most commonly sold in liquid form or kilograms per year if most commonly sold in solid form. For fuels and fuel additives already in production, the most recent annual production volume and the volume projected to be produced in the third subsequent year shall be provided. For products not yet in production, the best estimate of expected annual volume during the third year of production shall be provided.

(3) *Market distribution of the product.* For fuels and bulk additives, this information shall be presented as the percent of total annual sales volume marketed in each Petroleum Administration for Defense District (PADD). The States comprising each PADD are listed in the following section. For aftermarket additives, the distribution data shall be presented as the percent of total annual sales volume marketed in each State. For a product not yet in production, the manufacturer shall present the distribution (by PADD or State, as applicable) projected to occur during the third year of production.

(i) The following States and jurisdictions are included in PADD I:

Connecticut	New Jersey
Delaware	New York
District of Columbia	North Carolina
Florida	Pennsylvania
Georgia	Rhode Island
Maine	South Carolina
Maryland	Vermont
Massachusetts	Virginia
New Hampshire	West Virginia

(ii) The following States are included in PADD II:

Illinois	Nebraska
Indiana	North Dakota
Iowa	Ohio
Kansas	Oklahoma
Kentucky	South Dakota
Michigan	Tennessee
Minnesota	Wisconsin
Missouri	

(iii) The following States are included in PADD III:

Alabama	Mississippi
Arkansas	New Mexico
Louisiana	Texas

(iv) The following States are included in PADD IV:

Colorado	Montana
Idaho	Utah
	Wyoming

(v) The following States are included in PADD V:

Alaska	Hawaii
Arizona	Nevada
California	Oregon
	Washington

(4) Any applicable information pursuant to the grouping provisions in § 79.56, as follows:

(i) If the manufacturer has enrolled or intends to enroll the product in a fuel/additive group, the relevant group and the person(s) or entity expected to submit information on behalf of the group must be identified.

(ii) If the manufacturer intends to rely on registration information previously submitted by another manufacturer (or group) for registration of other product(s) in the same fuel/additive group, then the original submitter and its product (or product group) shall be identified. In such cases, the manufacturer shall provide evidence that the original submitter has been notified of the use of its registration data and that the manufacturer has complied or intends to comply with the proportional reimbursement required under § 79.56(c) of this rule.

(5) Any applicable information pursuant to the special provisions in § 79.58, as follows:

(i) If the manufacturer claims applicability of the special provisions for re-labeled additives, pursuant to § 79.58(a), then the manufacturer and brand name of the original product shall be given.

(ii) If the manufacturer claims applicability of any small business provisions pursuant to § 79.58(d), the average of the manufacturer's total annual sales revenue for the previous three years shall be given.

(iii) If the manufacturer claims applicability of the special provisions for aerosol products, pursuant to § 79.58(e),

then the purpose and recommended frequency of use shall be given.

(c) *Tier 1 and Tier 2 Reports.* If the results of Tiers 1 and 2 are reported to EPA at the same time, then the report shall include the following documents in paragraphs (c)(1) through (7) of this section. If Tier 1 and Tier 2 results are submitted to EPA separately, then the separate Tier 1 report shall include only documents in paragraphs (c) (1) through (4), (c)(6), and associated appendices in paragraphs (c)(7) of this section, and the separate Tier 2 report shall include only documents in paragraphs (c)(1) through (3), (c)(5), (c)(6), and associated appendices in paragraph (c)(7) of this section. In addition, manufacturers complying with Tier 2 requirements according to one of the time schedules specified in § 79.51(c)(1)(ii)(B), § 79.51(c)(1)(vi)(B)(2), or § 79.51(c)(1)(vii)(B)(2) must submit evidence of a suitable arrangement for completion of Tier 2 (e.g., a copy of a signed contract with a qualified laboratory for applicable Tier 2 services) by the date specified in the applicable time schedule.

(1) *Cover page.* (i) Identification of test substance,

(ii) Name and address of the manufacturer of the test substance,

(iii) Name and phone number of a designated contact person,

(iv) Group information, if applicable, including:

(A) Group name or grouping criteria,

(B) Name and address of responsible organization or entity reporting for the group,

(C) Product trade name and manufacturer of each member fuel and additive to which the report pertains.

(2) *Executive Summary.* Text overview of the significant results and conclusions obtained as a result of completing the requirements of Tier 1 and/or Tier 2, including references if used to support such results and conclusions.

(3) *Test Substance Information.* Test substance description, including, as applicable,

(i) Base fuel parameter values (including types and concentrations of base fuel additives) or test fuel composition (if a fuel other than the base fuel is used in testing). These values

must be provided for each of the fuel parameters specified in § 79.55 for the applicable fuel family.

(ii) Test additive composition and concentration

(4) *Summary of Tier 1.* (i) *Literature Search.* Pursuant to § 79.52(d), the literature search shall include a text summary of the methods and results of the literature search, including the following:

(A) Identification of person(s) performing the literature search,

(B) Description of data sources accessed, search strategy used, search period, and terms included in literature search,

(C) Documentation of all unpublished in-house and other privately-conducted studies,

(D) Tables summarizing the protocols and results of all cited studies,

(E) Summary of significant results and conclusions with respect to the effects of the emissions of the subject fuel or fuel additive on the public health and welfare, including references if used to support such results and conclusions.

(F) Statement of the extent to which the literature search has produced adequate information comparable to that which would otherwise be obtained through the performance of applicable emission characterization requirements under § 79.52(b) and/or health effects testing requirements under § 79.53, including justifications and specific references.

(ii) *Emission Characterization.* Pursuant to § 79.52(b), the emission characterization shall include:

(A) Name, address, and telephone number of the laboratory performing the characterization,

(B) Name and description of analytic methods used for characterization.

(5) *Summary of Tier 2.* For each health effects test performed pursuant to the provisions of § 79.53, the Tier 2 summary shall contain the following information:

(i) Name, address, and telephone number of the testing facility,

(ii) Summary of procedures (including quality assurance, quality control and compliance with Good Laboratory Practice Standards as specified in

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§ 79.60), findings, and conclusions, including references if used to support such results and conclusions,

(iii) Description of any problems and their resolution.

(6) *Conclusions*. The conclusions shall identify the need for further testing, if that need exists, or justify that current testing and/or available information is adequate for the tier(s) included in the report.

(7) *Appendices*. The appendices shall contain detailed documentation related to the summary information described in this section, including, at a minimum, the following five appendices:

(i) Literature search appendices shall contain:

(A) Copies of literature source outputs, including reference lists and associated abstracts from database searches, printed or on 3½ inch IBM-compatible computer diskettes;

(B) Summary tables organized by health or welfare endpoint and type of emission (e.g., combustion, evaporation, individual emission product), presenting in tabular form the following information at a minimum: number and species of test subjects, exposure concentrations/duration, positive (*i.e.*, abnormal) findings including numbers of test subjects involved, and bibliographic references;

(C) Complete documentation and/or reprints of articles for any previous study relied upon for satisfying emission characterization and/or Tier 2 test requirements; and

(D) Full reports for unpublished/in-house studies.

(ii) Emissions characterization appendices shall contain:

(A) Complete laboratory reports, including documentation of calibration and verification procedures;

(B) Documentation of the emissions generation procedures used; and

(C) Lists of speciated emission products and their emission rates reported in units of grams/mile.

(iii) [Reserved]

(iv) Tier 2 appendices shall contain, for each test performed:

(A) Complete protocol used;

(B) Documentation of emission generation procedures; and

(C) Complete laboratory report in compliance with the reporting standards in § 79.60, including detailed test results and conclusions, and descriptions of any problems encountered and their resolution.

(v) Laboratory certification/accreditation information, personnel credentials, and statements of compliance with the Good Laboratory Practices Standards specified in § 79.60 and the requirements in § 79.53(c)(1).

(d) *Tier 3 Report*. Subject to applicability as specified in § 79.54, each manufacturer of a designated fuel or fuel additive, or each group of such manufacturers pursuant to the provisions of § 79.56, shall submit the following information with respect to each Tier 3 test conducted for such fuels or fuel additives:

(1) The test objectives, including a summary of the reason(s) why such additional testing, beyond Tiers 1 and 2, was required;

(2) Name, address, and telephone number of each testing facility;

(3) Summary of test procedures, results and conclusions;

(4) Complete documentation of test protocols and emission generation procedures, complete laboratory reports in compliance with the reporting standards of § 79.60, detailed test results and conclusions, including references if used to support such results and conclusions, and descriptions of any problems encountered and their resolution; and

(5) Laboratory certification information, personnel credentials, and statements of compliance with the Good Laboratory Practices Standards specified in § 79.60.

(e) *Availability of Information*. (1) All health and safety test data and other information concerning health and welfare effects which is submitted by any manufacturer or group pursuant to §§ 79.52(c), 79.53, or 79.54, shall be considered to be public information and shall be made available to the public by EPA upon request. A reasonable fee may be charged by EPA for copying such materials. Any manufacturer or group who claims that any information concerning the composition of a fuel or

fuel additive product, or any other information, submitted under this subpart is confidential business information must state this claim in writing at the time of the submittal.

(2) To assert a business confidentiality claim concerning any information submitted under this subpart, the submitter must:

(i) Clearly mark the information as confidential at each location it appears in the submission; and

(ii) Submit with the information claimed as confidential a separate document setting forth the claim and listing each location at which the information appears in the submission.

(3) If any person subsequently requests access to information submitted under this subpart (other than health and safety test data and other information concerning health and welfare effects), and such information is subject to a claim of business confidentiality, the request and any subsequent disclosure shall be governed by the provisions of 40 CFR part 2.

[59 FR 33093, June 27, 1994, as amended at 62 FR 12572, 12576, Mar. 17, 1997; 85 FR 7069, Feb. 6, 2020]

§ 79.60 Good laboratory practices (GLP) standards for inhalation exposure health effects testing.

(a) *General Provisions*—(1) *Scope*. (i) This section prescribes good laboratory practices (GLPs) for conducting inhalation exposure studies relating to motor vehicle emissions health effects testing under this part. These directions are intended to ensure the quality and integrity of health effects data submitted pursuant to registration regulations issued under sections 211(b) or 211(e) of the Clean Air Act (CAA) (42 U.S.C. 7545).

(ii) This section applies to any study described by paragraph (a)(1)(i) of this section which any person conducts, initiates, or supports on or after May 27, 1994.

(iii) It is EPA's policy that all health effects data developed under sections 211(b) and (e) of CAA be in accordance with provisions of this section. If data are not developed in accordance with the provisions of this section, EPA may consider such data insufficient to evaluate the health effects of a motor

vehicle's fuel or fuel additive emissions, unless the submitter provides additional information demonstrating that the data are reliable and adequate and EPA determines that the data are sufficient.

(2) *Definitions*. As used in this section, the following terms shall have the meanings specified:

Batch means a specific quantity or lot of a test fuel, additive/base fuel mixture, or reference substance that has been characterized according to § 79.60(f)(1)(i).

CAA means the Clean Air Act.

Carrier means any material which is combined with engine/motor vehicle emissions or a reference substance for administration to a test system. "Carrier" includes, but is not limited to, clean, filtered air, water, feed, and nutrient media.

Control atmosphere means clean, filtered air which is administered to the test system in the course of a study for the purpose of establishing a basis for comparison with the test atmosphere for chemical or biological measurements.

Experimental start date means the first date the test atmosphere is applied to the test system.

Experimental termination date means the last date on which data are collected directly from the study.

Person includes an individual, partnership, corporation, association, scientific or academic establishment, government agency, or organizational unit thereof, and any other legal entity.

Quality assurance unit means any person or organizational element, except the study director, designated by testing facility management to perform the duties relating to quality assurance of the studies.

Raw data means any laboratory worksheets, records, memoranda, notes, or exact copies thereof, that are the result of original observations and activities of a study and are necessary for the reconstruction and evaluation of the report of that study. In the event that exact transcripts of raw data have been prepared (e.g., tapes which have been transcribed verbatim, dated, and verified accurate by signature), the exact copy or exact transcript may be substituted for the original source as

raw data. "Raw data" may include photographs, videotape, microfilm or microfiche copies, computer printouts, magnetic media, including dictated observations, and recorded data from automated instruments.

Reference substance means any chemical substance or mixture, analytical standard, or material other than engine/motor vehicle emissions and/or its carrier, that is administered to or used in analyzing the test system in the course of a study. A "reference substance" is used to establish a basis for comparison with the test atmosphere for known chemical or biological measurements, *i.e.*, positive or negative control substance.

Specimen means any material derived from a test system for examination or analysis.

Sponsor means person who initiates and supports, by provision of financial or other resources, a study or a person who submits a study to EPA in response to the CAA Section 211(b) or 211(e) Fuels and Fuel Additives Registration Rule or a testing facility, if it both initiates and actually conducts the study.

Study means any experiment, at one or more test sites, in which a test system is exposed to a test atmosphere under laboratory conditions to determine or help predict the health effects of that exposure in humans, other living organisms, or media.

Study completion date means the date the final report is signed by the study director.

Study director means the individual responsible for the overall conduct of a study.

Study initiation date means the date the protocol is signed by the study director.

Test substance means a vapor and/or aerosol mixture composed of engine/motor vehicle emissions and clean, filtered air which is administered directly, or indirectly, by the inhalation route to a test system in a study which develops data to meet the registration requirements of CAA section 211(b) or (e).

Test system means any animal, micro-organism, chemical or physical matrix, to which the test, control, or reference substance is administered or added for

study. This definition also includes appropriate groups or components of the system not treated with the test, control, or reference substance.

Testing facility means a person who actually conducts a study, *i.e.*, actually uses the test substance in a test system. "Testing facility" encompasses only those operational units that are being or have been used to conduct studies.

TSCA means the Toxic Substances Control Act (15 U.S.C. 2601 *et seq.*).

(3) *Applicability to studies performed under grants and contracts.* When a sponsor or other person utilizes the services of a consulting laboratory, contractor, or grantee to perform all or a part of a study to which this section applies, it shall notify the consulting laboratory, contractor, or grantee that the service is, or is part of, a study that must be conducted in compliance with the provisions of this section.

(4) *Statement of compliance or non-compliance.* Any person who submits to EPA a test in compliance with registration regulations issued under CAA section 211(b) or section 211(e) shall include in the submission a true and correct statement, signed by the sponsor and the study director, of one of the following types:

(i) A statement that the study was conducted in accordance with this section; or

(ii) A statement describing in detail all differences between the practices used in the study and those required by this section; or

(iii) A statement that the person was not a sponsor of the study, did not conduct the study, and does not know whether the study was conducted in accordance with this section.

(5) *Inspection of a testing facility.* (i) A testing facility shall permit an authorized employee or duly designated representative of EPA, at reasonable times and in a reasonable manner, to inspect the facility and to inspect (and in the case of records also to copy) all records and specimens required to be maintained regarding studies to which this section applies. The records inspection and copying requirements shall not apply to quality assurance unit records of findings and problems, or to actions recommended and taken,

except the EPA may seek production of these records in litigation or formal adjudicatory hearings.

(ii) EPA will not consider reliable for purposes of showing that a test substance does or does not present a risk of injury to health or the environment any data developed by a testing facility or sponsor that refuses to permit inspection in accordance with this section. The determination that a study will not be considered reliable does not, however, relieve the sponsor of a required test of any obligation under any applicable statute or regulation to submit the results of the study to EPA.

(6) *Effects of non-compliance.* (i) Pursuant to sections 114, 208, and 211(d) of the CAA, it shall be a violation of this section and a violation of this rule (40 CFR part 79, subpart F) if:

(A) The test is not being or was not conducted in accordance with any requirement of this part; or

(B) Data or information submitted to EPA under part 79, including the statement required by § 79.60(a)(4), include information or data that are false or misleading, contain significant omissions, or otherwise do not fulfill the requirements of this part; or

(C) Entry in accordance with § 79.60(a)(5) for the purpose of auditing test data is denied.

(ii) EPA, at its discretion, may not consider reliable for purposes of showing that a chemical substance or mixture does not present a risk of injury to health any study which was not conducted in accordance with this part. EPA, at its discretion, may rely upon such studies for purposes of showing adverse effects. The determination that a study will not be considered reliable does not, however, relieve the sponsor of a required test of the obligation under any applicable statute or regulation to submit the results of the study to EPA.

(iii) If data submitted in compliance with registration regulations issued under CAA section 211(b) or section 211(e) are not developed in accordance with this section, EPA may determine that the sponsor has not fulfilled its obligations under 40 CFR part 79 and may require the sponsor to develop data in accordance with the require-

ments of this section in order to satisfy such obligations.

(b) *Organization and Personnel*—(1) *Personnel.* (i) Each individual engaged in the conduct of or responsible for the supervision of a study shall have education, training, and experience, or combination thereof, to enable that individual to perform the assigned functions.

(ii) Each testing facility shall maintain a current summary of training and experience and job description for each individual engaged in or supervising the conduct of a study.

(iii) There shall be a sufficient number of personnel for the timely and proper conduct of the study according to the protocol.

(iv) Personnel shall take necessary personal sanitation and health precautions designed to avoid contamination of test fuel and additive/base fuel mixtures, test and reference substances, and test systems.

(v) Personnel engaged in a study shall wear clothing appropriate for the duties they perform. Such clothing shall be changed as often as necessary to prevent microbiological, radiological, or chemical contamination of test systems and test, control, and reference substances.

(vi) Any individual found at any time to have an illness that may adversely affect the quality and integrity of the study shall be excluded from direct contact with test systems, fuel and fuel/additive mixtures, test and reference substances and any other operation or function that may adversely affect the study until the condition is corrected. All personnel shall be instructed to report to their immediate supervisors any health or medical conditions that may reasonably be considered to have an adverse effect on a study.

(2) *Testing facility management.* For each study, testing facility management shall:

(i) Designate a study director as described in § 79.60(b)(3) before the study is initiated.

(ii) Replace the study director promptly if it becomes necessary to do so during the conduct of a study.

(iii) Assure that there is a quality assurance unit as described in § 79.60(b)(4).

(iv) Assure that test fuels and fuel/additive mixtures and test and reference substances have been identified as to content, strength, purity, stability, and uniformity, as applicable.

(v) Assure that personnel, resources, facilities, equipment, materials and methodologies are available as scheduled.

(vi) Assure that personnel clearly understand the functions they are to perform.

(vii) Assure that any deviations from these regulations reported by the quality assurance unit are communicated to the study director and corrective actions are taken and documented.

(3) *Study director.* For each study, a scientist or other professional person with a doctorate degree or equivalent in toxicology or other appropriate discipline shall be identified as the study director. The study director has overall responsibility for the technical conduct of the study, as well as for the interpretation, analysis, documentation, and reporting of results, and represents the single point of study control. The study director shall assure that:

(i) The protocol, including any changes, is approved as provided by § 79.60(g)(1)(i) and is followed;

(ii) All experimental data, including observations of unanticipated responses of the test system are accurately recorded and verified;

(iii) Unforeseen circumstances that may affect the quality and integrity of the study are noted when they occur, and corrective action is taken and documented;

(iv) Test systems are as specified in the protocol;

(v) All applicable good laboratory practice regulations are followed; and

(vi) All raw data, documentation, protocols, specimens, and final reports are archived properly during or at the close of the study.

(4) *Quality assurance unit.* A testing facility shall have a quality assurance unit which shall be responsible for monitoring each study to assure management that the facilities, equipment, personnel, methods, practices, records, and controls are in conformance with

the regulations in this section. For any given study, the quality assurance unit shall be entirely separate from and independent of the personnel engaged in the direction and conduct of that study. The quality assurance unit shall conduct inspections and maintain records appropriate to the study.

(i) *Quality assurance unit duties.* (A) Maintain a copy of a master schedule sheet of all studies conducted at the testing facility indexed by test substance and containing the test system, nature of study, date study was initiated, current status of each study, identity of the sponsor, and name of the study director.

(B) Maintain copies of all protocols pertaining to all studies for which the unit is responsible.

(C) Inspect each study at intervals adequate to ensure the integrity of the study and maintain written and properly signed records of each periodic inspection showing the date of the inspection, the study inspected, the phase or segment of the study inspected, the person performing the inspection, findings and problems, action recommended and taken to resolve existing problems, and any scheduled date for re-inspection. Any problems which are likely to affect study integrity found during the course of an inspection shall be brought to the attention of the study director and management immediately.

(D) Periodically submit to management and the study director written status reports on each study, noting any problems and the corrective actions taken.

(E) Determine that no deviations from approved protocols or standard operating procedures were made without proper authorization and documentation.

(F) Review the final study report to assure that such report accurately describes the methods and standard operating procedures, and that the reported results accurately reflect the raw data of the study.

(G) Prepare and sign a statement to be included with the final study report which shall specify the dates inspections were made and findings reported to management and to the study director.

(ii) The responsibilities and procedures applicable to the quality assurance unit, the records maintained by the quality assurance unit, and the method of indexing such records shall be in writing and shall be maintained. These items including inspection dates, the study inspected, the phase or segment of the study inspected, and the name of the individual performing the inspection shall be made available for inspection to authorized employees or duly designated representatives of EPA.

(iii) An authorized employee or a duly designated representative of EPA shall have access to the written procedures established for the inspection and may request test facility management to certify that inspections are being implemented, performed, documented, and followed up in accordance with this paragraph.

(c) *Facilities*—(1) *General*. Each testing facility shall be of suitable size and construction to facilitate the proper conduct of studies. Testing facilities which are not completely located within an indoor controlled environment shall be of suitable location/proximity to facilitate the proper conduct of studies. Testing facilities shall be designed so that there is a degree of separation that will prevent any function or activity from having an adverse effect on the study.

(2) *Test system care facilities*. (i) A testing facility shall have a sufficient number of animal rooms or other test system areas, as needed, to ensure proper separation of species or test systems, quarantine or isolation of animals or other test systems, and routine or specialized housing of animals or other test systems.

(ii) A testing facility shall have a number of animal rooms or other test system areas separate from those described in paragraph (a) of this section to ensure isolation of studies being done with test systems or test, control, and reference substances known to be biohazardous, including volatile atmospheres and aerosols, radioactive materials, and infectious agents. The animal handling facility must operate under the supervision of a veterinarian.

(iii) Separate areas shall be provided, as appropriate, for the diagnosis, treat-

ment, and control of laboratory test system diseases. These areas shall provide effective isolation for the housing of test systems either known or suspected of being diseased, or of being carriers of disease, from other test systems.

(iv) Facilities shall have proper provisions for collection and disposal of contaminated air, water, or other spent materials. When animals are housed, facilities shall exist for the collection and disposal of all animal waste and refuse or for safe sanitary storage of waste before removal from the testing facility. Disposal facilities shall be so provided and operated as to minimize vermin infestation, odors, disease hazards, and environmental contamination.

(v) Facilities shall have provisions to regulate environmental conditions (e.g., temperature, humidity, day length, etc.) as specified in the protocol.

(3) *Test system supply/operation areas*.

(i) There shall be storage areas, as needed, for feed, bedding, supplies, and equipment. Storage areas for feed and bedding shall be separated from areas where the test systems are located and shall be protected against infestation or contamination. Perishable supplies shall be preserved by appropriate means.

(ii) Separate laboratory space and other space shall be provided, as needed, for the performance of the routine and specialized procedures required by studies.

(4) *Facilities for handling test fuels and fuel/additive mixtures and reference substances*. (i) As necessary to prevent contamination or mixups, there shall be separate areas for:

(A) Receipt and storage of the test fuels and fuel/additive mixtures and reference substances;

(B) Mixing of the test fuels, fuel/additive mixtures, and reference substances with a carrier, *i.e.*, liquid hydrocarbon; and

(C) Storage of the test fuels, fuel/additive mixtures, and reference substance/carrier mixtures.

(ii) Storage areas for test fuels and fuel/additive mixtures and reference substances and for reference mixtures shall be separate from areas housing

the test systems and shall be adequate to preserve the identity, strength, purity, and stability of the substances and mixtures.

(5) *Specimen and data storage facilities.* Space shall be secured for archives for the storage and retrieval of all raw data and specimens from completed studies.

(d) *Equipment—(1) Equipment design.* Equipment used in the generation, measurement, or assessment of data and equipment used for facility environmental control shall be of appropriate design and adequate capacity to function according to the protocol and shall be suitably located for operation, inspection, cleaning, and maintenance.

(2) *Maintenance and calibration of equipment.* (i) Equipment shall be adequately inspected, cleaned, and maintained. Equipment used for the generation, measurement, or assessment of data shall be adequately tested, calibrated, and/or standardized.

(ii) The written standard operating procedures required under § 79.60(e)(1)(ii)(K) shall set forth in sufficient detail the methods, materials, and schedules to be used in the routine inspection, cleaning, maintenance, testing, calibration, and/or standardization of equipment, and shall specify, when appropriate, remedial action to be taken in the event of failure or malfunction of equipment. The written standard operating procedures shall designate the person responsible for the performance of each operation.

(iii) Written records shall be maintained of all inspection, maintenance, testing, calibrating, and/or standardizing operations. These records, containing the date of the operation, shall describe whether the maintenance operations were routine and followed the written standard operating procedures. Written records shall be kept of non-routine repairs performed on equipment as a result of failure and malfunction. Such records shall document the nature of the defect, how and when the defect was discovered, and any remedial action taken in response to the defect.

(e) *Testing Facilities Operation—(1) Standard operating procedures.* (i) A testing facility shall have standard operating procedures in writing, setting

forth study methods that management is satisfied are adequate to insure the quality and integrity of the data generated in the course of a study. All deviations in a study from standard operating procedures shall be authorized by the study director and shall be documented in the raw data. Significant changes in established standard operating procedures shall be properly authorized in writing by management.

(ii) Standard operating procedures shall be established for, but not limited to, the following:

- (A) Test system room preparation;
- (B) Test system care;
- (C) Receipt, identification, storage, handling, mixing, and method of sampling of test fuels and fuel/additive mixtures and reference substances;
- (D) Test system observations;
- (E) Laboratory or other tests;
- (F) Handling of test animals found moribund or dead during study;
- (G) Necropsy or postmortem examination of test animals;
- (H) Collection and identification of specimens;
- (I) Histopathology
- (J) Data handling, storage and retrieval.
- (K) Maintenance and calibration of equipment.
- (L) Transfer, proper placement, and identification of test systems.

(iii) Each laboratory or other study area shall have immediately available manuals and standard operating procedures relative to the laboratory procedures being performed. Published literature may be used as a supplement to standard operating procedures.

(iv) A historical file of standard operating procedures, and all revisions thereof, including the dates of such revisions, shall be maintained.

(2) *Reagents and solutions.* All reagents and solutions in the laboratory areas shall be labeled to indicate identity, titer or concentration, storage requirements, and expiration date. Deteriorated or outdated reagents and solutions shall not be used.

(3) *Animal and other test system care.* (i) There shall be standard operating procedures for the housing, feeding, handling, and care of animals and other test systems.

(ii) All newly received test systems from outside sources shall be isolated and their health status or appropriateness for the study shall be evaluated. This evaluation shall be in accordance with acceptable veterinary medical practice or scientific methods.

(iii) At the initiation of a study, test systems shall be free of any disease or condition that might interfere with the purpose or conduct of the study. If during the course of the study, the test systems contract such a disease or condition, the diseased test systems shall be isolated, if necessary. These test systems may be treated for disease or signs of disease provided that such treatment does not interfere with the study. The diagnosis, authorization of treatment, description of treatment, and each date of treatment shall be documented and shall be retained.

(iv) When laboratory procedures require test animals to be manipulated and observed over an extended period of time or when studies require test animals to be removed from and returned to their housing units for any reason (e.g., cage cleaning, treatment, etc.), these test systems shall receive appropriate identification (e.g., tattoo, color code, etc.). Test system identification shall conform with current laboratory animal handling practice. All information needed to specifically identify each test system within the test system-housing unit shall appear on the outside of that unit. Suckling animals are excluded from the requirement of individual identification unless otherwise specified in the protocol.

(v) Except as specified in paragraph (e)(3)(v)(A) of this section, test animals of different species shall be housed in separate rooms when necessary. Test animals of the same species, but used in different studies, shall not ordinarily be housed in the same room when inadvertent exposure to the test or reference substances or test system mixup could affect the outcome of either study. If such mixed housing is necessary, adequate differentiation by space and identification shall be made.

(A) Test systems that may be used in multispecies tests need not be housed in separate rooms, provided that they are adequately segregated to avoid mixup and cross-contamination.

(B) [Reserved]

(vi) Cages, racks, pens, enclosures, and other holding, rearing, and breeding areas, and accessory equipment, shall be cleaned and sanitized at appropriate intervals.

(vii) Feed and water used for the test animals shall be analyzed periodically to ensure that contaminants known to be capable of interfering with the study and reasonably expected to be present in such feed or water are not present at greater than trace levels. Documentation of such analyses shall be maintained as raw data.

(viii) Bedding used in animal cages or pens shall not interfere with the purpose or conduct of the study and shall be changed as often as necessary to keep the animals dry and clean.

(ix) If any pest control materials are used, the use shall be documented. Cleaning and pest control materials that interfere with the study shall not be used.

(x) All test systems shall be acclimatized to the environmental conditions of the test, prior to their use in a study.

(f) *Test fuels, additive/base fuel mixtures, and reference substances*—(1) *Test fuel, fuel/additive mixture, and reference substance identity.* (i) The product brand name/service mark, strength, purity, content, or other characteristics which appropriately define the test fuel, fuel/additive mixture, or reference substance shall be reported for each batch and shall be documented before its use in a study. Methods of synthesis, fabrication, or derivation, as appropriate, of the test fuel, fuel/additive mixture, or reference substance shall be documented by the sponsor or the testing facility, and such location of documentation shall be specified.

(ii) The stability of test fuel, fuel/additive mixture, and reference substances under storage conditions at the test site shall be known for all studies.

(2) *Test fuel, additive/base fuel mixture, and reference substance handling.* Procedures shall be established for a system for the handling of the test fuel, fuel/additive mixture, and reference substance(s) to ensure that:

(i) There is proper storage.

(ii) Distribution is made in a manner designed to preclude the possibility of

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contamination, deterioration, or damage.

(iii) Proper identification is maintained throughout the distribution process.

(iv) The receipt and distribution of each batch is documented. Such documentation shall include the date and quantity of each batch distributed or returned.

(3) Mixtures of test emissions or reference solutions with carriers.

(i) For test emissions or each reference substance mixed with a carrier, tests by appropriate analytical methods shall be conducted:

(A) To determine the uniformity of the test substance and to determine, periodically, the concentration of the test emissions or reference substance in the mixture;

(B) When relevant to the conduct of the experiment, to determine the solubility of each reference substance in the carrier mixture before the experimental start date; and

(C) To determine the stability of test emissions or a reference solution in the test substance before the experimental start date or concomitantly according to written standard operating procedures, which provide for periodic analysis of each batch.

(ii) Where any of the components of the reference substance/carrier mixture has an expiration date, that date shall be clearly shown on the container. If more than one component has an expiration date, the earliest date shall be shown.

(iii) If a chemical or physical agent is used to facilitate the mixing of a test substance with a carrier, assurance shall be provided that the agent does not interfere with the integrity of the test.

(g) *Protocol for and conduct of a study*—(1) *Protocol*. (i) Each study shall have a written protocol that clearly indicates the objectives and all methods for the conduct of the study. The protocol shall contain but shall not be limited to the following information:

(A) A descriptive title and statement of the purpose of the study.

(B) Identification of the test fuel, fuel/additive mixture, and reference substance by name, chemical abstracts

service (CAS) number or code number, as applicable.

(C) The name and address of the sponsor and the name and address of the testing facility at which the study is being conducted.

(D) The proposed experimental start and termination dates.

(E) Justification for selection of the test system, as necessary.

(F) Where applicable, the number, body weight, sex, source of supply, species, strain, substrain, and age of the test system.

(G) The procedure for identification of the test system.

(H) A description of the experimental design, including methods for the control of bias.

(I) Where applicable, a description and/or identification of the diet used in the study. The description shall include specifications for acceptable levels of contaminants that are reasonably expected to be present in the dietary materials and are known to be capable of interfering with the purpose or conduct of the study if present at levels greater than established by the specifications.

(J) Each concentration level, expressed in milligrams per cubic meter of air or other appropriate units, of the test or reference substance to be administered and the frequency of administration.

(K) The type and frequency of tests, analyses, and measurements to be made.

(L) The records to be maintained.

(M) The date of approval of the protocol by the sponsor and the dated signature of the study director.

(N) A statement of the proposed statistical method.

(ii) All changes in or revisions of an approved protocol and the reasons therefor shall be documented, signed by the study director, dated, and maintained with the protocol.

(2) *Conduct of a study*. (i) The study shall be conducted in accordance with the protocol.

(ii) The test systems shall be monitored in conformity with the protocol.

(iii) Specimens shall be identified by test system, study, nature, and date of collection. This information shall be located on the specimen container or

shall accompany the specimen in a manner that precludes error in the recording and storage of data.

(iv) In animal studies where histopathology is required, records of gross findings for a specimen from postmortem observations shall be available to a pathologist when examining that specimen histopathologically.

(v) All data generated during the conduct of a study, except those that are generated by automated data collection systems, shall be recorded directly, promptly, and legibly in ink. All data entries shall be dated on the day of entry and signed or initialed by the person entering the data. Any change in entries shall be made so as not to obscure the original entry, shall indicate the reason for such change, and shall be dated and signed or identified at the time of the change. In automated data collection systems, the individual responsible for direct data input shall be identified at the time of data input. Any change in automated data entries shall be made so as not to obscure the original entry, shall indicate the reason for change, shall be dated, and the responsible individual shall be identified.

(h) *Records and Reports*—(1) *Reporting of study results.* (i) A final report shall be prepared for each study and shall include, but not necessarily be limited to, the following:

(A) Name and address of the facility performing the study and the dates on which the study was initiated and was completed, terminated, or discontinued.

(B) Objectives and procedures stated in the approved protocol, including any changes in the original protocol.

(C) Statistical methods employed for analyzing the data.

(D) The test fuel, additive/base fuel mixture, and test and reference substances identified by name, chemical abstracts service (CAS) number or code number, strength, purity, content, or other appropriate characteristics.

(E) Stability, and when relevant to the conduct of the study, the solubility of the test emissions and reference substances under the conditions of administration.

(F) A description of the methods used.

(G) A description of the test system used. Where applicable, the final report shall include the number of animals or other test organisms used, sex, body weight range, source of supply, species, strain and substrain, age, and procedure used for identification.

(H) A description of the concentration regimen as daily exposure period, *i.e.*, number of hours, and exposure duration, *i.e.*, number of days.

(I) A description of all circumstances that may have affected the quality or integrity of the data.

(J) The name of the study director, the names of other scientists or professionals and the names of all supervisory personnel, involved in the study.

(K) A description of the transformations, calculations, or operations performed on the data, a summary and analysis of the data, and a statement of the conclusions drawn from the analysis.

(L) The signed and dated reports of each of the individual scientists or other professionals involved in the study, including each person who, at the request or direction of the testing facility or sponsor, conducted an analysis or evaluation of data or specimens from the study after data generation was completed.

(M) The locations where all specimens, raw data, and the final report are to be kept or stored.

(N) The statement, prepared and signed by the quality assurance unit, as described in § 79.60(b)(4)(i)(G).

(ii) The final report shall be signed and dated by the study director.

(iii) Corrections or additions to a final report shall be in the form of an amendment by the study director. The amendment shall clearly identify that part of the final report that is being added to or corrected and the reasons for the correction or addition, and shall be signed and dated by the person responsible. Modification of a final report to comply with the submission requirements of EPA does not constitute a correction, addition, or amendment to a final report.

(iv) A copy of the final report and of any amendment to it shall be maintained by the sponsor and the test facility.

(2) *Storage and retrieval of records and data.* (i) All raw data, documentation, records, protocols, specimens, and final reports generated as a result of a study shall be retained. Specimens obtained from mutagenicity tests, wet specimens of blood, urine, feces, and biological fluids, do not need to be retained after quality assurance verification. Correspondence and other documents relating to interpretation and evaluation of data, other than those documents contained in the final report, also shall be retained.

(ii) All raw data, documentation, protocols, specimens, and interim and final reports shall be archived for orderly storage and expedient retrieval. Conditions of storage shall minimize deterioration of the documents or specimens in accordance with the requirements for the time period of their retention and the nature of the documents of specimens. A testing facility may contract with commercial archives to provide a repository for all material to be retained. Raw data and specimens may be retained elsewhere provided that the archives have specific reference to those other locations.

(iii) An individual shall be identified as responsible for the archiving of records.

(iv) Access to archived material shall require authorization and documentation.

(v) Archived material shall be indexed to permit expedient retrieval.

(3) *Retention of records.* (i) Record retention requirements set forth in this section do not supersede the record retention requirements of any other regulations in this subchapter.

(ii) Except as provided in paragraph (h)(3)(iii) of this section, documentation records, raw data, and specimens pertaining to a study and required to be retained by this part shall be archived for a period of at least ten years following the completion of the study.

(iii) Wet specimens, samples of test fuel, additive/base fuel mixtures, or reference substances, and specially prepared material which are relatively

fragile and differ markedly in stability and quality during storage, shall be retained only as long as the quality of the preparation affords evaluation. Specimens obtained from mutagenicity tests, wet specimens of blood, urine, feces, biological fluids, do not need to be retained after quality assurance verification. In no case shall retention be required for a longer period than that set forth in paragraph (h)(3)(ii) of this section.

(iv) The master schedule sheet, copies of protocols, and records of quality assurance inspections, as required by § 79.60(b)(4)(iii) shall be maintained by the quality assurance unit as an easily accessible system of records for the period of time specified in paragraph (h)(3)(ii) of this section.

(v) Summaries of training and experience and job descriptions required to be maintained by § 79.60(b)(1)(ii) may be retained along with all other testing facility employment records for the length of time specified in paragraph (h)(3)(ii) of this section.

(vi) Records and reports of the maintenance and calibration and inspection of equipment, as required by § 79.60(d)(2) (ii) and (iii), shall be retained for the length of time specified in paragraph (h)(3)(ii) of this section.

(vii) If a facility conducting testing or an archive contracting facility goes out of business, all raw data, documentation, and other material specified in this section shall be transferred to the sponsor of the study for archival.

(viii) Records required by this section may be retained either as original records or as true copies such as photocopies, microfilm, microfiche, or other accurate reproductions of the original records.

§ 79.61 Vehicle emissions inhalation exposure guideline.

(a) *Purpose.* This guideline provides additional information on methodologies required to conduct health effects tests involving inhalation exposures to vehicle combustion emissions from fuels or fuel/additive mixtures. Where this guideline and the other health effects testing guidelines in 40 CFR 79.62 through 79.68 specify differing values

for the same test parameter, the specifications in the individual health test guideline shall prevail for that health effect endpoint.

(b) *Definitions.* For the purposes of this section the following definitions apply.

Acute inhalation study means a short-term toxicity test characterized by a single exposure by inhalation over a short period of time (at least 4 hours and less than 24 hours), followed by at least 14 days of observation.

Aerodynamic diameter means the diameter of a sphere of unit density that has the same settling velocity as the particle of the test substance. It is used to compare particles of different sizes, densities and shapes, and to predict where in the respiratory tract such particles may be deposited. It applies to the size of aerosol particles.

Chronic inhalation study means a prolonged and repeated exposure by inhalation for the life span of the test animal; technically, two years in the rat.

Concentration means an exposure level. Exposure is expressed as weight or volume of test aerosol/substance per volume of air, usually mg/m³ or as parts per million (ppm) over a given time period. Micrograms per cubic meter (µg/m³) or parts per billion may be appropriate, as well.

Cumulative toxicity means the adverse effects of repeated exposures occurring as a result of prolonged action or increased concentration of the administered test substance or its metabolites in the susceptible tissues.

Inhalable diameter means that aerodynamic diameter of a particle which is considered to be inhalable for the organism. It is used to refer to particles which are capable of being inhaled and may be deposited anywhere within the respiratory tract from the trachea to the alveoli.

Mass median aerodynamic diameter (MMAD) means the calculated aerodynamic diameter, which divides the particles of an aerosol in half based on the mass of the particles. Fifty percent of the particles in mass will be larger than the median diameter, and fifty percent will be smaller than the median diameter. MMAD describes the particle distribution of any aerosol based on the weight and size of the par-

ticles. MMAD and the geometric standard deviation describe the particle-size distribution.

Material safety data sheet (MSDS) means documentation or information on the physical, chemical, and hazardous characteristics of a given chemical, usually provided by the product's manufacturer.

Reynolds number means a dimensionless number that is proportional to the ratio of inertial forces to frictional forces acting on a fluid. It quantitatively provides a measure of whether flow is laminar or turbulent. A fluid traveling through a pipe is fully developed into a laminar flow for a Reynolds number less than 2000, and fully developed into a turbulent flow for a Reynolds number greater than 4000.

Subacute inhalation toxicity means the adverse effects occurring as a result of the repeated daily exposure of experimental animals to a chemical by inhalation for part (less than 10 percent) of a lifespan; generally, less than 90 days.

Subchronic inhalation study means a repeated exposure by inhalation for part (approximately 10 percent) of a life span of the exposed test animal.

Toxic effect means an adverse change in the structure or function of an experimental animal as a result of exposure to a chemical substance.

(c) *Principles and design criteria of inhalation exposure systems.* Proper conduct of inhalation toxicity studies of the emissions of fuels and additive/fuel mixtures requires that the exposure system be designed to ensure the controlled generation of the exposure atmosphere, the adequate dilution of the test emissions, delivery of the diluted exposure atmosphere to the test animals, and use of appropriate exposure chamber systems selected to meet criteria for a given exposure study.

(1) *Emissions generation.* Emissions shall be generated according to the specifications in 40 CFR 79.57.

(2) *Dilution and delivery systems.* (i) The delivery system is the means used to transport the emissions from the generation system to the exposure system. The dilution system is generally a component of the delivery system.

(ii) Dilution provides control of the emissions concentration delivered to

the exposure system, serving the function of diluting the associated combustion gases, such as carbon monoxide, carbon dioxide, nitrogen oxides, sulfur dioxide and other noxious gases and vapors, to levels that will ensure that there are no significant or measurable responses in the test animals as a result of exposure to the combustion gases. The formation of particle species is strongly dependent on the dilution rate, as well.

(iii) The engine exhaust system shall connect to the first-stage-dilution section at 90° to the axis of the dilution section. This is then connected to a right angle elbow on the center line of the dilution section. Engine emissions are injected through the elbow so that exhaust flow is concurrent to dilution flow.

(iv) *Materials.* In designing the dilution and delivery systems, the use of plastic, e.g., PVC and similar materials, copper, brass, and aluminum pipe and tubing shall be avoided if there exists a possibility of chemical reaction occurring between emissions and tubing. Stainless steel pipe and tubing is recommended as the best choice for most emission dilution and delivery applications, although glass and teflon may be appropriate, as well.

(v) *Flow requirements.* (A) Conduit for dilute raw emissions shall be of such dimensions as to provide residence times for the emissions on the order of less than one second to several seconds before the emissions are further diluted and introduced to the test chambers. With the high flow rates in the dilute raw emissions conduit, it will be necessary to sample various portions of the dilute emissions for delivering differing concentrations to the test chambers. The unused portions of the emissions stream are normally exhausted to the atmosphere outside of the exposure facility.

(B) Dimensions of the dilute raw exhaust conduit shall be such that, at a minimum, the flow Reynolds number is 70,000 or greater (see Mokler, *et al.*, 1984 in paragraph (f)(13) of this section). This will maintain highly turbulent flow conditions so that there is more complete mixing of the exhaust emissions.

(C) *Wall losses.* The delivery system shall be designed to minimize wall losses. This can be done by sizing the tubing or pipe to maintain laminar flow of the diluted emissions to the exposure chamber. A flow Reynolds number of 1000–3000 will ensure minimal wall losses. Also, the length of and number and degree of bends in the delivery lines to the exposure chamber system shall be minimized.

(D) Whole-body exposure vs. nose-only exposure delivery systems. Flow rates through whole-body chamber systems are of the order of 100 liters per minute to 500 liters per minute. Nose-only systems are on the order of less than 50 liters per minute. To maintain laminar flow conditions, the principles described in paragraph (c)(2)(v)(C) of this section apply to both systems.

(vi) *Dilution requirements.* (A) To maintain the water vapor, and dissolved organic compounds, in the raw exhaust emissions stream, a manufacturer/tester will initially dilute one part emissions with a minimum of five parts clean, filtered air (see Hinners, *et al.*, 1979 in paragraph (f)(11) of this section). Depending on the water vapor content of a particular fuel/additive mixture's combustion emissions and the humidity of the dilution air, initial exhaust dilutions as high as 1:15 or 1:20 may be necessary to maintain the general character of the exhaust as it cools, e.g., M100. At this point, it is expected that the exhaust stream would be further diluted to more appropriate levels for rodent health effects testing.

(B) A maximum concentration (minimum dilution) of the raw exhaust going into the test animal cages is anticipated to lie in the range between 1:5 and 1:50 exhaust emissions to clean, filtered air. The minimum concentration (maximum dilution) of raw exhaust for health effects testing is anticipated to be in range between 1:100 and 1:150. Individual manufacturers will treat these ranges as approximations only and will determine the optimum range of emission concentrations to elicit effects in Tier 2 health testing for their particular fuel/fuel additive mixture.

(3) *Exposure chamber systems—(i) Referenced Guidelines.* (A) The U.S. Department of Health and Human Services

“Guide for the Care and Use of Laboratory Animals” (*Guide*), 1985 cited in paragraph (c)(3)(ii)(A)(4), and in paragraphs (d)(2)(i), (d)(2)(ii), (d)(2)(iii), (d)(4)(ii), and (d)(4)(iii) of this section, has been incorporated by reference.

(B) This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be purchased from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402. Copies may be inspected at U.S. EPA, OAR, 401 M Street SW, Washington, DC 20460 or at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to: http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html.

(ii) *Exposure chambers.* There are two basic types of dynamic inhalation exposure chambers, whole-body chambers and nose/head-only exposure chambers (see Cheng and Moss, 1989 in paragraph (f)(8) of this section).

(A) *Whole-body chambers.* (1) The flow rate through a chamber shall be maintained at 15 air changes per hour.

(2) The chambers are usually maintained at a slightly negative pressure (0.5 to 1.5 inch of water) to prevent leakage of test substance into the exposure room.

(3) The exposure chamber shall be designed in such a way as to provide uniform distribution of exposure concentrations in all compartments (see Cheng *et al.*, 1989 in paragraph (f)(7) of this section).

(4) Animals are housed in separate compartments inside the chamber, where the whole surface area of an animal is exposed to the test material. The spaces required for different animal species shall follow the *Guide*. In general, the volume of animal bodies occupy less than 5 percent of the chamber volume.

(B) *Head/nose-only exposure chambers.* (1) In head/nose-only exposure chambers, only the head (oronasal) portion of the animal is exposed to the test material.

(2) The chamber volume and flow rates are much less than in the whole-

body exposure chambers because the subjects are usually restrained in a tube holder where the animal's breathing can be easily monitored. The head/nose-only exposure chamber is suitable for short-term exposures or when use of a small amount of test material is required.

(iii) Since whole-body exposure appears to be the least stressful mode of exposure, it is the preferred method. In general, head/nose only exposure, which is sometimes used to avoid concurrent exposure by the dermal or oral routes, *i.e.*, grooming, is not recommended because of the stress accompanying the restraining of the animals. However, there may be specific instances where it may be more appropriate than whole-body exposure. The tester shall provide justification for its selection.

(d) *Inhalation exposure procedures*—(1) *Animal selection.* (i) The rat is the preferred species for vehicle emission inhalation health effects testing. Commonly used laboratory strains shall be used. Any rodent species may be used, but the tester shall provide justification for the choice of that species.

(ii) Young adult animals, approximately ten weeks of age for the rat, shall be used. At the commencement of the study, the weight variation of animals used shall not exceed ± 20 percent of the mean weight for each sex. Animals shall be randomly assigned to treatment and control groups according to their weight.

(iii) An equal number of male and female rodents shall be used at each concentration level. Situations may arise where use of a single sex may be appropriate. Females, in general, shall be nulliparous and nonpregnant.

(iv) The number of animals used at each concentration level and in the control group(s) depends on the type of study, number of biological end points used in the toxicity evaluation, the pre-determined sensitivity of detection and power of significance of the study, and the animal species. For an acute study, at least five animals of each sex shall be used in each test group. For both the subacute and subchronic studies, at least 10 rodents of each sex shall be used in each test group. For a chronic study, at least 20 male and 20 female

rodents shall be used in each test group.

(A) If interim sacrifices are planned, the number of animals shall be increased by the number of animals scheduled to be sacrificed during the course of the study.

(B) For a chronic study, the number of animals at the termination of the study must be adequate for a meaningful and valid statistical evaluation of chronic effects.

(v) A concurrent control group is required. This group shall be exposed to clean, filtered air under conditions identical to those used for the group exposed to the test atmosphere.

(vi) The same species/strain shall be used to make comparisons between fuel-only and fuel/additive mixture studies. If another species/strain is used, the tester shall provide justification for its selection.

(2) *Animal handling and care.* (i) A key element in the conduct of inhalation exposure studies is the proper handling and care of the test animal population. Therefore, the exposure conditions must conform strictly with the conditions for housing and animal care and use set forth in the *Guide*.

(ii) In whole-body exposure chambers, animals shall be housed in individual caging. The minimum cage size per animal will be in accordance with instructions set forth in the *Guide*.

(iii) Chambers shall be cleaned and maintained in accordance with recommendations and schedules set forth in the *Guide*.

(A) Observations shall be made daily with appropriate actions taken to minimize loss of animals to the study (e.g., necropsy or refrigeration of animals found dead and isolation or sacrifice of weak or moribund animals). Exposure systems using head/nose-only exposure chambers require no special daily chamber maintenance. Chambers shall be inspected to ensure that they are clean, and that there are no obstructions in the chamber which would restrict air flow to the animals. Whole-body exposure chambers will be inspected on a minimum of twice daily, once before exposures and once after exposures.

(B) Signs of toxicity shall be recorded as they are observed, including the time of onset, degree, and duration.

(C) Cage-side observations shall include, but are not limited to: changes in skin, fur, eye and mucous membranes, respiratory, autonomic, and central nervous systems, somatomotor activity, and behavioral patterns. Particular attention shall be directed to observation of tremors, convulsions, salivation, diarrhea, lethargy, sleep, and coma.

(iv) Food and water will be withheld from animals for head/nose-only exposure systems. For whole-body-exposure systems, water only may be provided. When the exposure generation system is not operating, food will be available *ad libitum*. During operation of the generation system, food will be withheld to avoid possible contamination by emissions.

(v) At the end of the study period, all survivors in the main study population shall be sacrificed. Moribund animals shall be removed and sacrificed when observed.

(3) *Concentration levels and selection.* (i) In acute and subacute toxicity tests, at least three exposure concentrations and a control group shall be used and spaced appropriately to produce test groups with a range of toxic effects and mortality rates. The data shall be sufficient to produce a concentration-response curve and permit an acceptable estimation of the median lethal concentration.

(ii) In subchronic and chronic toxicity tests, testers shall use at least three different concentration levels, with a control exposure group, to determine a concentration-response relationship. Concentrations shall be spaced appropriately to produce test groups with a range of toxic effects. The concentration-response data may also be sufficient to determine a NOAEL, unless the result of a limit test precludes such findings. The criteria for selecting concentration levels has been published (40 CFR 798.2450 and 798.3260).

(A) The highest concentration shall result in toxic effects but not produce an incidence of fatalities which would prevent a meaningful evaluation of the study.

(B) The lowest concentration shall not produce toxic effects which are directly attributable to the test exposure. Where there is a useful estimation of human exposure, the lowest concentration shall exceed this.

(C) The intermediate concentration level(s) shall produce minimal observable toxic effects. If more than one intermediate concentration level is used, the concentrations shall be spaced to produce a gradation of toxic effects.

(D) In the low, intermediate, and control exposure groups, the incidence of fatalities shall be low to absent, so as not to preclude a meaningful evaluation of the results.

(4) Exposure chamber environmental conditions. The following environmental conditions in the exposure chamber are critical to the maintenance of the test animals: flow; temperature; relative humidity; lighting; and noise.

(i) Filtered and conditioned air shall be used during exposure, to dilute the exhaust emissions, and during non-exposure periods to maintain environmental conditions that are free of trace gases, dusts, and microorganisms on the test animals. Twelve to fifteen air changes per hour will be provided at all times to whole-body-exposure chambers. The minimum air flow rate for head/nose-only exposure chambers will be a function of the number of animals and the average minute volume of the animals:

$$Q_{\text{minimum}}(\text{L/min}) = 2 \times \text{number of animals} \times \text{average minute volume}$$

(see Cheng and Moss, 1989 in paragraph (f)(8) of this section).

(ii) Recommended ranges of temperature for various species are given in the *Guide*. The recommended temperature ranges will be used for establishing temperature conditions of whole-body-exposure chambers. For rodents in whole-body-exposure chambers, the recommended temperature is 22 °C ±2 °C and for rabbits, it is 20 °C ±3 °C. Temperature ranges have not been established for head/nose-only tubes; however, recommended maximum temperature limits have been established at the Inhalation Toxicology Research Institute (see Barr, 1988 in paragraph (f)(1) of this section). Maximum tem-

perature for rats and mice in head/nose-only tubes is 23 °C.

(iii) *Relative humidity*. The relative humidity in the chamber air is important for heat balance and shall be maintained between 40 percent and 60 percent, but in certain instances, this may not be practicable. Testers shall follow *Guide* recommends for a 30 percent to 70 percent relative humidity range for rodents in exposure chambers.

(iv) *Lighting*. Light intensity of 30 foot candles at 3 ft. from the floor of the exposure facility is recommended (see Rao, 1986 in paragraph (f)(16) of this section).

(5) *Exposure conditions*. Unless precluded by the requirements of a particular test protocol, animal subjects shall be exposed to the test atmosphere based on a nominal 5-day-per-week regimen, subject to the following rules:

(i) Each daily exposure must be at least 6 hours plus the time necessary to build the chamber atmosphere to 90 percent of the target exposure atmosphere. Interruptions of daily exposures caused by technical difficulties, if infrequent in occurrence and limited in duration, may be made up the same day by adding equivalent exposure time after the technical problem has been corrected and the exposure atmosphere restored to the required level.

(ii) Normally, no more than two non-exposure days may occur consecutively during the test period. However, if a third consecutive non-exposure day should occur due to circumstances beyond the tester's control, it may be remedied by adding a supplementary exposure day. Federal and other holidays do not constitute such circumstances. Whenever possible, a make-up day should be taken at the first opportunity, i.e., on the next day which would otherwise have been an intentional non-exposure day. If a compensatory day must be scheduled at the end of the standard test period, then it may occur either:

(A) Immediately following the last standard exposure day, with no intervening non-exposure days; or

(B) With up to two intervening non-exposure days, provided that no fewer than two consecutive compensatory exposure days are completed before the

test is terminated and the animals sacrificed.

(iii) Except as allowed in paragraph (d)(5)(ii)(B) of this section, in no case shall there be fewer than four exposure days per week at any time during the test period.

(iv) A nominal 90-day (13-week) subchronic test period shall include no fewer than 63 total exposure days.

(6) *Exposure atmosphere.* (i) The exposure atmosphere shall be held as constant as is practicable and must be monitored continuously or intermittently, depending on the method of analysis, to ensure that exposure levels are at the target values or within stated limits during the exposure period. Sampling methodology will be determined based on the type of generation system and the type of exposure chamber system specified for the exposure study.

(A) Integrated samples of test atmosphere aerosol shall be taken daily during the exposure period from a single representative sample port in the chamber near the breathing zone of the animals. Gas samples shall be taken daily to determine concentrations (ppm) of the major vapor components of the test atmosphere including CO, CO₂, NO_x, SO₂, and total hydrocarbons.

(B) To ensure that animals in different locations of the chamber receive a similar exposure atmosphere, distribution of an aerosol or vapor concentration in exposure chambers can be determined without animals during the developmental phase of the study, or it can be determined with animals early in the study. For head/nose-only exposure chambers, it may not be possible to monitor the chamber distribution during the exposure, because the exposure port contains the animal.

(C) During the development of the emissions generation system, particle size analysis shall be performed to establish the stability of an aerosol concentration with respect to particle size. Over the course of the exposure, analysis shall be conducted as often as is necessary to determine the consistency of particle size distribution.

(D) *Chamber rise and fall times.* The rise time required for the exposure concentration to reach 90 percent of the stable concentration after the gener-

ator is turned on, and the fall time when the chamber concentration decreases to 10 percent of the stable concentration after the generation system is stopped shall be determined in the developmental phase of the study. Time-integrated samples collected for calculating exposure concentrations shall be taken after the rise time. The daily exposure time is exclusive of the rise or the fall time.

(ii) Instrumentation used for a given study will be determined based on the type of generation system and the type of exposure chamber system specified for the exposure study.

(A) For exhaust studies, combustion gases shall be sampled by collecting exposure air in bags and then analyzing the collected air sample to determine major components of the combustion gas using gas analyzers. Exposure chambers can also be connected to gas analyzers directly by using sampling lines and switching valves. Samples can be taken more frequently using the latter method. Aerosol instruments, such as photometers, or time-integrated gravimetric determination may be used to determine the stability of any aerosol concentration in the chamber.

(B) For evaporative emission studies, concentration of fuel vapors can usually be determined by using a gas chromatograph (GC) and/or infrared (IR) spectrometry. Grab samples for intermittent sampling can be taken from the chamber by using bubble samplers with the appropriate solvent to collect the vapors, or by collecting a small volume of air in a syringe. Intermediate or continuous monitoring of the chamber concentration is also possible by connecting the chamber with a GC or IR detector.

(7) Monitoring chamber environmental conditions may be performed by a computer system or by exposure system operating personnel.

(i) The flow-metering device used for the exposure chambers must be a continuous monitoring device, and actual flow measurements must be recorded at least every 30 minutes. Accuracy must be ± 5 percent of full scale range. Measurement of air flow through the

exposure chamber may be accomplished using any device that has sufficient range to accurately measure the air flow for the given chamber. Types of flow metering devices include rotameters, orifice meters, venturi meters, critical orifices, and turbinometers (see Benedict, 1984 in paragraph (f)(4) and Spitzer, 1984 in paragraph (f)(17) of this section).

(ii) *Pressure.* Pressure measurement may be accomplished using manometers, electronic pressure transducers, magnehelics, or similar devices (see Gillum, 1982 in paragraph (f)(10) of this section). Accuracy of the pressure device must be ± 5 percent of full scale range. Pressure measurements must be continuous and recorded at least every 30 minutes.

(iii) *Temperature.* The temperature of exposure chambers must be monitored continuously and recorded at least every 30 minutes. Temperature may be measured using thermometers, RTD's, thermocouples, thermistors, or other devices (see Benedict, 1984 in paragraph (f)(4) of this section). It is necessary to incorporate an alarm system into the temperature monitoring system. The exposure operators must be notified by the alarm system when the chamber temperature exceeds 26.7 °C (80 °F). The exposure must be discontinued and emergency procedures enacted to immediately reduce temperatures or remove test animals from high temperature environment when chamber temperatures exceed 29 °C. Accuracy of the temperature monitoring device will be ± 1 °C for the temperature range of 20–30 °C.

(iv) *Relative humidity.* The relative humidity of exposure chambers must be monitored continuously and recorded at least every 30 minutes. Relative humidity may be measured using various devices (see Chaddock, 1985 in paragraph (f)(6) of this section).

(v) Lighting shall be measured quarterly, or once at the beginning, middle, and end of the study for shorter studies.

(vi) Noise level in the exposure chamber(s) shall be measured quarterly, or once at the beginning, middle, and end of the study for shorter studies.

(vii) Oxygen content is critical, especially in nose-only chamber systems,

and shall be greater than or equal to 19 percent in the test cages. An oxygen sensor shall be located at a single position in the test chamber and a lower alarm limit of 18 percent shall be used to activate an alarm system.

(8) *Safety procedures and requirements.* In the case of potentially explosive test substance concentrations, care shall be taken to avoid generating explosive atmospheres.

(i) It is mandatory that the upper explosive limit (UEL) and lower explosive limit (LEL) for the fuel and/or fuel additive(s) that are being tested be determined. These limits can be found in the material safety data sheets (MSDS) for each substance and in various reference texts. The air concentration of the fuel or additive-base fuel mixture in the generation system, dilution/delivery system, and the exposure chamber system shall be calculated to ensure that explosive limits are not present.

(ii) Storage, handling, and use of fuels or fuel/additive mixtures shall follow guidelines given in 29 CFR 1910.106.

(iii) Monitoring for carbon monoxide (CO) levels is mandatory for combustion systems. CO shall be continuously monitored in the immediate area of the engine/vehicle system and in the exposure chamber(s).

(iv) Air samples shall be taken quarterly in the immediate area of the vapor generation system and the exposure chamber system, or once at the beginning, middle, and end of the study for shorter studies. These samples shall be analyzed by methods described in paragraph (d)(6)(ii)(B) of this section.

(v) With the presence of fuels and/or fuel additives, all electrical and electronic equipment must be grounded. Also, the dilution/delivery system and chamber exposure system must be grounded. Guidelines for grounding are given in 29 CFR 1910.304.

(9) *Quality control and quality assurance procedures*—(i) *Standard operating procedures (SOPs).* SOPs for exposure operations, sampling instruments, animal handling, and analytical methods shall be written during the developmental phase of the study.

(ii) Technicians/operators shall be trained in exposure operation, maintenance, and documentation, as appropriate, and their training shall be documented.

(iii) Flow meters, sampling instruments, and balances used in the inhalation experiments shall be calibrated with standards during the developmental phase to determine their sensitivity, detection limits, and linearity. During the exposure period, instruments shall be checked for calibration and documented to ensure that each instrument still functions properly.

(iv) The mean exposure concentration shall be within 10 percent of the target concentration on 90 percent or more of exposure days. The coefficient of variation shall be within 25 percent of target on 90 percent or more of exposure days. For example, a manufacturer might determine a mean exposure concentration of its product's exposure emissions by identifying "marker" compound(s) typical of the emissions of the fuel or fuel/additive mixture under study as a surrogate for the total of individual compounds in those exposure emissions. The manufacturer would note any concentration changes in the level of the "marker" compound(s) in the sample's daily emissions for biological testing.

(v) The spatial variation of the chamber concentration shall be 10 percent, or less. If a higher spatial variation is observed during the developmental phase, then air mixing in the chamber shall be increased. In any case, animals shall be rotated among the various cages in the exposure chamber(s) to insure each animal's uniform exposure during the study.

(e) *Data and reporting.* Data shall be summarized in tabular form, showing for each group the number of animals at the start of the test, the number of animals showing lesions, the types of lesions, and the percentage of animals displaying each type of lesion.

(1) *Treatment of results.* All observed results, quantitative and incidental, shall be evaluated by an appropriate statistical method. Any generally accepted statistical method may be used; the statistical methods shall be selected during the design of the study.

(2) *Evaluation of results.* The findings of an inhalation toxicity study should be evaluated in conjunction with the findings of preceding studies and considered in terms of the observed toxic effects and the necropsy and histopathological findings. The evaluation will include the relationship between the concentration of the test atmosphere and the duration of exposure, and the severity of abnormalities, gross lesions, identified target organs, body weight changes, effects on mortality and any other general or specific toxic effects.

(3) *Test conditions.* (i) The exposure apparatus shall be described, including:

(A) The vehicle/engine design and type, the dynamometer, the cooling system, if any, the computer control system, and the dilution system for exhaust emission generation;

(B) The evaporative emissions generator model, type, or design and its dilution system; and

(C) Other test conditions, such as the source and quality of mixing air, fuel or fuel/additive mixture used, treatment of exhaust air, design of exposure chamber and the method of housing animals in a test chamber shall be described.

(ii) The equipment for measuring temperature, humidity, particulate aerosol concentrations and size distribution, gas analyzers, fuel vapor concentrations, chamber distribution, and rise and fall time shall be described.

(iii) *Daily exposure results.* The daily record shall document the date, the start and stop times of the exposure, number of samples taken during the day, daily concentrations determined, calibration of instruments, and problems encountered during the exposure. The daily exposure data shall be signed by the exposure operator and reviewed and signed by the exposure supervisor responsible for the study.

(4) Exposure data shall be tabulated and presented with mean values and a measure of variability (*e.g.*, standard deviation), and shall include:

(i) Airflow rates through the inhalation equipment;

(ii) Temperature and humidity of air;

(iii) Chamber concentrations in the chamber breathing zone;

(iv) Concentration of combustion exhaust gases in the chamber breathing zone;

(v) Particle size distribution (e.g., mass median aerodynamic diameter and geometric standard deviation from the mean);

(vi) Rise and fall time;

(vii) Chamber concentrations during the non-exposure period; and

(viii) Distribution of test substance in the chamber.

(5) *Animal data.* Tabulation of toxic response data by species, strain, sex and exposure level for:

(i) Number of animals exposed;

(ii) Number of animals showing signs of toxicity; and

(iii) Number of animals dying.

(f) *References.* For additional background information on this exposure guideline, the following references should be consulted.

(1) Barr, E.B. (1988) Operational Limits for Temperature and Percent Oxygen During HM Nose-Only Exposures—Emergency Procedures [interoffice memorandum]. Albuquerque, NM: Lovelace Inhalation Toxicology Research Institute; May 13.

(2) Barr, E.B.; Cheng, Y.S.; Mauderly, J.L. (1990) Determination of Oxygen Depletion in a Nose-Only Exposure Chamber. Presented at: 1990 American Association for Aerosol Research; June; Philadelphia, PA: American Association for Aerosol Research; abstract no. P2e1.

(3) Barrow, C.S. (1989) Generation and Characterization of Gases and Vapors. In: McClellan, R.O., Henderson, R.F. ed. *Concepts in Inhalation Toxicology*. New York, NY: Hemisphere Publishing Corp., 63-84.

(4) Benedict, R.P. (1984) *Fundamentals of Temperature, Pressure, and Flow Measurements*. 3rd ed. New York, NY: John Wiley and Sons.

(5) Cannon, W.C.; Blanton, E.F.; McDonald, K.E. The Flow-Past Chamber. (1983) An Improved Nose-Only Exposure System for Rodents. *Am. Ind. Hyg. Assoc. J.* 44: 923-928.

(6) Chaddock, J.B. ed. (1985) Moisture and humidity. *Measurement and Control in Science and Industry: Proceedings of the 1985 International Symposium on Moisture and Humidity*; April 1985; Washington, D.C. Research

Triangle Park, NC: Instrument Society of America.

(7) Cheng, Y.S.; Barr, E.B.; Carpenter, R.L.; Benson, J.M.; Hobbs, C.H. (1989) Improvement of Aerosol Distribution in Whole-Body Inhalation Exposure Chambers. *Inhal. Toxicol.* 1: 153-166.

(8) Cheng, Y.S.; Moss, O.R. (1989) Inhalation Exposure Systems. In: McClellan, R.O.; Henderson, R.F. ed. *Concepts in Inhalation Toxicology*. New York, NY: Hemisphere Publishing Corp., 19-62.

(9) Cheng, Y.S.; Yeh, H.C.; Mauderly, J.L.; Mokler, B.V. (1984) Characterization of Diesel Exhaust in a Chronic Inhalation Study. *Am. Ind. Hyg. Assoc. J.* 45: 547-555.

(10) Gillum, D.R. (1982) Industrial Pressure Measurement. Research Triangle Park, NC: Instrument Society of America.

(11) Hinnners, R.G.; Burkart, J.K.; Malanchuk, M. (1979) Animal Exposure Facility for Diesel Exhaust Studies.

(12) Kittelson, D.B.; Dolan, D.F. (1979) Diesel exhaust aerosols. In Willeke, K. ed. *Generation of Aerosols and Facilities for Exposure Experiments*. Ann Arbor, MI: Ann Arbor Science Publishers Inc., 337-360.

(13) Mokler, B.V.; Archibeque, F.A.; Beethe, R.L.; Kelly, C.P.J.; Lopez, J.A.; Mauderly, J.L.; Stafford, D.L. (1984) Diesel Exhaust Exposure System for Animal Studies. *Fundamental and Applied Toxicology* 4: 270-277.

(14) Moore, W.; *et al.* (1978) Preliminary finding on the Deposition and Retention of Automotive Diesel Particulate in Rat Lungs. *Proc. of Annual Meeting of the Air Pollution Control Assn.*, 3, paper 78-33.7.

(15) Raabe, O.G., Bennick, J.E., Light, M.E., Hobbs, C.H., Thomas, R.L., Tillery, M.I. (1973) An Improved Apparatus for Acute Inhalation Exposure of Rodents to Radioactive Aerosols. *Toxicol & Applied Pharmacol.* 1973; 26: 264-273.

(16) Rao, G.N. (1986) Significance of Environmental Factors on the Test System. In: Hoover, B.K.; Baldwin, J.K.; Uelner, A.F.; Whitmire, C.E.; Davies, C.L.; Bristol, D.W. ed. *Managing conduct and data quality of toxicology studies*. Raleigh, NC: Princeton Scientific Publishing Co., Inc.: 173-185.

(17) Spitzer, D.W. (1984) Industrial Flow Measurement. Research Triangle Park, NC: Instrument Society of America.

(18) 40 CFR part 798, Health effects testing guidelines.

(19) 29 CFR part 1910, Occupational safety and health standards for general industry.

(20) FEDERAL REGISTER, 42 FR 26748, May 25, 1977.

[59 FR 33093, June 27, 1994, as amended at 61 FR 58746, Nov. 18, 1996; 61 FR 36512, July 11, 1996]

§ 79.62 Subchronic toxicity study with specific health effect assessments.

(a) *Purpose*—(1) *General toxicity*. This subchronic inhalation study is designed to determine a concentration-response relationship for potential toxic effects in rats resulting from continuous or repeated inhalation exposure to vehicle/engine emissions over a period of 90 days. A subgroup of perfusion-fixed animals is required, in addition to the main study population, for more exacting organ and tissue histology. This test will provide screening information on target organ toxicities and on concentration levels useful for running chronic studies and establishing exposure criteria. Initial information on effective concentrations/exposures of the test atmosphere may be determined from the literature of previous studies or through concentration range-finding trials prior to starting this study. This health effects screening test is not capable of directly determining those effects which have a long latency period for development (e.g., carcinogenicity and life-shortening), though it may permit the determination of a no-observed-adverse-effect level, or NOAEL.

(2) *Specific health effects assessments (HEAs)*. These supplemental studies are designed to determine the potential for reproductive/teratologic, carcinogenic, mutagenic, and neurotoxic health effect outcomes from vehicle/engine emission exposures. They are done in combination with the subchronic toxicity study and paragraph (c) of this section or may be done separately as outlined by the appropriate test guideline.

(i) *Fertility assessment/teratology*. The fertility assessment is an *in vivo* study

designed to provide information on potential health hazards to the fetus arising from the mother's repeated exposure to vehicle/engine emissions before and during her pregnancy. By including a mating of test animals, the study provides preliminary data on the effects of repeated vehicle/engine emissions exposure on gonadal function, conception, and fertility. The fertility assessment/teratology guideline is found in § 79.63.

(ii) *Micronucleus (MN) Assay*. The MN assay is an *in vivo* cytogenetic test which gives information on potential carcinogenic and/or mutagenic effects of exposure to vehicle/engine emissions. The MN assay detects damage to the chromosomes or mitotic apparatus of cells in the tissues of a test subject exposed repeatedly to vehicle/engine emissions. The assay is based on an increase in the frequency of micronucleated erythrocytes found in bone marrow from treated animals compared to that of control animals. The guideline for the MN assay is found in § 79.64.

(iii) *Sister Chromatid Exchange (SCE) Assay*. The SCE assay is an *in vivo* analysis which gives information on potential mutagenic and/or carcinogenic effects of exposure to vehicle/engine emissions. The assay detects the ability of a chemical to enhance the exchange of DNA between two sister chromatids of a duplicating chromosome. This assay uses peripheral blood lymphocytes isolated from an exposed rodent test species and grown to confluence in cell culture. The guideline for the SCE assay is found in § 79.65.

(iv) *Neurotoxicity (NTX) measures*. NTX measures include (A) histopathology of specified central and peripheral nervous system tissues taken from emission-exposed rodents, and (B) an assay of brain tissue levels of glial fibrillary acidic protein (GFAP), a major filament protein of astrocytes, from emission-exposed rodents. The guidelines for the neurohistopathology and GFAP studies are found in § 79.66 and § 79.67, respectively.

(b) *Definitions*. For the purposes of this section, the following definitions apply:

No-observed-adverse-effect-level (NOAEL) means the maximum concentration used in a test which produces no observed adverse effects. A NOAEL is expressed in terms of weight or volume of test substance given daily per unit volume of air ($\mu\text{g/L}$ or ppm).

Subchronic inhalation toxicity means the adverse effects occurring as a result of the continuous or repeated daily exposure of experimental animals to a chemical by inhalation for part (approximately 10 percent) of a life span.

(c) *Principle of the test method.* As long as none of the requirements of any study are violated by the combination, one or more HEAs may be combined with the general toxicity study through concurrent exposures of their study populations and/or by sharing the analysis of the same animal subjects. Requirements duplicated in combined studies need not be repeated. Guidelines for combining HEAs with the general toxicity study are as follows.

(1) *Fertility assessment.* (i) The number of study animals in the test population is increased when the fertility assessment is run concurrently with the 90-day toxicity study. A minimum of 40 females per test group shall undergo vaginal lavage daily for two weeks before the start of the exposure period. The resulting wet smears are examined to cull those animals which are acyclic. Twenty-five females shall be randomly assigned to a for-breeding group with the balance of females assigned to a group for histopathologic examination.

(ii) All test groups are exposed over a period of 90 days to various concentrations of the test atmosphere for a minimum of six hours per day. After seven weeks of exposures, analysis of vaginal cell smears shall resume on a daily basis for the 25 for-breeding females and shall continue for a period of four weeks or until each female in the group is confirmed pregnant. Following the ninth week of exposures, each for-breeding female is housed overnight with a single study male. Matings shall continue for as long as two weeks, or until pregnancy is confirmed (pregnancy day 0). Pregnant females are only exposed through day 15 of their pregnancy while daily exposures con-

tinue throughout the course of the study for non-pregnant females and study males.

(iii) On pregnancy day 20, pregnant females are sacrificed and their uteri are examined. Pregnancy status and fetal effects are recorded as described in § 79.63. At the end of the exposure period, all males and non-pregnant females are sacrificed and necropsied. Testes and epididymal tissue samples are taken from five perfusion-fixed test subjects and histopathological examinations are carried out on the remainder of the non-pregnant females and study males.

(2) *Carcinogenicity/mutagenicity (C/M) assessment.* When combined with the subchronic toxicity study, the main study population is used to perform both the *in vivo* MN and SCE assays. Because of the constant turnover of the cells to be analyzed in these assays, a separate study population may be used for this assessment. A study population needs only to be exposed a minimum of four weeks. At exposure's end, ten animals per exposure and control groups are anaesthetized and heart punctures are performed on all members. After separating blood components, individual lymphocyte cell cultures are set up for SCE analysis. One femur from each study subject is also removed and the marrow extracted. The marrow is smeared onto a glass slide, and stained for analysis of micronuclei in erythrocytes.

(3) *Neurotoxicity (NTX) measures.* (i) When combined with this subchronic toxicity study, test animals designated for whole-body perfusion fixation/lung histology and exposed as part of the main animal population are used to perform the neurohistology portion of these measures. After the last exposure period, a minimum of ten animals from each exposure group shall be preserved *in situ* with fixative. Sections of brain, spinal cord, and proximal sciatic or tibial nerve are then cut, processed further in formalin, and mounted for viewing under a light microscope. Fibers from the sciatic or tibial nerve sample are teased apart for further analysis under the microscope.

(ii) *GFAP assay.* After the last exposure period, a minimum of ten rodents

from each exposure group shall be sacrificed, and their brains excised and divided into regions. The tissue samples are then applied to filter paper, washed with anti-GFAP antibody, and visualized with a radio-labelled Protein A. The filters are quantified for degree of immunoreactivity between the antibody and GFAP in the tissue samples. A non-radioactive ELISA format is also referenced in the GFAP guideline cited in paragraph (a)(2)(iv) of this section. Note: Because the GFAP assay requires fresh, *i.e.*, non-preserved, brain tissue, the number of test animals may need to be increased to provide an adequate number of test subjects to complete the histopathology requirements of both the GFAP and the general toxicity portion of the 90-day inhalation study.

(iii) The start of the exposure period for the NTX measures study population may be staggered from that of the main study group to more evenly distribute the analytical work required in both study populations. The exposures would remain the same in all other respects.

(d) *Test procedures*—(1) *Animal selection*—(i) *Species and sex*. The rat is the recommended species. If another rodent species is used, the tester shall provide justification for its selection. Both sexes shall be used in any assessment unless it is demonstrated that one sex is refractory to the effects of exposure.

(ii) *Age and number*. Rats shall be at least ten weeks of age at the beginning of the study exposure. The number of animals necessary for individual health effect outcomes is as follows:

(A) Thirty rodents per concentration level/group, fifteen of each sex, shall be used to satisfy the reporting requirements of the 90-day toxicity study. Ten animals per concentration level/group shall be designated for whole body perfusion with fixative (by gravity) for lung studies, and neurohistology and testes studies, as appropriate.

(B) Thirty-five rodents, 25 females and ten males, shall be added for each test concentration or control group when combining a 90-day toxicity study with a fertility assessment.

(C) The tester shall provide a group of 10 animals (five animals per sex per

experimental/control groups) in addition to the main test population when performing the GFAP neurotoxicity HEA.

(2) *Recovery group*. The manufacturer shall include a group of 20 animals (10 animals per sex) in the test population, exposing them to the highest concentration level for the entire length of the study's exposure period. This group shall then be observed for reversibility, persistence, or delayed occurrence of toxic effects during a post-exposure period of not less than 28 days.

(3) *Inhalation exposure*. (i) All data developed within this study shall be in accordance with good laboratory practice provisions under § 79.60.

(ii) The general conduct of this study shall be in accordance with the vehicle emissions inhalation exposure guideline in § 79.61.

(4) *Observation of animals*. (i) All toxicological (e.g., weight loss) and neurological signs (e.g., motor disturbance) shall be recorded frequently enough to observe any abnormality, and not less than weekly for all study animals. Animals shall be weighed weekly.

(ii) The following is a minimal list of measures that shall be noted:

(A) Body weight;

(B) Subject's reactivity to general stimuli such as removal from the cage or handling;

(C) Description, incidence, and severity of any convulsions, tremors, or abnormal motor movements in the home cage;

(D) Descriptions and incidence of posture and gait abnormalities observed in the home cage;

(E) Description and incidence of any unusual or abnormal behaviors, excessive or repetitive actions (stereotypies), emaciation, dehydration, hypotonia or hypertonia, altered fur appearance, red or crusty deposits around the eyes, nose, or mouth, and any other observations that may facilitate interpretation of the data.

(iii) Any animal which dies during the test is necropsied as soon as possible after discovery.

(5) *Clinical examinations*. (i) The following examinations shall be performed on the twenty animals designated as the 90-day study population, exclusive of pregnant dams and those

study animals targeted for perfusion by gravity:

(A) The following hematology determinations shall be carried out at least two times during the test period (after 30 days of exposure and just prior to terminal sacrifice at the end of the exposure period): hematocrit, hemoglobin concentration, erythrocyte count, total and differential leukocyte count, and a measure of clotting potential such as prothrombin time, thromboplastin time, or platelet count.

(B) Clinical biochemistry determinations on blood shall be carried out at least two times during the test period, after 30 days of exposure and just prior to terminal sacrifice at the end of the exposure period, on all groups of animals including concurrent controls. Clinical biochemical testing shall include assessment of electrolyte balance, carbohydrate metabolism, and liver and kidney function. The selection of specific tests will be influenced by observations on the mode of action of the substance. In the absence of more specific tests, the following determinations may be made: calcium, phosphorus, chloride, sodium, potassium, fasting glucose (with period of fasting appropriate to the species), serum alanine aminotransferase, serum aspartate aminotransferase, sorbitol dehydrogenase, gamma glutamyl transpeptidase, urea nitrogen, albumen, blood creatinine, methemoglobin, bile acids, total bilirubin, and total serum protein measurements. Additional clinical biochemistry shall be employed, where necessary, to extend the investigation of observed effects, e.g., analyses of lipids, hormones, acid/base balance, and cholinesterase activity.

(ii) The following examinations shall initially be performed on the high concentration and control groups only:

(A) Ophthalmological examination, using an ophthalmoscope or equivalent suitable equipment, shall be made prior to exposure to the test substance and at the termination of the study. If changes in the eyes are detected, all animals shall be examined.

(B) Urinalysis is not required on a routine basis, but shall be done when there is an indication based on expected and/or observed toxicity.

(iii) Preservation by whole-body perfusion of fixative into the anaesthetized animal for lung histology of ten animals from the 90-day study population for each experimental and control group.

(6) *Gross pathology.* With the exception of the whole body perfusion-fixed test animals cited in paragraph (d)(1)(ii)(A) of this section, all rodents shall be subjected to a full gross necropsy which includes examination of the external surface of the body, all orifices and the cranial, thoracic, and abdominal cavities and their contents. Gross pathology shall be performed on the following organs and tissues:

(i) The liver, kidneys, lungs, adrenals, brain, and gonads, including uterus, ovaries, testes, epididymides, seminal vesicles (with coagulating glands), and prostate, constitute the group of target organs for histology and shall be weighed as soon as possible after dissection to avoid drying. In addition, for other than rodent test species, the thyroid with parathyroids, when present, shall also be weighed as soon as possible after dissection to avoid drying.

(ii) The following organs and tissues, or representative samples thereof, shall be preserved in a suitable medium for possible future histopathological examination: All gross lesions; lungs—which shall be removed intact, weighed, and treated with a suitable fixative to ensure that lung structure is maintained (perfusion with the fixative is considered to be an effective procedure); nasopharyngeal tissues; brain—including sections of medulla/pons, cerebellar cortex, and cerebral cortex; pituitary; thyroid/parathyroid; thymus; trachea; heart; sternum with bone marrow; salivary glands; liver; spleen; kidneys; adrenals; pancreas; reproductive organs: uterus; cervix; ovaries; vagina; testes; epididymides; prostate; and, if present, seminal vesicles; aorta; (skin); gall bladder (if present); esophagus; stomach; duodenum; jejunum; ileum; cecum; colon; rectum; urinary bladder; representative lymph node; (mammary gland); (thigh musculature); peripheral nerve/tissue; (eyes); (femur—including articular surface); (spinal cord at three

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levels—cervical, midthoracic, and lumbar); and (zygomatic and exorbital lachrymal glands).

(7) *Histopathology.* Histopathology shall be performed on the following organs and tissues from all rodents:

- (i) All gross lesions.
- (ii) Respiratory tract and other organs and tissues, listed in paragraph (d)(6)(ii) of this section (except organs/tissues in parentheses), of all animals in the control and high dose groups.
- (iii) The tissues mentioned in parentheses, listed in paragraph (d)(6)(ii) of this section, if indicated by signs of toxicity or target organ involvement.
- (iv) Lungs of animals in the low and intermediate dose groups shall also be subjected to histopathological examination, primarily for evidence of infection since this provides a convenient assessment of the state of health of the animals.
- (v) Lungs and trachea of the whole-body perfusion-fixed test animals cited in paragraph (d)(1)(ii)(A) of this section are examined for inhaled particle distribution.

(e) Interpretation of results. All observed results, quantitative and incidental, shall be evaluated by an appropriate statistical method. The specific methods, including consideration of statistical power, shall be selected during the design of the study.

(f) *Test report.* In addition to the reporting requirements as specified under §§ 79.60 and 79.61(e), the following individual animal data information shall be reported:

- (1) Date of death during the study or whether animals survived to termination.
- (2) Date of observation of each abnormal sign and its subsequent course.
- (3) Individual body weight data, and group average body weight data vs. time.
- (4) Feed consumption data, when collected.
- (5) Hematological tests employed and all results.
- (6) Clinical biochemistry tests employed and all results.
- (7) Necropsy findings.
- (8) Type of stain/fixative and procedures used in preparing tissue samples.
- (9) Detailed description of all histopathological findings.

(10) Statistical treatment of the study results, where appropriate.

(g) *References.* For additional background information on this test guideline, the following references should be consulted.

(1) 40 CFR 798.2450, Inhalation toxicity.

(2) 40 CFR 798.2675, Oral Toxicity with Satellite Reproduction and Fertility Study.

(3) General Statement of Work for the Conduct of Toxicity and Carcinogenicity Studies in Laboratory Animals (revised April, 1987/modifications through January, 1990) appendix G, National Toxicology Program—U.S. Dept. of Health and Human Services (Public Health Service), P.O. Box 12233, Research Triangle Park, NC 27709.

[59 FR 33093, June 27, 1994, as amended at 63 FR 63793, Nov. 17, 1998]

§ 79.63 Fertility assessment/teratology.

(a) *Purpose.* Fertility assessment/teratology is an *in vivo* study designed to provide information on potential health hazards to the fetus arising from the mother's repeated inhalation exposure to vehicle/engine emissions before and during her pregnancy. By including a mating of test animals, the study provides preliminary data on the effects of repeated vehicle/engine emissions exposure on gonadal function, conception, and fertility. Since this is a one-generation test that ends with examination of full-term fetuses, but not of live pups, it is not capable of determining effects on reproductive development which would only be detected in viable offspring of treated parents.

(b) *Definitions.* For the purposes of this section, the following definitions apply:

Developmental toxicity means the ability of an agent to induce *in utero* death, structural or functional abnormalities, or growth retardation after contact with the pregnant animal.

Estrous cycle means the periodic recurrence of the biological phases of the female reproductive system which prepare the animal for conception and the development of offspring. The phases of the estrous cycle for a particular animal can be characterized by the general condition of the cells present in

the vagina and the presence or absence of various cell types.

Vaginal cytology evaluation means the use of wet vaginal cell smears to determine the phase of a test animal's estrous cycle and the potential for adverse exposure effects on the regularity of the animal's cycle. In the rat, common cell types found in the smears correlate well with the various stages of the estrous cycle and to changes occurring in the reproductive tract.

(c) *Principle of the test method.* (1) For a two week period before exposures start, daily vaginal cell smears are examined from a surplus of female test animals to identify and cull those females which are acyclic. After culling, testers shall randomly assign at each exposure concentration (including unexposed) a minimum of twenty-five females for breeding and fifteen non-bred females for later histologic evaluation. Test animals shall be exposed by inhalation to graduated concentrations of the test atmosphere for a minimum of six hours per day over the next 13 weeks. Males and females in both test and control groups are mated after nine weeks of exposure. Exposures for pregnant females continue through gestation day 15, while exposures for males and all non-pregnant females shall continue for the full exposure period.

(2) Beginning two weeks before the start of the mating period, daily vaginal smears resume for all to-be-bred females to characterize their estrous cycles. This will continue for four weeks or until a rat's pregnancy is confirmed, *i.e.*, day 0, by the presence of sperm in the cell smear. On pregnancy day 20, shortly before the expected date of delivery, each pregnant female is sacrificed, her uterus removed, and the contents examined for embryonic or fetal deaths, and live fetuses. At the end of the exposure period, males and all non-pregnant females shall be weighed, and various organs and tissues, as appropriate, shall be removed and weighed, fixed with stain, and sectioned for viewing under a light microscope.

(3) This assay may be done separately or in combination with the subchronic toxicity study, pursuant to the provisions in § 79.62.

(d) *Limit test.* If a test at one dose level of the highest concentration that can be achieved while maintaining a particle size distribution with a mass median aerodynamic diameter (MMAD) of 4 micrometers (μm) or less, using the procedures described in section 79.60 of this part produces no observable toxic effects and if toxicity would not be expected based upon data of structurally related compounds, then a full study using three dose levels might not be necessary. Expected human exposure though may indicate the need for a higher dose level.

(e) *Test procedures*—(1) *Animal selection*—(i) *Species and strain.* The rat is the preferred species. Strains with low fecundity shall not be used and the candidate species shall be characterized for its sensitivity to developmental toxins. If another rodent species is used, the tester shall provide justification for its selection.

(ii) Animals shall be a minimum of 10 weeks old at the start of the exposure period.

(iii) *Number and sex.* Each test and control group shall have a minimum of 25 males and 40 females. In order to ensure that sufficient pups are produced to permit meaningful evaluation of the potential developmental toxicity of the test substance, twenty pregnant test animals are required for each exposure and control level.

(2) *Observation period.* The observation period shall be 13 weeks, at a minimum.

(3) *Concentration levels and concentration selection.* (i) To select the appropriate concentration levels, a pilot or trial study may be advisable. Since pregnant animals have an increased minute ventilation as compared to non-pregnant animals, it is recommended that the trial study be conducted in pregnant animals. Similarly, since presumably the minute ventilation will vary with progression of pregnancy, the animals should be exposed during the same period of gestation as in the main study. It is not always necessary, though, to carry out a trial study in pregnant animals. Comparisons between the results of a trial study in non-pregnant animals, and the main study in pregnant animals will demonstrate whether or not the test

substance is more toxic in pregnant animals. In the trial study, the concentration producing embryonic or fetal lethalties or maternal toxicity should be determined.

(ii) The highest concentration level shall induce some overt maternal toxicity such as reduced body weight or body weight gain, but not more than 10 percent maternal deaths.

(iii) The lowest concentration level shall not produce any grossly observable evidence of either maternal or developmental toxicity.

(4) *Inhalation exposure.* (i) All data developed within this study shall be in accordance with good laboratory practice provisions under § 79.60.

(ii) The general conduct of this study shall be in accordance with the vehicle emissions inhalation exposure guideline in § 79.61.

(iii) Pregnant females shall be exposed to the test atmosphere on each and every day between (and including) the first and fifteenth day of gestation.

(f) *Test performance*—(1) *Study conduct.* Directions specific to this study are:

(i) The duration of exposure shall be at least six hours daily, allowing appropriate additional time for chamber equilibrium.

(ii) Where an exposure chamber is used, its design shall minimize crowding of the test animals. This is best accomplished by individual caging.

(iii) Pregnant animals shall not be subjected to beyond the minimum amount of stress. Since whole-body exposure appears to be the least stressful mode of exposure, it is the preferred method. In general oronasal or head-only exposure, which is sometimes used to avoid concurrent exposure by the dermal or oral routes, is not recommended because of the associated stress accompanying the restraining of the animals. However, there may be specific instances where it may be more appropriate than whole-body exposure. The tester shall provide justification/reasoning for its selection.

(iv) Measurements shall be made at least every other day of food consumption for all animals in the study. Males and females shall be weighed on the first day of exposure and 2–3 times per

week thereafter, except for pregnant dams.

(v) The test animal housing, mating, and exposure chambers shall be operated on a twenty-four hour lighting schedule, with twelve hours of light and twelve hours of darkness. Test animal exposure shall only occur during the light portion of the cycle.

(vi) Signs of toxicity shall be recorded as they are observed including the time of onset, degree, and duration.

(vii) Females showing signs of abortion or premature delivery shall be sacrificed and subjected to a thorough macroscopic examination.

(viii) Animals that die or are euthanized because of morbidity will be necropsied promptly.

(2) *Vaginal cytology.* (i) For a two week period before the mating period starts, each female in the to-be-bred population shall undergo a daily saline vaginal lavage. Two wet cell smears from this lavage shall be examined daily for each subject to determine a baseline pattern of estrus. Testers shall avoid excessive handling and roughness in obtaining the vaginal cell samples, as this may induce a condition of pseudo-pregnancy in the test animals.

(ii) This will continue for four weeks or until day 0 of a rat's pregnancy is confirmed by the presence of sperm in the cell smear.

(3) *Mating and fertility assessment.* (i) Beginning nine weeks after the start of exposure, each exposed and control group female (exclusive of the histology group females) shall be paired during non-exposure hours with a male from the same exposure concentration group. Matings shall continue for a period of two weeks, or until all mated females are determined to be pregnant. Mating pairs shall be clearly identified.

(ii) Each morning, including weekends, cages shall be examined for the presence of a sperm plug. When found, this shall mark gestation day 0 and pregnancy shall be confirmed by the presence of sperm in the day's wet vaginal cell smears.

(iii) Two weeks after mating is begun, or as females are determined to be pregnant, bred animals are returned to pre-mating housing. Daily exposures continues through gestation day 15 for all pregnant females or through the

balance of the exposure period for non-pregnant females and all males.

(iv) Those pairs which fail to mate shall be evaluated in the course of the study to determine the cause of the apparent infertility. This may involve such procedures as additional opportunities to mate with a proven fertile partner, histological examination of the reproductive organs, and, in males, examination of the spermatogenic cycles. The stage of estrus for each non-pregnant female in the breeding group will be determined at the end of the exposure period.

(4) All animals in the histology group shall be subject to histopathologic examination at the end of the study's exposure period.

(g) *Treatment of results.* (1) All observed results, quantitative and incidental, shall be evaluated by an appropriate statistical method. The specific methods, including consideration of statistical power, shall be selected during the design of the study.

(2) Data and reporting. In addition to the reporting requirements specified under §§ 79.60 and 79.61, the final test report must include the following information:

(i) *Gross necropsy.* (A) All animals shall be subjected to a full necropsy which includes examination of the external surface of the body, all orifices, and the cranial, thoracic, and abdominal cavities and their contents. Special attention shall be directed to the organs of the reproductive system.

(B) The liver, kidneys, adrenals, pituitary, uterus, vagina, ovaries, testes, epididymides and seminal vesicles (with coagulating glands), and prostate shall be weighed wet, as soon as possible after dissection, to avoid drying.

(i) At the time of sacrifice on gestation day 20 or at death during the study, each dam shall be examined macroscopically for any structural abnormalities or pathological changes which may have influenced the pregnancy.

(ii) The contents of the uterus shall be examined for embryonic or fetal deaths and the number of viable fetuses. Gravid uterine weights need not be obtained from dead animals where decomposition has occurred. The degree of resorption shall be described

in order to help estimate the relative time of death.

(iii) The number of corpora lutea shall be determined in each pregnant dam.

(iv) Each fetus shall be weighed, all weights recorded, and mean fetal weights determined.

(v) Each fetus shall be examined externally and the sex determined.

(vi) One-half of the rat fetuses in each litter shall be examined for skeletal anomalies, and the remaining half shall be examined for soft tissue anomalies, using appropriate methods.

(ii) *Histopathology.* (A) Histopathology on vagina, uterus, ovaries, testes, epididymides, seminal vesicles, and prostate as appropriate for all males and histology group females in the control and high concentration groups and for all animals that died or were euthanized during the study. If abnormalities or equivocal results are seen in any of these organs/tissues, the same organ/tissue from test animals in lower concentration groups shall be examined.

NOTE: Testes, seminal vesicles, epididymides, and ovaries, at a minimum, shall be examined in perfusion-fixed (pressure or gravity method) test subjects, when available.

(B) All gross lesions in all study animals shall be examined.

(C) As noted under mating procedures, reproductive organs of animals suspected of infertility shall be subject to microscopic examination.

(D) The following organs and tissues, or representative samples thereof, shall be preserved in a suitable medium for future histopathological examination: all gross lesions; vagina; uterus; ovaries; testes; epididymides; seminal vesicles; prostate; liver; and kidneys/adrenals.

(3) *Evaluation of results.* (i) The findings of a developmental toxicity study shall be evaluated in terms of the observed effects and the exposure levels producing effects. It is necessary to consider the historical developmental toxicity data on the species/strain tested.

(ii) There are several criteria for determining a positive result for reproductive/teratologic effects; a statistically significant dose-related decrease in the weight of the testes for treated subjects over control subjects, a decrease in neonatal viability, a significant change in the presence of soft tissue or skeletal abnormalities, or an increased rate of embryonic or fetal resorption or death. Other criteria, e.g., lengthening of the estrous cycle or the time spent in any one stage of estrus, changes in the proportion of viable male vs female fetuses or offspring, the number and type of cells in vaginal smears, or pathologic changes found during gross or microscopic examination of male or female reproductive organs may be based upon detection of a reproducible and statistically significant positive response for that evaluation parameter. A positive result indicates that, under the test conditions, the test substance does induce reproductive organ or fetal toxicity in the test species.

(iii) A test substance which does not produce either a statistically significant dose-related change in the reproductive organs or cycle or a statistically significant and reproducible positive response at any one of the test points may not induce reproductive organ toxicity in this test species, but further investigation, e.g., to establish absorption and bioavailability of the test substance, should be considered.

(h) *Test report.* In addition to the reporting requirements as specified under 40 CFR 79.60 and the vehicle emissions inhalation toxicity guideline as published in 40 CFR 79.61, the following specific information shall be reported:

(1) *Individual animal data.* (i) Time of death during the study or whether animals survived to termination.

(ii) Date of onset and duration of each abnormal sign and its subsequent course.

(iii) Feed and body weight data.

(iv) Necropsy findings.

(v) Male test subjects.

(A) Testicle weight, and body weight: testicle weight ratio.

(B) Detailed description of all histopathological findings, especially for the testes and the epididymides.

(vi) Female test subjects.

(A) Uterine weight data.

(B) Beginning and ending collection dates for vaginal cell smears.

(C) Estrous cycle length compared within and between groups including mean cycle length for groups.

(D) Percentage of time spent in each stage of cycle.

(E) Stage of estrus at time of mating/sacrifice and proportion of females in estrus between concentration groups.

(F) Detailed description of all histopathological findings, especially for uterine/ovary samples.

(vii) Pregnancy and litter data. Toxic response data by exposure level, including but not limited to, indices of fertility and time-to-mating, including the number of days until mating and the number of full or partial estrous cycles until mating.

(A) Number of pregnant animals.

(B) Number and percentage of live fetuses, resorptions.

(viii) *Fetal data.* (A) Numbers of each sex.

(B) Number of fetuses with any soft tissue or skeletal abnormalities.

(2) Type of stain/fixative and procedures used in preparing tissue samples.

(3) Statistical treatment of the study results.

(i) *References.* For additional background information on this test guideline, the following references should be consulted.

(1) 40 CFR 798.2675, Oral Toxicity with Satellite Reproduction and Fertility Study.

(2) 40 CFR 798.4350, Inhalation Developmental Toxicity Study.

(3) Chapin, R.E. and J.J. Heindel (1993) *Methods in Toxicology*, Vol. 3, Parts A and B: Reproductive Toxicology, Academic Press, Orlando, FL.

(4) Gray, L.E., et al. (1989) "A Dose-Response Analysis of Methoxychlor-Induced Alterations of Reproductive Development and Function in the Rat" *Fund. App. Tox.* 12, 92-108.

(5) Leblond, C.P. and Y. Clermont (1952) "Definition of the Stages of the Cycle of the Seminiferous Epithelium of the Rat." *Ann. N. Y. Acad. Sci.* 55:548-73.

(6) Morrissey, R.E., et al. (1988) "Evaluation of Rodent Sperm, Vaginal Cytology, and Reproductive Organ Weight Data from National Toxicology

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Program 13-week Studies.” Fundam. Appl. Toxicol. 11:343–358.

(7) Russell, L.D., Ettlin, R.A., Sinhattikim, A.P., and Clegg, E.D (1990) Histological and Histopathological Evaluation of the Testes, Cache River Press, Clearwater, FL.

[59 FR 33093, June 27, 1994, as amended at 61 FR 36513, July 11, 1996]

§ 79.64 *In vivo* micronucleus assay.

(a) *Purpose.* The micronucleus assay is an *in vivo* cytogenetic test which uses erythrocytes in the bone marrow of rodents to detect chemical damage to the chromosomes or mitotic apparatus of mammalian cells. As the erythroblast develops into an erythrocyte (red blood cell), its main nucleus is extruded and may leave a micronucleus in the cell body; a few micronuclei form under normal conditions in blood elements. This assay is based on an increase in the frequency of micronucleated erythrocytes found in bone marrow from treated animals compared to that of control animals. The visualization of micronuclei is facilitated in these cells because they lack a main nucleus.

(b) *Definitions.* For the purposes of this section the following definitions apply:

Micronuclei mean small particles consisting of acentric fragments of chromosomes or entire chromosomes, which lag behind at anaphase of cell division. After telophase, these fragments may not be included in the nuclei of daughter cells and form single or multiple micronuclei in the cytoplasm.

Polychromatic erythrocyte (PCE) means an immature red blood cell that, because it contains RNA, can be differentiated by appropriate staining techniques from a normochromatic erythrocyte (NCE), which lacks RNA. In one to two days, a PCE matures into a NCE.

(c) *Test method*—(1) *Principle of the test method.* (i) Groups of rodents are exposed by the inhalation route for a minimum of 6 hours/day over a period of not less than 28 days to three or more concentrations of a test substance in air. Groups of animals are sacrificed at the end of the exposure

period and femoral bone marrow is extracted. The bone marrow is then smeared onto glass slides, stained, and PCEs are scored for micronuclei. Researchers may need to run a trial at the highest tolerated concentration of the test atmosphere to optimize the sample collection time for micronucleated cells.

(ii) This assay may be done separately or in combination with the subchronic toxicity study, pursuant to the provisions in § 79.62.

(2) *Species and strain.* (i) The rat is the recommended test animal. Other rodent species may be used in this assay, but use of that species will be justified by the tester.

(ii) If a strain of mouse is used in this assay, the tester shall sample peripheral blood from an appropriate site on the test animal, e.g., the tail vein, as a source of normochromatic erythrocytes. Results shall be reported as outlined later in this guideline with “normochromatic” interchanged for “polychromatic”, where specified.

(3) *Animal number and sex.* At least five female and five male animals per experimental/sample and control group shall be used. The use of a single sex or a smaller number of animals shall be justified.

(4) *Positive control group.* A single concentration of a compound known to produce micronuclei *in vivo* is adequate as a positive control if it shows a significant response at any one time point; additional concentration levels may be used. To select an appropriate concentration level, a pilot or trial study may be advisable. Initially, one concentration of the test substance may be used, the maximum tolerated dose or that producing some indication of toxicity, e.g., a drop in the ratio of polychromatic to normochromatic erythrocytes. Intraperitoneal injection of 1,2-dimethyl-benz-anthracene or benzene are examples of positive control exposures. A concentration of 50–80 percent of an LD50 may be a suitable guide.

(d) *Test performance*—(1) *Inhalation exposure.* (i) All data developed within this study shall be in accordance with good laboratory practice provisions under § 79.60.

(ii) The general conduct of this study shall be in accordance with the vehicle emissions inhalation exposure guideline in § 79.61.

(2) *Preparation of slides and sampling times.* Within twenty-four hours of the last exposure, test animals will be sacrificed. One femur from each test animal will be removed and placed in fetal bovine serum. The bone marrow is removed, cells processed, and two bone marrow smears are made for each animal on glass microscope slides. The slides are stained with acridine-orange (AO) or another appropriate stain (Giemsa + Wright's, etc.) and examined under a microscope.

(3) *Analysis.* Slides shall be coded for study before microscopic analysis. At least 1,000 first-division erythrocytes per animal shall be scored for the incidence of micronuclei. Sexes will be analyzed separately.

(e) *Data and report*—(1) *Treatment of results.* In addition to the reporting requirements specified under §§ 79.60 and 79.61, the final test report must include the criteria for scoring micronuclei. Individual data shall be presented in a tabular form including both positive and negative controls and experimental groups. The number of polychromatic erythrocytes scored, the number of micronucleated erythrocytes, the percentage of micronucleated cells, and, where applicable, the percentage of micronucleated erythrocytes shall be listed separately for each experimental and control animal. Absolute numbers shall be included if percentages are reported.

(2) *Interpretation of data.* (i) There are several criteria for determining a positive response, one of which is a statistically significant dose-related increase in the number of micronucleated polychromatic erythrocytes. Another criterion may be based upon detection of a reproducible and statistically significant positive response for at least one of the test substance concentrations.

(ii) A test substance which does not produce either a statistically significant dose-related increase in the number of micronucleated polychromatic erythrocytes or a statistically significant and reproducible positive response

at any one of the test points is considered nonmutagenic in this system.

(3) *Test evaluation.* (i) Positive results in the micronucleus test provide information on the ability of a chemical to induce micronuclei in erythrocytes of the test species under the conditions of the test. This damage may have been the result of chromosomal damage or damage to the mitotic apparatus.

(ii) Negative results indicate that under the test conditions the test substance does not produce micronuclei in the bone marrow of the test species.

(f) *Test report.* In addition to the reporting recommendations as specified under § 79.60, the following specific information shall be reported:

(1) Test atmosphere concentration(s) used and rationale for concentration selection.

(2) Rationale for and description of treatment and sampling schedules, toxicity data, negative and positive controls.

(3) Historical control data (negative and positive), if available.

(4) Details of the protocol used for slide preparation.

(5) Criteria for identifying micronucleated erythrocytes.

(6) Micronucleus analysis by animal and by group for each concentration (sexes analyzed separately).

(i) Ratio of polychromatic to normochromatic erythrocytes.

(ii) Number of polychromatic erythrocytes with micronuclei.

(iii) Number of polychromatic erythrocytes scored.

(7) Statistical methodology chosen for test analysis.

(g) *References.* For additional background information on this test guideline, the following references should be consulted.

(1) 40 CFR 798.5395, *In Vivo*, Mammalian Bone Marrow Cytogenetics Tests: Micronucleus Assay.

(2) Cihak, R. "Evaluation of Benzidine by the Micronucleus Test." *Mutation Research*, 67: 383-384 (1979).

(3) Evans, H.J. "Cytological Methods for Detecting Chemical Mutagens." *Chemical Mutagens: Principles and Methods for Their Detection*, Vol. 4. Ed. A. Hollaender (New York and London: Plenum Press, 1976) pp. 1-29.

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(4) Heddle, J.A., *et al.* “The Induction of Micronuclei as a Measure of Genotoxicity. A Report of the U.S. Environmental Protection Agency Gene-Tox Program.” *Mutation Research*, 123:61–118 (1983).

(5) Preston, J.R. *et al.* “Mammalian *In Vivo* and *In Vitro* Cytogenetics Assays: Report of the Gene-Tox Program.” *Mutation Research*, 87:143–188 (1981).

(6) Schmid, W. “The micronucleus test for cytogenetic analysis”, *Chemical Mutagens, Principles and Methods for their Detection*. Vol. 4 Hollaender A, (Ed. A ed. (New York and London: Plenum Press, (1976) pp. 31–53.

(7) Tice, R.E., and Al Pellom “User’s guide: Micronucleus assay data management and analysis system”, NTIS Order no. PB-90-212-598AS.

§ 79.65 *In vivo* sister chromatid exchange assay.

(a) *Purpose.* The *in vivo* sister chromatid exchange (SCE) assay detects the ability of a chemical to enhance the exchange of DNA between two sister chromatids of a duplicating chromosome. The most commonly used assays employ mammalian bone marrow cells or peripheral blood lymphocytes, often from rodent species.

(b) *Definitions.* For the purposes of this section, the following definitions apply:

C-metaphase means a state of arrested cell growth typically seen after treatment with a spindle inhibitor, *i.e.*, colchicine.

Sister chromatid exchange means a reciprocal interchange of the two chromatid arms within a single chromosome. This exchange is visualized during the metaphase portion of the cell cycle and presumably requires the enzymatic incision, translocation and ligation of at least two DNA helices.

(c) *Test method*—(1) *Principle of the test method.* (i) Groups of rodents are exposed by the inhalation route for a minimum of 6 hours/day over a period of not less than 28 days to three or more concentrations of a test substance in air. Groups of animals are sacrificed at the end of the exposure period and blood lymphocyte cell cultures are prepared from study animals. Cell growth is suspended after a time

and cells are harvested, fixed and stained before scoring for SCEs. Researchers may need to run a trial at the highest tolerated concentration of the test atmosphere to optimize the sample collection time for second division metaphase cells.

(ii) This assay may be done separately or in combination with the subchronic toxicity study, pursuant to the provisions in § 79.62.

(2) *Description.* (i) The method described here employs peripheral blood lymphocytes (PBL) of laboratory rodents exposed to the test atmosphere.

(ii) Within twenty-four hours of the last exposure, test animal lymphocytes are obtained by heart puncture and duplicate cell cultures are started for each animal. Cultures are grown in bromo-deoxyuridine (BrdU), and then a spindle inhibitor (e.g., colchicine) is added to arrest cell growth. Cells are harvested, fixed, and stained and their chromosomes are scored for SCEs.

(3) *Species and strain.* The rat is the recommended test animal. Other rodent species may be used in this assay, but use of that species will be justified by the tester.

(4) *Animal number and sex.* At least five female and five male animals per experimental and control group shall be used. The use of a single sex or different number of animals shall be justified.

(5) *Positive control group.* A single concentration of a compound known to produce SCEs *in vivo* is adequate as a positive control if it shows a significant response at any one time point; additional concentration levels may be used. To select an appropriate concentration level, a pilot or trial study may be advisable. Initially, one concentration of the test substance may be used, the maximum tolerated dose or that producing some indication of toxicity as evidenced by animal morbidity (including death) or target cell toxicity. Intraperitoneal injection of 1,2-dimethyl-benz-anthracene or benzene are examples of positive control exposures. A concentration of 50–80 percent of an LD50 would also be a suitable guide.

(6) *Inhalation exposure.* (i) All data developed within this study shall be in

accordance with good laboratory practice provisions under § 79.60.

(ii) The general conduct of this study shall be in accordance with the vehicle emissions inhalation exposure guideline in § 79.61.

(d) *Test performance*—(1) *Treatment*. At the conclusion of the exposure period, all test animals are anaesthetized and heart punctures are performed. Lymphocytes are isolated over a Ficoll gradient and replicate cell cultures are started for each animal. After some 21 hours, the cells are treated with BrdU and returned to incubation. The following day, a spindle inhibitor (e.g., colchicine) is added to arrest cell growth in c-metaphase. Cells are harvested 4 hours later and second-division metaphase cells are washed and fixed in methanol:acetic acid, stained, and chromosome preparations are scored for SCEs.

(2) *Staining method*. Staining of slides to reveal SCEs can be performed according to any of several protocols. However, the fluorescence plus Giemsa method is recommended.

(3) *Number of cells scored*. (i) A minimum of 25 well-stained, second-division metaphase cells shall be scored for each animal for each cell type.

(ii) At least 100 consecutive metaphase cells shall be scored for the number of first, second, and third division metaphases for each animal for each cell type.

(iii) At least 1000 consecutive PBL's shall be scored for the number of metaphase cells present.

(iv) The number of cells to be analyzed per animal shall be based upon the number of animals used, the negative control frequency, the pre-determined sensitivity and the power chosen for the test. Slides shall be coded before microscopic analysis.

(e) *Data and report*—(1) *Treatment of results*. In addition to the reporting requirements specified under §§ 79.60 and 61, data shall be presented in tabular form, providing scores for both the number of SCE for each metaphase. Differences among animals within each group shall be considered before making comparisons between treated and control groups.

(2) *Statistical evaluation*. Data shall be evaluated by appropriate statistical methods.

(3) *Interpretation of results*. (i) There are several criteria for determining a positive result, one of which is a statistically significant dose-related increase in the number of SCE. Another criterion may be based upon detection of a reproducible and statistically significant positive response for at least one of the test concentrations.

(ii) A test substance which does not produce either a statistically significant dose-related increase in the number of SCE or a statistically significant and reproducible positive response at any one of the test concentrations is considered not to induce rearrangements of DNA segments in this system.

(iii) Both biological and statistical significance shall be considered together in the evaluation.

(4) *Test evaluation*. (i) A positive result in the *in vivo* SCE assay for either, or both, the lung or lymphocyte cultures indicates that under the test conditions the test substance induces reciprocal interchanges of DNA in duplicating chromosomes from lung or lymphocyte cells of the test species.

(ii) Negative results indicate that under the test conditions the test substance does not induce reciprocal interchanges in lung or lymphocyte cells of the test species.

(5) *Test report*. In addition to the reporting recommendations as specified under §§ 79.60 and 79.61, the following specific information shall be reported:

(i) Test concentrations used, rationale for concentration selection, negative and positive controls;

(ii) Toxic response data by concentration;

(iii) Schedule of administration of test atmosphere, BrdU, and spindle inhibitor;

(iv) Time of harvest after administration of BrdU;

(v) Identity of spindle inhibitor, its concentration and timing of treatment;

(vi) Details of the protocol used for cell culture and slide preparation;

(vii) Criteria for scoring SCE;

(viii) Replicative index, *i.e.*, [percent 1st division + (2 × percent 2nd division) + (3 × percent 3rd division) metaphases]/100; and

(ix) Mitotic activity, *i.e.*, # of metaphases/1000 cells.

(f) *References.* For additional background information on this test guideline, the following references should be consulted.

(1) 40 CFR 798.5915, *In vivo* Sister Chromatid Exchange Assay.

(2) Kato, H. “Spontaneous Sister Chromatid Exchanges Detected by a BudR-Labeling Method.” *Nature*, 251:70–72 (1974).

(4) Kligerman, A. D., *et al.* “Sister Chromatid Exchange Analysis in Lung and Peripheral Blood Lymphocytes of Mice Exposed to Methyl Isocyanate by Inhalation.” *Environmental Mutagenesis* 9:29–36 (1987).

(5) Kligerman, A.D., *et al.*, “Cytogenetic Studies of Rodents Exposed to Styrene by Inhalation”, IARC Monographs no. 127 “Butadiene and Styrene: Assessment of Health Hazards” (Sorsa, *et al.*, eds), pp 217–224, 1993.

(6) Kligerman, A., *et al.*, “Cytogenetic Studies of Mice Exposed to Styrene by Inhalation.”, *Mutation Research*, 280:35–43, 1992.

(7) Wolff, S., and P. Perry. “Differential Giemsa Staining of Sister Chromatids and the Study of Sister Chromatid Exchanges Without Autoradiography.” *Chromosoma* 48: 341–53 (1974).

§ 79.66 Neuropathology assessment.

(a) *Purpose.* (1) The histopathological and biochemical techniques in this guideline are designed to develop data in animals on morphologic changes in the nervous system associated with repeated inhalation exposures to motor vehicle emissions. These tests are not intended to provide a detailed evaluation of neurotoxicity. Neuropathological evaluation should be complemented by other neurotoxicity studies, *e.g.* behavioral and neurophysiological studies and/or general toxicity testing, to more completely assess the neurotoxic potential of an exposure.

(2) [Reserved]

(b) *Definition.* Neurotoxicity (NTX) or a neurotoxic effect is an adverse change in the structure or function of the nervous system following exposure to a chemical substance.

(c) *Principle of the test method.* (1) Laboratory rodents are exposed to one of several concentration levels of a test atmosphere for at least six hours daily over a period of 90 days. At the end of the exposure period, the animals are anaesthetized, perfused *in situ* with fixative, and tissues in the nervous system are examined grossly and prepared for microscopic examination. Starting with the highest dosage level, tissues are examined under the light microscope for morphologic changes, until a no-observed-adverse-effect level is determined. In cases where light microscopy has revealed neuropathology, the NOAEL may be confirmed by electron microscopy.

(2) The tests described herein may be combined with any other toxicity study, as long as none of the requirements of either are violated by the combination. Specifically, this assay may be combined with a subchronic toxicity study, pursuant to provisions in § 79.62.

(d) *Limit test.* If a test at one dose level of the highest concentration that can be achieved while maintaining a particle size distribution with a mass median aerodynamic diameter (MMAD) of 4 micrometers (µm) or less, using the procedures described in paragraph (a) of this section, produces no observable toxic effects and if toxicity would not be expected based upon data of structurally related compounds, then a full study using three dose levels might not be necessary. Expected human exposure though may indicate the need for a higher dose level.

(e) *Test procedures*—(1) *Animal selection*—(i) *Species and strain.* Testing shall be performed in the species being used in other NTX tests. A standard strain of laboratory rat is recommended. The choice of species shall take into consideration such factors as the comparative metabolism of the chemical and species sensitivity to the toxic effects of the test substance, as evidenced by the results of other studies, the potential for combined studies, and the availability of other toxicity data for the species.

(ii) *Age.* Animals shall be at least ten weeks of age at the start of exposure.

(iii) *Sex*. Both sexes shall be used unless it is demonstrated that one sex is refractory to the effects of exposure.

(2) *Number of Animals*. A minimum of ten animals per group shall be used. The tissues from each animal shall be examined separately.

(3) *Control Groups*. (i) A concurrent control group, exposed to clean, filtered air only, is required.

(ii) The laboratory performing the testing shall provide positive control data, e.g., results from repeated acrylamide exposure, as evidence of the ability of their histology procedures to detect neurotoxic endpoints. Positive control data shall be collected at the time of the test study unless the laboratory can demonstrate the adequacy of historical data for the planned study.

(iii) A satellite group of 10 female and 10 male test subjects shall be treated with the highest concentration level for the duration of the exposure and observed thereafter for reversibility, persistence, or delayed occurrence of toxic effects during a post-treatment period of not less than 28 days.

(4) *Inhalation exposure*. (i) All data developed within this study shall be in accordance with good laboratory practice provisions under § 79.60.

(ii) The general conduct of this study shall be in accordance with the vehicle emissions inhalation exposure guideline in § 79.61.

(5) *Study conduct*—(i) *Observation of animals*. All toxicological (e.g., weight loss) and neurological signs (e.g., motor disturbance) shall be recorded frequently enough to observe any abnormality, and not less than weekly.

(ii) The following is a minimal list of measures that shall be noted:

(A) Body weight;

(B) Subject's reactivity to general stimuli such as removal from the cage or handling;

(C) Description, incidence, and severity of any convulsions, tremors, or abnormal motor movements in the home cage;

(D) Descriptions and incidence of posture and gait abnormalities observed in the home cage; and

(E) Description and incidence of any unusual or abnormal behaviors, excessive or repetitive actions

(stereotypies), emaciation, dehydration, hypotonia or hypertonia, altered fur appearance, red or crusty deposits around the eyes, nose, or mouth, and any other observations that may facilitate interpretation of the data.

(iii) *Sacrifice of animals*—(A) *General*. The goal of the techniques outlined for sacrifice of animals and preparation of tissues is preservation of tissue morphology to simulate the living state of the cell.

(B) *Perfusion technique*. Animals shall be perfused *in situ* by a generally recognized technique. For fixation suitable for light or electronic microscopy, saline solution followed by buffered 2.5 percent glutaraldehyde or buffered 4.0 percent paraformaldehyde, is recommended. While some minor modifications or variations in procedures are used in different laboratories, a detailed and standard procedure for vascular perfusion may be found in the text by Zeman and Innes (1963), Hayat (1970), and Spencer and Schaumburg (1980) under paragraph (g) of this section. A more sophisticated technique is described by Palay and Chan-Palay (1974) under paragraph (g) of this section. In addition, the lungs shall be instilled with fixative via the trachea during the fixation process in order to preserve the lungs and achieve whole-body fixation.

(C) *Removal of brain and cord*. After perfusion, the bony structure (cranium and vertebral column) shall be exposed. Animals shall then be stored in fixative-filled bags at 4 °C for 8–12 hours. The cranium and vertebral column shall be removed carefully by trained technicians without physical damage of the brain and cord. Detailed dissection procedures may be found in the text by Palay and Chan-Palay (1974) under paragraph (g) of this section. After removal, simple measurement of the size (length and width) and weight of the whole brain (cerebrum, cerebellum, pons-medulla) shall be made. Any abnormal coloration or discoloration of the brain and cord shall also be noted and recorded.

(D) *Sampling*. Cross-sections of the following areas shall be examined: The forebrain, the center of the cerebrum, the midbrain, the cerebellum, and the medulla oblongata; the spinal cord at

the cervical swelling (C₃–C₆), and proximal sciatic nerve (mid-thigh and sciatic notch) or tibial nerve (at knee). Other sites and tissue elements (e.g., gastrocnemius muscle) shall be examined if deemed necessary. Any observable gross changes shall be recorded.

(iv) *Specimen storage.* Tissue samples from both the central and peripheral nervous system shall be further immersion fixed and stored in appropriate fixative (e.g., 10 percent buffered formalin for light microscopy; 2.5 percent buffered glutaraldehyde or 4.0 percent buffered paraformaldehyde for electron microscopy) for future examination. The volume of fixative versus the volume of tissues in a specimen jar shall be no less than 25:1. All stored tissues shall be washed with buffer for at least 2 hours prior to further tissue processing.

(v) *Histopathology examination*—(A) *Fixation.* Tissue specimens stored in 10 percent buffered formalin may be used for this purpose. All tissues must be immersion fixed in fixative for at least 48 hours prior to further tissue processing.

(B) *Dehydration.* All tissue specimens shall be washed for at least 1 hour with water or buffer, prior to dehydration. (A longer washing time is needed if the specimens have been stored in fixative for a prolonged period of time.) Dehydration can be performed with increasing concentration of graded ethanols up to absolute alcohol.

(C) *Clearing and embedding.* After dehydration, tissue specimens shall be cleared with xylene and embedded in paraffin or paraplast. Multiple tissue specimens (e.g., brain, cord, ganglia) may be embedded together in one single block for sectioning. All tissue blocks shall be labelled showing at least the experiment number, animal number, and specimens embedded.

(D) *Sectioning.* Tissue sections, 5 to 6 microns in thickness, shall be prepared from the tissue blocks and mounted on standard glass slides. It is recommended that several additional sections be made from each block at this time for possible future needs for special stainings. All tissue blocks and slides shall be filed and stored in properly labeled files or boxes.

(E) *Histopathological techniques.* The following general testing sequence is proposed for gathering histopathological data:

(1) *General staining.* A general staining procedure shall be performed on all tissue specimens in the highest treatment group. Hematoxylin and eosin (H&E) shall be used for this purpose. The staining shall be differentiated properly to achieve bluish nuclei with pinkish background.

(2) *Peripheral nerve teasing.* Peripheral nerve fiber teasing shall be used. Detailed staining methodology is available in standard histotechnological manuals such as AFIP (1968), Ralis *et al.* (1973), and Chang (1979) under paragraph (g) of this section. The nerve fiber teasing technique is discussed in Spencer and Schaumberg (1980) under paragraph (g) of this section. A section of normal tissue shall be included in each staining to assure that adequate staining has occurred. Any changes shall be noted and representative photographs shall be taken. If a lesion(s) is observed, the special techniques shall be repeated in the next lower treatment group until no further lesion is detectable.

(F) *Examination.* All stained microscopic slides shall be examined with a standard research microscope. Examples of cellular alterations (e.g., neuronal vacuolation, degeneration, and necrosis) and tissue changes (e.g., gliosis, leukocytic infiltration, and cystic formation) shall be recorded and photographed.

(f) Data collection, reporting, and evaluation. In addition to information meeting the requirements stated under 40 CFR 79.60 and 79.61, the following specific information shall be reported:

(1) *Description of test system and test methods.* (i) A description of the general design of the experiment shall be provided. This shall include a short justification explaining any decisions where professional judgment is involved such as fixation technique and choice of stains; and

(ii) Positive control data from the laboratory performing the test that demonstrate the sensitivity of the procedures being used. Historical data may be used if all essential aspects of

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the experimental protocol are the same.

(2) *Results.* All observations shall be recorded and arranged by test groups. This data may be presented in the following recommended format:

(i) *Description of signs and lesions for each animal.* For each animal, data must be submitted showing its identification (animal number, treatment, dose, duration), neurologic signs, location(s) nature of, frequency, and severity of lesion(s). A commonly-used scale such as 1 +, 2 +, 3 +, and 4 + for degree of severity ranging from very slight to extensive may be used. Any diagnoses derived from neurologic signs and lesions including naturally occurring diseases or conditions, shall also be recorded;

(ii) *Counts and incidence of lesions, by test group.* Data shall be tabulated to show:

(A) The number of animals used in each group, the number of animals displaying specific neurologic signs, and the number of animals in which any lesion was found; and

(B) The number of animals affected by each different type of lesion, the average grade of each type of lesion, and the frequency of each different type and/or location of lesion.

(iii) *Evaluation of data.* (A) An evaluation of the data based on gross necropsy findings and microscopic pathology observations shall be made and supplied. The evaluation shall include the relationship, if any, between the animal's exposure to the test atmosphere and the frequency and severity of any lesions observed; and

(B) The evaluation of dose-response, if existent, for various groups shall be given, and a description of statistical method must be presented. The evaluation of neuropathology data shall include, where applicable, an assessment in conjunction with any other neurotoxicity studies, electrophysiological, behavioral, or neurochemical, which may be relevant to this study.

(g) *References.* For additional background information on this test guideline, the following references should be consulted.

(1) 40 CFR 798.6400, Neuropathology.

(2) AFIP Manual of Histologic Staining Methods. (New York: McGraw-Hill (1968).

(3) Chang, L.W. A Color Atlas and Manual for Applied Histochemistry. (Springfield, IL: Charles C. Thomas, 1979).

(4) Dunnick, J.K., et.al. Thirteen-week Toxicity Study of N-Hexane in B6C3F1 Mice After Inhalation Exposure (1989) Toxicology, 57, 163-172.

(5) Hayat, M.A. "Vol. 1. Biological applications," Principles and techniques of electron microscopy. (New York: Van Nostrand Reinhold, 1970).

(6) Palay S.L., Chan-Palay, V. Cerebellar Cortex: Cytology and Organization. (New York: Springer-Verlag, 1974).

(7) Ralis, H.M., Beesley, R.A., Ralis, Z.A. Techniques in Neurohistology. (London: Butterworths, 1973).

(8) Sette, W. "Pesticide Assessment Guidelines, Subdivision F, Neurotoxicity Test Guidelines." Report No. 540/09-91-123 U.S. Environmental Protection Agency 1991 (NTIS # PB91-154617).

(9) Spencer, P.S., Schaumburg, H.H. (eds). Experimental and Clinical Neurotoxicology. (Baltimore: Williams and Wilkins, 1980).

(10) Zeman, W., Innes, J.R.M. Craigie's Neuroanatomy of the Rat. (New York: Academic, 1963).

[59 FR 33093, June 27, 1994, as amended at 63 FR 63793, Nov. 17, 1999]

§ 79.67 Glial fibrillary acidic protein assay.

(a) *Purpose.* Chemical-induced injury of the nervous system, *i.e.*, the brain, is associated with astrocytic hypertrophy at the site of damage (see O'Callaghan, 1988 in paragraph (e)(3) in this section). Assays of glial fibrillary acidic protein (GFAP), the major intermediate filament protein of astrocytes, can be used to document this response. To date, a diverse variety of chemical insults known to be injurious to the central nervous system have been shown to increase GFAP. Moreover, increases in GFAP can be seen at concentrations below those necessary to produce cytopathology as determined by routine Nissl stains (standard neuropathology). Thus it appears that assays of GFAP represent a sensitive

approach for documenting the existence and location of chemical-induced injury of the central nervous system. Additional functional, histopathological, and biochemical tests are necessary to assess completely the neurotoxic potential of any chemical. This biochemical test is intended to be used in conjunction with neurohistopathological studies.

(b) *Principle of the test method.* (1) This guideline describes the conduct of a radioimmunoassay for measurement of the amount of GFAP in the brain of vehicle emission-exposed and unexposed control animals. It is based on modifications (O'Callaghan & Miller 1985 in paragraph (e)(5), O'Callaghan 1987 in paragraph (e)(1) of this section) of the dot-immunobinding procedure described by Jahn *et al.* (1984) in paragraph (e)(2) of this section. Briefly, brain tissue samples from study animals are assayed for total protein, diluted in dot-immunobinding buffer, and applied to nitrocellulose sheets. The spotted sheets are then fixed, blocked, washed and incubated in anti-GFAP antibody and [I^{125}] Protein A. Bound protein A is then quantified by gamma spectrometry. In lieu of purified protein standards, standard curves are constructed from dilution of a single control sample. By comparing the immunoreactivity of individual samples (both control and exposed groups) with that of the sample used to generate the standard curve, the relative immunoreactivity of each sample is obtained. The immunoreactivity of the control groups is normalized to 100 percent and all data are expressed as a percentage of control. A variation on this radioimmunoassay procedure has been proposed (O'Callaghan 1991 in paragraph (e)(4) of this section) which uses a "sandwich" of GFAP, anti-GFAP, and a chromophore in a microtiter plate format enzyme-link immunosorbent assay (ELISA). The use of this variation shall be justified.

(2) This assay may be done separately or in combination with the subchronic toxicity study, pursuant to the provisions of § 79.62.

(c) *Test procedure*—(1) *Animal selection*—(i) *Species and strain.* Test shall be performed on the species being used in concurrent testing for neurotoxic or

other health effect endpoints. This will generally be a species of laboratory rat. The use of other rodent or non-rodent species shall be justified.

(ii) *Age.* Based on other concurrent testing, young adult rats shall be used. Study rodents shall not be older than ten weeks at the start of exposures.

(iii) *Number of animals.* A minimum of ten animals per group shall be used. The tissues from each animal shall be examined separately.

(iv) *Sex.* Both sexes shall be used unless it is demonstrated that one sex is refractory to the effects.

(2) *Materials.* The materials necessary to perform this study are [I^{125}] Protein A (2–10 μ Ci/ μ g), Anti-sera to GFAP, nitrocellulose paper (0.1 or 0.2 μ m pore size), sample application template (optional; e.g., "Minifold II", Schleicher & Schuell, Keene, NH), plastic sheet incubation trays.

(3) *Study conduct.* (i) All data developed within this study shall be in accordance with good laboratory practice provisions under § 79.60.

(ii) *Tissue Preparation.* Animals are euthanized 24 hours after the last exposure and the brain is excised from the skull. On a cold dissecting platform, the following six regions are dissected freehand: cerebellum; cerebral cortex; hippocampus; striatum; thalamus/hypothalamus; and the rest of the brain. Each region is then weighed and homogenized in 10 volumes of hot (70–90 °C) 1 percent (w/v) sodium dodecyl sulfate (SDS). Homogenization is best achieved through sonic disruption. A motor driven pestle inserted into a tissue grinding vessel is a suitable alternative. The homogenized samples can then be stored frozen at –70 °C for at least 4 years without loss of GFAP content.

(iii) *Total Protein Assay.* Aliquots of the tissue samples are assayed for total protein using the method of Smith *et al.* (1985) in paragraph (e)(7) of this section. This assay may be purchased in kit form (e.g., Pierce Chemical Company, Rockford, IL).

(iv) *Sample Preparation.* Dilute tissue samples in sample buffer (120 mM KCl, 20 mM NaCl, 2 mM $MgCl_2$), 5 mM Hepes, pH 7.4, 0.7 percent Triton X-100) to a final concentration of 0.25 mg total protein per ml (5 μ g/20 μ l).

(v) *Preparation of Standard Curve.* Dilute a single control sample in sample buffer to give at least five standards, between 1 and 10 µg total protein per 20 µl. The suggested values of total protein per 20 µl sample buffer are 1.25, 2.50, 3.25, 5.0, 6.25, 7.5, 8.75, and 10.0 µg.

(vi) *Preparation of Nitrocellulose Sheets.* Nitrocellulose sheets of 0.1 or 0.2 micron pore size are rinsed by immersion in distilled water for 5 minutes and then air dried.

(vii) *Sample Application.* Samples can be spotted onto the nitrocellulose sheets free-hand or with the aid of a template. For free-hand application, draw a grid of squares approximately 2 centimeters by 2 centimeters (cm) on the nitrocellulose sheets using a soft pencil. Spot 5–10 µl portions to the center of each square for a total sample volume of 20 µl. For template aided sample application a washerless microliter capacity sample application manifold is used. Position the nitrocellulose sheet in the sample application device as recommended by the manufacturer and spot a 20 µl sample in one application. Do not wet the nitrocellulose or any support elements prior to sample application. Do not apply vacuum during or after sample application. After spotting samples (using either method), let the sheets air dry. The sheets can be stored at room temperature for several days after sample application.

(viii) *Standard Incubation Conditions.* These conditions have been described by Jahn *et al.* (1984) in paragraph (e)(2) of this section. All steps are carried out at room temperature on a flat shaking platform (one complete excursion every 2–3 seconds). For best results, do not use rocking or orbital shakers. Perform the following steps in enough solution to cover the nitrocellulose sheets to a depth of 1 cm.

(A) Incubate 20 minutes in fixer (25 percent (v/v) isopropanol, 10 percent (v/v) acetic acid).

(B) Discard fixer, wash several times in deionized water to eliminate the fixer, and then incubate for 5 minutes in Tris-buffered saline (TBS): 200 mM NaCl, 60 mM Tris-HCl to pH 7.4.

(C) Discard TBS and incubate 1 hour in blocking solution (0.5 percent gelatin (w/v)) in TBS.

(D) Discard blocking solution and incubate for 2 hours in antibody solution (anti-GFAP antiserum diluted to the desired dilution in blocking solution containing 0.1 percent Triton X-100). Serum anti-bovine GFAP, which cross reacts with GFAP from rodents and humans, can be obtained commercially (e.g., Dako Corp.) and used at a dilution of 1:500.

(E) Discard antibody solution, and wash in 4 changes of TBS for 5 minutes each time. Then wash in TBS for 10 minutes.

(F) Discard TBS and incubate in blocking solution for 30 minutes.

(G) Discard blocking solution and incubate for 1 hour in Protein A solution ([¹²⁵I]-labeled Protein A diluted in blocking solution containing 0.1 percent Triton X-100, sufficient to produce 2000 counts per minute (cpm) per 10 µl of Protein A solution).

(H) Remove Protein A solution (it may be reused once). Wash in 0.1 percent Triton X-100 in TBS (TBSTX) for 5 minutes, 4 times. Then wash in TBSTX for 2–3 hours for 4 additional times. An overnight wash in a larger volume can be used to replace the last 4 washes.

(I) Hang sheets to air-dry. Cut out squares or spots and count radioactivity in a gamma counter.

(ix) *Expression of data.* Compare radioactivity counts for samples obtained from control and treated animals with counts obtained from the standard curve. By comparing the immunoreactivity (counts) of each sample with that of the standard curve, the relative amount of GFAP in each sample can be determined and expressed as a percent of control.

(d) *Data Reporting and Evaluation—(1) Test Report.* In addition to information meeting the requirements stated under 40 CFR 79.60, the following specific information shall be reported:

(i) Body weight and brain region weights at time of sacrifice for each subject tested;

(ii) Indication of whether each subject survived to sacrifice or time of death;

(iii) Data from control animals and blank samples; and

(iv) Statistical evaluation of results;

(2) *Evaluation of Results.* (i) Results shall be evaluated in terms of the extent of change in the amount of GFAP as a function of treatment and dose. GFAP assays (of any brain region) from a minimum of 6 samples typically will result in a standard error of the mean of ± 5 percent. In this case, a chemically-induced increase in GFAP of 115 percent of control is likely to be statistically significant.

(ii) The results of this assay shall be compared to and evaluated with any relevant behavioral and histopathological data.

(e) *References.* For additional background information on this test guideline the following references should be consulted.

(1) Brock, T.O and O'Callaghan, J.P. 1987. Quantitative changes in the synaptic vesicle proteins, synapsin I and p38 and the astrocyte specific protein, glial fibrillary acidic protein, are associated with chemical-induced injury to the rat central nervous system, *J. Neurosci.* 7:931-942.

(2) Jahn, R., Schiebler, W. Greengard, P. 1984. A quantitative dot-immunobinding assay for protein using nitrocellulose membrane filters. *Proc. Natl. Acad. Sci. U.S.A.* 81:1684-1687.

(3) O'Callaghan, J.P. 1988. Neurotypic and gliotypic protein as biochemical markers of neurotoxicity. *Neurotoxicol. Teratol.* 10:445-452.

(4) O'Callaghan, J.P. 1991. Quantification of glial fibrillary acidic protein: comparison of slot-immunobinding assays with a novel sandwich ELISA. *Neurotoxicol. Teratol.* 13:275-281.

(5) O'Callaghan, J.P. and Miller, D.B. 1985. Cerebellar hypoplasia in the Gunn rat is associated with quantitative changes in neurotypic and gliotypic proteins. *J. Pharmacol. Exp. Ther.* 234:522-532.

(6) Sette, W.F. "Pesticide Assessment Guidelines, Subdivision 'F', Hazard Evaluation: Human and Domestic Animals, Addendum 10, Neurotoxicity, Series 81, 82, and 83" US-EPA, Office of Pesticide Programs, EPA-540/09-91-123, March 1991.

(7) Smith, P.K., Krohn, R.I., Hermanson, G.T., Mallia, A.K., Gartner, F.H., Provenzano, M.D., Fujimoto, E.K., Goeke, N.M., Olson, B.J., Klenk, D.C. 1985. Measurement of

protein using bicinchoninic acid. *Annal. Biochem.* 150:76-85.

§ 79.68 *Salmonella typhimurium* reverse mutation assay.

(a) *Purpose.* The *Salmonella typhimurium* histidine (his) reversion system is a microbial assay which measures his⁻ → his⁺ reversion induced by chemicals which cause base changes or frameshift mutations in the genome of the microorganism *Salmonella typhimurium*.

(b) *Definitions.* For the purposes of this section, the following definitions apply:

Base pair mutagen means an agent which causes a base change in DNA. In a reversion assay, this change may occur at the site of the original mutation or at a second site in the chromosome.

Frameshift mutagen is an agent which causes the addition or deletion of single or multiple base pairs in the DNA molecule.

Salmonella typhimurium reverse mutation assay detects mutation in a gene of a histidine-requiring strain to produce a histidine independent strain of this organism.

(c) *Reference substances.* These may include, but need not be limited to, sodium azide, 2-nitrofluorene, 9-aminoacridine, 2-aminoanthracene, congo red, benzopurpurin 4B, trypan blue or direct blue 1.

(d) *Test method*—(1) *Principle.* Motor vehicle combustion emissions from fuel or additive/base fuel mixtures are, first, filtered to trap particulate matter and, then, passed through a sorbent resin to trap semi-volatile gases. Bacteria are separately exposed to the extract from both the filtered particulates and the resin-trapped organics. Assays are conducted using both test mixtures with and without a metabolic activation system and exposed cells are plated onto minimal medium. After a suitable period of incubation, revertant colonies are counted in test cultures and compared to the number of spontaneous revertants in unexposed control cultures.

(2) *Description.* Several methods for performing the test have been described. The procedures described here are for the direct plate incorporation

method and the azo-reduction method. Among those used are:

- (i) Direct plate incorporation method;
- (ii) Preincubation method;
- (iii) Azo-reduction method;
- (iv) Microsuspension method; and
- (v) Spiral assay.

(3) *Strain selection*—(i) *Designation*. Five tester strains shall be used in the assay. At the present time, TA1535, TA1537, TA98, and TA100 are designated as tester strains. The fifth strain will be chosen from the pool of *Salmonella* strains commonly used to determine the degree to which nitrated organic compounds, *i.e.*, nitroarenes, contribute to the overall mutagenic activity of a test substance. TA98/1,8-DNP₆ or other suitable Rosenkranz nitro-reductase resistant strains will be considered acceptable. The choice of the particular strain is left to the discretion of the researcher. However, the researcher shall justify the use of the selected bacterial tester strains.

(ii) *Preparation and storage of bacterial tester strains*. Recognized methods of stock culture preparation and storage shall be used. The requirement of histidine for growth shall be demonstrated for each strain. Other phenotypic characteristics shall be checked using such methods as crystal violet sensitivity and resistance to ampicillin. Spontaneous reversion frequency shall be in the range expected as reported in the literature and as established in the laboratory by historical control values.

(iii) *Bacterial growth*. Fresh cultures of bacteria shall be grown up to the late exponential or early stationary phase of growth (approximately 108–109 cells per ml).

(4) *Exogenous metabolic activation*. Bacteria shall be exposed to the test substance both in the presence and absence of an appropriate exogenous metabolic activation system. For the direct plate incorporation method, the most commonly used system is a cofactor-supplemented postmitochondrial fraction prepared from the livers of rodents treated with enzyme-inducing agents, such as Aroclor 1254. For the azo-reduction method, a cofactor-supplemented postmitochondrial fraction (S-9) prepared from the livers of untreated hamsters is preferred. For this

method, the cofactor supplement shall contain flavin mononucleotide, exogenous glucose 6-phosphate dehydrogenase, NADH and excess of glucose-6-phosphate.

(5) *Control groups*—(i) *Concurrent controls*. Concurrent positive and negative (untreated) controls shall be included in each experiment. Positive controls shall ensure both strain responsiveness and efficacy of the metabolic activation system.

(ii) *Strain specific positive controls* shall be included in the assay. Examples of strain specific positive controls are as follows:

(A) Strain TA1535, TA100: sodium azide;

(B) TA98: 2-nitrofluorene (without activation), 2-anthramine (with activation);

(C) TA1537: 9-aminoacridine; and

(D) TA98/1,8-DNP₆: benzo(a)pyrene (with activation).

The papers by Claxton *et al.*, 1991 and 1992 in paragraph (g) in this section will provide helpful information for the selection of positive controls.

(iii) *Positive controls to ensure the efficacy of the activation system*. The positive control reference substances for tests including a metabolic activation system shall be selected on the basis of the type of activation system used in the test. 2-Aminoanthracene is an example of a positive control compound in plate-incorporation tests using postmitochondrial fractions from the livers of rodents treated with enzyme-inducing agents such as Aroclor-1254. Congo red is an example of a positive control compound in the azo-reduction method. Other positive control reference substances may be used.

(iv) *Class-specific positive controls*. The azo-reduction method shall include positive controls from the same class of compounds as the test agent wherever possible.

(6) *Sampling the test atmosphere*. (i) Extracts of test emissions are collected on Teflon®-coated glass fiber filters using an exhaust dilution setup. The particulates are extracted with dichloromethane (DCM) using Soxhlet extraction techniques. Extracts in DCM can be stored at dry ice temperatures until use.

(ii) Gaseous hydrocarbons passing through the filter are trapped by a porous, polymer resin, like XAD-2/styrene-divinylbenzene, or an equivalent product. Methylene chloride is used to extract the resin and the sample is evaporated to dryness before storage or use.

(iii) Samples taken from this material are then used to expose the cells in this assay. Final concentration of extracts in solvent/vehicle, or after solvent exchange, shall not interfere with cell viability or growth rate. The paper by Stump (1982) in paragraph (g) of this section is useful for preparing extracts of particulate and semi-volatile organic compounds from diesel and gasoline exhaust stream.

(iv) Exposure concentrations. (A) The test should initially be performed over a broad range of concentrations. Among the criteria to be taken into consideration for determining the upper limits of test substance concentration are cytotoxicity and solubility. Cytotoxicity of the test chemical may be altered in the presence of metabolic activation systems. Toxicity may be evidenced by a reduction in the number of spontaneous revertants, a clearing of the background lawn or by the degree of survival of treated cultures. Relatively insoluble samples shall be tested up to the limits of solubility. The upper test chemical concentration shall be determined on a case by case basis.

(B) Generally, a maximum of 5 mg/plate for pure substances is considered acceptable. At least 5 different concentrations of test substance shall be used with adequate intervals between test points.

(C) When appropriate, a single positive response shall be confirmed by testing over a narrow range of concentrations.

(e) *Test performance.* All data developed within this study shall be in accordance with good laboratory practice provisions under § 79.60.

(1) Direct plate incorporation method. When testing with metabolic activation, test solution, bacteria, and 0.5 ml of activation mixture containing an adequate amount of postmitochondrial fraction shall be added to the liquid overlay agar and mixed. This mixture

is poured over the surface of a selective agar plate. Overlay agar shall be allowed to solidify before incubation. At the end of the incubation period, revertant colonies per plate shall be counted. When testing without metabolic activation, the test sample and 0.1 ml of a fresh bacterial culture shall be added to 2.0 ml of overlay agar.

(2) Azo-reduction method. When testing with metabolic activation, 0.5 ml of activation mixture containing 150 µl of postmitochondrial fraction and 0.1 ml of bacterial culture shall be added to a test tube kept on ice. 0.1 ml of test solution shall be added, and the tubes shall be incubated with shaking at 30 °C for 30 minutes. At the end of the incubation period, 2.0 ml of agar shall be added to each tube, the contents mixed and poured over the surface of a selective agar plate. Overlay agar shall be allowed to solidify before incubation. At the end of the incubation period, revertant colonies per plate shall be counted. For tests without metabolic activation, 0.5 ml of buffer shall be used in place of the 0.5 ml of activation mixture. All other procedures shall be the same as those used for the test with metabolic activation.

(3) Other methods/modifications may also be appropriate.

(4) Media. An appropriate selective medium with an adequate overlay agar shall be used.

(5) Incubation conditions. All plates within a given experiment shall be incubated for the same time period. This incubation period shall be for 48-72 hours at 37 °C.

(6) Number of cultures. All plating shall be done at least in triplicate.

(f) *Data and report*—(1) *Treatment of results.* Data shall be presented as number of revertant colonies per plate, revertants per kilogram (or liter) of fuel, and as revertants per kilometer (or mile, or brake-horsepower/hour, as appropriate) for each replicate and dose. These same measures shall be recorded on both the negative and positive control plates. The mean number of revertant colonies per plate, revertants per kilogram (or liter) of fuel, and revertants per kilometer (or mile, or brake-horsepower/hour), as well as individual plate counts and standard deviations shall be presented

for the test substance, positive control, and negative control plates.

(2) *Statistical evaluation.* Data shall be evaluated by appropriate statistical methods. Those methods shall include, at a minimum, means and standard deviations of the reversion data.

(3) *Interpretation of results.* (i) There are several criteria for determining a positive result, one of which is a statistically significant dose-related increase in the number of revertants. Another criterion may be based upon detection of a reproducible and statistically significant positive response for at least one of the test substance concentrations.

(ii) A test substance which does not produce either a statistically significant dose-related increase in the number of revertants or a statistically significant and reproducible positive response at any one of the test points is considered nonmutagenic in this system.

(iii) Both biological and statistical significance shall be considered together in the evaluation.

(4) *Test evaluation.* (i) Positive results from the *Salmonella typhimurium* reverse mutation assay indicate that, under the test conditions, the test substance induces point mutations by base changes or frameshifts in the genome of this organism.

(ii) Negative results indicate that under the test conditions the test substance is not mutagenic in *Salmonella typhimurium*.

(5) *Test report.* In addition to the reporting recommendations as specified under 40 CFR 79.60, the following specific information shall be reported:

(i) Sampling method(s) used and manner in which cells are exposed to sample solution;

(ii) Bacterial strains used;

(iii) Metabolic activation system used (source, amount and cofactor); details of preparation of postmitochondrial fraction;

(iv) Concentration levels and rationale for selection of concentration range;

(v) Description of positive and negative controls, and concentrations used, if appropriate;

(vi) Individual plate counts, mean number of revertant colonies per plate,

number of revertants per kilometer (or mile, or brake-horsepower/hour), and standard deviation; and

(vii) Dose-response relationship, if applicable.

(g) *References.* For additional background information on this test guideline, the following references should be consulted.

(1) 40 CFR 798.5265, The *Salmonella typhimurium* reverse mutation assay.

(2) Ames, B.N., McCann, J., Yamasaki, E. "Methods for detecting carcinogens and mutagens with the *Salmonella/mammalian* microsome mutagenicity test," *Mutation Research* 31:347-364 (1975).

(3) Huisinigh, J.L., et al., "Mutagenic and Carcinogenic Potency of Extracts of Diesel and Related Environmental Emissions: Study Design, Sample Generation, Collection, and Preparation". In: *Health Effects of Diesel Engine Emissions*, Vol. II, W.E. Pepekko, R., M., Danner and N. A. Clarke (Eds.), US EPA, Cincinnati, EPA-600/9-80-057b, pp. 788-800 (1980).

(4) [Reserved]

(5) Claxton, L.D., Allen, J., Auletta, A., Mortelmans, K., Nestmann, E., Zeiger, E. "Guide for the *Salmonella typhimurium/mammalian* microsome tests for bacterial mutagenicity" *Mutation Research* 189(2):83-91 (1987).

(6) Claxton, L., Houk, V.S., Allison, J.C., Creason, J., "Evaluating the relationship of metabolic activation system concentrations and chemical dose concentrations for the *Salmonella* Spiral and Plate Assays" *Mutation Research* 253:127-136 (1991).

(7) Claxton, L., Houk, V.S., Monteith, L.G., Myers, L.E., Hughes, T.J., "Assessing the use of known mutagens to calibrate the *Salmonella typhimurium* mutagenicity assay: I. Without exogenous activation." *Mutation Research* 253:137-147 (1991).

(8) Claxton, L., Houk, V.S., Warner, J.R., Myers, L.E., Hughes, T.J., "Assessing the use of known mutagens to calibrate the *Salmonella typhimurium* mutagenicity assay: II. With exogenous activation." *Mutation Research* 253:149-159 (1991).

(9) Claxton, L., Creason, J., Lares, B., Augurell, E., Bagley, S., Bryant, D.W., Courtois, Y.A., Douglas, G., Clare, C.B., Goto, S., Quillardet, P., Jagannath,

D.R., Mohn, G., Neilsen, P.A., Ohnishi, Y., Ong, T., Pederson, T.C., Shimizu, H., Nylund, L., Tokiwa, H., Vink, I.G.R., Wang, Y., Warshawsky, D., “Results of the IPCS Collaborative Study on Complex Mixtures” Mutation Research 276:23–32 (1992).

(10) Claxton, L., Douglas, G., Krewski, D., Lewtas, J., Matsushita, H., Rosenkranz, H., “Overview, conclusions, and recommendations of the IPCS Collaborative Study on Complex Mixtures” Mutation Research 276:61–80 (1992).

(11) Houk, V.S., Schalkowsky, S., and Claxton, L.D., “Development and Validation of the Spiral Salmonella Assay: An Automated Approach to Bacterial Mutagenicity Testing” Mutation Research 223:49–64 (1989).

(12) Jones, E., Richold, M., May, J.H., and Saje, A. “The Assessment of the Mutagenic Potential of Vehicle Engine Exhaust in the Ames Salmonella Assay Using a Direct Exposure Method” Mutation Research 97:35–40 (1985).

(13) Maron, D., and Ames, B. N., Revised methods for the Salmonella mutagenicity test, Mutation Research, 113:173–212 (1983).

(14) Prival, M.J., and Mitchell, V.D. “Analysis of a method for testing azo dyes for mutagenic activity in *Salmonella typhimurium* in the presence of flavin mononucleotide and hamster liver S-9,” Mutation Research 97:103–116 (1982).

(15) Rosenkranz, H.S., et.al. “Nitropyrenes: Isolation, identification, and reduction of mutagenic impurities in carbon black and toners” Science 209:1039–43 (1980).

(16) Stump, F., Snow, R., et.al., “Trapping gaseous hydrocarbons for mutagenic testing” SAE Technical Paper Series, No. 820776 (1982).

(17) Vogel, H.J., Bonner, D.M. “Acetylornithinase of *E. coli*: partial purification and some properties,” Journal of Biological Chemistry. 218:97–106 (1956).

[59 FR 33093, June 27, 1994, as amended at 61 FR 36513, July 11, 1996]

PART 80—REGULATION OF FUELS AND FUEL ADDITIVES

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Subparts N–O [Reserved]

APPENDIXES A–G TO PART 80 [RESERVED]

AUTHORITY: 42 U.S.C. 7414, 7521, 7542, 7545, and 7601(a).

SOURCE: 38 FR 1255, Jan. 10, 1973, unless otherwise noted.

Subpart A—General Provisions

§ 80.1 Scope.

(a) This part prescribes regulations for the renewable fuel program under the Clean Air Act section 211(o) (42 U.S.C. 7545(o)).

(b) This part also prescribes regulations for the labeling of fuel dispensing systems for oxygenated gasoline at retail under the Clean Air Act section 211(m)(4) (42 U.S.C. 7545(m)(4)).

(c) Nothing in this part is intended to preempt the ability of state or local governments to control or prohibit any fuel or fuel additive for use in motor vehicles and motor vehicle engines which is not explicitly regulated by this part.

[85 FR 78465, Dec. 4, 2020]

§ 80.2 Definitions.

The definitions of this section apply in this part unless otherwise specified. Note that many terms defined here are common terms that have specific meanings under this part.

Actual peak capacity means 105% of the maximum annual volume of renewable fuels produced from a specific renewable fuel production facility on a calendar year basis.

(1) For facilities that commenced construction prior to December 19, 2007, the actual peak capacity is based on the last five calendar years prior to 2008, unless no such production exists, in which case actual peak capacity is based on any calendar year after startup during the first three years of operation.

(2) For facilities that commenced construction after December 19, 2007 and before January 1, 2010, that are fired with natural gas, biomass, or a combination thereof, the actual peak capacity is based on any calendar year after startup during the first three years of operation.

(3) For all other facilities not included above, the actual peak capacity is based on the last five calendar years prior to the year in which the owner or operator registers the facility under the provisions of § 80.1450, unless no such production exists, in which case actual peak capacity is based on any calendar year after startup during the first three years of operation.

Adjusted cellulosic content means the percent of organic material that is cellulose, hemicellulose, and lignin.

Advanced biofuel means renewable fuel, other than ethanol derived from cornstarch, that has lifecycle greenhouse gas emissions that are at least 50

percent less than baseline lifecycle greenhouse gas emissions.

Agricultural digester means an anaerobic digester that processes only animal manure, crop residues, or separated yard waste with an adjusted cellulosic content of at least 75%. Each and every material processed in an agricultural digester must have an adjusted cellulosic content of at least 75%.

Algae grown photosynthetically are algae that are grown such that their energy and carbon are predominantly derived from photosynthesis.

Annual cover crop means an annual crop, planted as a rotation between primary planted crops, or between trees and vines in orchards and vineyards, typically to protect soil from erosion and to improve the soil between periods of regular crops. An annual cover crop has no existing market to which it can be sold except for its use as feedstock for the production of renewable fuel.

Approved pathway means a pathway listed in table 1 to § 80.1426 or in a petition approved under § 80.1416 that is eligible to generate RINs of a particular D code.

Areas at risk of wildfire are those areas in the “wildland-urban interface”, where humans and their development meet or intermix with wildland fuel. Note that, for guidance, the SILVIS laboratory at the University of Wisconsin maintains a website that provides a detailed map of areas meeting this criteria at: www.silvis.forest.wisc.edu/projects/US_WUI_2000.asp. The SILVIS laboratory is located at 1630 Linden Drive, Madison, Wisconsin 53706 and can be contacted at (608) 263-4349.

A-RIN means a RIN verified during the interim period by a registered independent third-party auditor using a QAP that has been approved under § 80.1469(a) following the audit process specified in § 80.1472.

Assigned RIN means a RIN assigned to a volume of renewable fuel or RNG pursuant to § 80.1426(e) or § 80.125(c), respectively, with a K code of 1.

Audited facility means any facility audited under an approved quality assurance plan under this part.

Audited party means a party that pays for or receives services from an independent third party under this part.

Baseline lifecycle greenhouse gas emissions means the average lifecycle greenhouse gas emissions for gasoline or diesel (whichever is being replaced by the renewable fuel) sold or distributed as transportation fuel in 2005.

Baseline volume means the permitted capacity or, if permitted capacity cannot be determined, the actual peak capacity or nameplate capacity as applicable pursuant to § 80.1450(b)(1)(v)(A) through (C), of a specific renewable fuel production facility on a calendar year basis.

Batch pathway means each combination of approved pathway, equivalence value as determined under § 80.1415, and verification status for which a facility is registered.

Biocrude means a liquid biointermediate that meets all the following requirements:

(1) It is produced at a biointermediate production facility using one or more of the following processes:

(i) A process identified in row M under table 1 to § 80.1426.

(ii) A process identified in a pathway listed in a petition approved under § 80.1416 for the production of renewable fuel produced from biocrude.

(2) It is to be used to produce renewable fuel at a refinery as defined in 40 CFR 1090.80.

Biodiesel means a mono-alkyl ester that meets ASTM D6751 (incorporated by reference, see § 80.12).

Biodiesel distillation bottoms means the heavier product from distillation at a biodiesel production facility that does not meet the definition of biodiesel.

Biogas means a mixture of biogas, methane, inert gases, and impurities that meets all the following requirements:

(1) It is produced through the anaerobic digestion of renewable biomass under an approved pathway.

(2) Non-renewable components have not been added.

(3) It requires removal of additional components to be suitable for its designated use (e.g., as a biointermediate, to produce RNG, or to produce biogas-derived renewable fuel).

Biogas closed distribution system means the infrastructure contained between when biogas is produced and when biogas or treated biogas is used to produce biogas-derived renewable fuel within a discrete location or series of locations that does not include placement of biogas, treated biogas, or RNG on a natural gas commercial pipeline system.

Biogas closed distribution system RIN generator means any party that generates RINs for renewable CNG/LNG in a biogas closed distribution system.

Biogas-derived renewable fuel means renewable CNG/LNG or any other renewable fuel that is produced from biogas or RNG, including from biogas used as a biointermediate.

Biogas producer means any person who owns, leases, operates, controls, or supervises a biogas production facility.

Biogas production facility means any facility where biogas is produced from renewable biomass under an approved pathway.

Biogas used as a biointermediate means biogas or treated biogas that a renewable fuel producer uses to produce renewable fuel other than renewable CNG/LNG at a separate facility from where the biogas is produced.

Biointermediate means any feedstock material that is intended for use to produce renewable fuel and meets all the following requirements:

(1) It is produced from renewable biomass.

(2) It has not previously had RINs generated for it.

(3) It is produced at a facility registered with EPA that is different than the facility at which it is used as feedstock material to produce renewable fuel.

(4) It is produced from the feedstock material identified in an approved pathway, will be used to produce the renewable fuel listed in that approved pathway, and is produced and processed in accordance with the process(es) listed in that approved pathway.

(5) Is one of the following types of biointermediate:

(i) Biocrude.

(ii) Biodiesel distillate bottoms.

(iii) Biomass-based sugars.

(iv) Digestate.

(v) Free fatty acid (FFA) feedstock.

- (vi) Glycerin.
- (vii) Soapstock.
- (viii) Undenatured ethanol.
- (ix) Biogas used to make a renewable fuel other than renewable CNG/LNG.

(6) It is not a feedstock material identified in an approved pathway that is used to produce the renewable fuel specified in that approved pathway.

Biointermediate import facility means any facility as defined in 40 CFR 1090.80 where a biointermediate is imported from outside the covered location into the covered location.

Biointermediate importer means any person who owns, leases, operates, controls, or supervises a biointermediate import facility.

Biointermediate producer means any person who owns, leases, operates, controls, or supervises a biointermediate production facility.

Biointermediate production facility means all of the activities and equipment associated with the production of a biointermediate starting from the point of delivery of feedstock material to the point of final storage of the end biointermediate product, which are located on one property, and are under the control of the same person (or persons under common control).

Biomass-based diesel means a renewable fuel that has lifecycle greenhouse gas emissions that are at least 50 percent less than baseline lifecycle greenhouse gas emissions and meets all of the requirements of paragraph (1) of this definition:

- (1)(i) Is a transportation fuel, transportation fuel additive, heating oil, or jet fuel.
- (ii) Meets the definition of either biodiesel or non-ester renewable diesel.
- (iii) Is registered as a motor vehicle fuel or fuel additive under 40 CFR part 79, if the fuel or fuel additive is intended for use in a motor vehicle.

(2) Renewable fuel produced from renewable biomass that is co-processed with petroleum is not biomass-based diesel.

Biomass-based sugars means sugars (e.g., dextrose, sucrose, etc.) extracted from renewable biomass under an approved pathway, other than through a form change specified in § 80.1460(k)(2).

Biomethane means methane produced from renewable biomass.

B-RIN means a RIN verified during the interim period by a registered independent third-party auditor using a QAP that has been approved under § 80.1469(b) following the audit process specified in § 80.1472.

Business day has the meaning given in 40 CFR 1090.80.

Canola/Rapeseed oil means either of the following:

(1) *Canola oil* is oil from the plants *Brassica napus*, *Brassica rapa*, *Brassica juncea*, *Sinapis alba*, or *Sinapis arvensis*, and which typically contains less than 2 percent erucic acid in the component fatty acids obtained.

(2) *Rapeseed oil* is the oil obtained from the plants *Brassica napus*, *Brassica rapa*, or *Brassica juncea*.

Carrier means any distributor who transports or stores or causes the transportation or storage of gasoline or diesel fuel without taking title to or otherwise having any ownership of the gasoline or diesel fuel, and without altering either the quality or quantity of the gasoline or diesel fuel.

Category 3 (C3) marine vessels, for the purposes of this part 80, are vessels that are propelled by engines meeting the definition of “Category 3” in 40 CFR 1042.901.

CBOB means gasoline blendstock that could become conventional gasoline solely upon the addition of oxygenate.

Cellulosic biofuel means renewable fuel derived from any cellulose, hemicellulose, or lignin that has lifecycle greenhouse gas emissions that are at least 60 percent less than the baseline lifecycle greenhouse gas emissions.

Cellulosic biogas feedstock means an individual feedstock used to produce biogas that contains at least 75% average adjusted cellulosic content and whose batch pathway has been assigned a D code of 3 or 7.

Cellulosic diesel is any renewable fuel which meets both the definitions of cellulosic biofuel and biomass-based diesel. Cellulosic diesel includes heating oil and jet fuel produced from cellulosic feedstocks.

Certified non-transportation 15 ppm distillate fuel or *certified NTDF* means distillate fuel that meets all the following:

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(1) The fuel has been certified under 40 CFR 1090.1000 as meeting the ULSD standards in 40 CFR 1090.305.

(2) The fuel has been designated under 40 CFR 1090.1015 as certified NTDF.

(3) The fuel has also been designated under 40 CFR 1090.1015 as 15 ppm heating oil, 15 ppm ECA marine fuel, or other non-transportation fuel (*e.g.*, jet fuel, kerosene, or distillate global marine fuel).

(4) The fuel has not been designated under 40 CFR 1090.1015 as ULSD or 15 ppm MVNRLM diesel fuel.

(5) The PTD for the fuel meets the requirements in § 80.1453(e).

Combined heat and power (CHP), also known as cogeneration, refers to industrial processes in which waste heat from the production of electricity is used for process energy in a biointermediate or renewable fuel production facility.

Continuous measurement means the automated measurement of specified parameters of biogas, treated biogas, or natural gas as follows:

(1) For in-line GC meters, automated measurement must occur and be recorded no less frequent than once every 15 minutes.

(2) For flow meters, automated measurement must occur no less frequent than once every 6 seconds, and weighted totals of such measurement must be recorded at no more than 1 minute intervals.

(3) For all other meters, automated measurement and recording must occur at a frequency specified at registration.

Contractual affiliate means one of the following:

(1) Two parties are contractual affiliates if they have an explicit or implicit agreement in place for one to purchase or hold RINs on behalf of the other or to deliver RINs to the other. This other party may or may not be registered under the RFS program.

(2) Two parties are contractual affiliates if one RIN-owning party purchases or holds RINs on behalf of the other. This other party may or may not be registered under the RFS program.

Control area means a geographic area in which only oxygenated gasoline under the oxygenated gasoline program may be sold or dispensed, with bound-

aries determined by Clean Air Act section 211(m) (42 U.S.C. 7545(m)).

Control period means the period during which oxygenated gasoline must be sold or dispensed in any control area, pursuant to Clean Air Act section 211(m)(2) (42 U.S.C. 7545(m)(2)).

Conventional gasoline (CG) means any gasoline that has been certified under 40 CFR 1090.1000(b) and is not RFG.

Co-processed means that renewable biomass or a biointermediate was simultaneously processed with fossil fuels or other non-renewable feedstock in the same unit or units to produce a fuel that is partially derived from renewable biomass or a biointermediate.

Co-processed cellulosic diesel is any renewable fuel that meets the definition of cellulosic biofuel and meets all the requirements of paragraph (1) of this definition:

(1)(i) Is a transportation fuel, transportation fuel additive, heating oil, or jet fuel.

(ii) Meets the definition of either biodiesel or non-ester renewable diesel.

(iii) Is registered as a motor vehicle fuel or fuel additive under 40 CFR part 79, if the fuel or fuel additive is intended for use in a motor vehicle.

(2) Co-processed cellulosic diesel includes all the following:

(i) Heating oil and jet fuel produced from cellulosic feedstocks.

(ii) Cellulosic biofuel produced from cellulosic feedstocks co-processed with petroleum.

Corn oil extraction means the recovery of corn oil from the thin stillage and/or the distillers grains and solubles produced by a dry mill corn ethanol plant, most often by mechanical separation.

Corn oil fractionation means a process whereby seeds are divided in various components and oils are removed prior to fermentation for the production of ethanol.

Corporate affiliate means one of the following:

(1) Two RIN-holding parties are corporate affiliates if one owns or controls ownership of more than 20 percent of the other.

(2) Two RIN-holding parties are corporate affiliates if one parent company owns or controls ownership of more than 20 percent of both.

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Corporate affiliate group means a group of parties in which each party is a corporate affiliate to at least one other party in the group.

Covered location means the contiguous 48 states, Hawaii, and any state or territory that has received an approval from EPA to opt-in to the RFS program under § 80.1443.

Crop residue means biomass left over from the harvesting or processing of planted crops from existing agricultural land and any biomass removed from existing agricultural land that facilitates crop management (including biomass removed from such lands in relation to invasive species control or fire management), whether or not the biomass includes any portion of a crop or crop plant. Biomass is considered crop residue only if the use of that biomass for the production of renewable fuel has no significant impact on demand for the feedstock crop, products produced from that feedstock crop, and all substitutes for the crop and its products, nor any other impact that would result in a significant increase in direct or indirect GHG emissions.

Cropland is land used for production of crops for harvest and includes cultivated cropland, such as for row crops or close-grown crops, and non-cultivated cropland, such as for horticultural or aquatic crops.

Diesel fuel means any of the following:

(1) Any fuel sold in any State or Territory of the United States and suitable for use in diesel engines, and that is one of the following:

(i) A distillate fuel commonly or commercially known or sold as No. 1 diesel fuel or No. 2 diesel fuel.

(ii) A non-distillate fuel other than residual fuel with comparable physical and chemical properties (*e.g.*, biodiesel fuel).

(iii) A mixture of fuels meeting the criteria of paragraphs (1)(i) and (ii) of this definition.

(2) For purposes of subpart M of this part, any and all of the products specified at § 80.1407(e).

Digestate means the material that remains following the anaerobic digestion of renewable biomass in an anaerobic digester. Digestate must only contain the leftovers that were unable to

be completely converted to biogas in an anaerobic digester that is part of an EPA-accepted registration under § 80.1450.

Distillate fuel means diesel fuel and other petroleum fuels that can be used in engines that are designed for diesel fuel. For example, jet fuel, heating oil, kerosene, No. 4 fuel, DMX, DMA, DMB, and DMC are distillate fuels; and natural gas, LPG, gasoline, and residual fuel are not distillate fuels. Blends containing residual fuel may be distillate fuels.

Distillers corn oil means corn oil recovered at any point downstream of when a dry mill ethanol or butanol plant grinds the corn, provided that the corn starch is converted to ethanol or butanol, the recovered oil is unfit for human food use without further refining, and the distillers grains remaining after the dry mill and oil recovery processes are marketable as animal feed.

Distillers sorghum oil means grain sorghum oil recovered at any point downstream of when a dry mill ethanol or butanol plant grinds the grain sorghum, provided that the grain sorghum is converted to ethanol or butanol, the recovered oil is unfit for human food use without further refining, and the distillers grains remaining after the dry mill and oil recovery processes are marketable as animal feed.

Distributor means any person who transports or stores or causes the transportation or storage of gasoline or diesel fuel at any point between any gasoline or diesel fuel refinery or importer's facility and any retail outlet or wholesale purchaser-consumer's facility.

DX RIN means a RIN with a D code of X, where X is the D code of the renewable fuel as identified under § 80.1425(g), generated under § 80.1426, and submitted under § 80.1452. For example, a D6 RIN is a RIN with a D code of 6.

ECA marine fuel is diesel, distillate, or residual fuel that meets the criteria of paragraph (1) of this definition, but not the criteria of paragraph (2) of this definition.

(1) All diesel, distillate, or residual fuel used, intended for use, or made available for use in Category 3 marine vessels while the vessels are operating

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within an Emission Control Area (ECA), or an ECA associated area, is ECA marine fuel, unless it meets the criteria of paragraph (2) of this definition.

(2) ECA marine fuel does not include any of the following fuel:

(i) Fuel used by exempted or excluded vessels (such as exempted steamships), or fuel used by vessels allowed by the U.S. government pursuant to MARPOL Annex VI Regulation 3 or Regulation 4 to exceed the fuel sulfur limits while operating in an ECA or an ECA associated area (see 33 U.S.C. 1903).

(ii) Fuel that conforms fully to the requirements of this part for MVNRLM diesel fuel (including being designated as MVNRLM).

(iii) Fuel used, or made available for use, in any diesel engines not installed on a Category 3 marine vessel.

Ecologically sensitive forestland means forestland that meets either of the following criteria:

(1) An ecological community with a global or state ranking of critically imperiled, imperiled or rare pursuant to a State Natural Heritage Program. For examples of such ecological communities, see “Listing of Forest Ecological Communities Pursuant to 40 CFR 80.1401; S1-S3 communities,” which is number EPA-HQ-OAR-2005-0161-1034.1 in the public docket, and “Listing of Forest Ecological Communities Pursuant to 40 CFR 80.1401; G1-G2 communities,” which is number EPA-HQ-OAR-2005-0161-2906.1 in the public docket. This material is available for inspection at the EPA Docket Center, EPA/DC, EPA West, Room 3334, 1301 Constitution Ave. NW, Washington, DC. The telephone number for the Air Docket is (202) 566-1742.

(2) Old growth or late successional, characterized by trees at least 200 years in age.

End of day means 7 a.m. Coordinated Universal Time (UTC).

Energy cane means a complex hybrid in the *Saccharum* genus that has been bred to maximize cellulosic rather than sugar content. For the purposes of this part:

(1) Energy cane excludes the species *Saccharum spontaneum*, but may include hybrids derived from *S.*

spontaneum that have been developed and publicly released by USDA; and

(2) Energy cane only includes cultivars that have, on average, at least 75% adjusted cellulosic content on a dry mass basis.

EPA Moderated Transaction System (EMTS) means a closed, EPA moderated system that provides a mechanism for screening and tracking RINs under § 80.1452.

Existing agricultural land is cropland, pastureland, and land enrolled in the Conservation Reserve Program (administered by the U.S. Department of Agriculture’s Farm Service Agency) that was cleared or cultivated prior to December 19, 2007, and that, on December 19, 2007, was:

(1) Nonforested; and

(2) Actively managed as agricultural land or fallow, as evidenced by records which must be traceable to the land in question, which must include one of the following:

(i) Records of sales of planted crops, crop residue, or livestock, or records of purchases for land treatments such as fertilizer, weed control, or seeding.

(ii) A written management plan for agricultural purposes.

(iii) Documented participation in an agricultural management program administered by a Federal, state, or local government agency.

(iv) Documented management in accordance with a certification program for agricultural products.

Exporter of renewable fuel means all buyers, sellers, and owners of the renewable fuel in any transaction that results in renewable fuel being transferred from a covered location to a destination outside of the covered locations.

Facility means all of the activities and equipment associated with the production of renewable fuel, biogas, treated biogas, RNG, or a biointermediate—starting from the point of delivery of feedstock material to the point of final storage of the end product—that are located on one property and are under the control of the same person (or persons under common control).

Fallow means cropland, pastureland, or land enrolled in the Conservation Reserve Program (administered by the

U.S. Department of Agriculture’s Farm Service Agency) that is intentionally left idle to regenerate for future agricultural purposes with no seeding or planting, harvesting, mowing, or treatment during the fallow period.

Feedstock aggregator means any person who collects feedstock from feedstock suppliers or other feedstock aggregators and distributes such feedstock to a renewable fuel producer, bio-intermediate producer, or other feedstock aggregator.

Feedstock supplier means any person who generates and supplies feedstock to a feedstock aggregator, renewable fuel producer, biogas producer, or bio-intermediate producer.

Foreign biogas producer means any person who owns, leases, operates, controls, or supervises a biogas production facility outside of the United States.

Foreign ethanol producer means a foreign renewable fuel producer who produces ethanol for use in transportation fuel, heating oil, or jet fuel but who does not add ethanol denaturant to their product as specified in paragraph (2) of the definition of “renewable fuel” in this section.

Foreign renewable fuel producer means a person from a foreign country or from an area outside the covered location who produces renewable fuel for use in transportation fuel, heating oil, or jet fuel for export to the covered location. Foreign ethanol producers are considered foreign renewable fuel producers.

Foreign RNG producer means any person who owns, leases, operates, controls, or supervises an RNG production facility outside of the United States.

Forestland is generally undeveloped land covering a minimum area of 1 acre upon which the primary vegetative species are trees, including land that formerly had such tree cover and that will be regenerated and tree plantations. Tree-covered areas in intensive agricultural crop production settings, such as fruit orchards, or tree-covered areas in urban settings, such as city parks, are not considered forestland.

Free fatty acid (FFA) feedstock means a biointermediate that is composed of at least 50 percent free fatty acids. FFA feedstock must not include any

free fatty acids from the refining of crude palm oil.

Fuel for use in an ocean-going vessel means, for this part only:

(1) Any marine residual fuel (whether burned in ocean waters, Great Lakes, or other internal waters);

(2) Emission Control Area (ECA) marine fuel, pursuant to § 80.2 and 40 CFR 1090.80 (whether burned in ocean waters, Great Lakes, or other internal waters); and

(3) Any other fuel intended for use only in ocean-going vessels.

Gasoline means any of the following:

(1) Any fuel sold in the United States for use in motor vehicles and motor vehicle engines, and commonly or commercially known or sold as gasoline.

(2) For purposes of subpart M of this part, any and all of the products specified at § 80.1407(c).

Gasoline blendstock or *component* means any liquid compound that is blended with other liquid compounds to produce gasoline.

Gasoline blendstock for oxygenate blending (BOB) has the meaning given in 40 CFR 1090.80.

Gasoline treated as blendstock (GTAB) means imported gasoline that is excluded from an import facility’s compliance calculations, but is treated as blendstock in a related refinery that includes the GTAB in its refinery compliance calculations.

Glycerin means a co-product from the production of biodiesel that primarily contains glycerol.

Heating oil means any of the following:

(1) Any No. 1, No. 2, or non-petroleum diesel blend that is sold for use in furnaces, boilers, and similar applications and which is commonly or commercially known or sold as heating oil, fuel oil, and similar trade names, and that is not jet fuel, kerosene, or MVNRLM diesel fuel.

(2) Any fuel oil that is used to heat or cool interior spaces of homes or buildings to control ambient climate for human comfort. The fuel oil must be liquid at STP and contain no more than 2.5% mass solids.

Importer means any person who imports transportation fuel or renewable fuel into the covered location from an area outside of the covered location.

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Independent third-party auditor means a party meeting the requirements of § 80.1471(b) that conducts QAP audits and verifies RINs, biointermediates, or biogas.

Interim period means the period between February 21, 2013, and December 31, 2014.

Jet fuel means any distillate fuel used, intended for use, or made available for use in aircraft.

Kerosene means any No.1 distillate fuel commonly or commercially sold as kerosene.

Liquefied petroleum gas (LPG) means a liquid hydrocarbon fuel that is stored under pressure and is composed primarily of species that are gases at atmospheric conditions (temperature = 25 °C and pressure = 1 atm), excluding natural gas.

Locomotive engine means an engine used in a locomotive as defined under 40 CFR 1033.901.

Marine engine has the meaning given in 40 CFR 1042.901.

Membrane separation means the process of dehydrating ethanol to fuel grade (>99.5% purity) using a hydrophilic membrane.

Mixed digester means an anaerobic digester that has received feedstocks under both an approved pathway with D code 3 or 7 and an approved pathway with D code 5 during the current calendar month or the previous two calendar months.

Motor vehicle has the meaning given in Section 216(2) of the Clean Air Act (42 U.S.C. 7550(2)).

Municipal wastewater treatment facility digester means an anaerobic digester that processes only municipal wastewater treatment plant sludge with an adjusted cellulosic content of at least 75%.

MVNRLM diesel fuel means any diesel fuel or other distillate fuel that is used, intended for use, or made available for use in motor vehicles or motor vehicle engines, or as a fuel in any nonroad diesel engines, including locomotive and marine diesel engines, except the following: Distillate fuel with a T90 at or above 700 °F that is used only in Category 2 and 3 marine engines is not MVNRLM diesel fuel, and ECA marine fuel is not MVNRLM diesel fuel (note that fuel that conforms

to the requirements of MVNRLM diesel fuel is excluded from the definition of “ECA marine fuel” in this section without regard to its actual use). Use the distillation test method specified in 40 CFR 1065.1010 to determine the T90 of the fuel.

(1) Any diesel fuel that is sold for use in stationary engines that are required to meet the requirements of 40 CFR 1090.300, when such provisions are applicable to nonroad engines, is considered MVNRLM diesel fuel.

(2) [Reserved]

Nameplate capacity means the peak design capacity of a facility for the purposes of registration of a facility under this part.

Naphtha means a blendstock or fuel blending component falling within the boiling range of gasoline, which is composed of only hydrocarbons, is commonly or commercially known as naphtha, and is used to produce gasoline or E85 (as defined in 40 CFR 1090.80) through blending.

Natural gas means a fuel whose primary constituent is methane. Natural gas includes RNG.

Natural gas commercial pipeline system means one or more connected pipelines that transport natural gas that meets all the following:

(1) The natural gas originates from multiple parties.

(2) The natural gas meets specifications set by the pipeline owner or operator.

(3) The natural gas is delivered to multiple parties in the covered location.

Neat renewable fuel is a renewable fuel to which 1% or less of gasoline (as defined in this section) or diesel fuel has been added.

Non-ester renewable diesel or *renewable diesel* means renewable fuel that is not a mono-alkyl ester and that is either:

(1) A fuel or fuel additive that meets the Grade No. 1-D or No. 2-D specification in ASTM D975 (incorporated by reference, see § 80.12) and can be used in an engine designed to operate on conventional diesel fuel; or

(2) A fuel or fuel additive that is registered under 40 CFR part 79 and can be used in an engine designed to operate using conventional diesel fuel.

Nonforested land means land that is not forestland.

Non-petroleum diesel means a diesel fuel that contains at least 80 percent mono-alkyl esters of long chain fatty acids derived from vegetable oils or animal fats.

Non-qualifying fuel use means a use of renewable fuel in an application other than transportation fuel, heating oil, or jet fuel.

Non-renewable component means any material (or any portion thereof) blended into biogas or RNG that does not meet the definition of renewable biomass.

Non-renewable feedstock means a feedstock (or any portion thereof) that does not meet the definition of renewable biomass or biointermediate.

Non-RIN-generating foreign producer means a foreign renewable fuel producer that has been registered by EPA to produce renewable fuel for which RINs have not been generated.

Nonroad diesel engine means an engine that is designed to operate with diesel fuel that meets the definition of nonroad engine in 40 CFR 1068.30, including locomotive and marine diesel engines.

Nonroad vehicle has the meaning given in Section 216(11) of the Clean Air Act (42 U.S.C. 7550(11)).

Obligated party means any refiner that produces gasoline or diesel fuel within the covered location, or any importer that imports gasoline or diesel fuel into the covered location, during a compliance period. A party that simply blends renewable fuel into gasoline or diesel fuel, as specified in § 80.1407(c) or (e), is not an obligated party.

Ocean-going vessel means vessels that are equipped with engines meeting the definition of “Category 3” in 40 CFR 1042.901.

Oxygenate means any substance which, when added to gasoline, increases the oxygen content of that gasoline. Lawful use of any of the substances or any combination of these substances requires that they be “substantially similar” under section 211(f)(1) of the Clean Air Act (42 U.S.C. 7545(f)(1)), or be permitted under a waiver granted by EPA under the authority of section 211(f)(4) of the Clean Air Act (42 U.S.C. 7545(f)(4)).

Oxygenated gasoline means gasoline which contains a measurable amount of oxygenate.

Pastureland is land managed for the production of select indigenous or introduced forage plants for livestock grazing or hay production, and to prevent succession to other plant types.

Permitted capacity means 105% of the maximum permissible volume output of renewable fuel that is allowed under operating conditions specified in the most restrictive of all applicable preconstruction, construction and operating permits issued by regulatory authorities (including local, regional, state or a foreign equivalent of a state, and federal permits, or permits issued by foreign governmental agencies) that govern the construction and/or operation of the renewable fuel facility, based on an annual volume output on a calendar year basis. If the permit specifies maximum rated volume output on an hourly basis, then annual volume output is determined by multiplying the hourly output by 8,322 hours per year.

(1) For facilities that commenced construction prior to December 19, 2007, the permitted capacity is based on permits issued or revised no later than December 19, 2007.

(2) For facilities that commenced construction after December 19, 2007 and before January 1, 2010 that are fired with natural gas, biomass, or a combination thereof, the permitted capacity is based on permits issued or revised no later than December 31, 2009.

(3) For facilities other than those specified in paragraphs (1) and (2) of this definition, permitted capacity is based on the most recent applicable permits.

Pipeline interconnect means the physical injection or withdrawal point where RNG is injected or withdrawn into or from the natural gas commercial pipeline system.

Planted crops are all annual or perennial agricultural crops from existing agricultural land that may be used as feedstocks for renewable fuel, such as grains, oilseeds, sugarcane, switchgrass, prairie grass, duckweed, and other species (but not including

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algae species or planted trees), providing that they were intentionally applied by humans to the ground, a growth medium, a pond or tank, either by direct application as seed or plant, or through intentional natural seeding or vegetative propagation by mature plants introduced or left undisturbed for that purpose.

Planted trees are trees harvested from a tree plantation.

Pre-commercial thinnings are trees, including unhealthy or diseased trees, removed to reduce stocking to concentrate growth on more desirable, healthy trees, or other vegetative material that is removed to promote tree growth.

Professional liability insurance means insurance coverage for liability arising out of the performance of professional or business duties related to a specific occupation, with coverage being tailored to the needs of the specific occupation. Examples include abstracters, accountants, insurance adjusters, architects, engineers, insurance agents and brokers, lawyers, real estate agents, stockbrokers, and veterinarians. For purposes of this definition, professional liability insurance does not include directors and officers liability insurance.

Q-RIN means a RIN verified by a registered independent third-party auditor using a QAP that has been approved under § 80.1469(c) following the audit process specified in § 80.1472.

Quality assurance audit means an audit of a renewable fuel production facility or biointermediate production facility conducted by an independent third-party auditor in accordance with a QAP that meets the requirements of §§ 80.1469, 80.1472, and 80.1477.

Quality assurance plan (QAP) means the list of elements that an independent third-party auditor will check to verify that the RINs generated by a renewable fuel producer or importer are valid or to verify the appropriate production of a biointermediate. A QAP includes both general and pathway specific elements.

Raw starch hydrolysis means the process of hydrolyzing corn starch into simple sugars at low temperatures, generally not exceeding 100 °F (38 °C),

using enzymes designed to be effective under these conditions.

Refiner means any person who owns, leases, operates, controls, or supervises a refinery.

Refinery means any facility, including but not limited to, a plant, tanker truck, or vessel where gasoline or diesel fuel is produced, including any facility at which blendstocks are combined to produce gasoline or diesel fuel, or at which blendstock is added to gasoline or diesel fuel.

Reformulated gasoline (RFG) means any gasoline whose formulation has been certified under 40 CFR 1090.1000(b), and which meets each of the standards and requirements prescribed under 40 CFR 1090.220.

Reformulated gasoline blendstock for oxygenate blending (RBOB) means a petroleum product that, when blended with a specified type and percentage of oxygenate, meets the definition of reformulated gasoline, and to which the specified type and percentage of oxygenate is added other than by the refiner or importer of the RBOB at the refinery or import facility where the RBOB is produced or imported.

Renewable biomass means each of the following (including any incidental, de minimis contaminants that are impractical to remove and are related to customary feedstock production and transport):

(1) Planted crops and crop residue harvested from existing agricultural land cleared or cultivated prior to December 19, 2007 and that was nonforested and either actively managed or fallow on December 19, 2007.

(2) Planted trees and tree residue from a tree plantation located on non-federal land (including land belonging to an Indian tribe or an Indian individual that is held in trust by the U.S. or subject to a restriction against alienation imposed by the U.S.) that was cleared at any time prior to December 19, 2007 and actively managed on December 19, 2007.

(3) Animal waste material and animal byproducts.

(4) Slash and pre-commercial thinnings from non-federal forestland (including forestland belonging to an Indian tribe or an Indian individual, that are held in trust by the United

States or subject to a restriction against alienation imposed by the United States) that is not ecologically sensitive forestland.

(5) Biomass (organic matter that is available on a renewable or recurring basis) obtained from within 200 feet of buildings and other areas regularly occupied by people, or of public infrastructure, in an area at risk of wildfire.

(6) Algae.

(7) Separated yard waste or food waste, including recycled cooking and trap grease.

Renewable compressed natural gas or renewable CNG means biogas, treated biogas, or RNG that is compressed for use as transportation fuel and meets the definition of renewable fuel.

Renewable electricity means electricity that meets the definition of renewable fuel.

Renewable fuel means a fuel that meets all the following requirements:

(1)(i) Fuel that is produced either from renewable biomass or from a bio-intermediate produced from renewable biomass.

(ii) Fuel that is used in the covered location to replace or reduce the quantity of fossil fuel present in a transportation fuel, heating oil, or jet fuel.

(iii) Has lifecycle greenhouse gas emissions that are at least 20 percent less than baseline lifecycle greenhouse gas emissions, unless the fuel is exempt from this requirement pursuant to § 80.1403.

(2) Ethanol covered by this definition must be denatured using an ethanol denaturant as required in 27 CFR parts 19 through 21. Any volume of ethanol denaturant added to the undenatured ethanol by a producer or importer in excess of 2 volume percent must not be included in the volume of ethanol for purposes of determining compliance with the requirements of this part.

Renewable gasoline means renewable fuel produced from renewable biomass that is composed of only hydrocarbons and that meets the definition of gasoline.

Renewable gasoline blendstock means a blendstock produced from renewable biomass that is composed of only hydrocarbons and which meets the definition of gasoline blendstock in § 80.2.

Renewable Identification Number (RIN) is a unique number generated to represent a volume of renewable fuel pursuant to §§ 80.1425 and 80.1426.

(1) *Gallon-RIN* is a RIN that represents an individual gallon of renewable fuel used for compliance purposes pursuant to § 80.1427 to satisfy a renewable volume obligation.

(2) *Batch-RIN* is a RIN that represents multiple gallon-RINs.

Renewable liquefied natural gas or renewable LNG means biogas, treated biogas, or RNG that is liquified (*i.e.*, it is cooled below its boiling point) for use as transportation fuel and meets the definition of renewable fuel.

Renewable natural gas (RNG) means a product that meets all the following requirements:

(1) It is produced from biogas.

(2) It does not require removal of additional components to be suitable for injection into the natural gas commercial pipeline system.

(3) It is used to produce renewable fuel.

Residual fuel means a petroleum fuel that can only be used in diesel engines if it is preheated before injection. For example, No. 5 fuels, No. 6 fuels, and RM grade marine fuels are residual fuels. Note: Residual fuels do not necessarily require heating for storage or pumping.

Responsible corporate officer (RCO) has the meaning given in 40 CFR 1090.80.

Retail outlet means any establishment at which gasoline, diesel fuel, natural gas or liquefied petroleum gas is sold or offered for sale for use in motor vehicles or nonroad engines, including locomotive or marine engines.

Retailer means any person who owns, leases, operates, controls, or supervises a retail outlet.

RIN-generating foreign producer means a foreign renewable fuel producer that has been registered by EPA to generate RINs for renewable fuel it produces.

RIN generator means any party allowed to generate RINs under this part.

RIN-less RNG means RNG produced by a foreign RNG producer and for which RINs were not generated by the foreign RNG producer.

RNG importer means any person who imports RNG into the covered location

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and generates RINs for the RNG as specified in § 80.125.

RNG producer means any person who owns, leases, operates, controls, or supervises an RNG production facility.

RNG production facility means a facility where biogas is upgraded to RNG under an approved pathway.

RNG RIN separator means any person registered to separate RINs for RNG under § 80.125(d).

RNG used as a feedstock or RNG as a feedstock means any RNG used to produce renewable fuel under § 80.125.

Separated food waste means a feedstock stream consisting of food waste kept separate since generation from other waste materials, and which includes food and beverage production waste and post-consumer food and beverage waste.

Separated municipal solid waste or separated MSW means material remaining after separation actions have been taken to remove recyclable paper, cardboard, plastics, rubber, textiles, metals, and glass from municipal solid waste, and which is composed of both cellulosic and non-cellulosic materials.

Separated RIN means a RIN with a K code of 2 that has been separated from a volume of renewable fuel or RNG pursuant to § 80.1429.

Separated yard waste means a feedstock stream consisting of yard waste kept separate since generation from other waste materials.

Slash is the residue, including tree-tops, branches, and bark, left on the ground after logging or accumulating as a result of a storm, fire, delimbing, or other similar disturbance.

Small refinery means a refinery for which the average aggregate daily crude oil throughput (as determined by dividing the aggregate throughput for the calendar year by the number of days in the calendar year) does not exceed 75,000 barrels.

Soapstock means an emulsion, or the oil obtained from separation of that emulsion, produced by washing oils listed as a feedstock in an approved pathway with water.

Standard temperature and pressure (STP) means 60 degrees Fahrenheit and 1 atmosphere of pressure.

Transportation fuel means fuel for use in motor vehicles, motor vehicle en-

gines, nonroad vehicles, or nonroad engines (except fuel for use in ocean-going vessels).

Treated biogas means a product that meets all the following requirements:

(1) It is produced from biogas.

(2) It does not require removal of additional components to be suitable for its designated use (e.g., as a biointermediate or to produce biogas-derived renewable fuel).

(3) It is used in a biogas closed distribution system as a biointermediate or to produce biogas-derived renewable fuel.

Tree plantation is a stand of no less than 1 acre composed primarily of trees established by hand- or machine-planting of a seed or sapling, or by coppice growth from the stump or root of a tree that was hand- or machine-planted. Tree plantations must have been cleared prior to December 19, 2007 and must have been actively managed on December 19, 2007, as evidenced by records which must be traceable to the land in question, which must include:

(1) Sales records for planted trees or tree residue together with other written documentation connecting the land in question to these purchases;

(2) Purchasing records for seeds, seedlings, or other nursery stock together with other written documentation connecting the land in question to these purchases;

(3) A written management plan for silvicultural purposes;

(4) Documentation of participation in a silvicultural program sponsored by a Federal, state, or local government agency;

(5) Documentation of land management in accordance with an agricultural or silvicultural product certification program;

(6) An agreement for land management consultation with a professional forester that identifies the land in question; or

(7) Evidence of the existence and ongoing maintenance of a road system or other physical infrastructure designed and maintained for logging use, together with one of the above-mentioned documents.

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Tree residue is slash and any woody residue generated during the processing of planted trees from tree plantations for use in lumber, paper, furniture, or other applications, provided that such woody residue is not mixed with similar residue from trees that do not originate in tree plantations.

Undenatured ethanol means a liquid that meets one of the definitions in paragraph (1) of this definition:

(1)(i) Ethanol that has not been denatured as required in 27 CFR parts 19 through 21.

(ii) Specially denatured alcohol as defined in 27 CFR 21.11.

(2) Undenatured ethanol is not renewable fuel.

United States has the meaning given in 40 CFR 1090.80.

Verification status means a description of whether biogas, treated biogas, RNG, or a RIN has been verified under an EPA-approved quality assurance plan.

Verified RIN means a RIN generated by a renewable fuel producer that was subject to a QAP audit executed by an independent third-party auditor, and determined by the independent third-party auditor to be valid. Verified RINs includes A-RINs, B-RINs, and Q-RINs.

Wholesale purchaser-consumer means any person that is an ultimate consumer of gasoline, diesel fuel, natural gas, or liquefied petroleum gas and which purchases or obtains gasoline, diesel fuel, natural gas or liquefied petroleum gas from a supplier for use in motor vehicles or nonroad engines, including locomotive or marine engines and, in the case of gasoline, diesel fuel, or liquefied petroleum gas, receives delivery of that product into a storage tank of at least 550-gallon capacity substantially under the control of that person.

[88 FR 44555, July 12, 2023, as amended at 90 FR 12113, Mar. 14, 2025]

§ 80.3 Acronyms and abbreviations.

AB	Advanced biofuel.
APHA	American Public Health Association.
API	American Petroleum Institute.
ASTM	ASTM International.
BBD	Biomass-based diesel.
BMP	Best management practices.
BOB	Gasoline before oxygenate blending.
CAA	Clean Air Act.

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CB	Cellulosic biofuel.
CBOB	Conventional gasoline before oxygenate blending.
CF	Converted fraction.
CG	Conventional gasoline.
CHP	Combined heat and power.
CNG	Compressed natural gas.
CPI-U	Consumer Price Index for All Urban Consumers.
ECA	Emission Control Area.
EDRR	Early detection and rapid response.
EIA	Energy Information Administration.
EMTS	EPA Moderated Transaction System.
EPA	Environmental Protection Agency.
EqV	Equivalence value.
ERVO	Exporter renewable volume obligation.
FE	Feedstock energy.
FFA	Free-fatty acid.
GC	Gas chromatography.
GHG	Greenhouse gas.
GTAB	Gasoline treated as blendstock.
HACCP	Hazard Analysis Critical Control Point.
HHV	Higher heating value.
IBR	Incorporation by reference.
ID	Identification.
kWh	Kilowatt-hour.
LE	Limited exemption.
LHV	Lower heating value.
LNG	Liquefied natural gas.
MSW	Municipal solid waste.
MVNRLM	Motor vehicle, nonroad, locomotive, or marine.
NARA	National Archives and Records Administration.
NTDF	Non-transportation 15 ppm distillate fuel.
PIR	Potentially invalid RIN.
PM ₁₀	Particulate matter generally 10 micrometers or smaller.
PM _{2.5}	Particulate matter generally 2.5 micrometers or smaller.
PTD	Product transfer document.
QAP	Quality assurance plan.
RBOB	Reformulated gasoline before oxygenate blending.
RCO	Responsible corporate officer.
RF	Renewable fuel.
RFS	Renewable Fuel Standard.
RFS-FRRF	RFS foreign refiner renewable fuel.
RIN	Renewable identification number.
RNG	Renewable natural gas.
RVO	Renewable volume obligation.
STP	Standard temperature and pressure.
U.S.	United States.
ULSD	Ultra-low-sulfur diesel fuel.
USDA	United States Department of Agriculture.
UTC	Coordinated Universal Time.
VCSB	Voluntary consensus standards body.

[88 FR 44562, July 12, 2023]

§ 80.4 Right of entry; tests and inspections.

EPA, upon presentation of appropriate credentials, shall have a right to

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enter upon or through any refinery, retail outlet, wholesale purchaser-consumer facility, or detergent manufacturer facility; or the premises or property of any gasoline or detergent distributor, carrier, or importer; or any place where gasoline or detergent is stored; and shall have the right to make inspections, take samples, obtain information and records, and conduct tests to determine compliance with the requirements of this part.

[61 FR 35356, July 5, 1996, as amended at 88 FR 44562, July 12, 2023]

§ 80.5 Penalties.

Any person who violates these regulations shall be liable to the United States for a civil penalty of not more than the sum of \$25,000 for every day of such violation and the amount of economic benefit or savings resulting from the violation. Any violation with respect to a regulation proscribed under section 211(c), (k), (l) or (m) of the Act which establishes a regulatory standard based upon a multi-day averaging period shall constitute a separate day of violation for each and every day in the averaging period. Civil penalties shall be assessed in accordance with section 205(b) and (c) of the Act. The civil monetary penalty amount listed in this section may not reflect recent inflation adjustments EPA is required to make. The current maximum and minimum statutory civil penalty amounts are located in § 19.4.

[58 FR 65554, Dec. 15, 1993, as amended at 89 FR 88655, Nov. 8, 2024]

§ 80.7 Requests for information.

(a) When EPA has reason to believe that a violation of section 211(c) or section 211(n) of the Clean Air Act and the regulations thereunder has occurred, EPA may require any refiner, distributor, wholesale purchaser-consumer, or retailer to report the following information regarding receipt, transfer, delivery, or sale of gasoline represented to be unleaded gasoline and to allow the reproduction of such information at all reasonable times.

(1) For any bulk shipment of gasoline represented to be unleaded gasoline which is transferred, sold, or delivered within the previous 6 months by a re-

finer or a distributor to a distributor, wholesale purchaser-consumer or a retail outlet, the refiner or distributor shall maintain and provide the following information as applicable:

(i) Business or corporate name and address of distributors, wholesale purchaser-consumers or retail outlets to which the gasoline has been transferred, sold, or delivered.

(ii) Quantity of gasoline involved.

(iii) Date of delivery.

(iv) Storage location of gasoline prior to transit via delivery vessel (e.g., location of a bulk terminal).

(v) Business or corporate name and address of the person who delivered the gasoline.

(vi) Identification of delivery vessel (e.g., truck number). This information shall be supplied by the person in paragraph (a)(1)(v) of this section who performed the delivery, e.g., common or contract carrier.

(2) For any bulk shipment of gasoline represented to be unleaded gasoline received by a retail outlet or a wholesale-purchaser-consumer facility within the previous 6 months, whether by purchase or otherwise, the retailer or wholesale purchaser-consumer shall maintain accessibility to and provide the following information:

(i) Business or corporate name and address of the distributor.

(ii) Quantity of gasoline received.

(iii) Date of receipt.

(b) Upon request by EPA, any retailer shall provide documentation of his annual total sales volume in gallons of gasoline for each retail outlet for each calendar year beginning with 1971.

(c) Any refiner, distributor, wholesale purchaser-consumer, retailer, or importer must provide such other information as EPA may reasonably require to enable the Agency to determine whether such refiner, distributor, wholesale purchaser-consumer, retailer, or importer has acted or is acting in compliance with sections 211(c) and 211(n) of the Clean Air Act and the regulations thereunder and must, upon request of EPA, produce and allow reproduction of any relevant records at all reasonable times. Such information may include but is not limited to records of unleaded gasoline inventory

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at a wholesale purchaser-consumer facility or a retail outlet, unleaded pump meter readings at a wholesale purchaser-consumer facility or a retail outlet, and receipts providing the date of acquisition of signs, labels, and nozzles required by 40 CFR 1090.1550. No person shall be required to furnish information requested under this paragraph if he can establish that such information is not maintained in the normal course of his business.

(Secs. 211, 301, Clean Air Act, as amended (42 U.S.C. 1857f-6c, 1857g))

[40 FR 36336, Aug. 20, 1975, as amended at 42 FR 45307, Sept. 9, 1977; 47 FR 49332, Oct. 29, 1982; 61 FR 3837, Feb. 2, 1996; 85 FR 78467, Dec. 4, 2020; 88 FR 44562, July 12, 2023]

§ 80.8 Sampling methods for gasoline, diesel fuel, fuel additives, and renewable fuels.

(a) *Manual sampling.* Manual sampling of tanks and pipelines shall be performed according to the applicable procedures specified in ASTM D4057 (incorporated by reference, see § 80.12).

(b) *Automatic sampling.* Automatic sampling of petroleum products in pipelines shall be performed according to the applicable procedures specified in ASTM D4177 (incorporated by reference, see § 80.12).

(c) *Sampling and sample handling for volatility measurement.* Samples to be analyzed for Reid Vapor Pressure (RVP) shall be collected and handled according to the applicable procedures specified in ASTM D5842 (incorporated by reference, see § 80.12).

(d) *Sample compositing.* Composite samples shall be prepared using the applicable procedures specified in ASTM D5854 (incorporated by reference, see § 80.12).

[88 FR 44563, July 12, 2023]

§ 80.9 Rounding.

(a) Test results and calculated values reported to EPA under this part must be rounded according to 40 CFR 1090.50(a) through (d).

(b) Calculated values under this part may only be rounded when reported to EPA.

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(c) Reported values under this part must be submitted using forms and procedures specified by EPA.

[88 FR 44563, July 12, 2023]

§ 80.10 Addresses.

(a) For submitting notifications, applications, petitions, or other communications with EPA, use one of the following addresses for mailing:

(1) For U.S. Mail: Attn: [TITLE AS DIRECTED], U.S. Environmental Protection Agency, 1200 Pennsylvania Ave. NW, Mail Code 6405A, Washington, DC 20460.

(2) For commercial service: Attn: [TITLE AS DIRECTED], U.S. Environmental Protection Agency, William Jefferson Clinton Building North, Mail Code 6405A, Room 6520V, 1200 Pennsylvania Ave. NW, Washington, DC 20004; Phone: 1-800-385-6164.

(b) [Reserved]

[85 FR 7070, Feb. 6, 2020]

§ 80.11 Confidentiality of information.

(a) Except as specified in paragraph (b) of this section, information obtained by the Administrator or his representatives pursuant to this part shall be treated, in so far as its confidentiality is concerned, in accordance with the provisions of 40 CFR part 2, subpart B.

(b) Information contained in EPA notices of violation, settlement agreements, administrative complaints, civil complaints, criminal information, and criminal indictments is not entitled to confidential treatment and therefore EPA may publicly disclose such information. Such information includes the company name and EPA-issued company identification number, the facility name and EPA-issued facility identification number, the total quantity of fuel and parameter, the time or time period when the violation occurred, information relating to the generation, transfer, or use of credits, and any other information relevant to describing the violation.

[87 FR 39659, July 1, 2022]

§ 80.12 Incorporation by reference.

Certain material is incorporated by reference into this part with the approval of the Director of the Federal

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Register under 5 U.S.C. 552(a) and 1 CFR part 51. All approved incorporation by reference (IBR) material is available for inspection at U.S. EPA and at the National Archives and Records Administration (NARA). Contact U.S. EPA at: U.S. EPA, Air and Radiation Docket and Information Center, WJC West Building, Room 3334, 1301 Constitution Ave. NW, Washington, DC 20460; (202) 566-1742. For information on the availability of this material at NARA, visit: www.archives.gov/federal-register/cfr/ibr-locations.html or email fr.inspection@nara.gov. The material may be obtained from the following sources:

(a) American Petroleum Institute (API), 200 Massachusetts Avenue NW, Suite 1100, Washington, DC 20001-5571; (202) 682-8000; www.api.org.

(1) API MPMS 14.1-2016, Manual of Petroleum Measurement Standards Chapter 14—Natural Gas Fluids Measurement Section 1—Collecting and Handling of Natural Gas Samples for Custody Transfer, 7th Edition, May 2016 (“API MPMS 14.1”); IBR approved for § 80.155(b).

(2) API MPMS 14.3.1-2012, Manual of Petroleum Measurement Standards Chapter 14.3.1—Orifice Metering of Natural Gas and Other Related Hydrocarbon Fluids—Concentric, Square-edged Orifice Meters Part 1: General Equations and Uncertainty Guidelines, 4th Edition, including Errata July 2013, Reaffirmed, July 2022 (“API MPMS 14.3.1”); IBR approved for § 80.155(a).

(3) API MPMS 14.3.2-2016, Manual of Petroleum Measurement Standards Chapter 14.3.2—Orifice Metering of Natural Gas and Other Related Hydrocarbon Fluids—Concentric, Square-edged Orifice Meters Part 2: Specification and Installation Requirements, 5th Edition, March 2016 (“API MPMS 14.3.2”); IBR approved for § 80.155(a).

(4) API MPMS 14.3.3-2013, Manual of Petroleum Measurement Standards Chapter 14.3.3—Orifice Metering of Natural Gas and Other Related Hydrocarbon Fluids—Concentric, Square-edged Orifice Meters Part 3: Natural Gas Applications, 4th Edition, Reaffirmed, June 2021 (“API MPMS 14.3.3”); IBR approved for § 80.155(a).

(5) API MPMS 14.3.4-2019, Manual of Petroleum Measurement Standards Chapter 14.3.4—Orifice Metering of Natural Gas and Other Related Hydrocarbon Fluids—Concentric, Square-edged Orifice Meters Part 4—Background, Development, Implementation Procedure, and Example Calculations, 4th Edition, October 2019 (“API MPMS 14.3.4”); IBR approved for § 80.155(a).

(6) API MPMS 14.12-2017, Manual of Petroleum Measurement Standards Chapter 14—Natural Gas Fluid Measurement Section 12—Measurement of Gas by Vortex Meters, 1st Edition, March 2017 (“API MPMS 14.12”); IBR approved for § 80.155(a).

NOTE 1 TO PARAGRAPH (a): API MPMS 14.3.1, 14.3.2, 14.3.3, and 14.3.4, are co-published as AGA Report 3, Parts 1, 2, 3, and 4, respectively.

(b) American Public Health Association (APHA), 1015 15th Street NW, Washington, DC 20005; (202) 777-2742; www.standardmethods.org.

(1) SM 2540, Solids, revised June 10, 2020; IBR approved for § 80.155(c).

(2) [Reserved]

(c) ASTM International (ASTM), 100 Barr Harbor Dr., P.O. Box C700, West Conshohocken, PA 19428-2959; (877) 909-2786; www.astm.org.

(1) ASTM D975-21, Standard Specification for Diesel Fuel, approved August 1, 2021 (“ASTM D975”); IBR approved for §§ 80.2; 80.1426(f); 80.1450(b); 80.1451(b); 80.1454(1).

(2) ASTM D1250-19e1, Standard Guide for the Use of the Joint API and ASTM Adjunct for Temperature and Pressure Volume Correction Factors for Generalized Crude Oils, Refined Products, and Lubricating Oils: API MPMS Chapter 11.1, approved May 1, 2019 (“ASTM D1250”); IBR approved for § 80.1426(f).

(3) ASTM D3588-98 (Reapproved 2017)e1, Standard Practice for Calculating Heat Value, Compressibility Factor, and Relative Density of Gaseous Fuels, approved April 1, 2017 (“ASTM D3588”); IBR approved for § 80.155(b) and (f).

(4) ASTM D4057-12, Standard Practice for Manual Sampling of Petroleum and Petroleum Products, approved December 1, 2012 (“ASTM D4057”); IBR approved for § 80.8(a).

(5) ASTM D4177-95 (Reapproved 2010), Standard Practice for Automatic Sampling of Petroleum and Petroleum

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Products, approved May 1, 2010 (“ASTM D4177”); IBR approved for § 80.8(b).

(6) ASTM D4442-20, Standard Test Methods for Direct Moisture Content Measurement of Wood and Wood-Based Materials, approved March 1, 2020 (“ASTM D4442”); IBR approved for § 80.1426(f).

(7) ASTM D4444-13 (Reapproved 2018), Standard Test Method for Laboratory Standardization and Calibration of Hand-Held Moisture Meters, reapproved July 1, 2018 (“ASTM D4444”); IBR approved for § 80.1426(f).

(8) ASTM D4888-20, Standard Test Method for Water Vapor in Natural Gas Using Length-of-Stain Detector Tubes, approved December 15, 2020 (“ASTM D4888”); IBR approved for § 80.155(b).

(9) ASTM D5504-20, Standard Test Method for Determination of Sulfur Compounds in Natural Gas and Gaseous Fuels by Gas Chromatography and Chemiluminescence, approved November 1, 2020 (“ASTM D5504”); IBR approved for § 80.155(b).

(10) ASTM D5842-14, Standard Practice for Sampling and Handling of Fuels for Volatility Measurement, approved January 15, 2014 (“ASTM D5842”); IBR approved for § 80.8(c).

(11) ASTM D5854-96 (Reapproved 2010), Standard Practice for Mixing and Handling of Liquid Samples of Petroleum and Petroleum Products, approved May 1, 2010 (“ASTM D5854”); IBR approved for § 80.8(d).

(12) ASTM D6751-24, Standard Specification for Biodiesel Fuel Blendstock (B100) for Middle Distillate Fuels, approved March 1, 2024 (“ASTM D6751”); IBR approved for § 80.2.

(13) ASTM D6866-22, Standard Test Methods for Determining the Biobased Content of Solid, Liquid, and Gaseous Samples Using Radiocarbon Analysis, approved March 15, 2022 (“ASTM D6866”); IBR approved for §§ 80.155(b); 80.1426(f); 80.1430(e).

(14) ASTM D7164-21, Standard Practice for On-line/At-line Heating Value Determination of Gaseous Fuels by Gas Chromatography, approved April 1, 2021 (“ASTM D7164”); IBR approved for § 80.155(a).

(15) ASTM D8230-19, Standard Test Method for Measurement of Volatile Silicon-Containing Compounds in a

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Gaseous Fuel Sample Using Gas Chromatography with Spectroscopic Detection, approved June 1, 2019 (“ASTM D8230”); IBR approved for § 80.155(b).

(16) ASTM E711-87 (Reapproved 2004), Standard Test Method for Gross Calorific Value of Refuse-Derived Fuel by the Bomb Calorimeter, reapproved 2004 (“ASTM E711”); IBR approved for § 80.1426(f).

(17) ASTM E870-82 (Reapproved 2019), Standard Test Methods for Analysis of Wood Fuels, reapproved April 1, 2019 (“ASTM E870”); IBR approved for § 80.1426(f).

(d) European Committee for Standardization (CEN), Rue de la Science 23, B-1040 Brussels, Belgium; + 32 2 550 08 11; www.cencenelec.eu.

(1) EN 17526:2021(E), Gas meter—Thermal-mass flow-meter based gas meter, approved July 11, 2021 (“EN 17526”); IBR approved for § 80.155(a).

(2) [Reserved]

[88 FR 44563, July 12, 2023, as amended at 90 FR 12113, Mar. 14, 2025]

Subpart B [Reserved]

Subpart C—Oxygenated Gasoline

§ 80.35 Labeling of retail gasoline pumps; oxygenated gasoline.

(a) For oxygenated gasoline programs with a minimum oxygen content per gallon or minimum oxygen content requirement in conjunction with a credit program, the following shall apply:

(1) Each gasoline pump stand from which oxygenated gasoline is dispensed at a retail outlet in the control area shall be affixed during the control period with a legible and conspicuous label which contains the following statement:

The gasoline dispensed from this pump is oxygenated and will reduce carbon monoxide pollution from motor vehicles.

(2) The posting of the above statement shall be in block letters of no less than 20-point bold type; in a color contrasting with the intended background. The label shall be placed on the vertical surface of the pump on each side with gallonage and price meters and shall be on the upper two-thirds of the pump, clearly readable to the public.

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(3) The retailer shall be responsible for compliance with the labeling requirements of this section.

(b) For oxygenated gasoline programs with a credit program and no minimum oxygen content requirement, the following shall apply:

(1) Each gasoline pump stand from which oxygenated gasoline is dispensed at a retail outlet in the control area shall be affixed during the control period with a legible and conspicuous label which contains the following statement:

The fuel dispensed from this pump meets the requirements of the Clean Air Act as part of a program to reduce carbon monoxide pollution from motor vehicles.

(2) The posting of the above statement shall be in block letters of no less than 20-point bold type; in a color contrasting with the intended background. The label shall be placed on the vertical surface of the pump on each side with gallonage and price meters and shall be on the upper two-thirds of the pump, clearly readable to the public.

(3) The retailer shall be responsible for compliance with the labeling requirements of this section.

[57 FR 47771, Oct. 20, 1992]

§§ 80.36–80.39 [Reserved]

Subpart D [Reserved]

Subpart E—Biogas-Derived Renewable Fuel

SOURCE: 88 FR 44564, July 12, 2023, unless otherwise noted.

§ 80.100 Scope and application.

(a) *Applicability.* (1) The provisions of this subpart E apply to all the following:

- (i) Biogas.
- (ii) Treated biogas.
- (iii) Biogas-derived renewable fuel.
- (iv) RNG used to produce a biogas-derived renewable fuel.
- (v) RINs generated for RNG or a biogas-derived renewable fuel.

(2) This subpart also specifies requirements for specified parties that engage in activities associated with the production, distribution, transfer, or

use of biogas, treated biogas, biogas-derived renewable fuel, RNG used to produce a biogas-derived renewable fuel, and RINs generated for a biogas-derived renewable fuel under the RFS program.

(b) *Relationship to other fuels regulations.* (1) The provisions of subpart M of this part also apply to the parties and products regulated under this subpart E.

(2) The provisions of 40 CFR part 1090 include provisions that may apply to the parties and products regulated under this subpart E.

(3) Parties and products subject to this subpart E may need to register a fuel or fuel additive under 40 CFR part 79.

(c) *Geographic scope.* RINs must only be generated for biogas-derived renewable fuel used in the covered location.

(d) *Implementation dates.*—(1) *General.* The provisions of this subpart E apply beginning July 1, 2024, unless otherwise specified.

(2) *Registration.* (i) Parties not registered to generate RINs under § 80.1426(f)(10)(ii) or (11)(ii) prior to July 1, 2024, must register with EPA under § 80.135. EPA will not accept registration submissions for the generation of RINs under § 80.1426(f)(10)(ii) and (11)(ii) on or after July 1, 2024.

(ii) Parties registered to generate RINs under § 80.1426(f)(10)(ii) or (11)(ii) must submit updated registration information under § 80.135 no later than October 1, 2024.

(iii) Independent third-party engineers may conduct engineering reviews for parties required to register under § 80.135 prior to July 1, 2024, as long as the engineering review satisfies all applicable requirements under §§ 80.135 and 80.1450.

(3) *Generation of RINs for RNG.* RNG producers may only generate RINs for RNG produced on or after July 1, 2024, as specified in § 80.125.

(4) *Generation of RINs for renewable CNG/LNG for previously registered facilities.* (i)(A) Prior to January 1, 2025, RIN generators may generate RINs as specified in § 80.1426(f)(10)(ii) or (11)(ii) for renewable CNG/LNG produced from a facility covered by a registration accepted by EPA under § 80.1450(b) prior to July 1, 2024.

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(B) Biogas or RNG produced under a registration accepted by EPA under § 80.1450(b) for the generation of RINs as specified in § 80.1426(f)(10)(ii) or (11)(ii) prior to July 1, 2024, may only be used to generate RINs for renewable CNG/LNG.

(ii) For biogas produced on or after January 1, 2025, biogas closed distribution system RIN generators must generate RINs for renewable CNG/LNG as specified in § 80.130.

(5) *Generation of RINs for renewable fuel produced from biogas used as a bio-intermediate.* Renewable fuel producers must only generate RINs for renewable fuel produced from biogas used as a biointermediate produced on or after July 1, 2024.

§ 80.105 Biogas producers.

(a) *General requirements.* (1) Any biogas producer that produces biogas for use to produce RNG or a biogas-derived renewable fuel, or that produces biogas used as a biointermediate, must comply with the requirements of this section.

(2) The biogas producer must also comply with all other applicable requirements of this part and 40 CFR part 1090.

(3) If the biogas producer meets the definition of more than one type of regulated party under this part or 40 CFR part 1090, the biogas producer must comply with the requirements applicable to each of those types of regulated parties.

(4) The biogas producer must comply with all applicable requirements of this part, regardless of whether the requirements are identified in this section.

(b) *Registration.* The biogas producer must register with EPA under §§ 80.135, 80.1450, and 40 CFR part 1090, subpart I, as applicable.

(c) *Reporting.* The biogas producer must submit reports to EPA under §§ 80.140 and 80.1451, as applicable.

(d) *Recordkeeping.* The biogas producer must create and maintain records under §§ 80.145 and 80.1454.

(e) *PTDs.* On each occasion when the biogas producer transfers title of any biogas, the transferor must provide to the transferee PTDs under § 80.150.

(f) *Sampling, testing, and measurement.* (1) All sampling, testing, and measure-

ments must be done in accordance with § 80.155.

(2)(i) A biogas producer must measure the volume of biogas, in Btu HHV, prior to converting biogas to any of the following:

(A) RNG.

(B) Treated biogas.

(C) Biointermediate.

(D) Biogas-derived renewable fuel.

(E) Process heat or energy under § 80.1426(f)(12) or (13).

(ii) Except for biogas produced from a mixed digester, a biogas producer must measure the volume of biogas, in Btu HHV, for each batch pathway prior to mixing with biogas produced under a different batch pathway or with non-qualifying gas.

(iii) For biogas produced from a mixed digester, a biogas producer must do all the following for each mixed digester:

(A) Measure the volume of biogas, in Btu HHV, prior to mixing with any other gas.

(B) Measure the daily mass of the cellulosic biogas feedstock, in pounds, added to the mixed digester.

(C) Collect a daily representative sample of each cellulosic biogas feedstock and test for total solids and volatile solids as specified in § 80.155(c).

(D) Measure and calculate the digester operating conditions as specified in § 80.155(d).

(iv) A biogas producer must measure each volume of gas containing biogas, in Btu HHV, that leaves the facility.

(g) *Foreign biogas producer requirements.* A foreign biogas producer must meet all the requirements that apply to a biogas producer under this part, as well as the additional requirements for foreign biogas producers specified in § 80.160.

(h) *Attest engagements.* The biogas producer must submit annual attest engagement reports to EPA under §§ 80.165 and 80.1464 using procedures specified in 40 CFR 1090.1800 and 1090.1805.

(i) *QAP.* Prior to the generation of Q-RINs for a biogas-derived renewable fuel, the biogas producer must meet all applicable requirements specified in § 80.170.

(j) *Batches.* (1) Except for biogas produced from a mixed digester, the batch

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volume of biogas is the volume of biogas measured under paragraph (f) of this section for a single batch pathway at a single facility for a calendar month, in Btu HHV.

(2) For biogas produced from a mixed digester, the batch volume of biogas must be calculated as follows:

(i) The batch volume of biogas produced under an approved pathway with a D code of 5 must be calculated as follows:

$$V_{BG,D5} = V_{BG} - V_{BG,D3/7}$$

Where:

$V_{BG,D5}$ = The batch volume of biogas for an approved pathway with a D code of 5 for the calendar month, in Btu HHV. If the result of this equation is negative, then $V_{BG,D5,p}$ equals 0.

V_{BG} = The total volume of biogas produced by the mixed digester for the calendar month, in Btu HHV, as measured under paragraph (f)(2)(iii)(A) of this section.

$V_{BG,D3/7}$ = The total batch volume of biogas produced under approved pathways with a D code of 3 or 7 for the calendar month, in Btu HHV, per paragraph (j)(2)(ii) of this section.

(ii) The batch volume of biogas produced under an approved pathway with a D code of 3 or 7 must be calculated as follows:

$$V_{BG,D3/7,p} = BE_{D3/7,i}$$

$V_{BG,D3/7,p}$ = The batch volume of biogas for batch pathway p with a D code of 3 or 7 for the calendar month, in Btu HHV.

$BE_{D3/7,i}$ = The total energy from cellulosic biogas feedstock i that forms energy in the biogas and whose batch pathway has been assigned a D code of 3 or 7 for the calendar month, in Btu HHV, per paragraph (j)(2)(iii) of this section.

(iii) The biogas energy value for each cellulosic biogas feedstock must be calculated as follows:

$$BE_{D3/7,i,j} = M_{i,j} * TS_{i,j} * VS_{i,j} * CF_{i,j}$$

Where:

$BE_{D3/7,i,j}$ = The amount of energy from cellulosic biogas feedstock i that forms energy in the biogas and whose batch pathway has been assigned a D code of 3 or 7 on day j, in Btu HHV.

$M_{i,j}$ = Mass of cellulosic biogas feedstock i, in pounds, measured on day j, per paragraph (f)(2)(iii)(B) of this section.

$TS_{i,j}$ = Total solids of cellulosic biogas feedstock i, as a mass fraction, in pounds total solids per pound feedstock, for the sample obtained on day j, per paragraph (f)(2)(iii)(C) of this section. If sample re-

sults are not available, then $TS_{i,j}$ equals 0.

$VS_{i,j}$ = Volatile solids of cellulosic biogas feedstock i, as a mass fraction, in pounds volatile solids per pound total solids, for the sample obtained on day j, per paragraph (f)(2)(iii)(C) of this section. If sample results are not available, then $VS_{i,j}$ equals 0.

$CF_{i,j}$ = Converted fraction in annual average Btu HHV/lb, representing the portion of cellulosic biogas feedstock i that is converted to biomethane by the producer on day j, per paragraph (j)(2)(iv) of this section. If data for digester operating conditions required under paragraph (f)(2)(iii)(D) of this section are outside the range of operating conditions specified in paragraph (j)(2)(v) of this section or such data to determine the operating conditions does not meet the requirements in § 80.155(d), then $CF_{i,j}$ equals 0.

(iv) Biogas producers must use one of the following cellulosic conversion factors, as applicable:

(A) Swine manure: 1,936 Btu HHV/lb.

(B) Bovine manure: 2,077 Btu HHV/lb.

(C) Chicken manure: 3,001 Btu HHV/lb.

(D) Municipal wastewater treatment sludge: 3,479 Btu HHV/lb.

(E) A cellulosic conversion factor accepted at registration under § 80.135(c)(10)(vi).

(v) Applicable operating conditions for the cellulosic converted fractions specified in paragraph (j)(2)(iv) of this section are the following:

(A) For the cellulosic converted fraction values specified in paragraphs (j)(2)(iv)(A) through (D) of this section, the mixed digester must continuously operate above 95 degrees Fahrenheit with hydraulic and solids mean residence times greater than 20 days.

(B) For the cellulosic converted fraction value specified in paragraph (j)(2)(iv)(E) of this section, the mixed digester must operate according to the conditions accepted at registration under § 80.135(c)(10)(vi)(A)(4).

(3) The biogas producer must assign a number (the "batch number") to each batch of biogas consisting of their EPA-issued company registration number, the EPA-issued facility registration number, the last two digits of the compliance year in which the batch was produced, and a unique number for the batch, beginning with the number one for the first batch produced each

compliance year and each subsequent batch during the compliance year being assigned the next sequential number (*e.g.*, 4321–54321–23–000001, 4321–54321–23–000002, etc.).

(k) *Limitations.* (1) For each biogas production facility, the biogas producer must only supply biogas for only one of the following uses:

(i) Production of renewable CNG/LNG via a biogas closed distribution system.

(ii) As a biointermediate via a biogas closed distribution system.

(iii) Production of RNG.

(2) For each biogas production facility producing biogas for use as a biointermediate in a biogas closed distribution system, the biogas producer must only supply biogas or treated biogas to a single renewable fuel production facility.

(3) If the biogas producer operates a municipal wastewater treatment facility digester, the biogas producer must not introduce any feedstocks into that digester that do not contain at least 75% average adjusted cellulosic content.

(4) The transfer and batch segregation limits specified in § 80.1476(g) do not apply.

[88 FR 44564, July 12, 2023, as amended at 90 FR 12114, Mar. 14, 2025]

§ 80.110 RNG producers, RNG importers, and biogas closed distribution system RIN generators.

(a) *General requirements.* (1) Any RNG producer, RNG importer, or biogas closed distribution system RIN generator that generates RINs must comply with the requirements of this section.

(2) The RNG producer, RNG importer, or biogas closed distribution system RIN generator must also comply with all other applicable requirements of this part and 40 CFR part 1090.

(3) If the RNG producer, RNG importer, or biogas closed distribution system RIN generator meets the definition of more than one type of regulated party under this part or 40 CFR 1090, the RNG producer, RNG importer, or biogas closed distribution system RIN generator must comply with the requirements applicable to each of those types of regulated parties.

(4) The RNG producer, RNG importer, or biogas closed distribution system

RIN generator must comply with all applicable requirements of this part, regardless of whether the requirements are identified in this section.

(5) The transfer and batch segregation limits specified in § 80.1476(g) do not apply.

(b) *Registration.* The RNG producer, RNG importer, or biogas closed distribution system RIN generator must register with EPA under §§ 80.135, 80.1450, and 40 CFR part 1090, subpart I, as applicable.

(c) *Reporting.* The RNG producer, RNG importer, or biogas closed distribution system RIN generator must submit reports to EPA under §§ 80.140, 80.1451, and 80.1452, as applicable.

(d) *Recordkeeping.* The RNG producer, RNG importer, or biogas closed distribution system RIN generator must create and maintain records under §§ 80.145 and 80.1454.

(e) *PTDs.* On each occasion when the RNG producer, RNG importer, or biogas closed distribution system RIN generator transfers RNG, renewable fuel, or RINs to another party, the transferor must provide to the transferee PTDs under §§ 80.150 and 80.1453, as applicable.

(f) *Sampling, testing, and measurement.*

(1) All sampling, testing, and measurements must be done in accordance with § 80.155.

(2)(i) An RNG producer must measure the volume of RNG, in Btu LHV, prior to injection of RNG from the RNG production facility into a natural gas commercial pipeline system.

(ii) An RNG producer that trucks RNG from the RNG production facility to a pipeline interconnect must measure the volume of RNG, in Btu LHV, upon loading and unloading of each truck.

(iii) An RNG producer that injects RNG from an RNG production facility into a natural gas commercial pipeline system must sample and test a representative sample of all the following at least once per calendar year, as applicable:

(A) Biogas used to produce RNG.

(B) RNG before blending with non-renewable components.

(C) RNG after blending with non-renewable components.

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(iv) A party that upgrades biogas to treated biogas must separately measure all the following, as applicable:

(A) The volume of biogas, in Btu HHV, used to produce treated biogas, a biogas-derived renewable fuel, or as a biointermediate.

(B) The volume of treated biogas, in Btu HHV, prior to addition of any non-renewable components.

(C) The volume of biointermediate or biogas-derived renewable fuel produced from the biogas or treated biogas. If the biogas-derived renewable fuel is renewable CNG/LNG, then this volume must be measured in both Btu HHV and Btu LHV.

(3) A biogas closed distribution RIN generator must measure renewable CNG/LNG in Btu LHV.

(g) *Foreign RNG producer, RNG importer, and foreign biogas closed distribution system RIN generator requirements.*

(1)(i) A foreign RNG producer must meet all the requirements that apply to an RNG producer under this part, as well as the additional requirements for foreign RNG producers specified in § 80.160.

(ii) A foreign RNG producer must either generate RINs under § 80.125 or enter into a contract with an RNG importer as specified in § 80.160(e).

(2) An RNG importer must meet all the requirements specified in § 80.160(h).

(3) A foreign biogas closed distribution system RIN generator must meet all the requirements that apply to a biogas closed distribution system RIN generator under this part, as well as the additional requirements for foreign biogas closed distribution system RIN generators specified in § 80.160 and for

RIN-generating foreign renewable fuel producers specified in § 80.1466.

(h) *Attest engagements.* The RNG producer, RNG importer, or biogas closed distribution system RIN generator must submit annual attest engagement reports to EPA under §§ 80.165 and 80.1464 using procedures specified in 40 CFR 1090.1800 and 1090.1805.

(i) *QAP.* Prior to the generation of a Q-RIN for RNG or biogas-derived renewable fuel, the RNG producer, RNG importer, or biogas closed distribution system RIN generator must meet all applicable requirements specified in § 80.170.

(j) *Batches.* (1) A batch of RNG is the total volume of RNG produced at an RNG production facility under a single batch pathway for the calendar month, in Btu LHV, as determined under paragraph (j)(4) of this section.

(2) A batch of biogas-derived renewable fuel must comply with the requirements specified in § 80.1426(d).

(3) The RNG producer, RNG importer, or biogas closed distribution system RIN generator must assign a number (the “batch number”) to each batch of RNG or biogas-derived renewable fuel consisting of their EPA-issued company registration number, the EPA-issued facility registration number, the last two digits of the compliance year in which the batch was produced, and a unique number for the batch, beginning with the number one for the first batch produced each compliance year and each subsequent batch during the compliance year being assigned the next sequential number (*e.g.*, 4321-54321-23-000001, 4321-54321-23-000002, etc.).

(4) The batch volume of RNG must be calculated as follows:

$$V_{RNG,p} = V_{NG} * \frac{V_{BG,p}}{V_{BG,total}} * R$$

Where:

$V_{RNG,p}$ = The batch volume of RNG for batch pathway p, in Btu LHV.

V_{NG} = The total volume of natural gas produced at the RNG production facility for the calendar month, in Btu LHV, as measured under § 80.155.

$V_{BG,p}$ = The total volume of biogas used to produce RNG under batch pathway p for the calendar month, in Btu HHV, per § 80.105(j).

$V_{BG,total}$ = The total volume of biogas used to produce RNG under all batch pathways for the calendar month, in Btu HHV, per § 80.105(j).

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R = The renewable fraction of the natural gas produced at the RNG production facility for the calendar month. For natural gas produced only from renewable feedstocks, R is equal to 1. For natural gas produced from both renewable and non-renewable feedstocks, R must be measured by a carbon-14 dating test method, per § 80.1426(f)(9).

[88 FR 44564, July 12, 2023, as amended at 90 FR 12114, Mar. 14, 2025]

§ 80.115 RNG RIN separators.

(a) *General requirements.* (1) Any RNG RIN separator must comply with the requirements of this section.

(2) The RNG RIN separator must also comply with all other applicable requirements of this part and 40 CFR part 1090.

(3) If the RNG RIN separator meets the definition of more than one type of regulated party under this part or 40 CFR 1090, the RNG RIN separator must comply with the requirements applicable to each of those types of regulated parties.

(4) The RNG RIN separator must comply with all applicable requirements of this part, regardless of whether the requirements are identified in this section.

(b) *Registration.* (1) The RNG RIN separator must register with EPA under §§ 80.135, 80.1450, and 40 CFR part 1090, subpart I, as applicable.

(2) A dispensing location may only be included in one RNG RIN separator's registration at a time.

(c) *Reporting.* The RNG RIN separator must submit reports to EPA under §§ 80.140, 80.1451, and 80.1452, as applicable.

(d) *Recordkeeping.* The RNG RIN separator must create and maintain records under §§ 80.145 and 80.1454.

(e) *PTDs.* On each occasion when the RNG RIN separator transfers title of renewable fuel and RINs to another party, the transferor must provide to the transferee PTDs under § 80.1453.

(f) *Measurement.* (1) All measurements must be done in accordance with § 80.155.

(2) An RNG RIN separator must measure the volume of natural gas, in Btu LHV, withdrawn from the natural gas commercial pipeline system.

(g) *Attest engagements.* The RNG RIN separator must submit annual attest

engagement reports to EPA under §§ 80.165 and 80.1464 using procedures specified in 40 CFR 1090.1800 and 1090.1805.

§ 80.120 Parties that use biogas as a biointermediate or RNG as a feedstock or as process heat or energy.

(a) *General requirements.* (1) Any renewable fuel producer that uses biogas as a biointermediate or RNG as a feedstock or as process heat or energy under § 80.1426(f)(12) or (13) must comply with the requirements of this section.

(2) The renewable fuel producer must also comply with all other applicable requirements of this part and 40 CFR part 1090.

(3) If the renewable fuel producer meets the definition of more than one type of regulated party under this part or 40 CFR 1090, the renewable fuel producer must comply with the requirements applicable to each of those types of regulated parties.

(4) The renewable fuel producer must comply with all applicable requirements of this part, regardless of whether they are identified in this section.

(5) The transfer and batch segregation limits specified in § 80.1476(g) do not apply.

(b) *Registration.* The renewable fuel producer must register with EPA under §§ 80.135, 80.1450, and 40 CFR part 1090, subpart I, as applicable.

(c) *Reporting.* The renewable fuel producer must submit reports to EPA under §§ 80.140, 80.1451, and 80.1452, as applicable.

(d) *Recordkeeping.* The renewable fuel producer must create and maintain records under §§ 80.145 and 80.1454.

(e) *PTDs.* On each occasion when the renewable fuel producer transfers title of biogas-derived renewable fuel and RINs to another party, the transferor must provide to the transferee PTDs under §§ 80.150 and 80.1453.

(f) *Measurement.* (1) All measurements must be done in accordance with § 80.155.

(2) A renewable fuel producer must measure the volume of natural gas, in Btu LHV, withdrawn from the natural gas commercial pipeline system.

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(g) *Attest engagements.* The renewable fuel producer must submit annual attest engagement reports to EPA under §§ 80.165 and 80.1464 using procedures specified in 40 CFR 1090.1800 and 1090.1805.

(h) *QAP.* Prior to the generation of a Q-RIN for biogas-derived renewable fuel produced from biogas used as a biointermediate or RNG used as a feedstock, the renewable fuel producer must meet all applicable requirements specified in § 80.170.

§ 80.125 RINs for RNG.

(a) *General requirements.* (1) Any party that generates, assigns, transfers, receives, separates, or retires RINs for RNG must comply with the requirements of this section.

(2) Any party that transacts RINs for RNG under this section must transact the RINs as specified in § 80.1452.

(b) *RIN generation.* (1) Only RNG producers may generate RINs for RNG injected into a natural gas commercial pipeline system.

(2) RNG producers must generate RINs for only the biomethane content of biogas supplied by a biogas producer registered under § 80.135.

(3) RNG producers must generate RINs using the applicable requirements for RIN generation in § 80.1426.

(4) If non-renewable components are blended into RNG, the RNG producer must generate RINs for only the biomethane content of the RNG prior to blending.

(5) RNG producers must use the measurement procedures specified in § 80.155 to determine the heating value of RNG for the generation of RINs.

(6) The number of RINs generated for a batch volume of RNG under each batch pathway must be calculated as follows:

$$RIN_{RNG,p} = \frac{V_{RNG,p}}{EqV_{RNG}}$$

Where:

$RIN_{RNG,p}$ = The number of RINs generated for a batch of RNG under batch pathway p, in gallon-RINs.

$V_{RNG,p}$ = The batch volume of RNG for batch pathway p, in Btu LHV, per § 80.110(j)(4).

EqV_{RNG} = The equivalence value for RNG, in Btu LHV per RIN, per § 80.1415(b)(5).

(7) When RNG is injected from multiple RNG production facilities at a pipeline interconnect, the total number of RINs generated must not be greater than the total number of RINs eligible to be generated under § 80.1415(b)(5) for the total volume of RNG injected by all RNG production facilities at that pipeline interconnect.

(8) For RNG that is trucked prior to injection into a natural gas commercial pipeline system, the total volume of RNG injected for the calendar month, in Btu LHV, must not be greater than the lesser of the total loading or unloading volume measurement for the month, in Btu LHV, as required under § 80.110(f)(2)(ii).

(9) Renewable fuel producers that retire RINs for RNG used as a feedstock under paragraph (e) of this section may only generate RINs for the renewable fuel produced from RNG if all applicable requirements under this part are met.

(c) *RIN assignment and transfer.* (1) RNG producers must assign the RINs generated for a batch of RNG to the specific volume of RNG injected into the natural gas commercial pipeline system.

(2) Except as specified in paragraph (c)(1) of this section, no party may assign a RIN to a volume of RNG.

(3) Each party that transfers title of a volume of RNG to another party must transfer title of any assigned RINs for the volume of RNG to the transferee.

(d) *RIN separation.* (1) Only the following parties may separate a RIN from RNG:

(i) The party that withdrew the RNG from the natural gas commercial pipeline system.

(ii) The party that produced or oversaw the production of the renewable CNG/LNG from the RNG.

(iii) The party that used or dispensed for use the renewable CNG/LNG as transportation fuel.

(2) An RNG RIN separator must only separate a RIN from RNG if all the following requirements are met:

(i) The RNG used to produce the renewable CNG/LNG was measured using the procedures specified in § 80.155.

(ii) The RNG RIN separator has the following documentation demonstrating that the volume of renewable CNG/LNG was used as transportation fuel:

(A) If the RNG RIN separator sold or used the renewable CNG/LNG, records demonstrating the date, location, and volume of renewable CNG/LNG sold or used as transportation fuel.

(B) If the RNG RIN separator is relying on documentation from another party, all the following as applicable:

(1) A written contract with the other party for the sale or use of the renewable CNG/LNG as transportation fuel.

(2) Records from the other party demonstrating the date, location, and volume of renewable CNG/LNG sold or used as transportation fuel.

(3) An affidavit from each other party confirming all the following:

(i) That the volume of renewable CNG/LNG was used as transportation fuel and for no other purpose.

(ii) That the party will not separate RINs for this volume of RNG.

(iii) That the party has not provided affidavits to any other party for the purpose of complying with the requirements of this paragraph (d)(2)(ii).

(iii) The volume of RNG was only used to produce renewable CNG/LNG that is used as transportation fuel and for no other purpose.

(iv) No other party used the measurement information under paragraph (d)(2)(i) of this section or the information required under paragraph (d)(2)(ii) of this section to separate RINs for the RNG.

(v) No other party has separated RINs for the RNG using the same dispensing location during the calendar month.

(vi) The RNG RIN separator follows the applicable provisions under § 80.1429(a), (b)(10), and (c) through (e).

(3) An obligated party must not separate RINs for RNG under § 80.1429(b)(1) unless the obligated party meets the requirements in paragraph (d)(1) of this section.

(4) A party must only separate a number of RINs equal to the total volume of RNG (where the Btu LHV are converted to gallon-RINs using the conversion specified in § 80.1415(b)(5)) that the party demonstrates is used as renewable CNG/LNG under paragraph (d)(2) of this section.

(e) *RIN retirement.* (1) A party must retire RINs generated for RNG if any of the conditions specified in § 80.1434(a) apply and must comply with § 80.1434(b).

(2)(i) A party must retire all assigned RINs for a volume of RNG if the RINs are not separated under paragraph (d) of this section by the date the assigned RINs expire under § 80.1428(c).

(ii) A party must retire any expired RINs under paragraph (e)(2)(i) of this section by March 31 of the subsequent year. For example, if an RNG producer assigns RINs for RNG in 2025, the RINs expire if they are not separated under paragraph (d) of this section by December 31, 2026, and must be retired by March 31, 2027.

(3) A party that uses RNG for a purpose other than to produce renewable CNG/LNG (*e.g.*, as a feedstock, as process heat under § 80.1426(f)(12), or as process energy under § 80.1426(f)(13)) must retire any assigned RINs for the volume of RNG within 5 business days of such use of the RNG.

§ 80.130 RINs for renewable CNG/LNG from a biogas closed distribution system.

(a) *General requirements.* (1) Any party that generates, assigns, separates, or retires RINs for renewable CNG/LNG from a biogas closed distribution system must comply with the requirements of this section.

(2) Parties must report all RIN transactions to EMTS as specified in § 80.1452.

(b) *RIN generation.* (1) Biogas closed distribution system RIN generators

must generate RINs using the applicable requirements for RIN generation in under this part.

(2) RINs for renewable CNG/LNG from a biogas closed distribution system may be generated if all the following requirements are met:

(i) The renewable CNG/LNG is produced from renewable biomass and qualifies to generate RINs under an approved pathway.

(ii) The biogas closed distribution system RIN generator has entered into a written contract for the sale or use of a specific quantity of renewable CNG/LNG for use as transportation fuel, and has obtained affidavits from all parties selling or using the renewable CNG/LNG certifying that the renewable CNG/LNG was used as transportation fuel.

(iii) The renewable CNG/LNG is used as transportation fuel and for no other purpose.

(c) *RIN separation.* A biogas closed distribution system RIN generator must separate RINs generated for renewable CNG/LNG under § 80.1429(b)(5)(ii).

(d) *RIN retirement.* A party must retire RINs generated for renewable CNG/LNG from a biogas closed distribution if any of the conditions specified in § 80.1434(a) apply and must comply with § 80.1434(b).

§ 80.135 Registration.

(a) *Applicability.* The following parties must register using the procedures specified in this section, § 80.1450 and 40 CFR 1090.800:

- (1) Biogas producers.
- (2) RNG producers.
- (3) RNG importers.
- (4) Biogas closed distribution system RIN generators.
- (5) RNG RIN separators.
- (6) Renewable fuel producers using biogas as a biointermediate or RNG as a feedstock.

(b) *General registration requirements.* Parties must submit applicable information for companies and facilities as specified in 40 CFR 1090.805.

(1) *New registrants.* (i) Parties required to register under this subpart must have an EPA-accepted registration prior to engaging in regulated activities under this subpart.

(ii) Registration information must be submitted at least 60 days prior to engaging in regulated activities under this subpart.

(iii) Parties may engage in regulated activities under this subpart once EPA has accepted their registration and they have met all other applicable requirements under this subpart.

(2) *Existing renewable CNG/LNG registrations.* (i) Parties listed in paragraph (a) of this section must submit updated registration information that complies with the applicable requirements of this section for any company or facility covered by a registration accepted under § 80.1450(b) for the generation of RINs under § 80.1426(f)(10)(ii) or (11)(ii) no later than October 1, 2024.

(ii) A biogas closed distribution system RIN generator or biogas producer does not need to submit an updated engineering review for any facility in the biogas closed distribution system as specified in § 80.1450(d)(1) before the next three-year engineering review update is due as specified in § 80.1450(d)(3).

(3) *Engineering reviews.* (i) Any party required to register a facility under this section must undergo all the following:

(A) A third-party engineering review as specified in § 80.1450(b)(2).

(B) Three-year engineering review updates as specified in § 80.1450(d)(3).

(ii) Third-party engineering reviews and three-year engineering review updates required under paragraph (b)(3)(i) of this section must evaluate all applicable registration information submitted under this section as well as all applicable requirements in § 80.1450(b).

(iii) A party may arrange for an independent third-party engineer to conduct a single site visit and submit a single engineering review report for a facility that performs multiple activities (*e.g.*, a facility that both produces biogas and upgrades it to RNG) under this subpart as long as the site visit and engineering review report includes all the requirements for each activity performed.

(4) *Registration updates.* (i) Parties registered under this section must submit updated registration information to EPA within 30 days when any of the following occur:

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(A) The registration information previously supplied becomes incomplete or inaccurate.

(B) Facility information is updated under § 80.1450(d)(1), as applicable.

(C) A change of ownership is submitted under 40 CFR 1090.820.

(ii) Parties registered under this section must submit updated registration information to EPA within 7 days when any facility information is updated under § 80.1450(d)(2).

(iii) Parties that register a facility under this section must update their registration information and undergo a three-year engineering review update as specified in § 80.1450(d)(3).

(5) *Registration deactivations.* EPA may deactivate the registration of a party registered under this section as specified in § 80.1450(h), 40 CFR 1090.810, or 40 CFR 1090.815, as applicable.

(c) *Biogas producer.* In addition to the information required under paragraph (b) of this section, a biogas producer must submit all the following information for each biogas production facility:

(1) Information describing the biogas production capacity for the biogas production facility, in Btu HHV, including the following:

(i) Information regarding the permitted capacity in the most recent applicable air permits issued by EPA, a state, a local air pollution control agency, or a foreign governmental agency that governs the biogas production facility, if available.

(ii) Documents demonstrating the biogas production facility's nameplate capacity.

(iii) Information describing the biogas production facility's biogas production for each of the last three calendar years prior to the registration submission, if available.

(2) Whether the biogas will be used to produce RNG, renewable CNG/LNG, or biointermediate and information identifying the facility that will be supplied.

(3) The following information related to biogas measurement:

(i) A description of how biogas will be measured under § 80.155(a), including the specific standards under which the meters are operated.

(ii) A description of the biogas production process, including a process flow diagram that includes metering type(s) and location(s).

(iii) For an alternative measurement protocol under § 80.155(a)(3), all the following:

(A) A description of why the biogas producer is unable to use meters that comply with the requirements specified in § 80.155(a)(1) and (2), as applicable.

(B) A description of how measurement is conducted.

(C) Any standards or specifications that apply.

(D) A description of all routine maintenance and the frequency that such maintenance will be conducted.

(E) A description of the frequency of all measurements and how often such measurements will be recorded under the alternative measurement protocol.

(F) A comparison between the accuracy, precision, and reliability of the alternative measurement protocol and the requirements specified in § 80.155(a)(1) and (2), as applicable, including any supporting data.

(4) For biogas used to produce renewable CNG/LNG in a biogas closed distribution system, all the following additional information:

(i) A process flow diagram of each step of the physical process from feedstock entry to the point where the renewable CNG/LNG is dispensed as transportation fuel. This includes all the following:

(A) Feedstock processing.

(B) Biogas production.

(C) Biogas processing.

(D) Renewable CNG/LNG production.

(E) Points where non-renewable natural gas may be added.

(F) Dispensing stations.

(G) Measurement locations and equipment.

(H) Major equipment (*e.g.*, tanks, pipelines, flares, separation equipment, compressors, and dispensing infrastructure).

(I) Any other process-related information as requested by EPA.

(ii) A description of losses of heating content going from biogas to renewable CNG/LNG and an explanation of how such losses would be accounted for.

(iii) A description of the physical process from biogas production to dispensing of renewable CNG/LNG as transportation fuel, including the biogas closed distribution system.

(iv) A description of the vehicle fleet and dispensing stations that are expected to use and distribute the renewable CNG/LNG as transportation fuel.

(5) For biogas used as a biointermediate, all the information specified in § 80.1450(b)(1)(ii)(B).

(6) For biogas used to produce RNG, all the following additional information:

(i) The RNG producer that will upgrade the biogas.

(ii) A process flow diagram of the physical process from biogas production to entering the RNG production facility, including major equipment (*e.g.*, tanks, pipelines, flares, separation equipment).

(iii) A description of the physical process from biogas production to entering the RNG production facility, including an explanation of how the biogas reaches the RNG production facility.

(7) For biogas produced in an agricultural digester, all the following information:

(i) A separated yard waste plan specified in § 80.1450(b)(1)(vii)(A), as applicable.

(ii) Crop residue information specified in § 80.1450(b)(1)(xv), as applicable.

(iii) A process flow diagram of the physical process from feedstock entry to biogas production, including major equipment (*e.g.*, feedstock preprocessing equipment, tanks, digesters, pipelines, flares).

(8) For biogas produced in a municipal wastewater treatment facility digester, a process flow diagram of the physical process from feedstock entry to biogas production, including major equipment (*e.g.*, feedstock preprocessing equipment, tanks, digesters, pipelines, flares).

(9) For biogas produced in a separated MSW digester, all the following information:

(i) Separated MSW plan specified in § 80.1450(b)(1)(viii).

(ii) A process flow diagram of the physical process from feedstock entry to biogas production, including major

equipment (*e.g.*, feedstock preprocessing equipment, tanks, digesters, pipelines, flares).

(10) For biogas produced in other waste digesters, all the following information, as applicable:

(i) A separated MSW plan specified in § 80.1450(b)(1)(viii).

(ii) A separated yard waste plan specified in § 80.1450(b)(1)(vii)(A).

(iii) Crop residues information specified in § 80.1450(b)(1)(xv).

(iv) A separated food waste plan or biogenic waste oils/fats/greases plan specified in § 80.1450(b)(1)(vii)(B).

(v) A process flow diagram of each step of the physical process from feedstock entry to the point where the biogas either leaves the facility or is used to produce RNG, biointermediate, or biogas-derived renewable fuel. This includes all the following:

(A) Feedstock processing.

(B) Biogas production.

(C) Biogas processing.

(D) Major equipment (*e.g.*, feedstock preprocessing equipment, tanks, digesters, pipelines, flares).

(E) Measurement locations and equipment.

(F) Any other process-related information as requested by EPA.

(vi) For biogas produced in a mixed digester, all the following:

(A) For biogas producers using a value under § 80.105(j)(2)(iv)(E), all the following:

(1) The cellulosic converted fraction (CF) for each cellulosic biogas feedstock that will be used in § 80.105(j)(2)(iii), in Btu HHV/lb feedstock, rounded to the nearest whole number.

(2) Data supporting the cellulosic CF from each cellulosic biogas feedstock. Data must be derived from processing of cellulosic biogas feedstock(s) in anaerobic digesters without simultaneous conversion under similar conditions as will be run in the simultaneously converted process. Data must be either from the facility when it was processing solely the feedstock that does have a minimum 75% adjusted cellulosic content or from a representative sample of other representative facilities processing the feedstock that does have a minimum 75% adjusted cellulosic content.

(3) A description of how the cellulosic CF was determined, including any calculations demonstrating how the data were used.

(4) A list of ranges of processing conditions, including temperature, solids mean residence time, and hydraulic mean residence time, for which the cellulosic CF is accurate and a description of how such processing conditions will be measured by the facility.

(5) A demonstration that no biogas generated from non-cellulosic biogas feedstocks could be used to generate RINs for a batch of renewable fuel with a D code of 3 or 7. EPA may reject this demonstration if it is not sufficiently protective.

(B) A description of the meters used to determine the mass of cellulosic biogas feedstock.

(C) The location of feedstock sampling, additive (*e.g.*, water) addition, and mass measurement for use in § 80.105(j)(2)(iii) included in the process flow diagram required under paragraph (c)(10)(v) of this section.

(D) For facilities using composite sampling under § 80.155(c)(3), a composite sampling plan, including all the following:

(1) A description of when and where the samples will be collected.

(2) A description of how the samples will be stored prior to testing.

(3) A description of how daily representative samples will be mixed, including how the ratio of each sample will be determined.

(4) A description of how often testing will occur.

(5) A description of how the plan complies with § 80.155(c)(2).

(d) *RNG producer.* In addition to the information required under paragraph (b) of this section, an RNG producer must submit all the following information for each RNG production facility:

(1) All applicable information in § 80.1450(b)(1)(ii).

(2) Information to establish the RNG production capacity for the RNG production facility, in Btu LHV, including all the following, as applicable:

(i) Information regarding the permitted capacity in the most recent applicable air permits issued by EPA, a state, a local air pollution control agency, or a foreign governmental

agency that governs the RNG production facility, if available.

(ii) Documents demonstrating the RNG production facility's nameplate capacity.

(iii) Information describing the RNG production facility's RNG production for each of the last three calendar years prior to the registration submission, if available.

(3) The following information related to RNG measurement:

(i) A description of how RNG will be measured under § 80.155(a), including the specific standards under which the meters are operated.

(ii) A description of the RNG production process, including a process flow diagram that includes metering type(s) and location(s).

(iii) For an alternative measurement protocol under § 80.155(a)(3), all the following:

(A) A description of why the RNG producer is unable to use meters that comply with the requirements specified in § 80.155(a)(1) and (2), as applicable.

(B) A description of how measurement is conducted.

(C) Any standards or specifications that apply.

(D) A description of all routine maintenance and the frequency that such maintenance will be conducted.

(E) A description of the frequency of all measurements and how often such measurements will be recorded under the alternative measurement protocol.

(F) A comparison between the accuracy, precision, and reliability of the alternative measurement protocol and the requirements specified in § 80.155(a)(1) and (2), as applicable, including any supporting data.

(4) The natural gas commercial pipeline system name and pipeline interconnect location into which the RNG will be injected.

(5) A description of the natural gas specifications for the natural gas commercial pipeline system into which the RNG will be injected, including information on all parameters regulated by the pipeline (*e.g.*, hydrogen sulfide, total sulfur, carbon dioxide, oxygen, nitrogen, heating content, moisture, siloxanes, and any other available data related to the gas components).

(6) For three-year registration updates, information related to RNG quality, including all the following:

(i) A certificate of analysis—including the major and minor gas components—from an independent laboratory for a representative sample of the biogas produced at the biogas production facility as specified in § 80.155(b).

(ii) A certificate of analysis—including the major and minor gas components—from an independent laboratory for a representative sample of the RNG prior to addition of non-renewable components as specified in § 80.155(b).

(iii) If the RNG is blended with non-renewable components prior to injection into a natural gas commercial pipeline system, a certificate of analysis from an independent laboratory for a representative sample of the RNG after blending with non-renewable components as specified in § 80.155(b).

(iv) A summary table with the results of the certificates of analysis required under paragraphs (d)(6)(i) through (iii) of this section and the natural gas specifications required under paragraph (d)(5) of this section converted to the same units.

(v) EPA may approve an RNG producer's request of an alternative analysis in lieu of the certificates of analysis and summary table required under paragraphs (d)(6)(i) through (iv) of this section if the RNG producer demonstrates that the alternative analysis provides information that is equivalent to that provided in the certificates of analysis and that the RNG will meet all natural gas specifications required under paragraph (d)(5) of this section.

(7) A RIN generation protocol that includes all the following information:

(i) The procedure for allocating RNG injected into the natural gas commercial pipeline system to each RNG production facility and each biogas production facility, including how discrepancies in meter values will be handled.

(ii) A diagram showing the locations of flow meters, gas analyzers, and in-line GC meters used in the allocation procedure.

(iii) A description of when RINs will be generated (*e.g.*, receipt of monthly pipeline statement, etc).

(8) For an RNG production facility that injects RNG at a pipeline inter-

connect that also has RNG injected from other sources, a description of how the RNG producers will allocate RINs to ensure that all facilities comply with the requirements specified in § 80.125(b)(7).

(9) For a foreign RNG producer, all the following additional information:

(i) The applicable information specified in § 80.160.

(ii) Whether the foreign RNG producer will generate RINs for their RNG.

(iii) For non-RIN generating foreign RNG producers, the name and EPA-issued company and facility IDs of the contracted importer under § 80.160(e).

(e) *RNG importer*. In addition to the information required under paragraph (b) of this section, an RNG importer must submit all the following information:

(1) The name and EPA-issued company and facility IDs of the contracted non-RIN generating foreign RNG producer under § 80.160(e).

(2) The name and contact information for the independent third party specified in § 80.160(h).

(f) *RNG RIN separator*. In addition to the information required under paragraph (b) of this section, an RNG RIN separator must submit a list of locations of any dispensing stations where the RNG RIN separator supplies or intends to supply renewable CNG/LNG for use as transportation fuel.

(g) *Renewable fuel producer using biogas as a biointermediate*. In addition to the information required under paragraph (b) of this section, a renewable fuel producer using biogas as a biointermediate must submit all the following:

(1) All applicable information in § 80.1450(b).

(2) Documentation demonstrating a direct connection between the biogas production facility and the renewable fuel production facility.

§ 80.140 Reporting.

(a) *General provisions*—(1) *Applicability*. Parties must submit reports to EPA according to the schedule and containing all applicable information specified in this section.

(2) *Forms and procedures for report submission*. All reports required under this

section must be submitted using forms and procedures specified by EPA.

(3) *Additional reporting elements.* In addition to any applicable reporting requirement under this section, parties must submit any additional information EPA requires to administer the reporting requirements of this section.

(4) *English language reports.* All reported information submitted to EPA under this section must be submitted in English, or must include an English translation.

(5) *Signature of reports.* Reports required under this section must be signed and certified as meeting all the applicable requirements of this subpart by the RCO or their delegate identified in the company registration under 40 CFR 1090.805(a)(1)(iv).

(6) *Report submission deadlines.* Reports required under this section must be submitted by the following deadlines:

(i) Monthly reports must be submitted by the applicable monthly deadline in § 80.1451(f)(4).

(ii) Quarterly reports must be submitted by the applicable quarterly deadline in § 80.1451(f)(2).

(iii) Annual reports must be submitted by the applicable annual deadline in § 80.1451(f)(1).

(7) *Volume standardization.* (i) All volumes reported to EPA in scf under this section must be standardized to STP.

(ii) All volumes reported to EPA in Btu under this section must be converted according to § 80.155(f), if applicable.

(iii) All other volumes reported to EPA under this section must be standardized according to § 80.1426(f)(8).

(b) *Biogas producers.* A biogas producer must submit monthly reports to EPA containing all the following information for each batch of biogas:

(1) Batch number.

(2) Production date (end date of the calendar month).

(3) Verification status of the batch.

(4) The batch volume of biogas supplied to the downstream party, in Btu HHV and scf, as measured under § 80.155.

(5) The associated pathway information, including D code, designated use of the biogas (*e.g.*, biointermediate, re-

newable CNG/LNG, or RNG), and feedstock information.

(6) The EPA-issued company and facility IDs for the RNG producer, biogas closed distribution system RIN generator, or renewable fuel producer that received the batch of the biogas.

(c) *RNG producers.* (1) An RNG producer must submit quarterly reports to EPA containing all the following information:

(i) The total volume of RNG, in Btu LHV and scf, produced and injected into the natural gas commercial pipeline system as measured under § 80.155.

(ii) The total volume of non-renewable components, in Btu LHV, added to RNG prior to injection into the natural gas commercial pipeline system.

(2) A non-RIN generating foreign RNG producer must submit monthly reports to EPA containing all the following information for each batch of RNG:

(i) Batch number.

(ii) Production date (end date of the calendar month).

(iii) Verification status of the batch.

(iv) The associated pathway information, including D code, production process, and feedstock information.

(v) The EPA-issued company and facility IDs for the RNG importer that will generate RINs for the batch.

(d) *Biogas closed distribution system RIN generators.* A biogas closed distribution system RIN generator must submit monthly reports to EPA containing all the following information:

(1)(i) For fuels that are gaseous at STP, the type and volume of biogas-derived renewable fuel, in Btu LHV.

(ii) For all other fuels, the type and volume of biogas-derived renewable fuel, in gallons.

(2) Each of the following, as applicable, as measured under § 80.155:

(i) The volume of biogas, in Btu HHV, used to produce the treated biogas that is used to produce the biogas-derived renewable fuel.

(ii) The volume of biogas, in Btu HHV, used to produce the biogas-derived renewable fuel.

(iii) The volume of treated biogas, in Btu HHV, used to produce the biogas-derived renewable fuel.

(3) The name(s) and location(s) of where the biogas-derived renewable

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fuel is used or sold for use as transportation fuel.

(4)(i) For fuels that are gaseous at STP, the volume of biogas-derived renewable fuel, in Btu LHV, used at each location where the biogas-derived renewable fuel is used or sold for use as transportation fuel.

(ii) For all other fuels, the volume of biogas-derived renewable fuel, in gallons, used at each location where the biogas-derived renewable fuel is used or sold for use as transportation fuel.

(5) All applicable information in § 80.1451(b).

(e) *RNG RIN separators.* (1) An RNG RIN separator must submit quarterly reports to EPA containing all the following information:

(i) Name and location of each point where RNG was withdrawn from the natural gas commercial pipeline system.

(ii) Volume of RNG, in Btu LHV, withdrawn from the natural gas commercial pipeline system during the reporting period by withdrawal location.

(iii) Volume of renewable CNG/LNG, in Btu LHV, dispensed during the reporting period by withdrawal location.

(2) An RNG RIN separator must submit monthly reports to EPA containing all the following information for each batch of biogas:

(i) The location where renewable CNG/LNG was dispensed as transportation fuel.

(ii) The volume of renewable CNG/LNG, in Btu LHV, dispensed as transportation fuel at the location.

(f) *Retirement of RINs for RNG used as a feedstock or process heat.* A party that retires RINs for RNG used as a feedstock or as process heat or energy under § 80.1426(f)(12) or (13) must submit quarterly reports to EPA containing all the following information:

(1) The name(s) and location(s) of the natural gas commercial pipeline where the RNG was withdrawn.

(2) Volume of RNG, in Btu LHV, withdrawn from the natural gas commercial pipeline during the reporting period by location.

(3) The EPA-issued company and facility IDs for the facility that used the withdrawn RNG as a feedstock or as process heat.

(4) For each facility, the following information, as applicable:

(i) For fuels that are gaseous at STP, the volume of biogas-derived renewable fuel, in Btu LHV, produced using the withdrawn RNG.

(ii) For all other fuels, the volume of biogas-derived renewable fuel, in gallons, produced using the withdrawn RNG.

(5) The number of RINs for RNG retired during the reporting period by D code and verification status.

[88 FR 44564, July 12, 2023; 88 FR 51239, Aug. 3, 2023]

§ 80.145 Recordkeeping.

(a) *General requirements*—(1) *Records to be kept.* All parties subject to the requirements of this subpart must keep the following records:

(i) *Compliance report records.* Records related to compliance reports submitted to EPA under this part as follows:

(A) Copies of all reports submitted to EPA.

(B) Copies of any confirmation received from the submission of such reports to EPA.

(C) Copies of all underlying information and documentation used to prepare and submit the reports.

(D) Copies of all calculations required under this subpart.

(ii) *Registration records.* Records related to registration under this part and 40 CFR part 1090, subpart I, as follows:

(A) Copies of all registration information and documentation submitted to EPA.

(B) Copies of all underlying information and documentation used to prepare and submit the registration request.

(iii) *PTD records.* Copies of all PTDs required under this part.

(iv) *Subpart M records.* Any applicable record required under 40 CFR part 80, subpart M.

(v) *QAP records.* Information and documentation related to participation in any QAP program, including contracts between the entity and the QAP provider, records related to verification activities under the QAP, and copies of any QAP-related submissions.

(vi) *Sampling, testing, and measurement records.* Documents supporting the sampling, storage, testing, and measurement results relied upon under § 80.155, including all results, maintenance records, and calibration records.

(vii) *Other records.* Any other records relied upon by the party to demonstrate compliance with this subpart.

(viii) *Potentially invalid RINs.* Any records and copies of notifications related to potentially inaccurate or non-qualifying biogas volumes or potentially invalid RINs under § 80.185.

(ix) *RNG importers and foreign parties.* Any records related to RNG importers and foreign parties under §§ 80.160, 80.1466, and 80.1467, as applicable.

(2) *Length of time records must be kept.* The records required under this subpart must be kept for five years from the date they were created, except that records related to transactions involving RINs must be kept for five years from the date of the RIN transaction.

(3) *Make records available to EPA.* Any party required to keep records under this section must make records available to EPA upon request by EPA. For records that are electronically generated or maintained, the party must make available any equipment and software necessary to read the records or, upon approval by EPA, convert the electronic records to paper documents.

(4) *English language records.* Any record requested by EPA under this section must be submitted in English, or include an English translation.

(b) *Biogas producers.* In addition to the records required under paragraph (a) of this section, a biogas producer must keep all the following records:

(1) Copies of all contracts, PTDs, affidavits required under this part, and all other commercial documents with any RNG producer, biointermediate producer, or renewable fuel producer.

(2) Documents supporting the volume of biogas, in Btu HHV and scf, produced for each batch.

(3) Documents supporting the composition and cleanup of biogas produced for each batch (*e.g.*, meter readings of composition, records of adsorbent replacement, records showing equipment operation including maintenance and energy usage, and records of

component streams separated from the biomethane-enriched stream).

(4) Information and documentation related to participation in any QAP program, including contracts between the biogas producer and the QAP provider, records related to verification activities under the QAP, and copies of any QAP-related submissions.

(5) Records related to measurement, including types of equipment used, metering process, maintenance and calibration records, documents supporting adjustments related to error correction, and measurement data.

(6) Documents supporting the use of each process heat source and supporting the amount of each source used in the production process for each batch.

(7) All the applicable recordkeeping requirements for digester feedstocks under § 80.1454.

(8) The following information and documents showing that the biogas came from renewable biomass:

(i) For all anaerobic digesters, documentation showing the mass of each feedstock type input into the digester for each batch of biogas.

(ii) For agricultural digesters, a quarterly affidavit signed by the RCO or their delegate that only animal manure, crop residue, or separated yard waste that had an adjusted cellulosic content of at least 75% were used to produce biogas during the quarter.

(iii) For municipal wastewater treatment facility digesters and separated MSW digesters, a quarterly affidavit signed by the RCO or their delegate that only feedstocks that had an adjusted cellulosic content of at least 75% were used to produce biogas during the quarter.

(iv) For biogas produced from separated yard waste, separated food waste, or biogenic waste oils/fats/greases, documents required under § 80.1454(j)(1).

(v) For biogas produced from separated MSW, documents required under § 80.1454(j)(2).

(9) For biogas produced in a mixed digester, all the following:

(i) Documents for each delivery of feedstock to the biogas production facility, demonstrating all the following for each unique combination of feedstock supplier and type of feedstock:

(A) The name of the feedstock supplier.

(B) The type of feedstock.

(C) The mass of that feedstock delivered from that supplier.

(ii) Data, documents, and calculations related to digester operating conditions required under § 80.105(f)(2)(iii)(D).

(iii) Documents for each batch showing how measurement data for volatile solids, total solids, and mass were used to calculate batch volume under § 80.105(j)(2).

(iv) Documents showing the amounts of additives (*e.g.*, water), timing of additive addition, and location of additive addition for all additives added to the feedstock.

(v) For samples tested for volatile solids and total solids, documents showing the time and location that each sample was obtained and tested.

(c) *RNG producers*. In addition to the records required under paragraph (a) of this section, an RNG producer must keep all the following records:

(1) Records related to the generation and assignment of RINs, including all the following information:

(i) Batch volume.

(ii) Batch number.

(iii) Production date when RINs were assigned to RNG.

(iv) Injection point into the natural gas commercial pipeline system.

(v) Volume of biogas, in Btu HHV and scf, respectively, received at each RNG production facility.

(vi) Volume of RNG, in Btu LHV, Btu HHV, and scf, produced at each RNG production facility.

(vii) Pipeline injection statements describing the energy and volume of natural gas for each pipeline interconnect.

(2) Records related to each RIN transaction, separately for each transaction, including all the following information:

(i) A list of the RINs generated, owned, purchased, sold, separated, retired, or reinstated.

(ii) The parties involved in each transaction including the transferor, transferee, and any broker or agent.

(iii) The date of the transfer of the RINs.

(iv) Additional information related to details of the transaction and its terms.

(3) Documentation recording the transfer and sale of RNG, from the point of biogas production to the facility that sells or uses the fuel for transportation purposes.

(4) A copy of the RNG producer's Compliance Certification required under Title V of the Clean Air Act.

(5) Results of any laboratory analysis of chemical composition or physical properties.

(6) Documents supporting the composition of biogas and RNG and clean-up of biogas for each batch (*e.g.*, meter readings of composition, records of adsorbent replacement, records showing equipment operation including maintenance and energy usage, and records of component streams separated from the biomethane-enriched stream).

(7) Documents supporting the use of each process heat source and supporting the amount of each source used in the production process for each batch.

(8) Records related to measurement, including types of equipment used, metering process, maintenance and calibration records, documents supporting adjustments related to error correction, and measurement data.

(9) Information and documentation related to participation in any QAP program, including contracts between the RNG producer and the QAP provider, records related to verification activities under the QAP, and copies of any QAP-related submissions.

(10) For an RNG production facility that injects RNG at a pipeline interconnect that also has RNG injected from other sources, documents showing that RINs generated for the facility comply with the requirements specified in § 80.125(b)(7).

(11) Documentation of any waiver provided by the natural gas commercial pipeline system for any parameter of the RNG that does not meet the natural gas specifications submitted under § 80.135(d)(5).

(d) *Biogas closed distribution system RIN generators*. In addition to the records required under paragraph (a) of

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this section, a biogas closed distribution system RIN generator must keep all the following records:

(1) Documentation demonstrating that the renewable CNG/LNG was produced from renewable biomass and qualifies to generate RINs under an approved pathway.

(2) Copies of any written contract for the sale or use of renewable CNG/LNG as transportation fuel, and copies of any affidavit from a party that sold or used the renewable CNG/LNG as transportation fuel.

(e) *RNG RIN separators.* In addition to the records required under paragraph (a) of this section, an RNG RIN separator must keep all the following records:

(1) Documentation indicating the volume of RNG, in Btu LHV, withdrawn from each interconnect of the natural gas commercial pipeline system.

(2) Documentation demonstrating the volume of RNG, in Btu LHV, withdrawn from the natural gas commercial pipeline system that was used to produce renewable CNG/LNG.

(3) Documentation indicating the volume of renewable CNG/LNG, in Btu LHV, dispensed as transportation fuel from each dispensing location.

(4) Copies of all documentation required under § 80.125(d)(2)(ii), as applicable.

(5) Documentation showing how the number of RINs separated was determined using the information specified in paragraphs (e)(1) through (4) of this section and the applicable RIN separation reports.

(f) *Renewable fuel producers that use biogas as a biointermediate or RNG as a feedstock.* In addition to the records required under paragraph (a) of this section, a renewable fuel producer that uses biogas as a biointermediate or RNG as a feedstock must keep all the following records:

(1) Documentation supporting the volume of renewable fuel produced from biogas used as a biointermediate or RNG that was used as a feedstock.

(2) For biogas, all the following additional information:

(i) For each facility, documentation supporting the volume of biogas, in Btu HHV and scf, that was used as a biointermediate.

(ii) Copies of all applicable contracts over the past 5 years with each biointermediate producer.

(3) For RNG, all the following additional information:

(i) Documentation supporting the volume of RNG, in Btu LHV, withdrawn from the natural gas commercial pipeline system.

(ii) Documentation supporting the retirement of RINs for RNG used as a feedstock (*e.g.*, contracts, purchase orders, invoices).

§ 80.150 Product transfer documents.

(a) *General requirements*—(1) *PTD contents.* On each occasion when any person transfers title of any biogas or imported RNG without assigned RINs, the transferor must provide the transferee PTDs that include all the following information:

(i) The name, EPA-issued company and facility IDs, and address of the transferor.

(ii) The name, EPA-issued company and facility IDs, and address of the transferee.

(iii) The volume (in Btu HHV for biogas or Btu LHV for RNG) of the product being transferred by D code and verification status.

(iv) The location of the product at the time of the transfer.

(v) The date of the transfer.

(vi) Period of production.

(2) *Other PTD requirements.* A party must also include any applicable PTD information required under § 80.1453 or 40 CFR part 1090, subpart L.

(b) *Additional PTD requirements for transfers of biogas.* In addition to the information required in paragraph (a) of this section, on each occasion when any person transfers title of biogas, the transferor must provide the transferee PTDs that include all the following information:

(1) An accurate and clear statement of the applicable designation of the biogas.

(2) If the biogas is designated as a biointermediate, any applicable requirement specified in § 80.1453(f).

(3) One of the following statements, as applicable:

(i) For biogas designated for use to produce renewable CNG/LNG, “This

volume of biogas is designated and intended for use to produce renewable CNG/LNG.”

(ii) For biogas designated for use to produce RNG, “This volume of biogas is designated and intended for use to produce renewable natural gas.”

(iii) For biogas designated for use as a biointermediate, the language found at § 80.1453(f)(1)(vi).

(iv) For biogas designated for use as process heat or energy under § 80.1426(f)(12) or (13), “This volume of biogas is designated and intended for use as process heat or energy.”

(c) *PTD requirements for custodial transfers of RNG.* On each occasion when custody of RNG is transferred prior to injection into a pipeline interconnect (*e.g.*, via truck), the transferor must provide the transferee PTDs that include all the following information:

(1) The applicable information listed in paragraph (a) of this section.

(2) The following statement, “This volume of RNG is designated and intended for transportation use and may not be used for any other purpose.”

(d) *PTD requirements for imported RIN-less RNG.* On each occasion when title of RIN-less RNG is transferred and ultimately imported into the covered location, the transferor must provide the transferee PTDs that include all the following information:

(1) The applicable information listed in paragraph (a) of this section.

(2) The following statement, “This volume of RNG is designated and intended for transportation use in the contiguous United States and may not be used for any other purpose.”

(3) The name, EPA-issued company and facility IDs, and address of the contracted RNG importer under § 80.160(e).

(4) The name, EPA-issued company and facility IDs, and address of the transferee.

§ 80.155 Sampling, testing, and measurement.

(a) *Biogas and RNG continuous measurement.* Any party required to measure the volume of biogas, RNG, or renewable CNG/LNG under this subpart must continuously measure using meters that comply with the requirements in paragraphs (a)(1) and (2) of

this section, or have an accepted alternative measurement protocol as specified in paragraph (a)(3) of this section:

(1) In-line GC meters compliant with ASTM D7164 (incorporated by reference, see § 80.12), including sections 9.2, 9.3, 9.4, 9.5, 9.7, 9.8, and 9.11 of ASTM D7164.

(2) Flow meters compliant with one of the following:

(i) API MPMS 14.3.1, API MPMS 14.3.2, API MPMS 14.3.3, and API MPMS 14.3.4 (incorporated by reference, see § 80.12).

(ii) API MPMS 14.12 (incorporated by reference, see § 80.12).

(iii) EN 17526 (incorporated by reference, see § 80.12) compatible with gas type H.

(3) EPA may accept an alternative measurement protocol if all the following conditions are met:

(i) The party demonstrates that they are unable to continuously measure using meters that comply with the requirements in paragraphs (a)(1) and (2) of this section, as applicable.

(ii) The party demonstrates that the alternative measurement protocol is at least as accurate and precise as the methods specified in paragraphs (a)(1) and (2) of this section, as applicable.

(b) *Biogas and RNG sampling and testing.* Any party required to sample and test biogas or RNG under this subpart must do so as follows:

(1) Collect representative samples of biogas or RNG using API MPMS 14.1 (incorporated by reference, see § 80.12).

(2) Perform all the following measurements on each representative sample:

(i) Methane, carbon dioxide, nitrogen, and oxygen using EPA Method 3C (see Appendix A-2 to 40 CFR part 60).

(ii) Hydrogen sulfide and total sulfur using ASTM D5504 (incorporated by reference, see § 80.12).

(iii) Siloxanes using ASTM D8230 (incorporated by reference, see § 80.12).

(iv) Moisture using ASTM D4888 (incorporated by reference, see § 80.12).

(v) Hydrocarbon analysis using EPA Method 18 (see Appendix A-6 to 40 CFR part 60).

(vi) Heating value and relative density using ASTM D3588 (incorporated by reference, see § 80.12).

(vii) Additional components specified in the natural gas specifications submitted under § 80.135(d)(5) or specified by EPA as a condition of registration under this part.

(viii) Carbon-14 analysis using ASTM D6866 (incorporated by reference, see § 80.12).

(c) *Digester feedstock.* Any party required to test for total solids and volatile solids of a digester feedstock under this subpart must do so as follows:

(1) Samples must be tested in accordance with Part G of SM 2540 (incorporated by reference, see § 80.12).

(2) Samples must be obtained, stored, and tested in accordance with Part A of SM 2540, including Sections 2, 3, and 5 (Sources of Error and Variability, Sample Handling and Preservation, and Quality Control).

(3) Parties must test each daily representative sample under paragraphs (c)(1) and (2) of this section unless the party has a composite sampling plan submitted to EPA under § 80.135(c)(10)(vi)(D). Parties with a composite sampling plan must either test each daily representative sample or test samples in accordance with Part A of SM 2540 and as specified in the facility's composite sampling plan.

(d) *Digester operations.* Any biogas producer required to measure or calculate digester operating conditions under this subpart must determine digester operating conditions for each mixed digester that meet all the following requirements:

(1) Digester temperature readings must be recorded no less frequent than every 30 minutes and represent the average temperature in the tank.

(2) Digester hydraulic and solids mean residence times must be calculated no less frequent than once a day using measurements of inflows, outflows, and tank levels, as applicable.

(3) Other parameters must be measured and calculated as specified in the facility's registration under § 80.135(c)(10)(vi)(A)(4).

(e) *Third parties.* Samples required to be obtained under this subpart may be collected and analyzed by third parties.

(f) *Unit conversions.* A party converting between Btu HHV and Btu LHV for biogas, treated biogas, natural gas,

or CNG/LNG must use the ratio of HHV and LHV of methane as specified in ASTM D3588 (incorporated by reference, see § 80.12).

(g) *Liquid measurement and standardization.* Any substance that is liquid at STP must be measured in gallons and standardized according to § 80.1426(f)(8).

§ 80.160 RNG importers, foreign biogas producers, and foreign RNG producers.

(a) *Applicability.* The provisions of this section apply to any RNG importer or any foreign party subject to requirements of this subpart outside the United States.

(b) *General requirements.* Any foreign party must meet all the following requirements:

(1) *Letter from RCO.* The foreign party must provide a letter signed by the RCO that commits the foreign party to the applicable provisions specified in paragraphs (b)(4) and (c) of this section as part of their registration under § 80.135.

(2) *Bond posting.* A foreign party that generates RINs must meet the bond requirements of § 80.1466(h).

(3) *Foreign RIN owners.* A foreign party that owns RINs must meet the requirements of § 80.1467, including any foreign party that separates or retires RINs under § 80.125.

(4) *Foreign party commitments.* Any foreign party must commit to the following provisions as a condition of being registered as a foreign party under this subpart:

(i) Any EPA inspector or auditor must be given full, complete, and immediate access to conduct inspections and audits of all facilities subject to this subpart.

(A) Inspections and audits may be either announced in advance by EPA, or unannounced.

(B) Access will be provided to any location where:

(1) Biogas, RNG, biointermediate, or biogas-derived renewable fuel is produced.

(2) Documents related to the foreign party operations are kept.

(3) Any product subject to this subpart (*e.g.*, biogas, RNG,

biointermediates, or biogas-derived renewable fuel) that is stored or transported outside the United States between the foreign party's facility and the point of importation into the United States, including storage tanks, vessels, and pipelines.

(C) EPA inspectors and auditors may be EPA employees or contractors to EPA.

(D) Any documents requested that are related to matters covered by inspections and audits must be provided to an EPA inspector or auditor on request.

(E) Inspections and audits may include review and copying of any documents related to the following:

(1) The volume or properties of any product subject to this subpart produced or delivered to a renewable fuel production facility.

(2) Transfers of title or custody to the any product subject to this subpart.

(3) Work performed and reports prepared by independent third parties and by independent auditors under the requirements of this subpart, including work papers.

(4) Records required under § 80.145.

(5) Any records related to claims made during registration.

(F) Inspections and audits by EPA may include interviewing employees.

(G) Any employee of the foreign party must be made available for interview by the EPA inspector or auditor, on request, within a reasonable time period.

(H) English language translations of any documents must be provided to an EPA inspector or auditor, on request, within 10 business days.

(I) English language interpreters must be provided to accompany EPA inspectors and auditors, on request.

(ii) An agent for service of process located in the District of Columbia will be named, and service on this agent constitutes service on the foreign party or any employee of the party for any action by EPA or otherwise by the United States related to the requirements of this subpart.

(iii) The forum for any civil or criminal enforcement action related to the provisions of this subpart for violations of the Clean Air Act or regulations pro-

mulgated thereunder are governed by the Clean Air Act, including the EPA administrative forum where allowed under the Clean Air Act.

(iv) United States substantive and procedural laws apply to any civil or criminal enforcement action against the foreign party or any employee of the foreign party related to the provisions of this subpart.

(v) Applying to be an approved foreign party under this subpart, or producing or exporting any product subject to this subpart under such approval, and all other actions to comply with the requirements of this subpart relating to such approval constitute actions or activities covered by and within the meaning of the provisions of 28 U.S.C. 1605(a)(2), but solely with respect to actions instituted against the foreign party, its agents and employees in any court or other tribunal in the United States for conduct that violates the requirements applicable to the foreign party under this subpart, including conduct that violates the False Statements Accountability Act of 1996 (18 U.S.C. 1001) and section 113(c)(2) of the Clean Air Act (42 U.S.C. 7413).

(vi) The foreign party, or its agents or employees, will not seek to detain or to impose civil or criminal remedies against EPA inspectors or auditors for actions performed within the scope of EPA employment or contract related to the provisions of this subpart.

(vii) In any case where a product produced at a foreign facility is stored or transported by another company between the foreign facility and the point of importation to the United States, the foreign party must obtain from each such other company a commitment that meets the requirements specified in paragraphs (b)(4)(i) through (vi) of this section before the product is transported to the United States, and these commitments must be included in the foreign party's application to be a registered foreign party under this subpart.

(c) *Sovereign immunity.* By submitting an application to be a registered foreign party under this subpart, or by producing or exporting any product subject to this subpart to the United

States under such registration, the foreign party, and its agents and employees, without exception, become subject to the full operation of the administrative and judicial enforcement powers and provisions of the United States without limitation based on sovereign immunity, with respect to actions instituted against the party, its agents and employees in any court or other tribunal in the United States for conduct that violates the requirements applicable to the foreign party under this subpart, including conduct that violates the False Statements Accountability Act of 1996 (18 U.S.C. 1001) and section 113(c)(2) of the Clean Air Act (42 U.S.C. 7413).

(d) *English language reports.* Any document submitted to EPA by a foreign party must be in English, or must include an English language translation.

(e) *Foreign RNG producer contractual relationship.* A non-RIN generating foreign RNG producer must establish a contractual relationship with an RNG importer, prior to the sale of RIN-less RNG.

(f) *Withdrawal or suspension of registration.* EPA may withdraw or suspend a foreign party's registration where any of the following occur:

(1) The foreign party fails to meet any requirement of this subpart.

(2) The foreign government fails to allow EPA inspections or audits as provided in paragraph (b)(4)(i) of this section.

(3) The foreign party asserts a claim of, or a right to claim, sovereign immunity in an action to enforce the requirements in this subpart.

(4) The foreign party fails to pay a civil or criminal penalty that is not satisfied using the bond required under paragraph (b)(2) of this section.

(g) *Additional requirements for applications, reports, and certificates.* Any application for registration as a foreign party, or any report, certification, or other submission required under this subpart by the foreign party, must be:

(1) Submitted using formats and procedures specified by EPA.

(2) Signed by the RCO of the foreign party's company.

(3) Contain the following declarations:

(i) *Certification.*

"I hereby certify:

That I have actual authority to sign on behalf of and to bind [NAME OF FOREIGN PARTY] with regard to all statements contained herein.

That I am aware that the information contained herein is being Certified, or submitted to the United States Environmental Protection Agency, under the requirements of 40 CFR part 80, subparts E and M, and that the information is material for determining compliance under these regulations.

That I have read and understand the information being Certified or submitted, and this information is true, complete, and correct to the best of my knowledge and belief after I have taken reasonable and appropriate steps to verify the accuracy thereof."

(ii) *Affirmation.*

"I affirm that I have read and understand the provisions of 40 CFR part 80, subparts E and M, including 40 CFR 80.160, 80.1466, and 80.1467 apply to [NAME OF FOREIGN PARTY]. Pursuant to Clean Air Act section 113(c) and 18 U.S.C. 1001, the penalty for furnishing false, incomplete, or misleading information in this certification or submission is a fine of up to \$10,000 U.S., and/or imprisonment for up to five years."

(h) *Requirements for RNG importers.* An RNG importer must meet all the following requirements:

(1) For each imported batch of RNG, the RNG importer must have an independent third party that meets the requirements of § 80.1450(b)(2)(i) and (ii) do all the following:

(i) Determine the volume of RNG, in Btu LHV, injected into the natural gas commercial pipeline system as specified in § 80.155.

(ii) Determine the name and EPA-assigned company and facility identification numbers of the foreign non-RIN generating RNG producer that produced the RNG.

(2) The independent third party must submit reports to the foreign non-RIN generating RNG producer and the RNG importer within 30 days following the date the RNG was injected into a natural gas commercial pipeline system for import into the United States containing all the following:

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(i) The statements specified in paragraph (g) of this section.

(ii) The name of the foreign non-RIN generating RNG producer, containing the information specified in paragraph (g) of this section, and including the identification of the natural gas commercial pipeline system terminal at which the product was offloaded.

(iii) PTDs showing the volume of RNG, in Btu LHV, transferred from the foreign non-RIN generating RNG producer to the RNG importer.

(3) The RNG importer and the independent third party must keep records of the audits and reports required under paragraphs (h)(1) and (2) of this section for five years from the date of creation.

§ 80.165 Attest engagements.

(a) *General provisions.* (1) The following parties must arrange for annual attestation engagement using agreed-upon procedures:

(i) Biogas producers.

(ii) RNG producers.

(iii) RNG importers.

(iv) Biogas closed distribution system RIN generators.

(v) RNG RIN separators.

(vi) Renewable fuel producers that use RNG as a feedstock.

(2) The auditor performing attestation engagements required under this subpart must meet the requirements in 40 CFR 1090.1800(b).

(3) The auditor must perform attestation engagements separately for each biogas production facility, RNG production facility, and renewable fuel production facility, as applicable.

(4) Except as otherwise specified in this section, attest auditors may use the representative sampling procedures specified in 40 CFR 1090.1805.

(5) Except as otherwise specified in this section, attest auditors must prepare and submit the annual attestation engagement following the procedures specified in 40 CFR 1090.1800(d).

(b) *General procedures for biogas producers.* An attest auditor must conduct annual attestation audits for biogas producers using the following procedures:

(1) *Registration and EPA reports.* The auditor must review registration and EPA reports as follows:

(i) Obtain copies of all the following:

(A) The biogas producer's registration information submitted under §§ 80.135 and 80.1450.

(B) All reports submitted under §§ 80.140 and 80.1451.

(ii) For each biogas production facility, confirm that the facility's registration is accurate based on the activities reported during the compliance period and confirm any related updates were completed prior to conducting regulated activities at the facility and report as a finding any exceptions.

(iii)(A) Report the date of the last engineering review conducted under §§ 80.135(b)(3) and 80.1450(b), as applicable.

(B) Report as a finding if the last engineering review is outside of the schedule specified in § 80.1450(d)(3)(ii).

(iv) Confirm that the biogas producer submitted all reports required under §§ 80.140 and 80.1451 for activities performed during the compliance period and report as a finding any exceptions.

(2) *Measurement method review.* The auditor must review measurement methods for each meter as follows:

(i) Obtain records related to measurement under § 80.145(a)(1)(vi).

(ii)(A) Identify and report the name of the method(s) used for measuring the volume of biogas, in Btu HHV and scf.

(B) Report as a finding any method that is not specified in § 80.155 or the biogas producer's registration.

(iii)(A) Identify whether maintenance and calibration records were kept for each meter and report the last date of calibration.

(B) Report as a finding if no records were obtained.

(3) *Listing of batches.* The auditor must review listings of batches as follows:

(i) Obtain the batch reports submitted under § 80.140.

(ii) Compare the reported volume for each batch to the measured volume and report as a finding any exceptions.

(4) *Testing of biogas transfers.* The auditor must review biogas transfers as follows:

(i) Obtain the associated PTD for each batch of biogas produced during the compliance period.

(ii) Using the batch number, confirm that the correct PTD is obtained for each batch and compare the volume, in Btu HHV and scf, on each batch report to the associated PTD and report as a finding any exceptions.

(iii) Confirm that the PTD associated with each batch contains all applicable language requirements under § 80.150 and report as a finding any exceptions.

(c) *General procedures for RNG producers and importers.* An attest auditor must conduct annual attestation audits for RNG producers and importers using the following procedures, as applicable:

(1) *Registration and EPA reports.* The auditor must review registration and EPA reports as follows:

(i) Obtain copies of all the following:

(A) The RNG producer or importer's registration information submitted under §§ 80.135 and 80.1450.

(B) All reports submitted under §§ 80.140 and 80.1451.

(ii) For each RNG production facility, confirm that the facility's registration is accurate based on the activities reported during the compliance period and confirm any related updates were completed prior to conducting regulated activities at the facility and report as a finding any exceptions.

(iii)(A) Report the date of the last engineering review conducted under §§ 80.135(b)(3) and 80.1450(b), as applicable.

(B) Report as a finding if the last engineering review is outside of the schedule specified in § 80.1450(d)(3)(ii).

(iv) Confirm that the RNG producer or importer submitted all reports required under §§ 80.140 and 80.1451 for activities performed during the compliance period and report as a finding any exceptions.

(2) *Feedstock received.* The auditor must perform an inventory of biogas received as follows:

(i) Obtain copies of all the following:

(A) Records documenting the source and volume of biogas, in Btu and scf, received by the RNG producer.

(B) Records showing the volume of biogas used to produce RNG, in Btu HHV and scf, and the volume of RNG produced, in Btu HHV and scf.

(C) Records showing whether non-renewable components were blended into RNG.

(ii) Report the number of parties the RNG producer received biogas from and the total volume received separately from each party.

(iii)(A) Report the total volume of biogas used to produce RNG, in Btu HHV and scf, and the total volume of RNG produced, in Btu HHV and scf.

(B) Report as a finding if the volume of RNG produced is greater than the volume of biogas used to produce RNG, in Btu HHV.

(iv) Report as a finding if any RINs were generated for the non-renewable components of the blended batch.

(3) *Measurement method review.* The auditor must review measurement methods for each meter as follows:

(i) Obtain records related to measurement under § 80.145(a)(1)(vi).

(ii)(A) Identify and report the name of the method(s) used for measuring the volume of RNG, in Btu and in scf.

(B) Report as a finding any method that is not specified in § 80.155 or the RNG producer's registration.

(iii) Identify whether maintenance and calibration records were kept and report as a finding if no records were obtained.

(4) *Listing of batches.* The auditor must review listings of batches as follows:

(i) Obtain the batch reports submitted under § 80.140.

(ii) Compare the reported volume for each batch to the measured volume and report as a finding any exceptions.

(iii) Report as a finding any batches with reported values that did not meet the natural gas specifications submitted under § 80.135(d)(5).

(5) *Testing of RNG transfers.* The auditor must review RNG transfers as follows:

(i) Obtain the associated PTD for each batch of RNG produced or imported during the compliance period.

(ii) Using the batch number, confirm that the correct PTD is obtained for each batch and compare the volume, in Btu and scf, on each batch report to the associated PTD and report as a finding any exceptions.

(iii) Confirm that the PTD associated with each batch contains all applicable

language requirements under § 80.150 and report as a finding any exceptions.

(6) *RNG RIN generation.* The auditor must perform the following procedures for monthly RIN generation:

(i) Obtain the RIN generation reports submitted under § 80.1451.

(ii) Compare the number of RINs generated for each batch to the batch report and report as a finding any exceptions.

(iii)(A) Compare the number of RINs generated multiplied by 77,000 Btu to the amount of RNG injected into the natural gas commercial pipeline system.

(B) Report as a finding if the volume of RNG injected is less than the number of RINs generated multiplied by 77,000 Btu.

(d) *General procedures for biogas closed distribution system RIN generators.* An attest auditor must conduct annual attestation audits for biogas closed distribution system RIN generators using the following procedures:

(1) *Registration and EPA reports.* The auditor must review registration and EPA reports as follows:

(i) Obtain copies of all the following:

(A) The biogas closed distribution system RIN generator's registration information submitted under § 80.135.

(B) All reports submitted under § 80.140.

(ii) Confirm that the biogas closed distribution system RIN generator's registration is accurate based on the activities reported during the compliance period and that any required updates were completed prior to conducting regulated activities and report as a finding any exceptions.

(iii) Confirm that the biogas closed distribution system RIN generator submitted all reports required under §§ 80.140 and 80.1451 for activities performed during the compliance period and report as a finding any exceptions.

(2) *RIN generation.* The auditor must complete all applicable requirements specified in § 80.1464.

(e) *General procedures for RNG RIN separators.* An attest auditor must conduct annual attestation audits for RNG RIN separators using the following procedures:

(1) *Registration and EPA reports.* The auditor must review registration and EPA reports as follows:

(i) Obtain copies of all the following:

(A) The RNG RIN separator's registration information submitted under §§ 80.135 and 80.1450.

(B) All reports submitted under §§ 80.140 and 80.1451.

(ii) Confirm that the RNG RIN separator's registration is accurate based on the activities reported during the compliance period and that any required updates were completed prior to conducting regulated activities and report as a finding any exceptions.

(iii) Confirm that the RNG RIN separator submitted all reports required under §§ 80.140 and 80.1451 for activities performed during the compliance period and report as a finding any exceptions.

(2) *RIN separation events.* The auditor must review records supporting RIN separation events as follows:

(i) Obtain copies of all the following:

(A) RIN separation reports submitted under §§ 80.140(e) and 80.1452.

(B) RNG withdrawal records required under § 80.145(e).

(ii)(A) Compare the volume of RNG, in Btu LHV, withdrawn from the natural gas commercial pipeline system to the reported number of separated RINs multiplied by 77,000 Btu used to produce the renewable CNG/LNG.

(B) Report as a finding if the volume of RNG, in Btu LHV, is less than the number of separated RINs multiplied by 77,000 Btu.

(iii)(A) Compare the volume of renewable CNG/LNG, in Btu LHV, to the reported number of separated RINs multiplied by 77,000 Btu.

(B) Report as a finding if the volume of renewable CNG/LNG, in Btu LHV, is less than the number of separated RINs multiplied by 77,000 Btu.

(3) *RIN owner.* The auditor must complete all the requirements specified in § 80.1464(c).

(f) *General procedures for renewable fuel producers that use RNG as a feedstock.* An attest auditor must conduct annual attestation audits for renewable fuel producers that use RNG as a feedstock using the following procedures:

(1) *Registration and EPA reports.* The auditor must review registration and EPA reports as follows:

(i) Obtain copies of all the following:
(A) The renewable fuel producer's registration information submitted under § 80.135.

(B) All reports submitted under § 80.140.

(ii) Confirm that the renewable fuel producer's registration is accurate based on the activities reported during the compliance period and that any required updates were completed prior to conducting regulated activities and report as a finding any exceptions.

(iii) Confirm that the renewable fuel producers submitted all reports required under §§ 80.140 and 80.1451 for activities performed during the compliance period and report as a finding any exceptions.

(2) *RIN retirements.* The attest auditor must review RIN retirements as follows:

(i) Obtain copies of all the following:
(A) RIN retirement reports submitted under §§ 80.140(f) and 80.1452.

(B) Records related to measurement under § 80.145(a)(1)(vi).

(ii) Compare the measured volume of RNG used as a feedstock to the reported number of RINs retired for RNG.

(iii) Report as a finding if the measured volume of RNG used as a feedstock does not match the number of RINs retired for RNG.

§ 80.170 Quality assurance plan.

(a) *General requirements.* This section specifies the requirements for QAPs related to the verification of RINs generated for RNG and biogas-derived renewable fuel.

(1) For the generation of Q-RINs for RNG or biogas-derived renewable fuel, the same independent third-party auditor must verify each party as follows:

(i) For RNG, all the RNG production facilities that inject into the same pipeline interconnect and all the biogas production facilities that provide feedstock to those RNG production facilities.

(ii) For renewable CNG/LNG produced from RNG, the biogas producer and the RNG producer.

(iii) For renewable CNG/LNG produced from biogas in a biogas closed distribution system, the biogas producer, the biogas closed distribution system RIN generator, and any party deemed necessary by EPA to ensure that the renewable CNG/LNG was used as transportation fuel.

(iv) For biogas-derived renewable fuel produced from biogas used as a bio-intermediate, the biogas producer, the producer of the biogas-derived renewable fuel, and any other party deemed necessary by EPA to ensure that the biogas-derived renewable fuel was produced under an approved pathway and used as transportation fuel.

(v) For biogas-derived renewable fuel produced from RNG used as a feedstock, the producer of the biogas-derived renewable fuel and any other party deemed necessary by EPA to ensure that the biogas-derived renewable fuel was produced under an approved pathway and used as transportation fuel.

(2) Independent third-party auditors that verify RINs generated under this subpart must meet the requirements in § 80.1471(a) through (c), (g), and (h).

(3)(i) QAPs approved by EPA to verify RINs generated under this subpart must meet the applicable requirements in § 80.1469.

(ii) EPA may revoke or void a QAP as specified in § 80.1469(e)(4) or (5).

(4) Independent third-party auditors must conduct quality assurance audits at biogas production facilities, RNG production facilities, renewable fuel production facilities, and any facility or location deemed necessary by EPA to ensure that the biogas-derived renewable fuel was produced under an approved pathway and used as transportation fuel, heating oil, or jet fuel as specified in § 80.1472.

(5) Independent third-party auditors must ensure that mass and energy balances performed under § 80.1469(c)(2) are consistent between facilities that are audited as part of the same chain.

(b) *Requirements for biogas production facilities.* In addition to the applicable elements verified under § 80.1469, the independent third-party auditor must do all the following for each biogas production facility:

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(1) Verify that the biogas was measured as required under § 80.155.

(2) Verify that the PTDs for biogas transfers meet the applicable PTD requirements in §§ 80.150 and 80.1453.

(c) *Requirements for RNG production facilities.* In addition to the applicable elements verified under § 80.1469, the independent third-party auditor must do all the following for each RNG production facility:

(1) Verify that the RNG was sampled, tested, and measured as required under § 80.155.

(2) Verify that RINs were assigned, separated, and retired as required under § 80.125(c), (d), and (e), respectively.

(3) Verify that the RNG was injected into a natural gas commercial pipeline system.

(4) Verify that RINs were not generated on non-renewable components added to RNG prior to injection into a natural gas commercial pipeline system.

(d) *Requirements for renewable fuel production facilities using biogas as a bio-intermediate.* The independent third-party auditor must meet all the requirements specified in paragraph (b) of this section and § 80.1477 for each renewable fuel production facility using biogas as a biointermediate.

(e) *Responsibility for replacement of invalid verified RINs.* The generator of RINs for RNG or a biogas-derived renewable fuel, and the obligated party that owns the Q-RINs, are required to replace invalidly generated Q-RINs with valid RINs as specified in § 80.1431(b).

§ 80.175 Prohibited acts and liability provisions.

(a) *Prohibited acts.* (1) It is a prohibited act for any person to act in violation of this subpart or fail to meet a requirement that applies to that person under this subpart.

(2) No person may cause another person to commit an act in violation of this subpart.

(b) *Liability provisions*—(1) *General.* (i) Any person who commits any prohibited act or requirement in this subpart is liable for the violation.

(ii) Any person who causes another person to commit a prohibited act

under this subpart is liable for that violation.

(iii) Any parent corporation is liable for any violation committed by any of its wholly-owned subsidiaries.

(iv) Each partner to a joint venture, or each owner of a facility owned by two or more owners, is jointly and severally liable for any violation of this subpart that occurs at the joint venture facility or facility owned by the joint owners, or any violation of this subpart that is committed by the joint venture operation or any of the joint owners of the facility.

(v) Any person listed in paragraphs (b)(2) through (4) of this section is liable for any violation of a prohibition specified in paragraph (a) of this section or failure to meet a requirement of any provision of this subpart regardless of whether the person violated or caused the violation unless the person establishes an affirmative defense under § 80.180.

(vi) The liability provisions of § 80.1461 also apply to any person subject to the provisions of this subpart.

(2) *Biogas liability.* When biogas is found in violation of a prohibition specified in paragraph (a) of this section or § 80.1460, the following persons are deemed in violation:

(i) The biogas producer that produced the biogas.

(ii) Any RNG producer that used the biogas to produce RNG.

(iii) Any biointermediate producer that used the biogas to produce a biointermediate.

(iv) Any person that used the biogas, RNG produced from the biogas, or biointermediate produced from the biogas to produce a biogas-derived renewable fuel.

(v) Any person that generated a RIN from a biogas-derived renewable fuel produced from the biogas, RNG produced from the biogas, or biointermediate produced from the biogas.

(vi) Any person that used the biogas or RNG produced from the biogas as process heat or energy under § 80.1426(f)(12) or (13).

(3) *RNG liability.* When RNG is found in violation of a prohibition specified in paragraph (a) of this section or § 80.1460, the following persons are deemed in violation:

(i) The biogas producer that produced the biogas used to produce the RNG.

(ii) The RNG producer that produced the RNG.

(iii) Any person that used the RNG as a feedstock.

(iv) Any person that used the RNG as process heat or energy under § 80.1426(f)(12) or (13).

(v) Any person that generated a RIN from a biogas-derived renewable fuel produced from the RNG or biointermediate produced from the RNG.

(4) *Third-party liability.* Any party allowed under this subpart to act on behalf of a regulated party and does so to demonstrate compliance with the requirements of this subpart must meet those requirements in the same way that the regulated party must meet those requirements. The regulated party and the third party are both liable for any violations arising from the third party's failure to meet the requirements of this subpart.

§ 80.180 Affirmative defense provisions.

(a) *Applicability.* A person may establish an affirmative defense to a violation that person is liable for under § 80.175(b) if that person satisfies all applicable elements of an affirmative defense in this section.

(1) No person that generates a RIN for biogas-derived renewable fuel may establish an affirmative defense under this section.

(2) A person that is a biogas producer may not establish an affirmative defense under this section for a violation that the biogas producer is liable for under § 80.175(b)(1) and (2).

(3) A person that is an RNG producer may not establish an affirmative defense under this section for a violation that the RNG producer is liable for under § 80.175(b)(1) and (3).

(b) *General elements.* A person may only establish an affirmative defense under this section if the person meets all the following requirements:

(1) The person, or any of the person's employees or agents, did not cause the violation.

(2) The person did not know or have reason to know that the biogas, treated biogas, RNG, biogas-derived renewable fuel, or RIN was in violation of a prohi-

bition or requirement under this subpart.

(3) The person must have had no financial interest in the company that caused the violation.

(4) If the person self-identified the violation, the person notified EPA within five business days of discovering the violation.

(5) The person must submit a written report to the EPA including all pertinent supporting documentation, demonstrating that the applicable elements of this section were met within 30 days of the person discovering the invalidity.

(c) *Biogas producer elements.* In addition to the elements specified in paragraph (b) of this section, a biogas producer must also meet all the following requirements to establish an affirmative defense:

(1) The biogas producer conducted or arranged to be conducted a quality assurance program that includes, at a minimum, a periodic sampling, testing, and measurement program adequately designed to ensure their biogas meets the applicable requirements to produce biogas under this part.

(2) The biogas producer had all affected biogas verified by a third-party auditor under an approved QAP under §§ 80.170 and 80.1469.

(3) The PTDs for the biogas indicate that the biogas was in compliance with the applicable requirements while in the biogas producer's control.

(d) *RNG producer elements.* In addition to the elements specified in paragraph (b) of this section, an RNG producer must also meet all the following requirements to establish an affirmative defense:

(1) The RNG producer conducted or arranged to be conducted a quality assurance program that includes, at a minimum, a periodic sampling, testing, and measurement program adequately designed to ensure that the biogas used to produce their RNG meets the applicable requirements to produce biogas under this part and that their RNG meets the applicable requirements to produce RNG under this part.

(2) The RNG producer had all affected biogas and RNG verified by a third-party auditor under an approved QAP under §§ 80.170 and 80.1469.

(3) The PTDs for the biogas used to produce their RNG and for their RNG indicate that the biogas and RNG were in compliance with the applicable requirements while in the RNG producer's control.

§ 80.185 Potentially invalid RINs.

(a) *Identification and treatment of potentially invalid RINs (PIRs).* (1) Any RIN can be identified as a PIR by the biogas producer, the RIN generator, the independent third-party auditor that verified the RIN, or EPA.

(2) Any party listed in paragraph (a)(1) of this section must use the procedures specified in § 80.1474(b) for identification and treatment of PIRs and retire any PIRs under § 80.1434(a).

(b) *Potentially inaccurate or non-qualifying volumes of biogas-derived renewable fuel.* (1) Any party that becomes aware of a volume of biogas-derived renewable fuel that does not meet the applicable requirements for such fuel under this part must notify the next party in the production chain within 5 business days.

(i) Biointermediate producers must notify the renewable fuel producer receiving the biointermediate within 5 business days.

(ii) If the volume of biogas-derived renewable fuel was audited under § 80.170, the party must notify the independent third-party auditor within 5 business days.

(iii) Non-RIN generating foreign RNG producers must comply with the requirements of this section and notify the importer generating RINs and other parties in the production chain, as applicable.

(iv) Each notified party must notify EPA within 5 business days.

(2) Any party that is notified of a volume of biogas-derived renewable fuel that does not meet the applicable requirements for such fuel under this part must correct affected volumes of biogas-derived renewable fuel under paragraph (a)(2) of this section, as applicable.

(c) *Potential double counting.* (1)(i) When any party becomes aware of any of the following, they must notify EPA and the RIN generator, if known, within 5 business days of initial discovery:

(A) More than one RIN being generated for renewable fuel produced from the same volume of biogas, treated biogas, or RNG.

(B) More than one RIN being generated for the same volume of biogas-derived renewable fuel or RNG.

(C) A party taking credit for biogas, treated biogas, or RNG under a non-transportation program (e.g., a stationary-source renewable electricity program) and also generating RINs for renewable fuel produced from that same volume of biogas, treated biogas, or RNG.

(D) A party taking credit for biogas-derived renewable fuel or RNG under a non-transportation program (e.g., a stationary-source renewable electricity program) and also generating RINs for that same volume of biogas-derived renewable fuel or RNG.

(E) A party taking credit for biogas, treated biogas, or RNG used outside the covered location and also generating RINs for renewable fuel produced from that same volume of biogas, treated biogas, or RNG.

(F) A party taking credit for biogas-derived renewable fuel or RNG used outside the covered location and also generating RINs for that same volume of biogas-derived renewable fuel or RNG.

(ii) When any party becomes aware of another party separating or retiring a RIN from the same volume of RNG, they must notify EPA and the RIN generator, if known, within 5 business days of initial discovery.

(2) EPA will notify the RIN generator of the potential double counting if the party that identified the potential double counting does not know the party that generated the potentially affected RINs.

(3) Upon notification, the RIN generator must then calculate any impacts to the number of RINs generated for the volume of impacted RNG or renewable fuel. The RIN generator must then notify EPA and the independent third-party auditor, if any, of the impacted RINs within 5 business days of initial notification.

(4) For any number of RINs over-generated due to the double counting of volumes of biogas or RNG, the RIN generator must follow the applicable

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procedures for invalid RINs specified in § 80.1431.

(d) *Failure to take corrective action.* Any person who fails to meet a requirement under paragraph (b) or (c) of this section is liable for full performance of such requirement, and each day of non-compliance is deemed a separate violation pursuant to § 80.1460(f). The administrative process for replacement of invalid RINs does not, in any way, limit the ability of the United States to exercise any other authority to bring an enforcement action under section 211 of the Clean Air Act, the fuels regulations under this part, 40 CFR part 1090, or any other applicable law.

(e) *Replacing PIRs or invalid RINs.* The following specifications apply when retiring valid RINs to replace PIRs or invalid RINs:

(1) When a RIN is retired to replace a PIR or invalid RIN, the D code of the retired RIN must be eligible to be used towards meeting all the renewable volume obligations as the PIR or invalid RIN it is replacing, as specified in § 80.1427(a)(2).

(2) The number of RINs retired must be equal to the number of PIRs or invalid RINs being replaced.

(f) *Forms and procedures.* (1) All parties that retire RINs under this section must use forms and procedures specified by EPA.

(2) All parties that must notify EPA under this section must submit those notifications to EPA as specified in 40 CFR 1090.10.

Subparts F–L [Reserved]

Subpart M—Renewable Fuel Standard

SOURCE: 75 FR 14863, Mar. 26, 2010, unless otherwise noted.

§ 80.1400 Applicability.

The provisions of this Subpart M shall apply for all renewable fuel produced on or after July 1, 2010, for all RINs generated on or after July 1, 2010, and for all renewable volume obligations and compliance periods starting with January 1, 2010.

[75 FR 14863, Mar. 26, 2010, as amended at 85 FR 78467, Dec. 4, 2020]

§ 80.1401 Definitions.

The definitions of § 80.2 apply for the purposes of this subpart M.

[88 FR 44580, July 12, 2023]

§ 80.1402 Availability of information; confidentiality of information.

(a) Beginning January 1, 2020, no claim of business confidentiality may be asserted by any person with respect to information submitted to EPA under § 80.1451(c)(2)(ii)(E), whether submitted electronically or in paper format.

(b) The following information contained in EPA determinations that RINs are invalid under § 80.1474(b)(4)(i)(C)(2) and (b)(4)(ii)(C)(2), notices of violation, settlement agreements, administrative complaints, civil complaints, criminal information, and criminal indictments arising under this subpart is not entitled to confidential treatment and the provisions of 40 CFR 2.201 through 2.215 and 2.301 do not apply:

(1) The company name.

(2) The name and location of the facility at which the fuel associated with the RINs in question was allegedly produced or imported.

(3) The EPA-issued company or facility identification number of the party that produced the fuel or generated the RINs in question.

(4) The total quantity of fuel and RINs in question.

(5) The time period when the fuel was allegedly produced.

(6) The time period when the RINs in question were generated.

(7) The batch number(s) and the D code(s) of the RINs in question.

(8) Information relating to the generation, transfer, or use of RINs.

(9) The shortfall in RINs related to an obligated party's failure to meet its renewable volume obligation.

(10) Any other information relevant to describing the violation.

(c) The following information contained in submissions under this subpart is not entitled to confidential treatment and the provisions of 40 CFR 2.201 through 2.215 and 2.301 do not apply:

(1) Submitter's name.

(2) The name and location of the facility, if applicable.

(3) The date the submission was transmitted to EPA.

(4) Any EPA-issued company or facility identification numbers associated with the submission.

(5) The purpose of the submission.

(6) The relevant time period for the submission, if applicable.

(d) The following information incorporated into EPA determinations on submissions under this subpart is not entitled to confidential treatment and the provisions of 40 CFR 2.201 through 2.215 and 2.301 do not apply:

(1) Submitter's name.

(2) The name and location of the facility, if applicable.

(3) The date the submission was transmitted to EPA.

(4) Any EPA-issued company or facility identification numbers associated with the submission.

(5) The purpose of the submission.

(6) The relevant time period of the submission, if applicable.

(7) The extent to which EPA granted or denied the request and any relevant terms and conditions.

(e) Except as otherwise specified in this section, any information submitted under this part claimed as confidential remains subject to evaluation by EPA under 40 CFR part 2, subpart B.

(f) EPA may disclose the information specified in paragraphs (a) through (d) of this section on its website, or otherwise make it available to interested parties, without additional notice or process, regardless of any claims that the information is entitled to confidential treatment under 40 CFR part 2, subpart B.

[87 FR 39661, July 1, 2022, as amended at 88 FR 44580, July 12, 2023]

§ 80.1403 Which fuels are not subject to the 20% GHG thresholds?

(a) For purposes of this section, the following definitions apply:

(1) *Commence construction*, as applied to facilities that produce renewable fuel, means that:

(i) The owner or operator has all necessary preconstruction approvals or permits (as defined at 40 CFR 52.21(b)(10)), and has satisfied either of the following:

(A) Begun, or caused to begin, a continuous program of actual construction on-site (as defined in 40 CFR 52.21(b)(11)).

(B) Entered into binding agreements or contractual obligations, which cannot be cancelled or modified without substantial loss to the owner or operator, to undertake a program of actual construction of the facility.

(ii) For multi-phased projects, the commencement of construction of one phase does not constitute commencement of construction of any later phase, unless each phase is mutually dependent for physical and chemical reasons only.

(2) [Reserved]

(b) The lifecycle greenhouse gas emissions from renewable fuels must be at least 20 percent less than baseline lifecycle greenhouse gas emissions, with the exception of the baseline volumes of renewable fuel produced from facilities described in paragraphs (c) and (d) of this section.

(c) The baseline volume of renewable fuel that is produced from facilities and any expansions, all of which commenced construction on or before December 19, 2007, shall not be subject to the requirement that lifecycle greenhouse gas emissions be at least 20 percent less than baseline lifecycle greenhouse gas emissions if the owner or operator:

(1) Did not discontinue construction for a period of 18 months after commencement of construction; and

(2) Completed construction by December 19, 2010.

(d) The baseline volume of ethanol that is produced from facilities and any expansions all of which commenced construction after December 19, 2007 and on or before December 31, 2009, shall not be subject to the requirement that lifecycle greenhouse gas emissions be at least 20 percent less than baseline lifecycle greenhouse gas emissions if such facilities are fired with natural gas, biomass, or a combination thereof at all times the facility operated between December 19, 2007 and December 31, 2009 and if:

(1) The owner or operator did not discontinue construction for a period of 18 months after commencement of construction;

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(2) The owner or operator completed construction within 36 months of commencement of construction; and

(3) The baseline volume continues to be produced through processes fired with natural gas, biomass, or any combination thereof.

(e) The annual volume of renewable fuel during a calendar year from facilities described in paragraphs (c) and (d) of this section that exceeds the baseline volume shall be subject to the requirement that lifecycle greenhouse gas emissions be at least 20 percent less than baseline lifecycle greenhouse gas emissions.

(f) If there are any changes in the mix of renewable fuels produced by those facilities described in paragraph (d) of this section, only the ethanol

volume (to the extent it is less than or equal to baseline volume) will not be subject to the requirement that lifecycle greenhouse gas emissions be at least 20 percent less than baseline lifecycle greenhouse gas emissions. Any party that changes the fuel mix must update their registration as specified in § 80.1450(d).

[75 FR 14863, Mar. 26, 2010, as amended at 75 FR 26036, May 10, 2010; 75 FR 37733, June 30, 2010; 75 FR 79976, Dec. 21, 2010]

§ 80.1404 [Reserved]

§ 80.1405 What are the Renewable Fuel Standards?

(a) The values of the renewable fuel standards are as follows:

TABLE 1 TO PARAGRAPH (a)—ANNUAL RENEWABLE FUEL STANDARDS

Year	Cellulosic biofuel standard (%)	Biomass-based diesel standard (%)	Advanced biofuel standard (%)	Renewable fuel standard (%)	Supplemental total renewable fuel standard (%)
2010	0.004	1.10	0.61	8.25	n/a
2011	n/a	0.69	0.78	8.01	n/a
2012	n/a	0.91	1.21	9.23	n/a
2013	0.0005	1.13	1.62	9.74	n/a
2014	0.019	1.41	1.51	9.19	n/a
2015	0.069	1.49	1.62	9.52	n/a
2016	0.128	1.59	2.01	10.10	n/a
2017	0.173	1.67	2.38	10.70	n/a
2018	0.159	1.74	2.37	10.67	n/a
2019	0.230	1.73	2.71	10.97	n/a
2020	0.32	2.30	2.93	10.82	n/a
2021	0.33	2.16	3.00	11.19	n/a
2022	0.35	2.33	3.16	11.59	0.14
2023	0.48	2.58	3.39	11.96	0.14
2024	0.63	2.82	3.79	12.50	n/a
2025	0.81	3.15	4.31	13.13	n/a

(b) EPA will calculate the value of the annual standards and publish these values in the FEDERAL REGISTER by November 30 of the year preceding the compliance period.

(c) EPA will calculate the annual renewable fuel percentage standards using the following equations:

$$Std_{CB,i} = 100 * \frac{RFV_{CB,i}}{(G_i - RG_i) + (GS_i - RGS_i) - GE_i + (D_i - RD_i) + (DS_i - RDS_i) - DE_i}$$

$$Std_{BBD,i} = 100 * \frac{RFV_{BBD,i} \times 1.6}{(G_i - RG_i) + (GS_i - RGS_i) - GE_i + (D_i - RD_i) + (DS_i - RDS_i) - DE_i}$$

$$Std_{AB,i} = 100 * \frac{RFV_{AB,i}}{(G_i - RG_i) + (GS_i - RGS_i) - GE_i + (D_i - RD_i) + (DS_i - RDS_i) - DE_i}$$

$$Std_{RF,i} = 100 * \frac{RFV_{RF,i}}{(G_i - RG_i) + (GS_i - RGS_i) - GE_i + (D_i - RD_i) + (DS_i - RDS_i) - DE_i}$$

Where:

Std_{CB,i} = The cellulosic biofuel standard for year i, in percent.

Std_{BBD,i} = The biomass-based diesel standard for year i, in percent.

Std_{AB,i} = The advanced biofuel standard for year i, in percent.

Std_{RF,i} = The renewable fuel standard for year i, in percent.

RFV_{CB,i} = Annual volume of cellulosic biofuel required by 42 U.S.C. 7545(o)(2)(B) for year i, or volume as adjusted pursuant to 42 U.S.C. 7545(o)(7)(D), in gallons.

RFV_{BBD,i} = Annual volume of biomass-based diesel required by 42 U.S.C. 7545 (o)(2)(B) for year i, in gallons.

RFV_{AB,i} = Annual volume of advanced biofuel required by 42 U.S.C. 7545(o)(2)(B) for year i, in gallons.

RFV_{RF,i} = Annual volume of renewable fuel required by 42 U.S.C. 7545(o)(2)(B) for year i, in gallons.

G_i = Amount of gasoline projected to be used in the covered location, in year i, in gallons.

D_i = Amount of diesel projected to be used in the covered location, in year i, in gallons.

RG_i = Amount of renewable fuel blended into gasoline that is projected to be consumed in the covered location, in year i, in gallons.

RD_i = Amount of renewable fuel blended into diesel that is projected to be consumed in the covered location, in year i, in gallons.

GS_i = Amount of gasoline projected to be used in Alaska or a U.S. territory, in year i, if the state or territory has opted-in or opts-in, in gallons.

RGS_i = Amount of renewable fuel blended into gasoline that is projected to be consumed in Alaska or a U.S. territory, in year i, if the state or territory opts-in, in gallons.

DS_i = Amount of diesel projected to be used in Alaska or a U.S. territory, in year i, if the state or territory has opted-in or opts-in, in gallons.

RDS_i = Amount of renewable fuel blended into diesel that is projected to be consumed in Alaska or a U.S. territory, in year i, if the state or territory opts-in, in gallons.

GE_i = The total amount of gasoline projected to be exempt in year i, in gallons, per §§ 80.1441 and 80.1442.

DE_i = The total amount of diesel fuel projected to be exempt in year i, in gallons, per §§ 80.1441 and 80.1442.

(d) The price for cellulosic biofuel waiver credits will be calculated in accordance with § 80.1456(d) and published on EPA's Web site.

[77 FR 1354, Jan. 9, 2012, as amended at 78 FR 49830, Aug. 15, 2013; 79 FR 25031, May 2, 2014; 80 FR 18140, Apr. 3, 2015; 80 FR 77517, Dec. 14, 2015; 81 FR 89804, Dec. 12, 2016; 82 FR 58527, Dec. 12, 2017; 83 FR 63744, Dec. 11, 2018; 85 FR 7074, Feb. 6, 2020; 87 FR 39661, July 1, 2022; 88 FR 44580, July 12, 2023]

§ 80.1406 Obligated party responsibilities.

(a) [Reserved]

(b) For each compliance period starting with 2010, an obligated party is required to demonstrate, pursuant to § 80.1427, that it has satisfied the Renewable Volume Obligations for that compliance period, as specified in § 80.1407(a).

(c) *Aggregation of facilities*—(1) Except as provided in paragraphs (c)(2), (d) and (e) of this section, an obligated party may comply with the requirements of paragraph (b) of this section in the aggregate for all of the refineries that it operates, or for each refinery individually.

(2) An obligated party that carries a deficit into year i + 1 must use the same approach to aggregation of facilities in year i + 1 as it did in year i.

(d) An obligated party must comply with the requirements of paragraph (b) of this section for all of its imported gasoline or diesel fuel in the aggregate.

(e) An obligated party that is both a refiner and importer must comply with the requirements of paragraph (b) of this section for its imported gasoline or diesel fuel separately from gasoline or diesel fuel produced by its domestic refinery or refineries.

(f) Where a refinery or import facility is jointly owned by two or more parties, the requirements of paragraph (b) of this section may be met by one of the joint owners for all of the gasoline or diesel fuel produced/imported at the facility, or each party may meet the requirements of paragraph (b) of this section for the portion of the gasoline

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or diesel fuel that it produces or imports, as long as all of the gasoline or diesel fuel produced/imported at the facility is accounted for in determining the Renewable Volume Obligations under § 80.1407. In either case, all joint owners are subject to the liability provisions of § 80.1461(d).

(g) The requirements in paragraph (b) of this section apply to the following compliance periods: Beginning in 2010, and every year thereafter, the compliance period is January 1 through December 31.

[75 FR 14863, Mar. 26, 2010, as amended at 75 FR 26037, May 10, 2010; 88 FR 44581, July 12, 2023]

§ 80.1407 How are the Renewable Volume Obligations calculated?

(a) The Renewable Volume Obligations for an obligated party are determined according to the following formulas:

(1) Cellulosic biofuel.

$$RVO_{CB,i} = (RFStd_{CB,i} * (GV_i + DV_i)) + D_{CB,i-1}$$

Where:

$RVO_{CB,i}$ = The Renewable Volume Obligation for cellulosic biofuel for an obligated party for calendar year i , in gallons.

$RFStd_{CB,i}$ = The standard for cellulosic biofuel for calendar year i , determined by EPA pursuant to § 80.1405, in percent.

GV_i = The non-renewable gasoline volume, determined in accordance with paragraphs (b), (c), and (f) of this section, which is produced in or imported into the covered location by an obligated party in calendar year i , in gallons.

DV_i = The non-renewable diesel volume, determined in accordance with paragraphs (d), (e), and (f) of this section, produced in or imported into the covered location by an obligated party in calendar year i , in gallons.

$D_{CB,i-1}$ = Deficit carryover from the previous year for cellulosic biofuel, in gallons.

(2) Biomass-based diesel.

$$RVO_{BBD,i} = (RFStd_{BBD,i} * (GV_i + DV_i)) + D_{BBD,i-1}$$

Where:

$RVO_{BBD,i}$ = The Renewable Volume Obligation for biomass-based diesel for an obligated party for calendar year i , in gallons.

$RFStd_{BBD,i}$ = The standard for biomass-based diesel for calendar year i , determined by EPA pursuant to § 80.1405, in percent.

GV_i = The non-renewable gasoline volume, determined in accordance with paragraphs (b), (c), and (f) of this section, which is produced in or imported into the covered location by an obligated party in calendar year i , in gallons.

DV_i = The non-renewable diesel volume, determined in accordance with paragraphs (d), (e), and (f) of this section, produced in or imported into the covered location by an obligated party in calendar year i , in gallons.

$D_{BBD,i-1}$ = Deficit carryover from the previous year for biomass-based diesel, in gallons.

(3) Advanced biofuel.

$$RVO_{AB,i} = (RFStd_{AB,i} * (GV_i + DV_i)) + D_{AB,i-1}$$

Where:

$RVO_{AB,i}$ = The Renewable Volume Obligation for advanced biofuel for an obligated party for calendar year i , in gallons.

$RFStd_{AB,i}$ = The standard for advanced biofuel for calendar year i , determined by EPA pursuant to § 80.1405, in percent.

GV_i = The non-renewable gasoline volume, determined in accordance with paragraphs (b), (c), and (f) of this section, which is produced in or imported into the covered location by an obligated party in calendar year i , in gallons.

DV_i = The non-renewable diesel volume, determined in accordance with paragraphs (d), (e), and (f) of this section, produced in or imported into the covered location by an obligated party in calendar year i , in gallons.

$D_{AB,i-1}$ = Deficit carryover from the previous year for advanced biofuel, in gallons.

(4) Renewable fuel.

$$RVO_{RF,i} = (RFStd_{RF,i} * (GV_i + DV_i)) + D_{RF,i-1}$$

Where:

$RVO_{RF,i}$ = The Renewable Volume Obligation for renewable fuel for an obligated party for calendar year i , in gallons.

$RFStd_{RF,i}$ = The standard for renewable fuel for calendar year i , determined by EPA pursuant to § 80.1405, in percent.

GV_i = The non-renewable gasoline volume, determined in accordance with paragraphs (b), (c), and (f) of this section, which is produced in or imported into the covered location by an obligated party in calendar year i , in gallons.

DV_i = The non-renewable diesel volume, determined in accordance with paragraphs (d), (e), and (f) of this section, produced in or imported into the covered location by an obligated party in calendar year i , in gallons.

$D_{RF,i-1}$ = Deficit carryover from the previous year for renewable fuel, in gallons.

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(b) The non-renewable gasoline volume, GV_i , for an obligated party for a given year as specified in paragraph (a) of this section is calculated as follows:

$$GV_i = \sum_{x=1}^n G_x - \sum_{y=1}^m RBG_y$$

Where:

x = Individual batch of gasoline produced or imported in calendar year i.

n = Total number of batches of gasoline produced or imported in calendar year i.

G_x = Volume of batch x of gasoline produced or imported, per paragraph (c) of this section, in gallons.

y = Individual batch of renewable fuel blended into gasoline in calendar year i.

m = Total number of batches of renewable fuel blended into gasoline in calendar year i.

RBG_y = Volume of batch y of renewable fuel blended into gasoline, in gallons.

(c) Except as specified in paragraph (f) of this section, all of the following products that are produced or imported during a compliance period, collectively called “gasoline” for the purposes of this section (unless otherwise specified), are to be included (but not double-counted) in the volume used to calculate a party’s Renewable Volume Obligations under paragraph (a) of this section, except as provided in paragraph (f) of this section:

(1) Reformulated gasoline, whether or not renewable fuel is later added to it.

(2) Conventional gasoline, whether or not renewable fuel is later added to it.

(3) Reformulated gasoline blendstock that becomes finished reformulated gasoline upon the addition of oxygenate (RBOB).

(4) Conventional gasoline blendstock that becomes finished conventional gasoline upon the addition of oxygenate (CBOB).

(5) Blendstock (including butane, pentane, and gasoline treated as blendstock (GTAB)) that has been combined with other blendstock and/or finished gasoline to produce gasoline.

(6) Any gasoline, or any unfinished gasoline that becomes finished gasoline upon the addition of oxygenate, that is produced or imported to comply with a state or local fuels program.

(d) The diesel non-renewable volume, DV_i , for an obligated party for a given year as specified in paragraph (a) of this section is calculated as follows:

$$DV_i = \sum_{x=1}^n D_x - \sum_{y=1}^m RBD_y$$

Where:

x = Individual batch of diesel produced or imported in calendar year i.

n = Total number of batches of diesel produced or imported in calendar year i.

D_x = Volume of batch x of diesel produced or imported, per paragraph (e) of this section, in gallons.

y = Individual batch of renewable fuel blended into diesel in calendar year i.

m = Total number of batches of renewable fuel blended into diesel in calendar year i.

RBD_y = Volume of batch y of renewable fuel blended into diesel, in gallons.

(e) Except as specified in paragraph (f) of this section, all products meeting the definition of MVNRLM diesel fuel that are produced or imported during a compliance period, collectively called “diesel fuel” for the purposes of this section (unless otherwise specified), are to be included (but not double-counted) in the volume used to calculate a party’s Renewable Volume Obligations under paragraph (a) of this section.

(f) The following products are not included in the volume of gasoline or diesel fuel produced or imported used to calculate a party’s Renewable Volume Obligations according to paragraph (a) of this section:

(1) Any renewable fuel. Renewable fuel for which a RIN is invalidly generated under § 80.1431 may not be excluded from a party’s renewable volume obligations.

(2) Blendstock that has not been combined with other blendstock, finished gasoline, or diesel to produce gasoline or diesel.

(3) Gasoline or diesel fuel produced or imported for use in Alaska, the Commonwealth of Puerto Rico, the U.S. Virgin Islands, Guam, American Samoa, and the Commonwealth of the Northern Marianas, unless the area has opted into the RFS program under § 80.1443.

(4) Gasoline or diesel fuel produced by a small refinery that has an exemption under § 80.1441 or an approved small refiner that has an exemption under § 80.1442.

(5) Gasoline or diesel fuel exported for use outside the covered location, and gasoline or diesel fuel exported for use outside Alaska, the Commonwealth of Puerto Rico, the U.S. Virgin Islands, Guam, American Samoa, and the Commonwealth of the Northern Marianas, if the area has opted into the RFS program under § 80.1443.

(6) For blenders, the volume of finished gasoline, finished diesel fuel, RBOB, or CBOB to which a blender adds blendstocks.

(7) Transmix gasoline product (as defined in 40 CFR 1090.80) and transmix distillate product (as defined in 40 CFR 1090.80) produced by a transmix processor, and transmix blended into gasoline or diesel fuel by a transmix blender under 40 CFR 1090.500.

(8) Any gasoline or diesel fuel that is not transportation fuel.

(9) Distillate fuel with a sulfur content greater than 15 ppm that is clearly designated for a use other than transportation fuel, such as heating oil or ECA marine fuel.

(10) Distillate fuel that meets a 15 ppm sulfur standard, is designated for non-transportation use, and that remains completely segregated from MVNRLM diesel fuel from the point of production through to the point of use for a non-transportation purpose, such as heating oil or ECA marine fuel.

(11) Certified NTDF, if the refiner or importer has a reasonable expectation that the fuel will be used for non-transportation purposes. To establish a reasonable expectation that the fuel will be used for non-transportation purposes, a refiner or importer must, at a minimum, be able to demonstrate that they supply areas that use heating oil, ECA marine fuel, or 15 ppm distillate fuel for non-transportation purposes in

quantities that are consistent with past practices or changed circumstances. EPA may consider any other relevant information, including the price of the fuel, in assessing whether a refiner or importer has a reasonable expectation that the fuel will be used for non-transportation purposes.

[75 FR 14863, Mar. 26, 2010, as amended at 79 FR 23655, Apr. 28, 2014; 85 FR 7074, Feb. 6, 2020; 85 FR 78467, Dec. 4, 2020; 87 FR 39661, July 1, 2022; 88 FR 44581, July 12, 2023]

§ 80.1408 What are the requirements for parties that own and redesignate certified NTDF as MVNRLM diesel fuel?

(a) Beginning January 1, 2021, a party that owns certified NTDF, and only a party that owns certified NTDF, may redesignate NTDF as MVNRLM diesel fuel if they meet all of the following requirements:

(1) Register as a refiner and register each facility where redesignation occurs as a refinery under § 80.76. NTDF may only be redesignated as MVNRLM diesel fuel at a facility registered as a refinery.

(2) At each facility, calculate a balance of MVNRLM diesel fuel during each annual compliance period according to the following equation:

$$MVNRLM_{BAL} = MVNRLM_O + MVNRLM_{INVCHG} - MVNRLM_I$$

Where:

$MVNRLM_{BAL}$ = the balance for MVNRLM diesel fuel for the compliance period.

$MVNRLM_I$ = the total volume of all batches of fuel designated as MVNRLM diesel fuel owned when the fuel was received at the facility and acquired at the facility during the compliance period. Any MVNRLM diesel fuel produced (apart from redesignation of NTDF to MVNRLM diesel fuel) or imported into the facility must also be included in this volume.

$MVNRLM_O$ = the total volume of all batches of fuel designated as MVNRLM diesel fuel owned and sold or transferred to other parties at the facility during the compliance period.

$MVNRLM_{INVCHG}$ = the volume of MVNRLM diesel fuel owned at the end of the compliance period minus the volume of MVNRLM diesel fuel owned at the beginning of the compliance period, including accounting for any corrections in inventory due to volume swell or shrinkage,

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difference in measurement calibration between receiving and delivering meters, and similar matters, where corrections that increase inventory are defined as positive.

(i) If $MVNRLM_{BAL}$ is greater than 0, an RVO is incurred by the redesignating party for the volume of diesel fuel equal to $MVNRLM$. The redesignating party must also comply with all of the following:

(A) The reporting requirements of § 80.1451(a)(1)(xix).

(B) The recordkeeping requirements of § 80.1454(o).

(C) The attest engagement requirements of §§ 80.1464 and 80.1475, as applicable.

(ii) If $MVNRLM_{BAL}$ is less than or equal to 0, no RVO is incurred by the redesignating party for any redesignated certified NTDF. These parties must comply with all of the following:

(A) The reporting requirements of § 80.1451(i).

(B) The recordkeeping requirements of § 80.1454(o).

(b) Parties that incur an RVO under paragraph (a)(2)(i) of this section must comply with all applicable requirements for obligated parties under this subpart.

(c) The provisions of this section do not apply to gasoline or diesel fuel that is designated for export.

[85 FR 7074, Feb. 6, 2020, as amended at 87 FR 39661, July 1, 2022]

§§ 80.1409–80.1414 [Reserved]

§ 80.1415 How are equivalence values assigned to renewable fuel?

(a)(1) Each gallon of a renewable fuel, or gallon equivalent pursuant to paragraph (b)(5) or (b)(6) of this section, shall be assigned an equivalence value by the producer or importer pursuant to paragraph (b) or (c) of this section.

(2) The equivalence value is a number that is used to determine how many gallon-RINs can be generated for a gallon of renewable fuel according to § 80.1426.

(b) Equivalence values shall be assigned for certain renewable fuels as follows:

(1) Ethanol which is denatured shall have an equivalence value of 1.0.

(2) Biodiesel shall have an equivalence value of 1.5.

(3) Butanol shall have an equivalence value of 1.3.

(4) Non-ester renewable diesel with a lower heating value of at least 123,500 Btu/gal shall have an equivalence value of 1.7.

(5) 77,000 Btu LHV of renewable CNG/LNG or RNG shall represent one gallon of renewable fuel with an equivalence value of 1.0.

(6) 22.6 kWh of electricity shall represent one gallon of renewable fuel with an equivalence value of 1.0.

(7) For all other renewable fuels, a producer or importer must submit an application to EPA for an equivalence value following the provisions of paragraph (c) of this section. A producer or importer may also submit an application for an alternative equivalence value pursuant to paragraph (c) of this section if the renewable fuel is listed in this paragraph (b), but the producer or importer has reason to believe that a different equivalence value than that listed in this paragraph (b) is warranted.

(c) *Calculation of new equivalence values.* (1) The equivalence value for renewable fuels described in paragraph (b)(7) of this section shall be calculated using the following formula:

$$EqV = (R/0.972) * (EC/77,000)$$

Where:

EqV = Equivalence Value for the renewable fuel, rounded to the nearest tenth.

R = Renewable content of the renewable fuel. This is a measure of the portion of a renewable fuel that came from renewable biomass, expressed as a fraction, on an energy basis.

EC = Energy content of the renewable fuel, in Btu per gallon (lower heating value).

(2) The application for an equivalence value shall include a technical justification that includes all the following:

(i) A calculation for the requested equivalence value according to the equation in paragraph (c)(1) of this section, including supporting documentation for the value of EC used in the calculation such as a certificate of analysis from a laboratory that verifies the lower heating value in Btu per gallon of the renewable fuel produced.

(ii) For each feedstock, biointermediate, component, or additive that is used to make the renewable fuel, provide a description, the percent input, and identify whether or not it is renewable biomass or is produced from renewable biomass.

(iii) For each feedstock or biointermediate that also qualifies as a renewable fuel, state whether or not RINs have been previously generated for such feedstock.

(iv) A description of the renewable fuel and the production process, including a block diagram that shows all inputs and outputs at each step of the production process with a sample quantity of all inputs and outputs for one batch of renewable fuel produced.

(3) The Agency will review the technical justification and assign an appropriate equivalence value to the renewable fuel based on the procedure in this paragraph (c).

(4) Applications for equivalence values must be sent to the attention of “RFS2 Program (Equivalence Value Application)” to the address in § 80.10(a).

(5) All applications required under this section shall be submitted on forms and following procedures prescribed by EPA.

[75 FR 14863, Mar. 26, 2010, as amended at 75 FR 26037, May 10, 2010; 77 FR 1355, Jan. 9, 2012; 79 FR 42159, July 18, 2014; 85 FR 7075, Feb. 6, 2020; 87 FR 39661, July 1, 2022; 88 FR 44581, July 12, 2023]

§ 80.1416 Petition process for evaluation of new renewable fuels pathways.

(a) Pursuant to this section, a party may petition EPA to assign a D code for their renewable fuel if any of the following apply:

(1) The renewable fuel pathway has not been evaluated by EPA to determine if it qualifies for a D code pursuant to § 80.1426(f).

(2) The renewable fuel pathway has been determined by EPA not to qualify for a D code pursuant to § 80.1426(f) and the party can document significant differences between their fuel production processes and the fuel production processes already considered by EPA.

(3) The renewable fuel pathway has been determined to qualify for a cer-

tain D code pursuant to § 80.1426(f) and the party can document significant differences between their fuel production processes and the fuel production processes already considered by EPA that may qualify their fuel pathway for a different D code.

(b)(1) Any petition under paragraph (a) of this section shall include all the following:

(i) The information specified under 40 CFR 1090.805.

(ii) A technical justification that includes a description of the renewable fuel, feedstock(s), and biointermediate(s) used to make it, and the production process. The justification must include process modeling flow charts.

(iii) A mass balance for the pathway, including feedstocks and biointermediates, fuels produced, co-products, and waste materials production.

(iv) Information on co-products, including their expected use and market value.

(v) An energy balance for the pathway, including a list of any energy and process heat inputs and outputs used in the pathway, including such sources produced off site or by another entity.

(vi) Any other relevant information, including information pertaining to energy saving technologies or other process improvements.

(vii) EPA may ask for additional information to complete the lifecycle greenhouse gas assessment of the new fuel or pathway.

(2) For those companies who use a feedstock not previously evaluated by EPA under this subpart, the petition must include all the following in addition to the requirements in paragraph (b)(1) of this section:

(i) Type of feedstock and description of how it meets the definition of renewable biomass.

(ii) Market value of the feedstock.

(iii) List of other uses for the feedstock.

(iv) List of chemical inputs needed to produce the renewable biomass source of the feedstock and prepare the renewable biomass for processing into feedstock.

(v) Identify energy needed to obtain the feedstock and deliver it to the facility. If applicable, identify energy needed to plant and harvest the renewable biomass source of the feedstock and modify the source to create the feedstock.

(vi) Current and projected quantities of the feedstock that will be used to produce the fuel, including information on current and projected yields for feedstocks that are harvested or collected.

(vii) EPA may ask for additional information to complete the lifecycle Greenhouse Gas assessment of the new fuel or pathway.

(c)(1) A company may only submit one petition per pathway. If EPA determines the petition to be incomplete, then the company may resubmit.

(2) The petition must be signed and certified as meeting all the applicable requirements of this subpart by the responsible corporate officer of the applicant company.

(3) If EPA determines that the petition is incomplete then EPA will notify the applicant in writing that the petition is incomplete and will not be reviewed further. However, an amended petition that corrects the omission may be re-submitted for EPA review.

(4) If the fuel or pathway described in the petition does not meet the definition of renewable fuel, advanced biofuel, cellulosic biofuel, or biomass-based diesel, then EPA will notify the applicant in writing that the petition is denied and will not be reviewed further.

(d) A D code must be approved prior to the generation of RINs for the fuel in question. During petition review EPA will evaluate whether a feedstock meets the 75% cellulosic content threshold allowing cellulosic RINs to be generated for the entire fuel volume produced. EPA may ask for additional information to complete this evaluation.

(e) The petition under this section shall be submitted on forms and following procedures as prescribed by EPA.

[75 FR 26037, May 10, 2010, as amended at 79 FR 42160, July 18, 2014; 85 FR 78467, Dec. 4, 2020; 87 FR 39662, July 1, 2022; 88 FR 44582, July 12, 2023]

§§ 80.1417–80.1424 [Reserved]

§ 80.1425 Renewable Identification Numbers (RINs).

RINs generated on or after July 1, 2010 shall not be generated as a 38-digit code, but shall be identified by the information specified in paragraphs (a) through (i) of this section and introduced into EMTS as data elements during the generation of RINs pursuant to § 80.1452(b). For RINs generated prior to July 1, 2010, each RIN is a 38-digit code of the following form:

KYYYYCCCCFFFFFBBBBBRRD

SSSSSSSSEEEEEEEE

(a) K is a number identifying the type of RIN as follows:

(1) K has the value of 1 when the RIN is assigned to a volume of renewable fuel pursuant to § 80.1426(e) and § 80.1428(a).

(2) K has the value of 2 when the RIN has been separated from a volume of renewable fuel pursuant to § 80.1429.

(b) YYYY is the calendar year in which the RIN was generated.

(c) CCCC is the registration number assigned, according to § 80.1450, to the producer or importer of the batch of renewable fuel.

(d) FFFFFF is the registration number assigned, according to § 80.1450, to the facility at which the batch of renewable fuel was produced or imported.

(e) BBBBBB is a serial number assigned to the batch which is chosen by the producer or importer of the batch such that no two batches have the same value in a given calendar year.

(f) RR is a number representing 10 times the equivalence value of the renewable fuel as specified in § 80.1415.

(g) D is a number determined according to § 80.1426(f) and identifying the type of renewable fuel, as follows:

(1) D has the value of 3 to denote fuel categorized as cellulosic biofuel.

(2) D has the value of 4 to denote fuel categorized as biomass-based diesel.

(3) D has the value of 5 to denote fuel categorized as advanced biofuel.

(4) D has the value of 6 to denote fuel categorized as renewable fuel.

(5) D has the value of 7 to denote fuel categorized as cellulosic diesel.

(h) SSSSSSSS is a number representing the first gallon-RIN associated with a batch of renewable fuel.

(i) EEEEEEEE is a number representing the last gallon-RIN associated with a volume of renewable fuel.

[75 FR 14863, Mar. 26, 2010, as amended at 75 FR 79977, Dec. 21, 2010]

§ 80.1426 How are RINs generated and assigned to batches of renewable fuel?

(a) *General requirements.* (1) Renewable fuel producers, importers of renewable fuel, and other parties allowed to generate RINs under this part may only generate RINs to represent renewable fuel if they meet the requirements of paragraphs (b) and (c) of this section and if all the following occur:

(i) The fuel qualifies for a D code pursuant to § 80.1426(f), or the EPA has approved a petition for use of a D code pursuant to § 80.1416.

(ii) The fuel is demonstrated to be produced from renewable biomass pursuant to the reporting requirements of § 80.1451 and the recordkeeping requirements of § 80.1454.

(A) Feedstocks meeting the requirements of renewable biomass through the aggregate compliance provision at § 80.1454(g) are deemed to be renewable biomass.

(B) [Reserved]

(iii) The fuel was produced in compliance with the registration requirements of § 80.1450, the reporting requirements of § 80.1451, the recordkeeping requirements of § 80.1454, all conditions set forth in an approval document for a pathway petition submitted under § 80.1416, and all other applicable regulations of this subpart M.

(iv) The fuel is designated on a product transfer document (PTD) for use as transportation fuel, heating oil, or jet fuel in accordance with § 80.1453(a)(12).

(2) To generate RINs for imported renewable fuel, including any renewable fuel contained in imported transportation fuel, heating oil, or jet fuel, importers must obtain information from a non-RIN-generating foreign renewable fuel producer that is registered pursuant to § 80.1450 sufficient to make the appropriate determination regarding the applicable D code and compliance with the renewable biomass defi-

nition for each imported batch for which RINs are generated.

(3) A party generating a RIN shall specify the appropriate numerical values for each component of the RIN in accordance with the provisions of § 80.1425(a) and paragraph (f) of this section.

(4) Where a feedstock or biointermediate is used to produce renewable fuel and is not entirely renewable biomass, RINs may only be generated for the portion of fuel that is derived from renewable biomass, as calculated under paragraph (f)(4) of this section.

(b) *Regional applicability.* (1) Except as provided in paragraph (c) of this section, a RIN may only be generated by a renewable fuel producer or importer for a batch of renewable fuel that satisfies the requirements of paragraph (a)(1) of this section if it is produced or imported for use as transportation fuel, heating oil, or jet fuel in the covered location.

(2) If the Administrator approves a petition of Alaska or a United States territory to opt-in to the renewable fuel program under the provisions in § 80.1443, then the requirements of paragraph (b)(1) of this section shall also apply to renewable fuel produced or imported for use as transportation fuel, heating oil, or jet fuel in that state or territory beginning in the next calendar year.

(c) *Cases in which RINs are not generated.* (1) No person may generate RINs for fuel that does not satisfy the requirements of paragraph (a)(1) of this section.

(2) A party must not generate RINs for renewable fuel that is not produced for use in the covered location.

(3) [Reserved]

(4) Importers shall not generate RINs for renewable fuel imported from a non-RIN-generating foreign renewable fuel producer unless the foreign renewable fuel producer is registered with EPA as required in § 80.1450.

(5) Importers shall not generate RINs for renewable fuel that has already been assigned RINs by a RIN-generating foreign renewable fuel producer.

(6) A party is prohibited from generating RINs for a volume of fuel that it produces if the fuel has been produced by a process that uses a renewable fuel

as a feedstock, and the renewable fuel that is used as a feedstock was produced by another party, except that RINs may be generated for such fuel if allowed by the EPA in response to a petition submitted pursuant to § 80.1416 and the petition approval specifies a mechanism to prevent double counting of RINs or where RINs are generated for RNG.

(7) For renewable fuel oil that is heating oil as defined in paragraph (2) of the definition of heating oil in § 80.2, renewable fuel producers and importers shall not generate RINs unless they have received affidavits from the final end user or users of the fuel oil as specified in § 80.1451(b)(1)(i)(T)(2).

(8) RINs must not be generated for a biointermediate.

(d)(1) *Definition of batch.* For the purposes of this section and § 80.1425, a “batch of renewable fuel” is a volume of renewable fuel that has been assigned a unique identifier within a calendar year by the producer or importer of the renewable fuel in accordance with the provisions of this section and § 80.1425. Biogas producers and RNG producers must use the definitions of batch for biogas and RNG in §§ 80.105(j) and 80.110(j), respectively.

(i) The number of gallon-RINs generated for a batch of renewable fuel may not exceed 99,999,999.

(ii) A batch of renewable fuel cannot represent renewable fuel produced or imported in excess of one calendar month.

(2) Multiple gallon-RINs generated to represent a given volume of renewable fuel can be represented by a single batch-RIN through the appropriate designation of the RIN volume codes SSSSSSSS and EEEEEEEE.

(i) The value of SSSSSSSS in the batch-RIN shall be 00000001 to represent the first gallon-RIN associated with the volume of renewable fuel.

(ii) The value of EEEEEEEE in the batch-RIN shall represent the last gallon-RIN associated with the volume of renewable fuel, based on the RIN volume V_{RIN} determined pursuant to paragraph (f) of this section.

(iii) Under § 80.1452, RIN volumes will be managed by EMTS. RIN codes SSSSSSSS and EEEEEEEE do not have a role in EMTS.

(e) *Assignment of RINs to batches.* (1) Except as provided in paragraph (g) of this section for delayed RINs, the producer or importer of renewable fuel must assign all RINs generated from a specific batch of renewable fuel to that batch of renewable fuel.

(2) A RIN is assigned to a volume of renewable fuel when ownership of the RIN is transferred along with the transfer of ownership of the volume of renewable fuel, pursuant to § 80.1428(a).

(3) All assigned RINs shall have a K code value of 1.

(f) *Generation of RINs—(1) Applicable pathways.* (i) D codes must be used in RINs generated by producers or importers of renewable fuel according to approved pathways or as specified in paragraph (f)(6) of this section.

(ii) In choosing an appropriate D code, producers and importers may disregard any incidental, *de minimis* feedstock contaminants that are impractical to remove and are related to customary feedstock production and transport.

(iii) Tables 1 and 2 to this section do not apply to, and impose no requirements with respect to, volumes of fuel for which RINs are generated pursuant to paragraph (f)(6) of this section.

(iv) Pathways in Table 1 to this section and advanced technologies in Table 2 to this section also apply in cases where the renewable fuel producer is using a biointermediate.

(v) For the purposes of identifying the appropriate pathway in Table 1 to this section, biointermediates used for the production of renewable fuel are considered to be equivalent to the renewable biomass from which they were derived, with the following exceptions:

(A) Oil that is physically separated from any woody or herbaceous biomass and used to produce renewable fuel shall not generate D-code 3 or 7 RINs.

(B) Sugar or starch that is physically separated from cellulosic biomass and used to produce renewable fuel shall not generate D-code 3 or 7 RINs.

(vi) If a renewable fuel producer uses a biointermediate for the production of renewable fuel, additional requirements apply to both the renewable fuel producer and the biointermediate producer as described in § 80.1476.

(2) *Renewable fuel that can be described by a single pathway.* (i) The number of gallon-RINs that shall be generated for a batch of renewable fuel by a producer or importer for renewable fuel that can be described by a single pathway shall be equal to a volume calculated according to the following formula:

$$V_{\text{RIN}} = \text{EqV} * V_s$$

Where:

V_{RIN} = RIN volume, in gallons, for use in determining the number of gallon-RINs that shall be generated for the batch.

EqV = Equivalence value for the batch of renewable fuel per §80.1415.

V_s = Standardized volume of the batch of renewable fuel at 60 °F, in gallons, calculated in accordance with paragraph (f)(8) of this section.

(ii) The D code that shall be used in the RINs generated shall be the D code specified in the approved pathway that corresponds to the pathway that describes the producer's operations.

(3) *Renewable fuel that can be described by two or more pathways.* (i) The D codes that shall be used in the RINs generated by a producer or importer whose renewable fuel can be described by two or more pathways shall be the D codes specified in the approved pathways that correspond to the pathways that describe the renewable fuel throughout that calendar year.

(ii) If all the pathways describing the producer's operations have the same D code and each batch is of a single fuel type, then that D code shall be used in all the RINs generated and the number of gallon-RINs that shall be generated for a batch of renewable fuel shall be equal to a volume calculated according to the following formula:

$$V_{\text{RIN}} = \text{EqV} * V_s$$

Where:

V_{RIN} = RIN volume, in gallons, for use in determining the number of gallon-RINs that shall be generated for the batch.

EqV = Equivalence value for the batch of renewable fuel per §80.1415.

V_s = Standardized volume of the batch of renewable fuel at 60 °F, in gallons, calculated in accordance with paragraph (f)(8) of this section.

(iii) If all the pathways describing the producer's operations have the same D code but individual batches are comprised of a mixture of fuel types

with different equivalence values, then that D code shall be used in all the RINs generated and the number of gallon-RINs that shall be generated for a batch of renewable fuel shall be equal to a volume calculated according to the following formula:

$$V_{\text{RIN}} = \Sigma(\text{EqV}_i * V_{s,i})$$

Where:

V_{RIN} = RIN volume, in gallons, for use in determining the number of gallon-RINs that shall be generated for the batch.

EqV_i = Equivalence value for fuel type i in the batch of renewable fuel per §80.1415.

$V_{s,i}$ = Standardized volume of fuel type i in the batch of renewable fuel at 60 °F, in gallons, calculated in accordance with paragraph (f)(8) of this section.

(iv) If the pathway applicable to a producer changes on a specific date, such that one pathway applies before the date and another pathway applies on and after the date, and each batch is of a single fuel type, then the applicable D code and batch identifier used in generating RINs must change on the date that the change in pathway occurs and the number of gallon-RINs that shall be generated for a batch of renewable fuel shall be equal to a volume calculated according to the following formula:

$$V_{\text{RIN}} = \text{EqV} * V_s$$

Where:

V_{RIN} = RIN volume, in gallons, for use in determining the number of gallon-RINs that shall be generated for a batch with a single applicable D code.

EqV = Equivalence value for the batch of renewable fuel per §80.1415.

V_s = Standardized volume of the batch of renewable fuel at 60 °F, in gallons, calculated in accordance with paragraph (f)(8) of this section.

(v) If a producer produces batches that are comprised of a mixture of fuel types with different equivalence values and different applicable D codes, then separate values for V_{RIN} must be calculated for each category of renewable fuel according to the following formula. All batch-RINs thus generated must be assigned to unique batch identifiers for each portion of the batch with a different D code.

$$V_{\text{RIN},\text{DX}} = \text{EqV}_{\text{DX}} * V_{s,\text{DX}}$$

Where:

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$V_{RIN,DX}$ = RIN volume, in gallons, for use in determining the number of gallon-RINs that must be generated for the portion of the batch with a D code of X.

EqV_{DX} = Equivalence value for the portion of the batch with a D code of X, per §80.1415.

$V_{S,DX}$ = Standardized volume at 60 °F of the portion of the batch that must be assigned a D code of X, in gallons, per paragraph (f)(8) of this section.

(vi)(A) If a producer produces a single type of renewable fuel using two or more different feedstocks that are processed simultaneously, and each batch is comprised of a single type of fuel, then the number of gallon-RINs that must be generated for a batch of renewable fuel and assigned a particular D code must be calculated as follows:

$$V_{RIN,DX} = EqV * V_S * \frac{FE_{DX}}{FE_{total}}$$

Where:

$V_{RIN,DX}$ = RIN volume, in gallons, for use in determining the number of gallon-RINs that must be generated for a batch of renewable fuel with a D code of X.

EqV = Equivalence value for the renewable fuel per §80.1415.

V_S = Standardized volume of the batch of renewable fuel at 60 °F, in gallons, per paragraph (f)(8) of this section.

FE_{DX} = The total feedstock energy from all feedstocks whose pathways have been assigned a D code of X, in Btu HHV, per paragraphs (f)(3)(vi)(B) and (C) of this section.

FE_{total} = The total feedstock energy from all feedstocks, in Btu HHV, per paragraphs (f)(3)(vi)(B) and (C) of this section.

(B) Except for biogas produced from anaerobic digestion, the feedstock energy value of each feedstock must be calculated as follows:

$$FE_{DX,i} = M_i * (1 - m_i) * CF_i$$

Where:

$FE_{DX,i}$ = The amount of energy from feedstock i that forms energy in the renewable fuel and whose pathway has been assigned a D code of X, in Btu HHV.

M_i = Mass of feedstock i, in pounds, measured on a daily or per-batch basis.

m_i = Average moisture content of feedstock i, as a mass fraction.

CF_i = Converted fraction in annual average Btu HHV/lb, except as otherwise provided by §80.1451(b)(1)(ii)(U), representing that portion of feedstock i that is converted to fuel by the producer.

(C) For biogas produced from anaerobic digestion, the volume of biogas must be measured under §80.105(f) and the feedstock energy value of each feedstock must be calculated as specified in §80.105(j) by substituting “feed-

stock energy” for “batch volume of biogas” in all cases.

(4) *Renewable fuel that is produced by co-processing renewable biomass (including a biointermediate) and non-renewable feedstocks simultaneously to produce a fuel that is partially renewable.* (i) The number of gallon-RINs that shall be generated for a batch of partially renewable fuel shall be equal to a volume V_{RIN} calculated according to Method A or Method B.

(A) *Method A.* (1) V_{RIN} shall be calculated according to the following formula:

$$V_{RIN} = EqV * V_S * FE_R / (FE_R + FE_{NR})$$

Where:

V_{RIN} = RIN volume, in gallons, for use in determining the number of gallon-RINs that shall be generated for the batch.

EqV = Equivalence value for the batch of renewable fuel per §80.1415, subject to qualification in paragraph (f)(4)(iii) of this section.

V_S = Standardized volume of the batch of renewable fuel at 60 °F, in gallons, calculated in accordance with paragraph (f)(8) of this section.

FE_R = Feedstock energy from renewable biomass (including the renewable portion of a biointermediate) used to make the transportation fuel, in Btu.

FE_{NR} = Feedstock energy from non-renewable feedstocks (including the non-renewable portion of a biointermediate) used to make the transportation fuel, heating oil, or jet fuel, in Btu.

(2) The value of FE for use in paragraph (f)(4)(i)(A)(I) of this section shall be calculated from the following formula:

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$$FE = M * (1 - m) * CF * E$$

Where:

FE = Feedstock energy, in Btu.

M = Mass of feedstock, in pounds, measured on a daily or per-batch basis.

m = Average moisture content of the feedstock, in mass percent.

CF = Converted Fraction in annual average mass percent, except as otherwise provided by § 80.1451(b)(1)(ii)(U), representing that portion of the feedstock that is converted into transportation fuel, heating oil, or jet fuel by the producer.

E = Energy content of the components of the feedstock that are converted to fuel, in annual average Btu/lb, determined according to paragraph (f)(7) of this section.

(B) *Method B.* V_{RIN} shall be calculated according to the following formula:

$$V_{RIN} = EqV * V_s * R$$

Where:

V_{RIN} = RIN volume, in gallons, for use in determining the number of gallon-RINs that shall be generated for the batch.

EqV = Equivalence value for the batch of renewable fuel per § 80.1415, subject to qualification in paragraph (f)(4)(iii) of this section.

V_s = Standardized volume of the batch of renewable fuel at 60 °F, in gallons, calculated in accordance with paragraph (f)(8) of this section.

R = The renewable fraction of the fuel as measured by a carbon-14 dating test method as provided in paragraph (f)(9) of this section.

(ii) The D code that shall be used in the RINs generated to represent partially renewable transportation fuel, heating oil, or jet fuel shall be the D code specified in the approved pathway that corresponds to the pathway that describes a producer's operations. In determining the appropriate pathway, the contribution of non-renewable feedstocks to the production of partially renewable fuel shall be ignored.

(iii) In determining the RIN volume V_{RIN} according to paragraph (f)(4)(i)(A) or (f)(4)(i)(B) of this section, the equivalence value used to determine V_{RIN} which is calculated according to § 80.1415 shall use a value of 1.0 to represent R, the renewable content of the renewable fuel.

(iv) RIN-generating parties must calculate RIN volume V_{RIN} for co-processed fuels produced from a biointermediate as described in paragraph

(f)(4)(i)(B) of this section and calculate the renewable fraction of a fuel R using one of the following:

(A) Method B of ASTM D6866 (incorporated by reference, see § 80.12) as described in paragraph (f)(9)(ii) of this section.

(B) If the renewable content of the co-processed fuel is 10 percent or greater, Method C of ASTM D6866 as described in paragraph (f)(9)(ii) of this section.

(C) Any other EPA-approved method under paragraph (f)(9)(ii) of this section.

(5) *Renewable fuel produced from separated yard waste, separated food waste, and separated MSW.* (i)(A) Separated yard waste is deemed to be composed entirely of cellulosic materials.

(B) Separated food waste is deemed to be composed entirely of non-cellulosic materials, unless a party demonstrates that a portion of the feedstock is cellulosic through approval of their facility registration.

(ii)(A) A feedstock qualifies as separated yard waste or separated food waste only if it is collected according to a plan submitted to and accepted by EPA under the registration procedures specified in § 80.1450(b)(1)(vii).

(B) A feedstock qualifies as separated MSW only if it is collected according to a plan submitted to and approved by EPA.

(iii) Separation and recycling actions for separated MSW are considered to occur if:

(A) Recyclable paper, cardboard, plastics, rubber, textiles, metals, and glass that can be recycled are separated and removed from the municipal solid waste stream to the extent reasonably practicable according to a plan submitted to and approved by U.S. EPA under the registration procedures specified in § 80.1450(b)(1)(viii); and

(B) The fuel producer has evidence of all contracts relating to the disposition of paper, cardboard, plastics, rubber, textiles, metals, and glass that are recycled.

(iv)(A) The number of gallon-RINs that shall be generated for a batch of renewable fuel derived from separated yard waste shall be equal to a volume V_{RIN} and is calculated according to the following formula:

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$$V_{\text{RIN}} = \text{EqV} * V_s$$

Where:

V_{RIN} = RIN volume, in gallons, for use in determining the number of cellulosic biofuel gallon-RINs that shall be generated for the batch.

EqV = Equivalence value for the batch of renewable fuel per §80.1415.

V_s = Standardized volume of the batch of renewable fuel at 60 °F, in gallons, calculated in accordance with paragraph (f)(8) of this section.

(B) The number of gallon-RINs that shall be generated for a batch of renewable fuel derived from separated food waste shall be equal to a volume V_{RIN} and is calculated according to the following formula:

$$V_{\text{RIN}} = \text{EqV} * V_s$$

Where:

V_{RIN} = RIN volume, in gallons, for use in determining the number of cellulosic or advanced biofuel gallon-RINs that shall be generated for the batch.

EqV = Equivalence value for the batch of renewable fuel per §80.1415.

V_s = Standardized volume of the batch of renewable fuel at 60 °F, in gallons, calculated in accordance with paragraph (f)(8) of this section.

(v) The number of cellulosic biofuel gallon-RINs that shall be generated for the cellulosic portion of a batch of renewable fuel derived from separated MSW shall be determined according to the following formula:

$$V_{\text{RIN}} = \text{EqV} * V_s * R$$

Where:

V_{RIN} = RIN volume, in gallons, for use in determining the number of cellulosic biofuel gallon-RINs that shall be generated for the batch.

EqV = Equivalence value for the batch of renewable fuel per §80.1415.

V_s = Standardized volume of the batch of renewable fuel at 60 °F, in gallons, calculated in accordance with paragraph (f)(8) of this section.

R = The calculated non-fossil fraction of the fuel as measured by a carbon-14 dating test method as provided in paragraph (f)(9) of this section, except that for biogas-derived renewable fuel made from separated MSW, no testing is required and $R = 1$.

(6) *Renewable fuel not covered by an approved pathway.* If no approved pathway applies to a producer's operations, the party may generate RINs if the fuel from its facility is produced from re-

newable biomass and qualifies for an exemption under §80.1403 from the requirement that renewable fuel achieve at least a 20 percent reduction in lifecycle greenhouse gas emissions compared to baseline lifecycle greenhouse gas emissions.

(i) The number of gallon-RINs that shall be generated for a batch of renewable fuel that qualifies for an exemption from the 20 percent GHG reduction requirements under §80.1403 shall be equal to a volume calculated according to the following formula:

$$V_{\text{RIN}} = \text{EqV} * V_s$$

Where:

V_{RIN} = RIN volume, in gallons, for use in determining the number of gallon-RINs that shall be generated for the batch.

EqV = Equivalence value for the batch of renewable fuel per §80.1415.

V_s = Standardized volume of the batch of renewable fuel at 60 °F, in gallons, calculated in accordance with paragraph (f)(8) of this section.

(ii) A D code of 6 shall be used in the RINs generated under this paragraph (f)(6).

(7) *Determination of feedstock energy content factors.*(i) For purposes of paragraphs (f)(3)(vi) and (f)(4)(i)(A)(2) of this section, producers must specify the value for E, the energy content of the components of the feedstock that are converted to renewable fuel, used in the calculation of the feedstock energy value FE.

(ii) The value for E shall represent the higher or gross calorific heating value for a feedstock on a zero moisture basis.

(iii) Producers must specify the value for E for each type of feedstock at least once per calendar year.

(iv) A producer must use default values for E as provided in paragraph (f)(7)(vi) of this section, or must determine alternative values for its own feedstocks according to paragraph (f)(7)(v) of this section.

(v) Producers that do not use a default value for E must use the following test methods, or alternative test methods as approved by EPA, to determine the value of E. The value of E shall be based upon the test results of a sample of feedstock that, based upon good engineering judgment, is

representative of the feedstocks used to produce renewable fuel:

(A) ASTM E870 or ASTM E711 for gross calorific value (both incorporated by reference, see § 80.12).

(B) ASTM D4442 or ASTM D4444 for moisture content (both incorporated by reference, see § 80.12).

(vi) *Default values for E.*

(A) Starch: 7,600 Btu/lb.

(B) Sugar: 7,300 Btu/lb.

(C) Vegetable oil: 17,000 Btu/lb.

(D) Waste cooking oil or trap grease: 16,600 Btu/lb.

(E) Tallow or fat: 16,200 Btu/lb.

(F) Manure: 6,900 Btu/lb.

(G) Woody biomass: 8,400 Btu/lb.

(H) Herbaceous biomass: 7,300 Btu/lb.

(I) Yard wastes: 2,900 Btu/lb.

(J) Biogas: 11,000 Btu/lb.

(K) Food waste: 2,000 Btu/lb.

(L) Paper: 7,200 Btu/lb.

(M) Crude oil: 19,100 Btu/lb.

(N) Coal—bituminous: 12,200 Btu/lb.

(O) Coal—anthracite: 13,300 Btu/lb.

(P) Coal—lignite or sub-bituminous: 7,900 Btu/lb.

(Q) Natural gas: 19,700 Btu/lb.

(R) Tires or rubber: 16,000 Btu/lb.

(S) Plastic: 19,000 Btu/lb.

(8) *Standardization of volumes.* In determining the standardized volume of a batch of renewable fuel for purposes of generating RINs under this paragraph (f), the batch volumes shall be adjusted to a standard temperature of 60 °F.

(i) For ethanol, the following formula shall be used:

$$V_{s,e} = V_{a,e} * (-0.0006301 * T + 1.0378)$$

Where:

$V_{s,e}$ = Standardized volume of ethanol at 60 °F, in gallons.

$V_{a,e}$ = Actual volume of ethanol, in gallons.

T = Actual temperature of the batch, in °F.

(ii) For biodiesel, one of the following two methods for biodiesel temperature standardization to 60 °Fahrenheit (°F) shall be used

$$(A) V_{s,b} = V_{a,b} * (-0.00045767 * T + 1.02746025)$$

Where

$V_{s,b}$ = Standardized volume of biodiesel at 60 °F, in gallons.

$V_{a,b}$ = Actual volume of biodiesel, in gallons.

T = Actual temperature of the batch, in °F.

(B) The standardized volume of biodiesel at 60 °F, in gallons, as calculated

from the use of the American Petroleum Institute Refined Products Table 6B, as referenced in ASTM D1250 (incorporated by reference, see § 80.12).

(iii) For other renewable fuels, an appropriate formula commonly accepted by the industry shall be used to standardize the actual volume to 60 °F. Formulas used must be reported to EPA, and may be determined to be inappropriate.

(9) *Use of radiocarbon dating test methods.*

(i) Parties may use a radiocarbon dating test method for determination of the renewable fraction of a fuel R used to determine V_{RIN} as provided in paragraphs (f)(4) and (f)(5) of this section.

(ii) Parties must use Method B or Method C of ASTM D6866 (incorporated by reference, see § 80.12), or an alternative test method as approved by EPA.

(iii) For each batch of fuel, the value of R must be based on:

(A) A radiocarbon dating test of the batch of fuel produced; or

(B) A radiocarbon dating test of a composite sample of previously produced fuel, if all of the following conditions are met:

(1) Based upon good engineering judgment, the renewable fraction of the composite sample must be representative of the batch of fuel produced.

(2) The composite sample is comprised of a volume weighted combination of samples from every batch of partially renewable transportation fuel produced by the party over a period not to exceed one calendar month, or more frequently if necessary to ensure that the test results are representative of the renewable fraction of the partially renewable fuel.

(3) The composite sample must be well mixed prior to testing.

(4) A volume of each composite sample must be retained for a minimum of two years, and be of sufficient volume to permit two additional tests to be conducted.

(iv) If the party is using the composite sampling approach according to paragraph (f)(9)(iii)(B) of this section, the party may estimate the value of R for use in generating RINs in the first month if all of the following conditions are met:

(A) The estimate of R for the first month is based on information on the composition of the feedstock;

(B) The party calculates R in the second month based on the application of a radiocarbon dating test on a composite sample pursuant to (f)(9)(iii)(B) of this section; and

(C) The party adjusts the value of R used to generate RINs in the second month using the following formula

$$R_{i+1,adj} = 2 \times R_{i+1,calc} - R_{i,est}$$

Where

$R_{i+1,adj}$ = Adjusted value of R for use in generating RINs in month the second month $i + 1$.

$R_{i+1,calc}$ = Calculated value of R in second month $i + 1$ by applying a radiocarbon dating test method to a composite sample of fuel.

$R_{i,est}$ = Estimate of R for the first month i .

(10)(i) For purposes of this section, electricity that is only distributed via a closed, private, non-commercial system is considered renewable fuel and RINs may be generated if all of the following apply:

(A) The electricity is produced from renewable biomass and qualifies for a D code in Table 1 to this section or has received approval for use of a D code by EPA.

(B) The RIN generator has documentation for the sale, if applicable, and use of a specific quantity of renewable electricity as transportation fuel, or has obtained affidavits from all parties selling or using the electricity as transportation fuel.

(C) The electricity is used as a transportation fuel and for no other purposes.

(ii) RIN generators may only generate RINs for renewable CNG/LNG produced from biogas that is distributed via a closed, private, non-commercial system if all the following requirements are met:

(A) The renewable CNG/LNG was produced from renewable biomass under an approved pathway.

(B) The RIN generator has entered into a written contract for the sale or use of a specific quantity of renewable CNG/LNG for use as transportation fuel, or has obtained affidavits from all parties selling or using the renewable CNG/LNG as transportation fuel.

(C) The renewable CNG/LNG was used as transportation fuel and for no other purpose.

(D) The biogas was introduced into the closed, private, non-commercial system no later and the renewable CNG/LNG produced from the biogas was used as transportation fuel no later than December 31, 2024.

(E) RINs may only be generated on biomethane content of the renewable CNG/LNG used as transportation fuel.

(iii) A producer of electricity that is generated by co-firing a combination of renewable biomass and fossil fuel may generate RINs only for the portion attributable to the renewable biomass, using the procedure described in paragraph (f)(4) of this section.

(11)(i) For purposes of this section, electricity that is introduced into a commercial distribution system (transmission grid) is considered renewable fuel for which RINs may be generated if all of the following apply:

(A) The electricity is produced from renewable biomass and qualifies for a D code in Table 1 of this section or has received approval for use of a D code by EPA.

(B) The RIN generator has documentation for the sale and use of a specific quantity of renewable electricity as transportation fuel, or has obtained affidavits from all parties selling or using the electricity as transportation fuel.

(C) The quantity of electricity for which RINs were generated was sold for use as transportation fuel and for no other purpose.

(D) The renewable electricity was loaded onto and withdrawn from a physically connected transmission grid.

(E) The amount of electricity sold for use as transportation fuel corresponds to the amount of electricity derived from biogas that was placed into the commercial distribution system.

(F) No other party relied upon the renewable electricity for the creation of RINs.

(ii) RINs for renewable CNG/LNG produced from RNG that is introduced into a commercial distribution system may only be generated if all the following requirements are met:

(A) The renewable CNG/LNG was produced from renewable biomass and qualifies for a D code in an approved pathway.

(B) The RIN generator has entered into a written contract for the sale or use of a specific quantity of RNG, taken from a commercial distribution system (*e.g.*, physically connected pipeline, barge, truck, rail), for use as transportation fuel, or has obtained affidavits from all parties selling or using the RNG taken from a commercial distribution system as transportation fuel.

(C) The renewable CNG/LNG produced from the RNG was sold for use as transportation fuel and for no other purpose.

(D) The RNG was injected into and withdrawn from the same commercial distribution system.

(E) The RNG was withdrawn from the commercial distribution system in a manner and at a time consistent with the transport of the RNG between the injection and withdrawal points.

(F) The volume of RNG injected into the commercial distribution system and the volume of RNG withdrawn are measured by continuous metering.

(G) The volume of renewable CNG/LNG sold for use as transportation fuel corresponds to the volume of RNG that was injected into and withdrawn from the commercial distribution system.

(H) No other party relied upon the volume of biogas, RNG, or renewable CNG/LNG for the generation of RINs.

(I) The RNG was introduced into the commercial distribution system no later than December 31, 2024, and the renewable CNG/LNG was used as transportation fuel no later than December 31, 2024.

(J) RINs may only be generated on biomethane content of the biogas, treated biogas, RNG, or renewable CNG/LNG.

(K)(1) On or after January 1, 2025, RINs may only be generated for RNG injected into a natural gas commercial pipeline system for use as transportation fuel as specified in subpart E of this part.

(2) RINs may be generated for RNG as specified in subpart E of this part prior to January 1, 2025, if all applica-

ble requirements under this part are met.

(iii) For renewable electricity that is generated by co-firing a combination of renewable biomass and fossil fuel, the producer may generate RINs only for the portion attributable to the renewable biomass, using the procedure described in paragraph (f)(4) of this section.

(12) Process heat produced from combustion of biogas or RNG at a renewable fuel production facility is considered “derived from biomass” under an approved pathway if all the following requirements are met, as applicable:

(i) For biogas transported to the renewable fuel production facility via a biogas closed distribution system:

(A) The renewable fuel producer has entered into a written contract for the procurement of a specific volume of biogas with a specific heat content.

(B) The volume of biogas was sold to the renewable fuel production facility, and to no other facility.

(C) The volume of biogas injected into the biogas closed distribution system and the volume of biogas used as process heat were measured under § 80.155.

(ii) For RNG injected into a natural gas commercial pipeline system prior to July 1, 2024:

(A) The producer has entered into a written contract for the procurement of a specific volume of RNG with a specific heat content.

(B) The volume of RNG was sold to the renewable fuel production facility, and to no other facility.

(C) The volume of RNG was withdrawn from the natural gas commercial pipeline system in a manner and at a time consistent with the transport of RNG between the injection and withdrawal points.

(D) The volume of RNG injected into the natural gas commercial pipeline system and the volume of RNG withdrawn were measured under § 80.155.

(E) The natural gas commercial pipeline system into which the RNG was injected ultimately serves the renewable fuel production facility.

(iii) Process heat produced from combustion of biogas or RNG is not considered produced from renewable biomass

if any other party relied upon the volume of biogas or RNG for the generation of RINs.

(iv) For RNG used as process heat on or after July 1, 2024, the renewable fuel producer must retire RINs for RNG as specified in § 80.125(e).

(13) In order for a renewable fuel production facility to satisfy the requirements of the advanced biofuel grain sorghum pathway, all the following requirements must be met:

(i) The quantity of electricity used at the site that is purchased from the grid must be measured and recorded by continuous metering.

(ii) All electricity used on-site that is not purchased from the grid must be produced on-site from biogas from landfills, waste treatment plants, and/or waste digesters.

(iii) For biogas transported to the renewable fuel production facility via a biogas closed distribution system and used as process energy, the requirements in paragraph (f)(12)(i) of this section must be met.

(iv)(A) For RNG injected into a commercial distribution system prior to July 1, 2024, and used as process energy, the requirements in paragraph (f)(12)(ii) of this section must be met.

(B) For RNG injected into a natural gas commercial pipeline system on or after July 1, 2024, and used as process energy, the renewable fuel producer must retire RINs for RNG as specified in § 80.125(e).

(v) The biogas or RNG used as process energy at the renewable fuel production facility is not considered “produced from renewable biomass” under an approved pathway if any other party relied upon the volume of biogas or RNG for the generation of RINs.

(14) A producer or importer of renewable fuel using giant reed (*Arundo donax*) or napier grass (*Pennisetum purpureum*) as a feedstock may generate RINs for that renewable fuel if:

(i) The feedstock is produced, managed, transported, collected, monitored, and processed according to a Risk Mitigation Plan approved by EPA under the registration procedures specified in § 80.1450(b)(1)(x)(A); or,

(ii) EPA has determined that there is not a significant likelihood of spread beyond the planting area of the feed-

stock used for production of the renewable fuel. Any determination that *Arundo donax* or *Pennisetum purpureum* does not present a significant likelihood of spread beyond the planting area must be based upon clear and compelling evidence, including information and supporting data submitted by the producer. Such a determination must be made by EPA as specified in § 80.1450(b)(1)(x)(B).

(15) *Application of formulas in paragraph (f)(3)(vi) of this section to certain producers generating D3 or D7 RINs.* If a producer seeking to generate D code 3 or 7 RINs produces a single type of renewable fuel using two or more feedstocks or biointermediates converted simultaneously, and at least one of the feedstocks or biointermediates does not have a minimum 75% average adjusted cellulosic content, one of the following additional requirements apply:

(i) If the producer is using a thermochemical process to convert cellulosic biomass into cellulosic biofuel, the producer is subject to additional registration requirements under § 80.1450(b)(1)(xiii)(A).

(ii) If the producer is using any process other than a thermochemical process, or is using a combination of processes, the producer is subject to additional registration requirements under § 80.1450(b)(1)(xiii)(B) or (C), and reporting requirements under § 80.1451(b)(1)(ii)(U), as applicable.

(16) *Renewable fuel produced from crop residue.* Producers generating RINs for qualifying renewable fuel utilizing crop residue as feedstock under Pathway K or Pathway L must meet all of the following conditions (in addition to any other applicable requirements):

(i) Registration requirements under § 80.1450(b)(1)(xv).

(ii) Reporting requirements under § 80.1451(b)(1)(ii)(V).

(iii) Recordkeeping requirements under § 80.1454(n).

(17) *Qualifying use demonstration for certain renewable fuels.* For purposes of this section, any renewable fuel other than ethanol, biodiesel, renewable gasoline, or renewable diesel that meets the Grade No. 1-D or No. 2-D specification in ASTM D975 (incorporated by

reference, see § 80.12) is considered renewable fuel and the producer or importer may generate RINs for such fuel only if all the following apply:

(i) The fuel is produced from renewable biomass and qualifies to generate RINs under an approved pathway.

(ii) The fuel producer or importer maintains records demonstrating that the fuel was produced for use as a transportation fuel, heating oil or jet fuel by any of the following:

(A) Blending the renewable fuel into gasoline or distillate fuel to produce a transportation fuel, heating oil, or jet fuel that meets all applicable standards under this part and 40 CFR part 1090.

(B) Entering into a written contract for the sale of the renewable fuel, which specifies the purchasing party must blend the fuel into gasoline or distillate fuel to produce a transportation fuel, heating oil, or jet fuel that meets all applicable standards under this part and 40 CFR part 1090.

(C) Entering into a written contract for the sale of the renewable fuel, which specifies that the fuel must be used in its neat form as a transportation fuel, heating oil or jet fuel that meets all applicable standards.

(ii) The fuel was sold for use in or as a transportation fuel, heating oil, or jet fuel, and for no other purpose.

(g) *Delayed RIN generation.* (1) Parties who produce or import renewable fuel may elect to generate delayed RINs to represent renewable fuel volumes that have already been transferred to another party if those renewable fuel volumes meet all of the following requirements.

(i) The renewable fuel volumes can be described by a new approved pathway that was added after July 1, 2010.

(A) For new pathways that EPA approves in response to petitions submitted pursuant to § 80.1416, complete petitions must be received by EPA by January 31, 2011.

(B) [Reserved]

(ii) The renewable fuel volumes can be described by a pathway that:

(A) Is biodiesel that is made from canola oil through transesterification using natural gas or biomass for process energy; or

(B) EPA has determined was in use as of July 1, 2010, for the primary purpose of producing transportation fuel, heating oil, or jet fuel for commercial sale.

(iii) The renewable fuel volumes were not designated or intended for export from the covered location by the renewable fuel producer or importer, and the producer or importer of the renewable fuel volumes does not know or have reason to know that the volumes were exported from the covered location.

(2) When a new approved pathway is added, EPA will specify in its approval action the effective date on which the new pathway becomes valid for the generation of RINs and whether the fuel in question meets the requirements of paragraph (g)(1)(ii) of this section.

(i) The effective date for the pathway describing biodiesel that is made from canola oil through transesterification using natural gas or biomass for process energy is September 28, 2010.

(ii) [Reserved]

(3) Delayed RINs can only be generated to represent renewable fuel volumes produced in the covered location or imported into the covered location between July 1, 2010, and the earlier of either of the following dates:

(i) The effective date (identified pursuant to paragraph (g)(2) of this section) of the new pathway through which the fuel in question was produced; or

(ii) December 31, 2011.

(4) Delayed RINs must be generated no later than 60 days after the effective date (identified pursuant to paragraph (g)(2) of this section) of the pathway by which the fuel in question was produced.

(5) A party authorized pursuant to paragraph (g)(1) of this section to generate delayed RINs, and electing to do so, who generated RINs pursuant to 80.1426(f)(6) for fuel produced through a pathway described in paragraph (g)(1) of this section, and transferred those RINs with renewable fuel volumes between July 1, 2010 and the effective date (identified pursuant to paragraph (g)(2) of this section) of that pathway, must retire a number of gallon-RINs prior to generating delayed RINs.

(i) The number of gallon-RINs retired by a party pursuant to this paragraph must not exceed the number of gallon-RINs originally generated by the party to represent fuel described in paragraph (g)(1) of this section that was produced in the covered location or imported into the covered location, and transferred to another party, between July 1, 2010 and the earlier of either of the following dates:

(A) The effective date (identified pursuant to paragraph (g)(2) of this section) of the new pathway through which the fuel in question was produced; or

(B) December 31, 2011.

(ii) Retired RINs must have a D code of 6.

(iii) Retired RINs must have a K code of 2.

(iv) Retired RINs must have been generated in the same year as the gallon-RINs originally generated by the party to represent fuel described in paragraph (g)(1) of this section.

(A) For gallon-RINs originally generated in 2010 to represent fuel described in paragraph (g)(1) of this section, the generation year of retired RINs shall be 2010.

(B) For gallon-RINs originally generated in 2011 to represent fuel described in paragraph (g)(1) of this section, the generation year of retired RINs shall be 2011.

(6) For parties that retire RINs pursuant to paragraph (g)(5) of this section, the number of delayed gallon-RINs generated shall be equal to the number of gallon-RINs retired in accordance with paragraph (g)(5) of this section.

(7) A party authorized pursuant to paragraph (g)(1) of this section to generate delayed RINs, and electing to do so, who did not generate RINs pursuant to § 80.1426(f)(6) for renewable fuel produced in the covered location or imported into the covered location between July 1, 2010 and the effective date (identified pursuant to paragraph (g)(2) of this section) of a new pathway for the fuel in question, may generate a number of delayed gallon-RINs for that renewable fuel in accordance with paragraph (f) of this section.

(i) The standardized volume of fuel (V_s) used by a party to determine the

RIN volume (V_{RIN}) under paragraph (f) of this section shall be the standardized volume of the fuel described in paragraph (g)(1)(i) of this section that was produced in the covered location or imported into the covered location by the party, and transferred to another party, between July 1, 2010 and the earlier of either of the following dates:

(A) The effective date (identified pursuant to paragraph (g)(2) of this section) of the new pathway through which the fuel in question was produced; or

(B) December 31, 2011.

(ii) [Reserved]

(8) The renewable fuel for which delayed RINs are generated must be described by a pathway that satisfies the requirements of paragraph (g)(1) of this section.

(9) All delayed RINs generated by a renewable fuel producer or importer must be generated within EMTS on the same date.

(10) The generation year of delayed RINs as designated in EMTS shall be the year that the renewable fuel volumes they represent were either produced or imported into the covered location.

(i) For renewable fuel volumes produced or imported in 2010, the generation year of delayed RINs shall be 2010 and the production date specified in EMTS shall be 07/01/2010.

(ii) For renewable fuel volumes produced or imported in 2011, the generation year of delayed RINs shall be 2011 and the production date specified in EMTS shall be 01/01/2011.

(11) Delayed RINs shall be generated as assigned RINs in EMTS with a batch number that begins with “DRN”, and then immediately separated by the RIN generator.

(12) The D code that shall be used in delayed RINs shall be the D code which corresponds to the new pathway.

(13) Except as provided in this paragraph (g), all other provisions in this Subpart M that pertain to the identification of fuels for which RINs may be generated, the generation and use of RINs, and recordkeeping and reporting, are also applicable to delayed RINs.

TABLE 1 TO § 80.1426—APPLICABLE D CODES FOR EACH FUEL PATHWAY FOR USE IN GENERATING RINS

	Fuel type	Feedstock	Production process requirements	D-Code
A	Ethanol	Corn starch	All of the following: Dry mill process, using natural gas, biomass, or biogas for process energy and at least two advanced technologies from Table 2 to this section.	6
B	Ethanol	Corn starch	All of the following: Dry mill process, using natural gas, biomass, or biogas for process energy and at least one of the advanced technologies from Table 2 to this section plus drying no more than 65% of the distillers grains with solubles it markets annually.	6
C	Ethanol	Corn starch	All of the following: Dry mill process, using natural gas, biomass, or biogas for process energy and drying no more than 50% of the distillers grains with solubles it markets annually.	6
D	Ethanol	Corn starch	Wet mill process using biomass or biogas for process energy.	6
E	Ethanol	Starches from crop residue and annual covercrops.	Fermentation using natural gas, biomass, or biogas for process energy.	6
F	Biodiesel, renewable diesel, jet fuel and heating oil.	Soy bean oil; Oil from annual covercrops; Oil from algae grown photosynthetically; Biogenic waste oils/fats/greases; <i>Camelina sativa</i> oil; Distillers corn oil; Distillers sorghum oil; Commingled distillers corn oil and sorghum oil.	One of the following: Transesterification with or without esterification pre-treatment, Esterification, or Hydrotreating; excludes processes that co-process renewable biomass and petroleum.	4
G	Biodiesel, renewable diesel, jet fuel, and heating oil.	Canola/Rapeseed oil	One of the following: Transesterification using natural gas or biomass for process energy, or Hydrotreating; excludes processes that co-process renewable biomass and petroleum.	4
H	Biodiesel, renewable diesel, jet fuel, and heating oil.	Soy bean oil; Oil from annual covercrops; Oil from algae grown photosynthetically; Biogenic waste oils/fats/greases; <i>Camelina sativa</i> oil; Distillers corn oil; Distillers sorghum oil; Commingled distillers corn oil and sorghum oil; Canola/Rapeseed oil.	One of the following: Transesterification with or without esterification pre-treatment, Esterification, or Hydrotreating; includes only processes that co-process renewable biomass and petroleum.	5
I	Naphtha, LPG ..	<i>Camelina sativa</i> oil; Distillers sorghum oil; Distillers corn oil; Commingled distillers corn oil and distillers sorghum oil; Canola/Rapeseed oil.	Hydrotreating	5
J	Ethanol	Sugarcane	Fermentation	5
K	Ethanol	Crop residue, slash, pre-commercial thinnings and tree residue, switchgrass, miscanthus, energy cane, <i>Arundo donax</i> , <i>Pennisetum purpureum</i> , and separated yard waste; biogenic components of separated MSW; cellulosic components of separated food waste; and cellulosic components of annual cover crops.	Any process that converts cellulosic biomass to fuel.	3
L	Cellulosic diesel, jet fuel and heating oil.	Crop residue, slash, pre-commercial thinnings and tree residue, switchgrass, miscanthus, energy cane, <i>Arundo donax</i> , <i>Pennisetum purpureum</i> , and separated yard waste; biogenic components of separated MSW; cellulosic components of separated food waste; and cellulosic components of annual cover crops.	Any process that converts cellulosic biomass to fuel.	7

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TABLE 1 TO § 80.1426—APPLICABLE D CODES FOR EACH FUEL PATHWAY FOR USE IN GENERATING RINS—Continued

	Fuel type	Feedstock	Production process requirements	D-Code
M	Renewable Gasoline and Renewable Gasoline Blendstock; Co-Processed Cellulosic Diesel, Jet Fuel, and Heating Oil.	Crop residue, slash, pre-commercial thinnings, tree residue, and separated yard waste; biogenic components of separated MSW; cellulosic components of separated food waste; and cellulosic components of annual cover crops.	Catalytic Pyrolysis and Upgrading, Gasification and Upgrading, Thermo-Catalytic Hydrodeoxygenation and Upgrading, Direct Biological Conversion, Biological Conversion and Upgrading utilizing natural gas, biogas, and/or biomass as the only process energy sources providing that process used converts cellulosic biomass to fuel; any process utilizing biogas and/or biomass as the only process energy sources which converts cellulosic biomass to fuel.	3
N	Naphtha	Switchgrass, miscanthus, energy cane, Arundo donax, and Pennisetum purpureum.	Gasification and upgrading processes that converts cellulosic biomass to fuel.	3
O	Butanol	Corn starch	Fermentation; dry mill using natural gas, biomass, or biogas for process energy.	6
P	Ethanol, renewable diesel, jet fuel, heating oil, and naphtha.	The non-cellulosic portions of separated food waste and non-cellulosic components of annual cover crops.	Any	5
Q	Renewable Compressed Natural Gas, Renewable Liquefied Natural Gas, Renewable Electricity.	Biogas from landfills, municipal wastewater treatment facility digesters, agricultural digesters, and separated MSW digesters; and biogas from the cellulosic components of biomass processed in other waste digesters.	Any	3
R	Ethanol	Grain Sorghum	Dry mill process using biogas from landfills, waste treatment plants, and/or waste digesters, and/or natural gas, for process energy.	6
S	Ethanol	Grain Sorghum	Dry mill process, using only biogas from landfills, waste treatment plants, and/or waste digesters for process energy and for on-site production of all electricity used at the site other than up to 0.15 kWh of electricity from the grid per gallon of ethanol produced, calculated on a per batch basis.	5
T	Renewable Compressed Natural Gas, Renewable Liquefied Natural Gas, and Renewable Electricity.	Biogas from waste digesters	Any	5

TABLE 2 TO § 80.1426—ADVANCED TECHNOLOGIES

Corn oil fractionation that is applied to at least 90% of the corn used to produce ethanol on a calendar year basis.

Corn oil extraction that is applied to the whole stillage and/or derivatives of whole stillage and results in recovery of corn oil at an annual average rate equal to or greater than 1.33 pounds oil per bushel of corn processed into ethanol.

TABLE 2 TO § 80.1426—ADVANCED TECHNOLOGIES—Continued

Membrane separation in which at least 90% of ethanol dehydration is carried out using a hydrophilic membrane on a calendar year basis.

Raw starch hydrolysis that is used for at least 90% of starch hydrolysis used to produce ethanol instead of hydrolysis using a traditional high heat cooking process, calculated on a calendar year basis.

TABLE 2 TO § 80.1426—ADVANCED
TECHNOLOGIES—Continued

Combined heat and power such that, on a calendar year basis, at least 90% of the thermal energy associated with ethanol production (including thermal energy produced at the facility and that which is derived from an off-site waste heat supplier), exclusive of any thermal energy used for the drying of distillers grains and solubles, is used to produce electricity prior to being used to meet the process heat requirements of the facility.

[75 FR 14863, Mar. 26, 2010]

EDITORIAL NOTE: For FEDERAL REGISTER citations affecting § 80.1426, see the List of CFR Sections Affected, which appears in the Finding Aids section of the printed volume and at www.govinfo.gov.

§ 80.1427 How are RINs used to demonstrate compliance?

(a) *Obligated party renewable volume obligations.* (1) Except as specified in paragraph (b) of this section or § 80.1456, each party that is an obligated party and is obligated to meet the Renewable Volume Obligations under § 80.1407 must demonstrate pursuant to § 80.1451(a)(1) that it has retired for compliance purposes a sufficient number of RINs to satisfy the following equations:

(i) *Cellulosic biofuel.*

$$(\Sigma \text{RINNUM})_{\text{CB},i} + (\Sigma \text{RINNUM})_{\text{CB},i-1} = \text{RVO}_{\text{CB},i}$$

Where:

$(\Sigma \text{RINNUM})_{\text{CB},i}$ = Sum of all owned gallon-RINs that are valid for use in complying with the cellulosic biofuel RVO, were generated in year i , and are being applied towards the $\text{RVO}_{\text{CB},i}$, in gallons.

$(\Sigma \text{RINNUM})_{\text{CB},i-1}$ = Sum of all owned gallon-RINs that are valid for use in complying with the cellulosic biofuel RVO, were generated in year $i-1$, and are being applied towards the $\text{RVO}_{\text{CB},i}$, in gallons.

$\text{RVO}_{\text{CB},i}$ = The Renewable Volume Obligation for cellulosic biofuel for the obligated party for calendar year i , in gallons, pursuant to § 80.1407.

(ii) *Biomass-based diesel.* Except as provided in paragraph (a)(7) of this section,

$$(\Sigma \text{RINNUM})_{\text{BBD},i} + (\Sigma \text{RINNUM})_{\text{BBD},i-1} = \text{RVO}_{\text{BBD},i}$$

Where:

$(\Sigma \text{RINNUM})_{\text{BBD},i}$ = Sum of all owned gallon-RINs that are valid for use in complying with the biomass-based diesel RVO, were generated in year i , and are being applied towards the $\text{RVO}_{\text{BBD},i}$, in gallons.

$(\Sigma \text{RINNUM})_{\text{BBD},i-1}$ = Sum of all owned gallon-RINs that are valid for use in complying with the biomass-based diesel RVO, were generated in year $i-1$, and are being applied towards the $\text{RVO}_{\text{BBD},i}$, in gallons.

$\text{RVO}_{\text{BBD},i}$ = The Renewable Volume Obligation for biomass-based diesel for the obligated party for calendar year i after 2010, in gallons, pursuant to § 80.1407.

(iii) *Advanced biofuel.*

$$(\Sigma \text{RINNUM})_{\text{AB},i} + (\Sigma \text{RINNUM})_{\text{AB},i-1} = \text{RVO}_{\text{AB},i}$$

Where:

$(\Sigma \text{RINNUM})_{\text{AB},i}$ = Sum of all owned gallon-RINs that are valid for use in complying with the advanced biofuel RVO, were generated in year i , and are being applied towards the $\text{RVO}_{\text{AB},i}$, in gallons.

$(\Sigma \text{RINNUM})_{\text{AB},i-1}$ = Sum of all owned gallon-RINs that are valid for use in complying with the advanced biofuel RVO, were generated in year $i-1$, and are being applied towards the $\text{RVO}_{\text{AB},i}$, in gallons.

$\text{RVO}_{\text{AB},i}$ = The Renewable Volume Obligation for advanced biofuel for the obligated party for calendar year i , in gallons, pursuant to § 80.1407.

(iv) *Renewable fuel.*

$$(\Sigma \text{RINNUM})_{\text{RF},i} + (\Sigma \text{RINNUM})_{\text{RF},i-1} = \text{RVO}_{\text{RF},i}$$

Where:

$(\Sigma \text{RINNUM})_{\text{RF},i}$ = Sum of all owned gallon-RINs that are valid for use in complying with the renewable fuel RVO, were generated in year i , and are being applied towards the $\text{RVO}_{\text{RF},i}$, in gallons.

$(\Sigma \text{RINNUM})_{\text{RF},i-1}$ = Sum of all owned gallon-RINs that are valid for use in complying with the renewable fuel RVO, were generated in year $i-1$, and are being applied towards the $\text{RVO}_{\text{RF},i}$, in gallons.

$\text{RVO}_{\text{RF},i}$ = The Renewable Volume Obligation for renewable fuel for the obligated party for calendar year i , in gallons, pursuant to § 80.1407.

(2) RINs that are valid for use in complying with each Renewable Volume Obligation are determined by their D codes.

(i) RINs with a D code of 3 or 7 are valid for compliance with the cellulosic biofuel RVO.

(ii) RINs with a D code of 4 or 7 are valid for compliance with the biomass-based diesel RVO.

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(iii) RINs with a D code of 3, 4, 5, or 7 are valid for compliance with the advanced biofuel RVO.

(iv) RINs with a D code of 3, 4, 5, 6, or 7 are valid for compliance with the renewable fuel RVO.

(3)(i) Except as provided in paragraph (a)(3)(ii) of this section, a party may use the same RIN to demonstrate compliance with more than one RVO so long as it is valid for compliance with all RVOs to which it is applied.

(ii) A cellulosic diesel RIN with a D code of 7 cannot be used to demonstrate compliance with both a cellulosic biofuel RVO and a biomass-based diesel RVO.

(4) [Reserved]

(5) The value of $(\Sigma \text{RINNUM})_{i-1}$ may not exceed values determined by the following inequalities except as provided in paragraph (a)(7)(iii) of this section and § 80.1442(d)

$$\begin{aligned}(\Sigma \text{RINNUM})_{\text{CB},i-1} &\leq 0.20 * \text{RVO}_{\text{CB},i} \\(\Sigma \text{RINNUM})_{\text{BBD},i-1} &\leq 0.20 * \text{RVO}_{\text{BBD},i} \\(\Sigma \text{RINNUM})_{\text{AB},i-1} &\leq 0.20 * \text{RVO}_{\text{AB},i} \\(\Sigma \text{RINNUM})_{\text{RF},i-1} &\leq 0.20 * \text{RVO}_{\text{RF},i}\end{aligned}$$

(6) Except as provided in paragraph (a)(7) of this section:

(i) RINs may only be used to demonstrate compliance with the RVOs for the calendar year in which they were generated or the following calendar year.

(ii) RINs used to demonstrate compliance in one year cannot be used to demonstrate compliance in any other year.

(7) *Biomass-based diesel in 2010.*

(i) Prior to determining compliance with the 2010 biomass-based diesel RVO, obligated parties may reduce the value of $\text{RVO}_{\text{BBD},2010}$ by an amount equal to the sum of all 2008 and 2009 RINs that they used for compliance purposes for calendar year 2009 which have a D code of 2 and an RR code of 15, 16, or 17.

(ii) For calendar year 2010 only, the following equation shall be used to determine compliance with the biomass-based diesel RVO instead of the equation in paragraph (a)(1)(ii) of this section

$$(\Sigma \text{RINNUM})_{\text{BBD},2010} + (\Sigma \text{RINNUM})_{\text{BBD},2009} + (\Sigma \text{RINNUM})_{\text{BBD},2008} = \text{RVO}_{\text{BBD},2010}$$

Where

$(\Sigma \text{RINNUM})_{\text{BBD},2010}$ = Sum of all owned gallon-RINs that are valid for use in complying with the biomass-based diesel RVO, were generated in year 2010, and are being applied towards the $\text{RVO}_{\text{BBD},2010}$, in gallons.

$(\Sigma \text{RINNUM})_{\text{BBD},2009}$ = Sum of all owned gallon-RINs that are valid for use in complying with the biomass-based diesel RVO, were generated in year 2009, have not previously been used for compliance purposes, and are being applied towards the $\text{RVO}_{\text{BBD},2010}$, in gallons.

$(\Sigma \text{RINNUM})_{\text{BBD},2008}$ = Sum of all owned gallon-RINs that are valid for use in complying with the biomass-based diesel RVO, were generated in year 2008, have not previously been used for compliance purposes, and are being applied towards the $\text{RVO}_{\text{BBD},2010}$, in gallons.

$\text{RVO}_{\text{BBD},2010}$ = The Renewable Volume Obligation for biomass-based diesel for the obligated party for calendar year 2010, in gallons, pursuant to § 80.1407 or § 80.1430, as adjusted by paragraph (a)(7)(i) of this section.

(iii) The values of $(\Sigma \text{RINNUM})_{2008}$ and $(\Sigma \text{RINNUM})_{2009}$ may not exceed values determined by both of the following inequalities

$$\begin{aligned}(\Sigma \text{RINNUM})_{\text{BBD},2008} &\leq 0.087 * \text{RVO}_{\text{BBD},2010} \\(\Sigma \text{RINNUM})_{\text{BBD},2008} + (\Sigma \text{RINNUM})_{\text{BBD},2009} &\leq 0.20 * \text{RVO}_{\text{BBD},2010}\end{aligned}$$

(8) A party may only use a RIN for purposes of meeting the requirements of paragraph (a)(1) or (a)(7) of this section if that RIN is a separated RIN with a K code of 2 obtained in accordance with §§ 80.1428 and 80.1429.

(9) The number of gallon-RINs associated with a given batch-RIN that can be used for compliance with the RVOs shall be calculated from the following formula:

$$\text{RINNUM} = \text{EEEEEEEE} - \text{SSSSSSSS} + 1$$

Where:

RINNUM = Number of gallon-RINs associated with a batch-RIN, where each gallon-RIN represents one gallon of renewable fuel for compliance purposes.

EEEEEEEE = Batch-RIN component identifying the last gallon-RIN associated with the batch-RIN.

SSSSSSSS = Batch-RIN component identifying the first gallon-RIN associated with the batch-RIN.

(b) *Deficit carryovers.* (1) An obligated party that fails to meet the requirements of paragraph (a)(1) or (a)(7) of

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this section for calendar year i is permitted to carry a deficit into year $i + 1$ under the following conditions:

(i) The party did not carry a deficit into calendar year i from calendar year $i-1$ for the same RVO.

(ii) The party subsequently meets the requirements of paragraph (a)(1) of this section for calendar year $i + 1$ and carries no deficit into year $i + 2$ for the same RVO.

(iii) For compliance with the biomass-based diesel RVO in calendar year 2011, the deficit which is carried over from 2010 is no larger than 57% of the party's 2010 biomass-based diesel RVO as determined prior to any adjustment applied pursuant to paragraph (a)(7)(i) of this section.

(iv) The party uses the same compliance approach in year $i + 1$ as it did in year i , as provided in § 80.1406(c)(2).

(2) A deficit is calculated according to the following formula:

$$D_i = \text{RVO}_i - [(\Sigma \text{RINNUM})_i + (\Sigma \text{RINNUM})_{i-1}]$$

Where:

D_i = The deficit, in gallons, generated in calendar year i that must be carried over to year $i + 1$ if allowed pursuant to paragraph (b)(1) of this section.

RVO_i = The Renewable Volume Obligation for the obligated party or exporter of renewable fuel for calendar year i , in gallons.

$(\Sigma \text{RINNUM})_i$ = Sum of all acquired gallon-RINs that were generated in year i and are being applied towards the RVO_i , in gallons.

$(\Sigma \text{RINNUM})_{i-1}$ = Sum of all acquired gallon-RINs that were generated in year $i-1$ and are being applied towards the RVO_i , in gallons.

(c) *Exporter Renewable Volume Obligations (ERVOs)*. (1) Each exporter of renewable fuel that is obligated to meet Exporter Renewable Volume Obligations under § 80.1430 must demonstrate pursuant to § 80.1451(a)(1) that it has retired for compliance purposes a sufficient number of RINs to meet its ERVOs by the deadline specified in § 80.1430(f).

(2) In fulfillment of its ERVOs, each exporter of renewable fuel is subject to the provisions of paragraphs (a)(2), (3), (6), and (8) of this section.

(3) No more than 20 percent of the ERVO calculated according to a formula at § 80.1430(b) may be fulfilled

using RINs generated in the year prior to the year in which the RVO was incurred.

[75 FR 14863, Mar. 26, 2010, as amended at 75 FR 26042, May 10, 2010; 79 FR 42114, July 18, 2014; 85 FR 7076, Feb. 6, 2020; 85 FR 78467, Dec. 4, 2020; 88 FR 44584, July 12, 2023]

§ 80.1428 General requirements for RIN distribution.

(a) *RINs assigned to volumes of renewable fuel or RNG*. (1) Except as provided in §§ 80.1429 and 80.125(d), no person can separate a RIN that has been assigned to a volume of renewable fuel or RNG pursuant to § 80.1426(e).

(2) An assigned RIN cannot be transferred to another person without simultaneously transferring a volume of renewable fuel or RNG to that same person.

(3) Assigned gallon-RINs with a K code of 1 can be transferred to another person based on the following:

(i) Except for RNG, no more than 2.5 assigned gallon-RINs with a K code of 1 can be transferred to another person with every gallon of renewable fuel transferred to that same person.

(ii) For RNG, the transferor of assigned RINs for RNG must transfer RINs under § 80.125(c).

(4)(i) Except for RNG, on each of the dates listed in paragraph (a)(4)(ii) of this section in any calendar year, the following equation must be satisfied for assigned RINs and volumes of renewable fuel owned by a person:

$$\text{RIN}_d \leq V_d * 2.5$$

Where:

RIN_d = Total number of assigned gallon-RINs with a K code of 1 that are owned on date d .

V_d = Standardized total volume of renewable fuel owned on date d , in gallons, per § 80.1426(f)(8).

(ii) The applicable dates are March 31, June 30, September 30, and December 31.

(5) Any transfer of ownership of assigned RINs must be documented on product transfer documents generated pursuant to § 80.1453.

(i) The RIN must be recorded on the product transfer document used to transfer ownership of the volume of renewable fuel or RNG to another person; or

(ii) The RIN must be recorded on a separate product transfer document transferred to the same person on the same day as the product transfer document used to transfer ownership of the volume of renewable fuel or RNG.

(b) *RINs separated from volumes of renewable fuel or RNG.*

(1) Unless otherwise specified, any person that has registered pursuant to § 80.1450 can own a separated RIN.

(2) Separated RINs can be transferred any number of times.

(c) *RIN expiration.* Except as provided in § 80.1427(a)(7), a RIN is valid for compliance during the calendar year in which it was generated, or the following calendar year. Any RIN that is not used for compliance purposes for the calendar year in which it was generated, or for the following calendar year, will be considered an expired RIN. Pursuant to § 80.1431(a), an expired RIN will be considered an invalid RIN and cannot be used for compliance purposes.

(d) Any batch-RIN can be divided into multiple batch-RINs, each representing a smaller number of gallon-RINs, if all of the following conditions are met:

(1) All RIN components other than SSSSSSSS and EEEEEEEE are identical for the original parent and newly formed daughter RINs.

(2) The sum of the gallon-RINs associated with the multiple daughter batch-RINs is equal to the gallon-RINs associated with the parent batch-RIN.

[75 FR 14863, Mar. 26, 2010, as amended at 75 FR 26042, May 10, 2010; 87 FR 39664, July 1, 2022; 88 FR 44584, July 12, 2023]

§ 80.1429 Requirements for separating RINs from volumes of renewable fuel or RNG.

(a)(1) Separation of a RIN from a volume of renewable fuel or RNG means termination of the assignment of the RIN to a volume of renewable fuel or RNG.

(2) RINs that have been separated from volumes of renewable fuel or RNG become separated RINs subject to the provisions of § 80.1428(b).

(b) A RIN that is assigned to a volume of renewable fuel or RNG can be separated from that volume only under one of the following conditions:

(1) Except as provided in paragraphs (b)(7) and (9) of this section and § 80.125(d)(3), an obligated party must separate any RINs that have been assigned to a volume of renewable fuel if that party owns that volume.

(2) Except as provided in paragraph (b)(6) of this section, any party that owns a volume of renewable fuel must separate any RINs that have been assigned to that volume once the volume is blended with gasoline or fossil-based diesel to produce a transportation fuel, heating oil, or jet fuel. A party may separate up to 2.5 RINs per gallon of blended renewable fuel.

(3) Any exporter of renewable fuel must separate any RINs that have been assigned to the exported renewable fuel volume. An exporter of renewable fuel may separate up to 2.5 RINs per gallon of exported renewable fuel.

(4) Any party that produces, imports, owns, sells, or uses a volume of neat renewable fuel, or a blend of renewable fuel and diesel fuel, must separate any RINs that have been assigned to that volume of neat renewable fuel or that blend if:

(i) The party designates the neat renewable fuel or blend as transportation fuel, heating oil, or jet fuel; and

(ii) The neat renewable fuel or blend is used without further blending, in the designated form, as transportation fuel, heating oil, or jet fuel.

(5)(i) Any party that produces, imports, owns, sells, or uses a volume of electricity or biogas for which RINs have been generated in accordance with § 80.1426(f) must separate any RINs that have been assigned to that volume of renewable electricity or biogas if:

(A) The party designates the electricity or biogas as transportation fuel; and

(B) The electricity or biogas is used as transportation fuel.

(ii)(A) Any biogas closed distribution system RIN generator that generates RINs for a batch of renewable CNG/LNG under § 80.130(b) may only separate RINs that have been assigned to that batch after the party demonstrates that the renewable CNG/LNG was used as transportation fuel.

(B) Only an RNG RIN separator may only separate the RINs that have been assigned to a volume of RNG after

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meeting all applicable requirements in § 80.125(d)(2).

(6) RINs assigned to a volume of biodiesel can only be separated from that volume pursuant to paragraph (b)(2) of this section if such biodiesel is blended into diesel fuel at a concentration of 80 volume percent biodiesel or less.

(i) This paragraph (b)(6) shall not apply to biodiesel owned by obligated parties or to exported volumes of biodiesel.

(ii) This paragraph (b)(6) shall not apply to parties meeting the requirements of paragraph (b)(4) of this section.

(7) For RINs that an obligated party generates for renewable fuel that has not been blended into gasoline or diesel to produce a transportation fuel, heating oil, or jet fuel, the obligated party can only separate such RINs from volumes of renewable fuel if the number of gallon-RINs separated in a calendar year are less than or equal to a limit set as follows:

(i) For RINs with a D code of 3, the limit shall be equal to RVO_{CB} .

(ii) For RINs with a D code of 4, the limit shall be equal to RVO_{BDD} .

(iii) For RINs with a D code of 7, the limit shall be equal to the larger of RVO_{BDD} or RVO_{CB} .

(iv) For RINs with a D code of 5, the limit shall be equal to $RVO_{AB} - RVO_{CB} - RVO_{BDD}$.

(v) For RINs with a D code of 6, the limit shall be equal to $RVO_{RF} - RVO_{AB}$.

(8) Small refiners and small refineries may only separate RINs that have been assigned to volumes of renewable fuel that the party blends into gasoline or diesel to produce transportation fuel, heating oil, or jet fuel, or that the party used as transportation fuel, heating oil, or jet fuel. This paragraph (b)(8) shall apply only under the following conditions:

(i) During the calendar year in which the party has received a small refinery exemption under § 80.1441 or a small refiner exemption under § 80.1442; and

(ii) The party is not otherwise an obligated party during the period of time that the small refinery or small refiner exemption is in effect.

(9) Except as provided in paragraphs (b)(2) through (5) and (8) of this section, parties whose non-export renewable

volume obligations are solely related to the importation of products listed in § 80.1407(c) or (e), the addition of blendstocks into a volume of finished gasoline, finished diesel fuel, or BOB, or that incur a renewable volume obligation (RVO) under § 80.1408, can only separate RINs from volumes of renewable fuel if the number of gallon-RINs separated in a calendar year is less than or equal to a limit set as follows:

(i) For RINs with a D code of 3, the limit shall be equal to RVO_{CB} .

(ii) For RINs with a D code of 4, the limit shall be equal to RVO_{BDD} .

(iii) For RINs with a D code of 7, the limit shall be equal to the larger of RVO_{BDD} or RVO_{CB} .

(iv) For RINs with a D code of 5, the limit shall be equal to $RVO_{AB} - RVO_{CB} - RVO_{BDD}$.

(v) For RINs with a D code of 6, the limit shall be equal to $RVO_{RF} - RVO_{AB}$.

(10) Any party that produces a volume of renewable fuel or RNG may separate any RINs that have been generated to represent that volume of renewable fuel or RNG if that party retires the separated RINs to replace invalid RINs according to § 80.1474.

(c) The party responsible for separating a RIN from a volume of renewable fuel or RNG shall change the K code in the RIN from a value of 1 to a value of 2 prior to transferring the RIN to any other party.

(d) Upon and after separation of a RIN from its associated volume of renewable fuel or RNG, the separated RIN must be accompanied by a PTD pursuant to § 80.1453 when transferred to another party.

(e) Upon and after separation of a RIN from its associated volume of renewable fuel or RNG, product transfer documents used to transfer ownership of the volume must meet the requirements of § 80.1453.

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§ 80.1430 Requirements for exporters of renewable fuels.

(a) Any exporter of renewable fuel, whether in its neat form or blended shall acquire sufficient RINs to comply

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with all applicable Renewable Volume Obligations under paragraphs (b) through (e) of this section representing the exported renewable fuel. No provision of this section applies to renewable fuel purchased directly from the renewable fuel producer and for which the exporter of renewable fuel can demonstrate that no RINs were generated through the recordkeeping requirements of § 80.1454(a)(6).

(b) *Exporter Renewable Volume Obligations (ERVOs)*. An exporter of renewable fuel shall determine its Exporter Renewable Volume Obligations from the volumes of the renewable fuel exported.

(1) *Cellulosic biofuel*.

$$ERVO_{CB,k} = VOL_k * EV_k$$

Where:

$ERVO_{CB,k}$ = The Exporter Renewable Volume Obligation for cellulosic biofuel for discrete volume k in gallons.

k = A discrete volume of renewable fuel that the exporter of renewable fuel knows or has reason to know is cellulosic biofuel that is exported in a single shipment.

VOL_k = The standardized volume of discrete volume k, in gallons, calculated in accordance with § 80.1426(f)(8).

EV_k = The equivalence value associated with discrete volume k.

(2) *Biomass-based diesel*.

$$ERVO_{BBD,k} = VOL_k * EV_k$$

Where:

$ERVO_{BBD,k}$ = The Exporter Renewable Volume Obligation for biomass-based diesel for discrete volume k, in gallons.

k = A discrete volume of renewable fuel that is biodiesel or renewable diesel and is exported in a single shipment.

VOL_k = The standardized volume of discrete volume k calculated in accordance with § 80.1426(f)(8).

EV_k = The equivalence value associated with discrete volume k.

(3) *Advanced biofuel*.

$$ERVO_{AB,k} = VOL_k * EV_k$$

Where:

$ERVO_{AB,k}$ = The Exporter Renewable Volume Obligation for advanced biofuel for discrete volume k, in gallons.

k = A discrete volume of renewable fuel that is advanced biofuel (including biomass-based diesel, renewable diesel, cellulosic biofuel and other advanced biofuel) and is exported in a single shipment.

VOL_k = The standardized volume of discrete volume k, in gallons, calculated in accordance with § 80.1426(f)(8).

EV_k = The equivalence value associated with discrete volume k.

(4) *Renewable fuel*.

$$ERVO_{RF,i} = VOL_k * EV_k$$

Where:

$ERVO_{RF,i}$ = The Renewable Volume Obligation for renewable fuel for discrete volume k, in gallons.

k = A discrete volume of exported renewable fuel that is exported in a single shipment.

VOL_k = The standardized volume of discrete volume k, in gallons, calculated in accordance with § 80.1426(f)(8).

EV_k = The equivalence value associated with discrete volume k.

(c) If the exporter of renewable fuel knows or has reason to know that a volume of exported renewable fuel is cellulosic diesel, the exporter of renewable fuel must treat the exported volume as either cellulosic biofuel or biomass-based diesel when determining his Renewable Volume Obligations pursuant to paragraph (b) of this section.

(d) For the purposes of calculating the Renewable Volume Obligations:

(1) If the equivalence value for a volume of exported renewable fuel can be determined pursuant to § 80.1415 based on its composition, then the appropriate equivalence value shall be used in the calculation of the exporter of renewable fuel's Renewable Volume Obligations under paragraph (b) of this section.

(2) If the category of the exported renewable fuel is known to be biomass-based diesel but the composition is unknown, the value of EV_k shall be 1.5.

(3) If neither the category nor composition of a volume of exported renewable fuel can be determined, the value of EV_k shall be 1.0.

(e) For renewable fuels that are in the form of a blend at the time of export, the exporter of renewable fuel shall determine the volume of exported renewable fuel based on one of the following:

(1) Information from the supplier of the blend of the concentration of renewable fuel in the blend.

(2) Determination of the renewable portion of the blend using Method B or Method C of ASTM D6866 (incorporated

by reference, see § 80.12), or an alternative test method as approved by the EPA.

(3) Assuming the maximum concentration of the renewable fuel in the blend as allowed by law and/or regulation.

(f) Each exporter of renewable fuel must fulfill its ERVO for each discrete volume of exported renewable fuel within thirty days of export, and must demonstrate compliance with its ERVOs pursuant to § 80.1427(c).

(g) Each exporter of renewable fuel must fulfill any 2014 ERVOs existing as of September 16, 2014 for which RINs have not yet been retired by the compliance demonstration deadline for the 2013 compliance period, and must demonstrate compliance with such ERVOs pursuant to § 80.1427(c).

(h) Each person meeting the definition of exporter of renewable fuel for a particular export transaction is jointly and severally liable for completion of the requirements of this section and all associated RIN retirement demonstration, registration, reporting, and attest engagement obligations under this subpart. However, these requirements for exporters of renewable fuel must be met only once for any export transaction.

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§ 80.1431 Treatment of invalid RINs.

(a) *Invalid RINs.* (1) An invalid RIN is a RIN that is any of the following:

- (i) A duplicate of a valid RIN.
- (ii) Was based on incorrect volumes or volumes that have not been standardized to 60 °F.
- (iii) Has expired, as provided in § 80.1428(c).
- (iv) Was based on an incorrect equivalence value.
- (v) Deemed invalid under § 80.1467(g).
- (vi) Does not represent renewable fuel or RNG.
- (vii) Was assigned an incorrect “D” code value under § 80.1426(f) for the associated volume of fuel.
- (viii) Was generated for fuel that was not used in the covered location.
- (ix) Was otherwise improperly generated.

(x) Was inappropriately separated under § 80.125(d).

(2) In the event that the same RIN is transferred to two or more parties, all such RINs are deemed invalid, unless EPA in its sole discretion determines that some portion of these RINs is valid.

(3) If any RIN generated for a batch of renewable fuel produced using a bio-intermediate is invalid, then all RINs generated for that batch of renewable fuel are deemed invalid, unless EPA in its sole discretion determines that some portion of those RINs are valid.

(4) If any RIN generated for a batch of renewable fuel that had RINs apportioned through § 80.1426(f)(3) is invalid, then all RINs generated for that batch of renewable fuel are deemed invalid, unless EPA in its sole discretion determines that some portion of those RINs are valid.

(b) Except as provided in paragraph (c) of this section and § 80.1473, the following provisions apply in the case of RINs that are invalid:

(1) Upon determination by any party that RINs owned are invalid, the party must keep copies and adjust its records, reports, and compliance calculations in which the invalid RINs were used. The party must retire the invalid RINs in the applicable RIN transaction reports under § 80.1451(c)(2) for the quarter in which the RINs were determined to be invalid.

(2) Invalid RINs cannot be used to achieve compliance with the Renewable Volume Obligations of an obligated party or exporter of renewable fuel, regardless of the party’s good faith belief that the RINs were valid at the time they were acquired.

(3) Any valid RINs remaining after invalid RINs are retired must first be applied to correct the transfer of invalid RINs to another party before applying the valid RINs to meet the party’s Renewable Volume Obligations at the end of the compliance year.

(c) Improperly generated RINs may be used for compliance provided that all the following conditions and requirements are satisfied and the RIN generator demonstrates that the conditions and requirements are satisfied

through the reporting and record-keeping requirements set forth below, that:

(1) The number of RINs generated for a batch exceeds the number of RINs that should have been properly generated.

(2) The RINs were improperly generated as a result of a broken meter, an inadvertent temperature correction error, or an inadvertent administrative error.

(3) The renewable fuel producer or importer had in place at the time the RINs were improperly generated a quality assurance/quality control plan designed to ensure that process measuring equipment such as meters and temperature probes are properly maintained and to prevent inadvertent administrative errors.

(4) The renewable fuel producer or importer has taken any appropriate additional steps to prevent similar violations from occurring in the future.

(5) The improperly generated RINs have been transferred to another party.

(6) The renewable fuel producer or importer has not improperly generated RINs for the reasons described in paragraph (c)(2) of this section on more than five batches during any calendar year.

(7) All of the following remedial actions have been implemented within 30 days of the EMTS submission date of the improper RIN generation:

(i) The renewable fuel producer or importer retires an equal number of valid RINs with the same D Code and RIN year as the properly generated RINs, using an EMTS retire code of 110.

(ii) The renewable fuel producer or importer reports all the following information to EPA via EMTS, which EPA may make publicly available:

(A) Company name.

(B) Company ID.

(C) Facility name.

(D) Facility ID.

(E) The date the renewable fuel was produced.

(F) The date the RINs were originally generated.

(G) The number of RINs generated.

(H) The number of RINs improperly generated.

(I) RIN year.

(J) D codes of generated RINs.

(K) Batch numbers.

(L) EMTS Transaction ID of the original generation.

(M) An explanation of how the violation occurred, and why the improperly generated RINs meet the criteria in paragraph (c)(2) of this section.

(N) Steps taken to prevent similar violations from occurring in the future.

(O) Information under paragraphs (c)(3), (c)(4), and (c)(5) of this section.

(P) Any additional information that EPA may require.

(8) The renewable fuel producer or importer maintains all records relating to the improper RIN generation and the associated remedial actions taken, including but not limited to any of the following:

(i) All information regarding the generation of invalid RINs, including information that is sufficient to demonstrate that the improperly generated RINs meet the criteria in paragraph (c)(2) of this section.

(ii) Documents demonstrating that the renewable fuel producer or importer has implemented the quality control/quality assurance plan required in paragraph (c)(3) of this section, and has taken all appropriate additional steps to prevent similar violations from occurring in the future.

(iii) All correspondence with EPA.

(iv) All EMTS transactions (Generation, Buy, Sell and Retire).

(v) All Product Transfer Documents (PTDs).

(d) If EPA determines that a renewable fuel producer improperly generated RINs but did not meet the requirements set forth in paragraph (c) of this section, then the requirements of paragraph (b) of this section apply from the moment that the invalid RINs were generated in EMTS. Once the RIN generator has identified improperly generated RINs to EPA, then EPA may remove these improperly generated RINs from EMTS.

[75 FR 14863, Mar. 26, 2010, as amended at 77 FR 1355, Jan. 9, 2012; 79 FR 42115, July 18, 2014; 85 FR 7076, Feb. 6, 2020; 87 FR 39665, July 1, 2022; 88 FR 44585, July 12, 2023]

§ 80.1432 Reported spillage or disposal of renewable fuel.

(a) A reported spillage or disposal under this subpart means a spillage or

disposal of renewable fuel associated with a requirement by a federal, state, or local authority to report the spillage or disposal.

(b) Except as provided in paragraph (c) of this section, in the event of a reported spillage or disposal of any volume of renewable fuel, the owner of the renewable fuel must retire a number of RINs corresponding to the volume of spilled or disposed of renewable fuel multiplied by its equivalence value.

(1) If the equivalence value for the spilled or disposed of volume may be determined pursuant to § 80.1415 based on its composition, then the appropriate equivalence value shall be used.

(2) If the equivalence value for a spilled or disposed of volume of renewable fuel cannot be determined, the equivalence value shall be 1.0.

(c) If the owner of a volume of renewable fuel that is spilled or disposed of and reported establishes that no RINs were generated to represent the volume, then no RINs shall be retired.

(d) A RIN that is retired under paragraph (b) of this section:

(1) Must be reported as a retired RIN in the applicable reports under § 80.1451.

(2) May not be transferred to another person or used by any obligated party to demonstrate compliance with the party's Renewable Volume Obligations.

§ 80.1433 [Reserved]

§ 80.1434 RIN retirement.

(a) A RIN must be retired in any of the following cases:

(1) *Demonstrate annual compliance.* Except as specified in paragraph (b) of this section or § 80.1456, an obligated party required to meet the RVO under § 80.1407 must retire a sufficient number of RINs to demonstrate compliance with an applicable RVO.

(2) *Exported renewable fuel.* Any exporter of renewable fuel that incurs an ERVO as described in § 80.1430(a) shall retire RINs pursuant to §§ 80.1430(b) through (g) and 80.1427(c).

(3) *Volume error correction.* A RIN must be retired when it was based on incorrect volumes or volumes that have not been standardized to 60 °F as described in § 80.1426(f)(8).

(4) *Import volume correction.* Where the port of entry volume is the lesser of

the two volumes in § 80.1466(e)(1)(i), the importer shall calculate the difference between the number of RINs originally assigned by the foreign producer and the number of RINs calculated under § 80.1426 for the volume of renewable fuel as measured at the port of entry, and retire that amount of RINs in accordance with § 80.1466(k)(4).

(5) *Spillage, leakage, or disposal of renewable fuels.* Except as provided in § 80.1432(c), in the event that a reported spillage, leakage, or disposal of any volume of renewable fuel, the owner of the renewable fuel must notify any holder or holders of the attached RINs and retire a number of gallon-RINs corresponding to the volume of spilled or disposed of renewable fuel multiplied by its equivalence value in accordance with § 80.1432(b).

(6) *Contaminated or spoiled fuel.* In the event that contamination or spoliation of any volume of renewable fuel is reported, the owner of the renewable fuel must notify any holder or holders of the attached RINs and retire a number of gallon-RINs corresponding to the volume of contaminated or spoiled renewable fuel multiplied by its equivalence value.

(i) If the equivalence value for the contaminated or spoiled volume may be determined pursuant to § 80.1415 based on its composition, then the appropriate equivalence value shall be used.

(ii) If the equivalence value for a contaminated or spoiled volume of renewable fuel cannot be determined, the equivalence value shall be 1.0.

(iii) If the owner of a volume of renewable fuel that is contaminated or spoiled and reported establishes that no RINs were generated to represent the volume, then no gallon-RINs shall be retired.

(7) *Delayed RIN generation.* In the event that a party generated a delayed RIN as described in § 80.1426(g)(1) through (4), parties must retire RINs as described in accordance with § 80.1426(g)(5) and (6).

(8) *Invalid RIN.* In the case that a RIN is invalid as described in § 80.1431(a), the RIN will be considered invalid and must be retired as described in § 80.1431(b).

(9) *Potentially invalid RINs.* In the case that a RIN is identified as a PIR under § 80.1474(b)(1), the PIRs or replacement RINs must be retired as described in § 80.1474(b)(2) through (5).

(10) *Replacement.* As required by § 80.1431(b) or § 80.1474, any party that must replace an invalid RIN or PIR that was used for compliance must retire valid RINs to replace the invalid RINs originally used for any RVO.

(11) *Used to produce other renewable fuel.* Any party that uses renewable fuel or RNG to produce other renewable fuel must retire any assigned RINs for the volume of the renewable fuel or RNG.

(12) *Expired RINs for RNG.* Any party owning RINs assigned to RNG as specified in § 80.125(e) must retire the assigned RIN.

(13) *Other.* Any other instance identified by EPA.

(b) In the case that retirement of a RIN is necessary, the following provisions apply:

(1) Any party affected by such retirement must keep copies and adjust its records, reports, and compliance calculations in which the retired RIN was used.

(2) The retired RIN must be reported in the applicable reports under § 80.1451.

(3) The retired RIN must be reported in the EPA Moderated Transaction System pursuant to § 80.1452(c).

(4) Where the importer of renewable fuel is required to retire RINs under paragraph (a)(5) of this section, the importer must report the retired RINs in the applicable reports under §§ 80.1451, 80.1466(k), and 80.1466(m).

[85 FR 7076, Feb. 6, 2020, as amended at 88 FR 44585, July 12, 2023]

§ 80.1435 How are RIN holdings and RIN holding thresholds calculated?

Beginning January 1, 2020, any party that holds RINs must comply with the requirements of this section.

(a) *RIN holdings calculation.* (1) Each party must calculate daily end-of-day separated D6 RIN holdings by aggregating its end-of-day separated D6 RIN holdings with the end-of-day separated D6 RIN holdings of all corporate affiliates in a corporate affiliate group and use the end-of-day separated D6 RIN

holdings as specified in paragraph (b) of this section.

(2) Each party must calculate, as applicable, the holdings-to-market percentage under paragraph (b)(1) of this section and the holdings-to-obligation percentage under paragraph (b)(2) of this section quarterly in accordance with the schedule specified in Table 1 to § 80.1451.

(3) For a corporate affiliate group containing at least one obligated party that has a holdings-to-market percentage greater than 3.00 percent for any calendar day in a compliance period, as determined under paragraph (b)(1) of this section, each party must calculate the corporate affiliate group's holdings-to-obligation percentage as specified in paragraph (b)(2) of this section.

(4) Each party must individually keep copies of all calculations and supporting information for separated D6 RIN holding threshold calculations required under this section as specified in § 80.1454(p).

(b) *RIN holding thresholds calculations—(1) Primary test calculations.* For each day in a compliance period, each party that owns RINs must calculate the holdings-to-market percentage for their corporate affiliate group using the method specified in paragraph (b)(1)(i) or (b)(1)(ii) of this section, as applicable.

(i) For each day beginning January 1 through March 31, calculate the holdings-to-market percentage for a corporate affiliate group as follows:

$$\text{HTMP}_d = [(\sum \text{D6RIN}_d)_a / (\text{CNV\_VOL}_{\text{TOT},i} * 1.25)] * 100$$

Where:

HTMP_d = The holdings-to-market percentage is the percentage of separated D6 RINs a corporate affiliate group holds on calendar day d relative to the total expected number of separated D6 RINs in the market in compliance period i , in percent.

d = A given calendar day.

i = The compliance period, typically expressed as a calendar year.

a = Individual corporate affiliate in a corporate affiliate group.

$(\sum \text{D6RIN}_d)_a$ = Sum of the number of separated D6 RINs each individual corporate affiliate a holds at the end of calendar day d , in gallon-RINs.

$\text{CNV\_VOL}_{\text{TOT},i}$ = The total expected annual volume of conventional renewable fuels for the compliance period i , in gallons.

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Unless otherwise specified, this number is 15 billion gallons.

(ii) For each day beginning April 1 through December 31, calculate the holdings-to-market percentage for a corporate affiliate group as follows:

$$\text{HTMP}_d = [(\Sigma \text{D6RIN}_d)_a / (\text{CNV\_VOL}_{\text{TOT},i})] * 100$$

Where:

HTMP_d = The holdings-to-market percentage is the percentage of separated D6 RINs a corporate affiliate group holds on calendar day d relative to the total expected number of separated D6 RINs in the market in compliance period i, in percent.

d = A given calendar day.

i = The compliance period, typically expressed as a calendar year.

a = Individual corporate affiliate in a corporate affiliate group.

$(\Sigma \text{D6RIN}_d)_a$ = Sum of the number of separated D6 RINs each individual corporate affiliate a holds at the end of calendar day d, in gallon-RINs.

$\text{CNV\_VOL}_{\text{TOT},i}$ = The total expected annual volume of conventional renewable fuels for compliance period i, in gallons. Unless otherwise specified, this number is 15 billion gallons.

(2) *Secondary threshold calculations.* For each day in a compliance period where a corporate affiliate group is required to calculate with the secondary threshold requirement under paragraph (a)(3) of this section, each party must calculate the holdings-to-obligation percentage for their corporate affiliate group using the methods at paragraph (b)(2)(i) or (b)(2)(ii) of this section, as applicable.

(i) For each day beginning January 1 through March 31, calculate the holdings-to-obligation percentage as follows:

$$\text{HTOP}_d = [(\Sigma \text{D6RIN}_d)_a / \{[(\Sigma \text{CNV\_RVO}_{i-1})_a + (\Sigma \text{CNV\_DEF}_{i-1})_a + (\Sigma \text{CNV\_DEF}_{i-2})_a] * 1.25\}] * 100$$

Where:

HTOP_d = The holdings-to-obligation percentage is the percentage of separated D6 RINs a corporate affiliate group holds on calendar day d relative to their expected separated D6 RIN holdings based on the corporate affiliate group's conventional RVO for compliance period i-1, in percent.

d = A given calendar day.

i = The compliance period, typically expressed as a calendar year.

a = Individual corporate affiliate in a corporate affiliate group.

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$(\Sigma \text{D6RIN}_d)_a$ = Sum of the number of separated D6 RINs each individual corporate affiliate a holds on calendar day d, in gallon-RINs.

$(\Sigma \text{CNV\_RVO}_{i-1})_a$ = Sum of the conventional RVOs for each individual corporate affiliate a for compliance period i-1 as calculated in paragraph (b)(2)(iii) of this section, in gallon-RINs.

$(\Sigma \text{CNV\_DEF}_{i-1})_a$ = Sum of the conventional deficits for each individual corporate affiliate a as calculated in paragraph (b)(2)(iv) of this section for compliance period i-1, in gallon-RINs.

$(\Sigma \text{CNV\_DEF}_{i-2})_a$ = Sum of the conventional deficits for each individual corporate affiliate a as calculated in paragraph (b)(2)(iv) of this section for compliance period i-2, in gallon-RINs.

(ii) For each day beginning April 1 through December 31, calculate the holdings-to-obligation percentage as follows:

$$\text{HTOP}_d = \{(\Sigma \text{D6RIN}_d)_a / [(\Sigma \text{CNV\_RVO}_{i-1})_a + (\Sigma \text{CNV\_DEF}_{i-1})_a]\} * 100$$

Where:

HTOP_d = The holdings-to-obligation percentage is the percentage of separated D6 RINs a corporate affiliate group holds on calendar day d relative to their expected separated D6 RIN holdings based on the corporate affiliate group's conventional RVO for compliance period i-1, in percent.

d = A given calendar day.

i = The compliance period, typically expressed as a calendar year.

a = Individual corporate affiliate in a corporate affiliate group.

$(\Sigma \text{D6RIN}_d)_a$ = Sum of the number of separated D6 RINs each individual corporate affiliate a holds on calendar day d, in RIN gallons.

$(\Sigma \text{CNV\_RVO}_{i-1})_a$ = Sum of the conventional RVOs for each individual corporate affiliate a for compliance period i-1 as calculated in paragraph (b)(2)(iii) of this section, in gallon-RINs.

$(\Sigma \text{CNV\_DEF}_{i-1})_a$ = Sum of the conventional deficits for each individual corporate affiliate a as calculated in paragraph (b)(2)(iv) of this section for compliance period i-1, in gallon-RINs.

(iii) As needed to calculate the holdings-to-obligation percentage in paragraphs (b)(2)(i) and (b)(2)(ii) of this section, calculate the conventional RVO for an individual corporate affiliate as follows:

$$\text{CNV\_RVO}_i = \{[\text{RFStd}_{\text{RF},i} * (\text{GV}_i + \text{DV}_i)] - [\text{RFStd}_{\text{AB},i} * (\text{GV}_i + \text{DV}_i)]\} + \text{ERV}_{\text{RF},i}$$

Where:

CNV_{RVO_i} = The conventional RVO for an individual corporate affiliate for compliance period *i* without deficits, in gallon-RINs.

i = The compliance period, typically expressed as a calendar year.

RFStd_{RF,*i*} = The standard for renewable fuel for compliance period *i* determined by EPA pursuant to § 80.1405, in percent.

RFStd_{AB,*i*} = The standard for advanced biofuel for compliance period *i* determined by EPA pursuant to § 80.1405, in percent.

GV_{*i*} = The non-renewable gasoline volume, determined in accordance with § 80.1407(b), (c), and (f), which is produced in or imported into the covered location by an obligated party for compliance period *i*, in gallons.

DV_{*i*} = The non-renewable diesel volume, determined in accordance with § 80.1407(b), (c), and (f), which is produced in or imported into the covered location by an obligated party for compliance period *i*, in gallons.

ERVORF,_{*i*} = The sum of all renewable volume obligations from exporting renewable fuels, as calculated under § 80.1430, by an obligated party for compliance period *i*, in gallon-RINs.

(iv) As needed to calculate the holdings-to-obligation percentage in paragraphs (b)(2)(i) and (b)(2)(ii) of this section, calculate the conventional deficit for an individual corporate affiliate as follows:

$$\text{CNV\_DEF}_i = \text{D}_{\text{RF},i} - \text{D}_{\text{AB},i}$$

Where:

CNV_{DEF_i} = The conventional deficit for an individual corporate affiliate for compliance period *i*, in gallon-RINs. If a conventional deficit is less than zero, use zero for conventional deficits in paragraphs (b)(2)(i) and (b)(2)(ii) of this section.

i = The compliance period, typically expressed as a calendar year.

D_{RF,*i*} = Deficit carryover from compliance period *i* for renewable fuel, in gallon-RINs.

D_{AB,*i*} = Deficit carryover from compliance period *i* for advanced biofuel, in gallon-RINs.

(c) *Exceeding the D6 RIN holding thresholds*—(1) *Primary threshold test*. A non-obligated party or corporate affiliate group that does not contain an obligated party and that has a holdings-to-market percentage greater than 3.00 percent for any calendar day in a compliance period, as determined under paragraph (b)(1) of this section, has exceeded the primary threshold.

(2) *Secondary threshold test*. Any party or corporate affiliate group required to calculate a holdings-to-obligation percentage under paragraph (a)(3) of this section and that has a holdings-to-obligation percentage greater than 130.00 percent for any calendar day in a compliance period, as determined under paragraph (b)(2) of this section, has exceeded the secondary threshold.

(d) *Alternative gasoline and diesel production volume allowance*. Parties that must calculate the secondary threshold under paragraph (b)(2) of this section may use alternative gasoline and diesel production volumes if all the following requirements are met:

(1) The party must have a reasonable basis for using the alternative production numbers (*e.g.*, selling or acquiring a refinery or a shutdown of a refinery).

(2) When substituting the alternative production volume for the conventional RVO volume, the party must use actual production numbers for any completed quarter in the compliance period and extrapolated production numbers for any future quarters.

(3) The party must meet the applicable recordkeeping requirements of § 80.1454.

(4) The party must retain documentation of the reasonable basis and the calculations used and must provide these to the auditor conducting the attest engagement under § 80.1464.

(e) *Exemption from aggregation requirements*. (1) A party may claim exemption from the requirement to aggregate D6 RIN holdings for any affiliate where one or more of the following apply:

(i) There is an absence of common trading-level control and information sharing with the affiliate.

(ii) The sharing of information regarding aggregation with the affiliate could lead either party to violate state or Federal law, or the law of a foreign jurisdiction.

(iii) The affiliate is exempt from the regulations regarding commodities and securities exchanges under 17 CFR 150.4(b)(7).

(2) A party must retain detailed, explanatory documentation supporting its exemption and must provide this documentation to the attest auditor

under §80.1464, and to EPA upon request. Such records include, but are not limited to, the following:

- (i) Documents that reflect that the parties do not have knowledge of the trading decisions of the other.
- (ii) Documents that demonstrate that there are developed and independent trading systems in place.
- (iii) Documents that demonstrate that the parties have and enforce written procedures to preclude each from having knowledge of, gaining access to, or receiving data about, trades of the other.
- (iv) Documents reflective of the risk management and other systems in place.
- (v) Documents that support an exemption under 17 CFR 150.4(b)(7).
- (vi) Any other documents that support the applicability of the exemption.

[84 FR 27022, June 10, 2019, as amended at 87 FR 39665, July 1, 2022; 88 FR 44586, July 12, 2023]

§§ 80.1436–80.1439 [Reserved]

§ 80.1440 What are the provisions for blenders who handle and blend less than 250,000 gallons of renewable fuel per year or who handle renewable fuel blended for fuels under a national security exemption?

- (a)(1) Renewable fuel blenders who handle and blend less than 250,000 gallons of renewable fuel per year, and who do not have one or more reported or unreported Renewable Volume Obligations, are permitted to delegate their RIN-related responsibilities to the party directly upstream of them who supplied the renewable fuel for blending.
- (2) Renewable fuel blenders who handle and blend renewable fuel for parties that have a national security exemption under paragraph (f) of this section, or a national security exemption under 40 CFR 1090.605, and who do not have one or more reported or unreported Renewable Volume Obligations, are permitted to delegate their RIN-related responsibilities to the party directly upstream of them who supplied the renewable fuel for blending.
- (b) The RIN-related responsibilities that may be delegated directly upstream include all of the following:

- (1) The RIN separation requirements of §80.1429.
- (2) The reporting requirements of §80.1451.
- (3) The recordkeeping requirements of §80.1454.
- (4) The attest engagement requirements of §80.1464.
- (c) For upstream delegation of RIN-related responsibilities, both parties must agree on the delegation, and a quarterly written statement signed by both parties must be included with the reporting party's reports under §80.1451.
- (1) Both parties must keep copies of the signed quarterly written statement agreeing to the upward delegation for 5 years.
- (2) Parties delegating their RIN responsibilities upward shall keep copies of their registration forms as submitted to EPA.
- (3) A renewable fuel blender who delegates its RIN-related responsibilities under this section will remain liable for any violation of this subpart M associated with its renewable fuel blending activities.
- (d) Renewable fuel blenders who handle and blend less than 250,000 gallons of renewable fuel per year and delegate their RIN-related responsibilities under paragraph (b) of this section must register pursuant to §80.1450(e), and may not own RINs.
- (e) Renewable fuel blenders who handle and blend less than 250,000 gallons of renewable fuel per year and who do not opt to delegate their RIN-related responsibilities, or own RINs, will be subject to all requirements stated in paragraph (b) of this section, and all other applicable requirements of this subpart M.
- (f) The requirements described in paragraph (b) of this section may be delegated directly upstream for renewable fuel (neat or blended) that is produced, imported, sold, offered for sale, supplied, offered for supply, stored, dispensed, or transported for use in any of the following:
 - (1) Tactical military vehicles, engines, or equipment having an EPA national security exemption from emission standards under 40 CFR 85.1708, 1042.635, or 1068.225.

(2) Tactical military vehicles, engines, or equipment that are not subject to a national security exemption from vehicle or engine emissions standards as described in paragraph (f)(1) of this section but, for national security purposes (for purposes of readiness for deployment overseas), need to be fueled on the same transportation fuel, heating oil, or jet fuel as the vehicles, engines, or equipment for which EPA has granted such a national security exemption.

[75 FR 14863, Mar. 26, 2010, as amended at 75 FR 26042, May 10, 2010; 79 FR 42162, July 18, 2014; 85 FR 7077, Feb. 6, 2020; 85 FR 78467, Dec. 4, 2020, 90 FR 12114, Mar. 14, 2025]

§ 80.1441 Small refinery exemption.

(a)(1) Transportation fuel produced at a refinery by a refiner is exempt from January 1, 2010, through December 31, 2010, from the renewable fuel standards of § 80.1405, and the owner or operator of the refinery is exempt from the requirements that apply to obligated parties under this subpart M for fuel produced at the refinery if the refinery meets the definition of “small refinery” in § 80.2 for calendar year 2006.

(2) The exemption of paragraph (a)(1) of this section shall apply unless a refiner chooses to waive this exemption (as described in paragraph (f) of this section), or the exemption is extended (as described in paragraph (e) of this section).

(3) [Reserved]

(4) This exemption shall only apply to refineries that process crude oil through refinery processing units.

(5) The small refinery exemption is effective immediately, except as specified in paragraph (b)(3) of this section.

(b)(1) A refiner owning a small refinery must submit a verification letter to EPA containing all of the following information:

(i) The annual average aggregate daily crude oil throughput for the period January 1, 2006 through December 31, 2006 (as determined by dividing the aggregate throughput for the calendar year by the number 365).

(ii) A letter signed by the president, chief operating or chief executive officer of the company, or his/her designee, stating that the information contained in the letter is true to the best of his/

her knowledge, and that the refinery was small as of December 31, 2006.

(iii) Name, address, phone number, facsimile number, and e-mail address of a corporate contact person.

(2) Verification letters must be submitted by July 1, 2010 to one of the addresses listed in paragraph (h) of this section.

(c) If EPA finds that a refiner provided false or inaccurate information regarding a refinery’s crude throughput (pursuant to paragraph (b)(1)(i) of this section) in its small refinery verification letter, the exemption will be void as of the effective date of these regulations.

(d) If a refiner is complying on an aggregate basis for multiple refineries, any such refiner may exclude from the calculation of its Renewable Volume Obligations (under § 80.1407) transportation fuel from any refinery receiving the small refinery exemption under paragraph (a) of this section.

(e)(1) The exemption period in paragraph (a) of this section shall be extended by EPA for a period of not less than two additional years if a study by the Secretary of Energy determines that compliance with the requirements of this subpart would impose a disproportionate economic hardship on a small refinery.

(2) A refiner may petition EPA for an extension of its small refinery exemption, based on disproportionate economic hardship, at any time.

(i) A petition for an extension of the small refinery exemption must specify the factors that demonstrate a disproportionate economic hardship and must provide a detailed discussion regarding the hardship the refinery would face in producing transportation fuel meeting the requirements of § 80.1405 and the date the refiner anticipates that compliance with the requirements can reasonably be achieved at the small refinery.

(ii) EPA shall act on such a petition not later than 90 days after the date of receipt of the petition.

(iii) In order to qualify for an extension of its small refinery exemption, a refinery must meet the definition of “small refinery” in § 80.2 for the most recent full calendar year prior to seeking an extension and must be projected

to meet the definition of “small refinery” in § 80.2 for the year or years for which an exemption is sought. Failure to meet the definition of small refinery for any calendar year for which an exemption was granted would invalidate the exemption for that calendar year.

(f) At any time, a refiner with a small refinery exemption under paragraph (a) of this section may waive that exemption upon notification to EPA.

(1) A refiner’s notice to EPA that it intends to waive its small refinery exemption must be received by November 1 to be effective in the next compliance year.

(2) The waiver will be effective beginning on January 1 of the following calendar year, at which point the transportation fuel produced at that refinery will be subject to the renewable fuels standard of § 80.1405 and the owner or operator of the refinery shall be subject to all other requirements that apply to obligated parties under this Subpart M.

(3) The waiver notice must be sent to EPA at one of the addresses listed in paragraph (h) of this section.

(g) A refiner that acquires a refinery from either an approved small refiner (as specified in § 80.1442(a)) or another refiner with an approved small refinery exemption under paragraph (a) of this section shall notify EPA in writing no later than 20 days following the acquisition.

(h) Verification letters under paragraph (b) of this section, petitions for small refinery hardship extensions under paragraph (e) of this section, and small refinery exemption waiver notices under paragraph (f) of this section shall be sent to the attention of “RFS Program” to the address in § 80.10(a).

[75 FR 14863, Mar. 26, 2010, as amended at 79 FR 42163, July 18, 2014; 85 FR 7077, Feb. 6, 2020; 85 FR 78467, Dec. 4, 2020; 88 FR 44586, July 12, 2023]

§ 80.1442 What are the provisions for small refiners under the RFS program?

(a)(1) To qualify as a small refiner under this section, a refiner must meet all of the following criteria:

(i) The refiner produced transportation fuel at its refineries by proc-

essing crude oil through refinery processing units from January 1, 2006 through December 31, 2006.

(ii) The refiner employed an average of no more than 1,500 people, based on the average number of employees for all pay periods for calendar year 2006 for all subsidiary companies, all parent companies, all subsidiaries of the parent companies, and all joint venture partners.

(iii) The refiner had a corporate-average crude oil capacity less than or equal to 155,000 barrels per calendar day (bpcd) for 2006.

(2) [Reserved]

(b)(1) The small refiner exemption in paragraph (c) of this section is effective immediately, except as provided in paragraph (b)(5) of this section, provided that all requirements of this section are satisfied.

(2) Refiners who qualify for the small refiner exemption under paragraph (a) of this section must submit a verification letter (and any other relevant information) to EPA by July 1, 2010. The small refiner verification letter must include all of the following information for the refiner and for all subsidiary companies, all parent companies, all subsidiaries of the parent companies, and all joint venture partners:

(i) A listing of the name and address of each company location where any employee worked for the period January 1, 2006 through December 31, 2006.

(ii) The average number of employees at each location based on the number of employees for each pay period for the period January 1, 2006 through December 31, 2006.

(iii) The type of business activities carried out at each location.

(iv) For joint ventures, the total number of employees includes the combined employee count of all corporate entities in the venture.

(v) For government-owned refiners, the total employee count includes all government employees.

(vi) The total corporate crude oil capacity of each refinery as reported to the Energy Information Administration (EIA) of the U.S. Department of Energy (DOE), for the period January 1, 2006 through December 31, 2006. The

information submitted to EIA is presumed to be correct. In cases where a company disagrees with this information, the company may petition EPA with appropriate data to correct the record when the company submits its application.

(vii) The verification letter must be signed by the president, chief operating or chief executive officer of the company, or his/her designee, stating that the information is true to the best of his/her knowledge, and that the company owned the refinery as of December 31, 2006.

(viii) Name, address, phone number, facsimile number, and e-mail address of a corporate contact person.

(3) In the case of a refiner who acquires or reactivates a refinery that was shutdown or non-operational between January 1, 2005 and January 1, 2006, the information required in paragraph (b)(2) of this section must be provided for the time period since the refiner acquired or reactivated the refinery.

(c) *Small refiner temporary exemption.*

(1) Transportation fuel produced by a small refiner pursuant to paragraph (b)(1) of this section is exempt from January 1, 2010, through December 31, 2010, from the renewable fuel standards of § 80.1405 and the requirements that apply to obligated parties under this subpart if the refiner meets all the criteria of paragraph (a)(1) of this section.

(2) The small refiner exemption shall apply to a small refiner pursuant to paragraph (b)(1) of this section or an approved foreign small refiner unless that refiner chooses to waive this exemption (as described in paragraph (d) of this section).

(d)(1) A refiner may, at any time, waive the small refiner exemption under paragraph (c) of this section upon notification to EPA.

(2) A refiner's notice to EPA that it intends to waive the small refiner exemption must be received by November 1 of a given year in order for the waiver to be effective for the following calendar year. The waiver will be effective beginning on January 1 of the following calendar year, at which point the refiner will be subject to the renewable fuel standards of § 80.1405 and the

requirements that apply to obligated parties under this subpart.

(3) The waiver must be sent to EPA at one of the addresses listed in paragraph (i) of this section.

(e) Refiners who qualify as small refiners under this section and subsequently fail to meet all of the qualifying criteria as set out in paragraph (a) of this section are disqualified as small refiners of January 1 of the next calendar year, except as provided under paragraphs (d) and (e)(2) of this section.

(1) In the event such disqualification occurs, the refiner shall notify EPA in writing no later than 20 days following the disqualifying event.

(2) Disqualification under this paragraph (e) shall not apply in the case of a merger between two approved small refiners.

(f) If EPA finds that a refiner provided false or inaccurate information in its small refiner status verification letter under this subpart M, the refiner will be disqualified as a small refiner as of the effective date of this subpart.

(g) Any refiner that acquires a refinery from another refiner with approved small refiner status under paragraph (a) of this section shall notify EPA in writing no later than 20 days following the acquisition.

(h) *Extensions of the small refiner temporary exemption.* (1) A small refiner may apply for an extension of the temporary exemption of paragraph (c)(1) of this section based on a showing of all the following:

(i) Circumstances exist that impose disproportionate economic hardship on the refiner and significantly affects the refiner's ability to comply with the RFS standards.

(ii) The refiner has made best efforts to comply with the requirements of this subpart.

(2) A refiner must apply, and be approved, for small refiner status under this section.

(3) A small refiner's hardship application must include all the following information:

(i) A plan demonstrating how the refiner will comply with the requirements of § 80.1405 (and all other requirements of this subpart applicable to obligated parties), as expeditiously as possible.

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(ii) A detailed description of the refinery configuration and operations including, at a minimum, all the following information:

(A) The refinery's total crude capacity.

(B) Total crude capacity of any other refineries owned by the same entity.

(C) Total volume of gasoline and diesel produced at the refinery.

(D) Detailed descriptions of efforts to comply.

(E) Bond rating of the entity that owns the refinery.

(F) Estimated investment needed to comply with the requirements of this subpart M.

(4) A small refiner shall notify EPA in writing of any changes to its situation between approval of the extension application and the end of its approved extension period.

(5) EPA may impose reasonable conditions on extensions of the temporary exemption, including reducing the length of such an extension, if conditions or situations change between approval of the application and the end of the approved extension period.

(i) Small refiner status verification letters, small refiner exemption waivers, or applications for extensions of the small refiner temporary exemption under this section must be sent to the attention of "RFS Program" to the address in § 80.10(a).

[75 FR 14863, Mar. 26, 2010, as amended at 75 FR 26042, May 10, 2010; 85 FR 7077, Feb. 6, 2020; 85 FR 78467, Dec. 4, 2020; 88 FR 44586, July 12, 2023]

§ 80.1443 What are the opt-in provisions for noncontiguous states and territories?

(a) Alaska or a United States territory may petition EPA to opt-in to the program requirements of this subpart.

(b) EPA will approve the petition if it meets the provisions of paragraphs (c) and (d) of this section.

(c) The petition must be signed by the Governor of the state or his authorized representative (or the equivalent official of the territory).

(d)(1) A petition submitted under this section must be received by EPA by November 1 for the state or territory to be included in the RFS program in the next calendar year.

(2) A petition submitted under this section should be sent to the attention of "RFS Program" to the address in § 80.10(a).

(e) Upon approval of the petition by EPA:

(1) EPA shall calculate the standards for the following year, including the total gasoline and diesel fuel volume for the state or territory in question.

(2) Beginning on January 1 of the next calendar year, all gasoline and diesel fuel refiners and importers in the state or territory for which a petition has been approved shall be obligated parties.

(3) Beginning on January 1 of the next calendar year, all renewable fuel producers in the state or territory for which a petition has been approved shall, pursuant to § 80.1426(a)(2), be required to generate RINs and comply with other requirements of this subpart M that are applicable to producers of renewable fuel.

[75 FR 14863, Mar. 26, 2010, as amended at 85 FR 7077, Feb. 6, 2020; 88 FR 44586, July 12, 2023]

§ 80.1444 Alternative RIN retirement schedule for small refineries.

(a) *Applicability.* The provisions of this section apply to the following compliance years:

(1) 2020.

(2) [Reserved]

(b) *Eligibility.* Any obligated party that has a refinery that meets the definition of small refinery in § 80.1401 for the applicable compliance year in paragraph (a) of this section (hereinafter the "applicable compliance year") is eligible to use the provisions of this section for each small refinery it operates (hereinafter the "small refinery").

(c) *Treatment of RVOs.* (1) In lieu of retiring sufficient RINs under § 80.1427(a) to demonstrate compliance with the small refinery's RVOs for the applicable compliance year by the applicable compliance deadline, the obligated party must meet all the requirements of this section and all other applicable requirements of this subpart.

(2) If the obligated party does not meet all of the requirements in this section, the obligated party is subject to the requirements of § 80.1427(a).

(d) *Individual facility compliance.* (1) If the obligated party carries a deficit into the applicable compliance year from the previous compliance year, the obligated party must comply with its RVOs for each refinery it operates on an individual basis (as specified in § 80.1406(c)) for both the previous compliance year and the applicable compliance year.

(2) If the obligated party does not carry a deficit into the applicable compliance year from the previous compliance year, the obligated party must comply with its RVOs for each refinery it operates on an individual basis (as specified in § 80.1406(c)) for the applicable compliance year.

(e) *Compliance report submission and notification.* The obligated party must do all the following by the annual compliance reporting deadline specified in § 80.1451(f)(1)(i) for the applicable compliance year (hereinafter the “applicable compliance deadline”):

(1) Submit an annual compliance report for the small refinery for the applicable compliance year.

(2) Notify EPA in a letter signed by the responsible corporate officer (RCO) or RCO delegate, as specified at 40 CFR 1090.800(d), of its intent to use the provisions of this section for the small refinery.

(f) *Alternative RIN retirement schedule.* The obligated party must retire sufficient RINs to satisfy the minimum percentages of each and every RVO for the applicable compliance year (as determined under § 80.1407(a)) according to the following RIN retirement schedule:

(1) For the 2020 compliance year:

TABLE 1 TO PARAGRAPH (f)(1)—2020
COMPLIANCE YEAR RIN RETIREMENT SCHEDULE

Minimum 2020 RVOs percentage RIN retirement	Deadline
20	February 1, 2023.
40	May 1, 2023.
60	August 1, 2023.
80	November 1, 2023.
100	February 1, 2024.

(2) [Reserved]

(g) *RIN vintage and retirements.* (1) The obligated party may retire for compliance any valid RINs at the time of retirement towards the small refinery’s RVOs for the applicable compli-

ance year and is exempt from the requirements in § 80.1427(a)(6)(i).

(2) The obligated party must not retire for compliance any prior-year RINs for the small refinery’s RVOs after the applicable compliance deadline.

(h) *Deficit carry-forward for subsequent compliance years.* The obligated party may not carry forward any deficit under § 80.1427(b) for the small refinery for compliance years after the applicable compliance year until it has retired sufficient RINs to satisfy each and every RVO for the applicable compliance year in its entirety.

(i) *Forms and procedures.* The obligated party must submit annual compliance reports and retire RINs under this section using forms and procedures specified by EPA under §§ 80.1451(j) and 80.1452(d).

[87 FR 54166, Sept. 2, 2022]

§§ 80.1445–80.1448 [Reserved]

§ 80.1449 What are the Production Outlook Report requirements?

(a) By June 1 of each year (September 1 for the report due in 2010), a registered renewable fuel producer or importer must submit and an unregistered renewable fuel producer may submit all of the following information for each of its facilities, as applicable, to EPA:

(1) The type, or types, of renewable fuel expected to be produced or imported at each facility owned by the renewable fuel producer or importer.

(2) The volume of each type of renewable fuel expected to be produced or imported at each facility.

(3) The number of RINs expected to be generated by the renewable fuel producer or importer for each type of renewable fuel.

(4) Information about all the following:

(i) Existing and planned production capacity.

(ii) Long-range plans for expansion of production capacity at existing facilities or construction of new facilities.

(iii) Feedstocks, biointermediates, and production processes to be used at each production facility.

(iv) Changes to the facility that would raise or lower emissions of any greenhouse gases from the facility.

(5) For expanded production capacity that is planned or underway at each existing facility, or new production facilities that are planned or underway, information on all the following, as available:

- (i) Strategic planning.
- (ii) Planning and front-end engineering.
- (iii) Detailed engineering and permitting.
- (iv) Procurement and construction.
- (v) Commissioning and startup.
- (6) Whether capital commitments have been made or are projected to be made.

(b) The information listed in paragraph (a) of this section shall include the reporting party's best estimates for the five following calendar years.

(c) Production outlook reports must provide an update of the progress in each of the areas listed in paragraph (a) of this section in comparison to information provided in previous year production outlook reports.

(d) Production outlook reports shall be sent to the attention of "RFS Program (Production Output Reports)" to the address in § 80.10(a).

(e) All production outlook reports required under this section shall be submitted on forms and following procedures prescribed by EPA.

[75 FR 14863, Mar. 26, 2010, as amended at 77 FR 1356, Jan. 9, 2012; 85 FR 7077, Feb. 6, 2020; 87 FR 39665, July 1, 2022; 88 FR 44586, July 12, 2023]

§ 80.1450 What are the registration requirements under the RFS program?

(a) *Obligated parties and exporters.* Any obligated party or any exporter of renewable fuel must provide EPA with the information specified for registration under 40 CFR 1090.805, if such information has not already been provided under the provisions of this part. An obligated party or an exporter of renewable fuel must receive EPA-issued identification numbers prior to engaging in any transaction involving RINs. Registration information may be submitted to EPA at any time after publication of this rule in the FEDERAL REG-

ISTER, but must be submitted and accepted by EPA by July 1, 2010, or 60 days prior to RIN ownership, whichever date comes later.

(b) *Producers.* Any RIN-generating foreign producer, any non-RIN-generating foreign producer, any domestic renewable fuel producer that generates RINs, or any biointermediate producer that transfers any biointermediate for the production of a renewable fuel for RIN generation, must provide EPA the information specified under 40 CFR 1090.805 if such information has not already been provided under the provisions of this part, and must receive EPA-issued company and facility identification numbers prior to the generation of any RINs for their fuel or for fuel made with their ethanol, or prior to the transfer of any biointermediate to be used in the production of a renewable fuel for which RINs may be generated. Unless otherwise specifically indicated, all the following registration information must be submitted to EPA at least 60 days prior to the intended generation of RINs or the intended transfer of any biointermediate to be used in the production of a renewable fuel for which RINs may be generated. Renewable fuel producers may generate RINs for a renewable fuel under this part after EPA has accepted their registration and they have met all other applicable requirements under this part.

(1) A description of the types of renewable fuels, RNG, ethanol, or biointermediates that the producer intends to produce at the facility and that the facility is capable of producing without significant modifications to the existing facility. For each type of renewable fuel, RNG, ethanol, or biointermediate the renewable fuel producer or foreign ethanol producer must also provide all the following:

(i)(A) A list of all the feedstocks and biointermediates the facility intends to utilize without significant modification to the existing facility.

(B) A description of the type(s) of renewable biomass that will be used as feedstock material to produce the biointermediate, if applicable.

(C) A list of the EPA-issued company and facility registration numbers of all

biointermediate producers and biointermediate production facilities that will supply biointermediates for renewable fuel production.

(ii) A description of the facility's renewable fuel, RNG, ethanol, or biointermediate production processes, including:

(A) For registrations indicating production of cellulosic biofuel (D codes 3 or 7) from feedstocks other than biogas (including through pathways in rows K, L, M, and N of Table 1 to §80.1426), the producer must demonstrate the ability to convert cellulosic components of feedstock into fuel by providing all of the following:

(1) A process diagram with all relevant unit processes labeled and a designation of which unit process is capable of performing cellulosic treatment, including required inputs and outputs at each step.

(2) A description of the cellulosic biomass treatment process, including required inputs and outputs used at each step.

(3) A description of the mechanical, chemical and biochemical mechanisms by which cellulosic materials can be converted to biofuel products.

(B) For registrations indicating the production of any biointermediate, the biointermediate producer must provide all of the following:

(1) For each biointermediate production facility, the company name, EPA company registration number, and EPA facility registration number of the renewable fuel producer and renewable fuel production facility at which the biointermediate produced from the biointermediate production facility will be transferred and used.

(2) Copies of documents and corresponding calculations demonstrating production capacity of each biointermediate produced at the biointermediate production facility.

(3) For each type of feedstock that the biointermediate producer intends to process the biointermediate producer must provide all the following:

(i) A list of all the feedstocks the facility intends to utilize without significant modification to the existing facility.

(ii) A description of the type(s) of renewable biomass that will be used as

feedstock material to produce the biointermediate.

(4) The approved pathway(s) that the biointermediate could be used in to produce renewable fuel.

(iii) The type(s) of co-products produced with each type of renewable fuel, ethanol, or biointermediate.

(iv) A process heat fuel supply plan that includes all of the following:

(A) For all process heat fuel, provide all the following information:

(1) Each type of process heat fuel used at the facility to produce the renewable fuel, ethanol, or biointermediate.

(2) The name and address of the company supplying each process heat fuel to the renewable fuel facility, foreign ethanol facility, or biointermediate production facility.

(B) For biogas used for process heat, provide all the following information:

(1) Locations from which the biogas was produced or extracted.

(2) Name of suppliers of all biogas the producer purchases for use for process heat in the facility.

(3) An affidavit from the biogas supplier stating its intent to supply biogas to the renewable fuel producer, foreign ethanol producer, or biointermediate producer, and the quantity and energy content of the biogas that it intends to provide to the renewable fuel producer or foreign ethanol producer.

(v) The following records that support the facility's baseline volume or, for foreign ethanol facilities, their production volume:

(A) For all facilities except those described in paragraph (b)(1)(v)(B) of this section, copies of the most recent applicable air permits issued by the U.S. Environmental Protection Agency, state, local air pollution control agencies, or foreign governmental agencies and that govern the construction and/or operation of the renewable fuel or foreign ethanol facility.

(B) For facilities claiming the exemption described in §80.1403(c) or (d):

(1) Applicable air permits issued by EPA, state, local air pollution control agencies, or foreign governmental agencies that govern the construction and/or operation of the renewable fuel facility that were:

(i) Issued or revised no later than December 19, 2007, for facilities described in § 80.1403(c); or

(ii) Issued or revised no later than December 31, 2009, for facilities described in § 80.1403(d).

(2) If the air permits specified in paragraph (b)(1)(v)(B)(I) of this section do not specify the maximum rated annual volume output of renewable fuel, copies of documents demonstrating the facility's actual peak capacity.

(C) For facilities not claiming the exemption described in § 80.1403(c) or (d) and that are exempt from air permit requirements or for which the maximum rated annual volume output of renewable fuel is not specified in their air permits, appropriate documentation demonstrating the facility's actual peak capacity or nameplate capacity.

(D) For all facilities producing renewable electricity or other renewable fuel from biogas, submit all relevant information in § 80.1426(f)(10) or (11), including:

(1) Copies of all contracts or affidavits, as applicable, that follow the track of the biogas/CNG/LNG or renewable electricity from its original source, to the producer that processes it into renewable fuel, and finally to the end user that will actually use the renewable electricity or the renewable CNG/LNG for transportation purposes.

(2) Specific quantity, heat content, and percent efficiency of transfer, as applicable, and any conversion factors, for the renewable fuel derived from biogas.

(E)(1) For parties registered to generate RINs for renewable CNG/LNG prior to July 1, 2024, the registration requirements under paragraph (b)(1)(v)(D) under this section apply until December 31, 2024.

(2) For biogas producers, RNG producers, and biogas closed distribution system RIN generators not registered prior to July 1, 2024, the registration requirements under § 80.135 apply.

(F) Any other records as requested by EPA.

(vi) For facilities claiming the exemption described in § 80.1403(c) or (d), evidence demonstrating the date that construction commenced (as specified

in § 80.1403(a)(1)) including all of the following:

(A) Contracts with construction and other companies.

(B) Applicable air permits issued by the U.S. Environmental Protection Agency, state, local air pollution control agencies, or foreign governmental agencies that governed the construction and/or operation of the renewable fuel facility during construction and when first operated.

(vii)(A) For a renewable fuel producer, foreign ethanol producer, or bio-intermediate producer using separated yard waste:

(1) The location of any establishment from which the waste stream consisting solely of separated yard waste is collected.

(2) A plan documenting how the waste will be collected and how the renewable fuel producer or foreign ethanol producer will conduct ongoing verification that such waste consists only of yard waste (and incidental other components such as paper and plastics) that is kept separate since generation from other waste materials.

(B) For a renewable fuel producer, foreign ethanol producer, or biointermediate producer using separated food waste:

(1) A plan documenting the type(s) of separated food waste or biogenic waste oils/fats/greases, the type(s) of establishment from which the waste is collected, how the waste will be collected, a description of ongoing verification measures that demonstrate such waste consists only of food waste (and an incidental amount of other components such as paper and plastics) or biogenic waste oils/fats/greases that is kept separate from other waste materials, and if applicable, how the cellulosic and non-cellulosic portions of the waste will be quantified.

(2) [Reserved]

(viii) For a renewable fuel producer, foreign ethanol producer, or biointermediate producer using separated municipal solid waste:

(A) The location of the municipal waste establishment(s) from which the separated municipal solid waste is collected or from which material is collected that will be processed to produce separated municipal solid waste.

(B) A plan providing ongoing verification that there is separation of recyclable paper, cardboard, plastics, rubber, textiles, metals, and glass wastes to the extent reasonably practicable and which documents the following:

(1) Extent and nature of recycling that occurred prior to receipt of the waste material by the renewable fuel producer, foreign ethanol producer, or biointermediate producer;

(2) Identification of available recycling technology and practices that are appropriate for removing recycling materials from the waste stream by the fuel producer, foreign ethanol producer, or biointermediate producer; and

(3) Identification of the technology or practices selected for implementation by the fuel producer, foreign ethanol producer, or biointermediate producer including an explanation for such selection, and reasons why other technologies or practices were not.

(C) Contracts relevant to materials recycled from municipal waste streams as described in § 80.1426(f)(5)(iii).

(D) Certification by the producer that recycling is conducted in a manner consistent with goals and requirements of applicable State and local laws relating to recycling and waste management.

(E) The independent third-party engineer must visit all material recovery facilities as part of the engineering review site visit under § 80.1450(b)(2) and (d)(3), as applicable.

(ix)(A) For a producer of ethanol from grain sorghum or a foreign ethanol producer making product from grain sorghum and seeking to have it sold as renewable fuel after addition of ethanol denaturant, provide a plan that has been submitted and accepted by U.S. EPA that includes the following information:

(1) Locations from which the biogas used at the facility was produced or extracted.

(2) Name of suppliers of all biogas used at the facility.

(3) An affidavit from each biogas supplier stating its intent to supply biogas to the renewable fuel producer or foreign ethanol producer, the quantity and energy content of the biogas that

it intends to provide to the renewable fuel producer or foreign ethanol producer, and that the biogas will be derived solely from landfills, waste treatment plants, and/or waste digesters.

(4) If the producer intends to generate advanced biofuel RINs, estimates of the total amount of electricity used from the grid, the total amount of ethanol produced, and a calculation of the amount of electricity used from the grid per gallon of ethanol produced.

(5) If the producer intends to generate advanced biofuel RINs, a description of how the facility intends to demonstrate and document that not more than 0.15 kWh of grid electricity is used per gallon of ethanol produced, calculated on a per batch basis, at the time of RIN generation.

(B) [Reserved]

(x)(A) For a producer of renewable fuel made from *Arundo donax* or *Pennisetum purpureum* per § 80.1426(f)(14)(i):

(1) A Risk Mitigation Plan (Plan) that demonstrates the growth of *Arundo donax* or *Pennisetum purpureum* will not pose a significant likelihood of spread beyond the planting area of the feedstock used for production of the renewable fuel. The Plan must identify and incorporate best management practices (BMPs) into the production, management, transport, collection, monitoring, and processing of the feedstock. To the extent practicable, the Risk Mitigation Plan should utilize a Hazard Analysis Critical Control Point (HACCP) approach to examine each phase of the pathway to identify spread reduction steps. BMPs should include the development of mitigation strategies and plans to minimize escape and other impacts (e.g., minimize soil disturbance), incorporate desirable traits (e.g., sterility or reduced seed production), develop and implement dispersal mitigation protocols prior to cultivation, develop multiple year eradication controls. Eradication controls should follow an approach of early detection and rapid response (EDRR) to unintended spread. EDRR efforts should demonstrate the likelihood that invasions will be halted while still localized and identify and employ cooperative networks, communication forums, and consultation processes with federal,

state, and local agencies. The Risk Mitigation Plan must provide for the following:

(i) Monitoring and reporting data for a period prior to planting that is sufficient to establish a baseline, through crop production, and extending beyond crop production for a sufficient period after the field is no longer used for feedstock production to ensure no remnants of giant reed or napier grass survive or spread.

(ii) Monitoring must include the area encompassing the feedstock growing areas, the transportation corridor between the growing areas and the renewable fuel production facility, and the renewable fuel production facility, extending to the distance of potential propagation of the feedstock species, or further if necessary.

(iii) Monitoring must reflect the likelihood of spread specific to the feedstock.

(iv) A closure plan providing for the destruction and removal of feedstock from the growing area upon abandonment by the feedstock grower or end of production.

(v) A plan providing for an independent third party who will audit the monitoring and reporting conducted in accordance with the Plan on an annual basis, subject to approval of a different frequency by EPA.

(2) A letter from the United States Department of Agriculture (“USDA”) to the renewable fuel producer stating USDA’s conclusions and the bases therefore regarding whether the *Arundo donax* or *Pennisetum purpureum* does or does not present a significant likelihood of spread beyond the planting area of the feedstock used for production of the renewable fuel as proposed by the producer. This letter shall also include USDA’s recommendation of whether it is appropriate to require the use of a financial mechanism to ensure the availability of financial resources sufficient to cover reasonable potential remediation costs associated with the invasive spread of giant reed or napier grass beyond the intended planting areas. In coordination with USDA, EPA shall identify for the producer the appropriate USDA office from which the letter should originate.

(3) Identification of all federal, state, regional, and local requirements related to invasive species that are applicable for the feedstock at the growing site and at all points between the growing site and the fuel production site.

(4) A copy of all state and local growing permits held by the feedstock grower.

(5) A communication plan for notifying EPA’s Office of Transportation and Air Quality, USDA, adjacent federal land management agencies, and any relevant state, tribal, regional, and local authorities as soon as possible after identification of the issue if the feedstock is detected outside planted area.

(6) A copy of the agreement between the feedstock grower and fuel producer establishing all rights and duties of the parties related to the Risk Mitigation Plan and any other activities and liability associated with the prevention of the spread of *Arundo donax* and/or *Pennisetum purpureum* outside of the intended planting area.

(7) A copy of the agreement between the fuel producer and an independent third party describing how the third party will audit the monitoring and reporting conducted in accordance with the Risk Mitigation Plan on an annual basis, subject to approval of a different timeframe by EPA.

(8) Information on the financial resources or other financial mechanism (such as a state-administered fund, bond, or certificate of deposit) that would be available to finance reasonable remediation activities associated with the potential spread of giant reed or napier grass beyond the intended planting areas, and information on whether it is necessary to have any further such resources or mechanism. EPA may require a demonstration that there is an adequate financial mechanism (such as a state-administered fund, bond, or certificate of deposit) to ensure the availability of financial resources sufficient to cover reasonable potential remediation costs associated with the spread of giant reed or napier grass beyond the intended planting areas.

(9) EPA may require additional information as appropriate.

(B) For a producer of renewable fuel made from *Arundo donax* or *Pennisetum purpureum* per § 80.1426(f)(14)(ii):

(1) Clear and compelling evidence, including information and supporting data, demonstrating that *Arundo donax* or *Pennisetum purpureum* does not present a significant likelihood of spread beyond the planting area of the feedstock used for production of the renewable fuel. Evidence must include data collected from similar environments (soils, temperatures, precipitation, USDA Hardiness Zones) as the proposed feedstock production project site and accepted by the scientific community. Such a demonstration should include consideration of the elements of a Risk Mitigation Plan set forth in paragraph (b)(1)(x)(A) of this section, fully disclose the potential invasiveness of the feedstock, provide a closure plan for the destruction and removal of feedstock from the growing area upon abandonment by the feedstock grower or end of production, and explain why a Risk Mitigation Plan is not needed to make the required determination.

(2) A letter from the United States Department of Agriculture (“USDA”) to the renewable fuel producer stating USDA’s conclusions and the bases therefore regarding whether the *Arundo donax* or *Pennisetum purpureum* does or does not present a significant likelihood of spread beyond the planting area of the feedstock used for production of the renewable fuel as proposed by the producer or importer. In coordination with USDA, EPA shall identify for the producer the appropriate USDA office from which the letter should originate.

(C) EPA may suspend a producer’s registration for purposes of generating RINs for renewable fuel using *Arundo donax* or *Pennisetum purpureum* as a feedstock if such feedstock has spread beyond the intended planting area.

(xi) For a producer of fuel oil meeting paragraph (2) of the definition of heating oil in § 80.2:

(A) An affidavit from the producer of the fuel oil meeting paragraph (2) of the definition of “heating oil” in § 80.2 stating that the fuel oil for which RINs have been generated will be sold for the purposes of heating or cooling interior

spaces of homes or buildings to control ambient climate for human comfort, and no other purpose.

(B) Affidavits from the final end user or users of the fuel oil stating that the fuel oil meeting paragraph (2) of the definition of “heating oil” in § 80.2 is being used or will be used for purposes of heating or cooling interior spaces of homes or buildings to control ambient climate for human comfort, and no other purpose, and acknowledging that any other use of the fuel oil would violate EPA regulations and subject the user to civil and/or criminal penalties under the Clean Air Act.

(xii) For a producer or importer of any renewable fuel other than ethanol, biodiesel, renewable gasoline, renewable diesel that meets the Grade No. 1-D or No. 2-D specification in ASTM D975 (incorporated by reference, see § 80.12), biogas, or renewable electricity, all the following:

(A) A description of the renewable fuel and how it will be blended to into gasoline or diesel fuel to produce a transportation fuel, heating oil or jet fuel that meets all applicable standards.

(B) A statement regarding whether the renewable fuel producer or importer will blend the renewable fuel into gasoline or diesel fuel or enter into a written contract for the sale and use of a specific quantity of the renewable fuel with a party who blends the fuel into gasoline or distillate fuel to produce a transportation fuel, heating oil, or jet fuel that meets all applicable standards under this part and 40 CFR part 1090.

(C) If the renewable fuel producer or importer enters into a written contract for the sale and use of a specific quantity of the renewable fuel with a party who blends the fuel into gasoline or distillate fuel to produce a transportation fuel, heating oil, or jet fuel, provide all the following:

(1) The name, location and contact information for the party that will blend the renewable fuel.

(2) A copy of the contract that requires the party to blend the renewable fuel into gasoline or diesel fuel to produce a transportation fuel, heating oil or jet fuel that meets all applicable standards.

(xiii)(A) A renewable fuel producer seeking to generate D code 3 or D code 7 RINs, a foreign ethanol producer seeking to have its product sold as cellulosic biofuel after it is denatured, or a biointermediate producer seeking to have its biointermediate made into cellulosic biofuel, who intends to produce a single type of fuel using two or more feedstocks converted simultaneously, where at least one of the feedstocks does not have a minimum 75% average adjusted cellulosic content, and who uses only a thermochemical process to convert feedstock into renewable fuel, must provide all the following:

(1) Data showing the average adjusted cellulosic content of the feedstock(s) to be used to produce fuel or biointermediate, based on the average of at least three representative samples. Cellulosic content data must come from an analytical method certified by a voluntary consensus standards body or using a method that would produce reasonably accurate results as demonstrated through peer reviewed references provided to the third party engineer performing the engineering review at registration. Samples must be of representative feedstock from the primary feedstock supplier that will provide the renewable fuel or biointermediate producer with feedstock subsequent to registration.

(2) For renewable fuel and biointermediate producers who want to use a new feedstock(s) after initial registration, updates to their registration under paragraph (d) of this section indicating the average adjusted cellulosic content of the new feedstock.

(3) For renewable fuel producers already registered as of August 18, 2014, to produce a single type of fuel that qualifies for D code 3 or D code 7 RINs (or would do so after denaturing) using two or more feedstocks converted simultaneously using only a thermochemical process, the information specified in this paragraph (b)(1)(xiii)(A) shall be provided at the next required registration update under paragraph (d) of this section.

(B) A renewable fuel producer seeking to generate D code 3 or D code 7 RINs, a foreign ethanol producer seeking to have its product sold as cellulosic biofuel after it is denatured, or a

biointermediate producer seeking to have its biointermediate made into cellulosic biofuel, who intends to produce a single type of fuel using two or more feedstocks converted simultaneously, where at least one of the feedstocks does not have a minimum 75% adjusted cellulosic content, and who uses a process other than a thermochemical process, excluding anaerobic digestion, or a combination of processes to convert feedstock into renewable fuel or biointermediate, must provide all the following:

(1) The expected overall fuel or biointermediate yield, calculated as the total volume of fuel produced per batch (*e.g.*, cellulosic biofuel plus all other fuel) divided by the total feedstock mass per batch on a dry weight basis (*e.g.*, cellulosic feedstock plus all other feedstocks).

(2) The cellulosic Converted Fraction (CF) that will be used for generating RINs under § 80.1426(f)(3)(vi).

(3) Chemical analysis data supporting the calculated cellulosic Converted Fraction and a discussion of the possible variability that could be expected between reporting periods per § 80.1451(b)(1)(ii)(U)(I). Data used to calculate the cellulosic CF must be representative and obtained using an analytical method certified by a voluntary consensus standards body, or using a method that would produce reasonably accurate results as demonstrated through peer reviewed references provided to the third party engineer performing the engineering review at registration.

(4) A description and calculations showing how the data were used to determine the cellulosic Converted Fraction.

(5) For renewable fuel producers already registered as of August 18, 2014, to produce a single type of fuel that qualifies for D code 3 or D code 7 RINs (or would do so after denaturing) using two or more feedstocks converted simultaneously using a combination of processes or a process other than a thermochemical process, the information specified in this paragraph (b)(1)(xiii)(B) shall be provided at the next required registration update under paragraph (d) of this section.

(C) A renewable fuel producer seeking to generate D code 3 or D code 7 RINs or a biointermediate producer seeking to have its biointermediate made into cellulosic biofuel, who intends to produce biogas using two or more feedstocks converted simultaneously in an anaerobic digester, where at least one of the feedstocks does not have a minimum 75% adjusted cellulosic content, must supply the information specified in § 80.135(c)(10).

(xiv) For a producer of cellulosic biofuel made from energy cane, or a foreign renewable fuel producer making ethanol from energy cane and seeking to have it sold after denaturing as cellulosic biofuel, provide all of the following:

(A) Data showing that the average adjusted cellulosic content of each cane cultivar they intend to use is at least 75%, based on the average of at least three representative samples of each cultivar. Cultivars must be grown under normal growing conditions and consistent with acceptable farming practices. Samples must be of feedstock from a feedstock supplier that the fuel producer intends to use to supply feedstock for their production process and must represent the feedstock supplier's range of growing conditions and locations. Cellulosic content data must come from an analytical method certified by a voluntary consensus standards body or using a method that would produce reasonably accurate results as demonstrated through peer reviewed references provided to the third party engineer performing the engineering review at registration.

(B) Producers that want to change or add new cultivar(s) after initial registration must update their registration and provide EPA with data in accordance with paragraph (d) of this section demonstrating that the average adjusted cellulosic content for any new cultivar is at least 75%. Cultivars that do not meet this requirement are considered sugarcane for purposes of Table 1 to § 80.1426.

(xv) For a producer of cellulosic biofuel made from crop residue, a foreign ethanol producer making ethanol from crop residue and seeking to have it sold after denaturing as cellulosic biofuel, or a biointermediate producer

producing a biointermediate for use in the production of a cellulosic biofuel made from crop residue, provide all the following information:

(A) A list of all feedstocks the producer intends to utilize as crop residue.

(B) A written justification which explains why each feedstock a producer lists according to paragraph (b)(1)(xv)(A) of this section meets the definition of crop residue.

(C) For producers already registered as of August 18, 2014 to produce a renewable fuel using crop residue, the information specified in this paragraph (b)(1)(xv) shall be provided at the next required registration update under paragraph (d) of this section.

(xvi) For FFA feedstock, the biointermediate producer must provide a description of how the biointermediate producer will determine FFA concentration.

(2) An independent third-party engineering review and written report and verification of the information provided pursuant to paragraph (b)(1) of this section and § 80.135, as applicable. The report and verification shall be based upon a site visit and review of relevant documents and shall separately identify each item required by paragraph (b)(1) of this section, describe how the independent third-party evaluated the accuracy of the information provided, state whether the independent third-party agrees with the information provided, and identify any exceptions between the independent third-party's findings and the information provided.

(i) The verifications required under this section must be conducted by a professional engineer, as specified in paragraphs (b)(2)(i)(A) and (b)(2)(i)(B) of this section, who is an independent third-party. The verifying engineer must be:

(A) For a domestic renewable fuel production facility, a foreign ethanol production facility, or a biointermediate production facility, a professional engineer who is licensed by an appropriate state agency in the United States, with professional work experience in the chemical engineering field or related to renewable fuel production.

(B) For a foreign renewable fuel or foreign biointermediate production facility, an engineer who is a foreign equivalent to a professional engineer licensed in the United States with professional work experience in the chemical engineering field or related to renewable fuel production.

(ii) The independent third-party engineer and its contractors and subcontractors must meet the independence requirements specified in § 80.1471(b)(1), (2), (4), (5), and (7) through (12).

(iii) The independent third-party shall retain all records pertaining to the verification required under this section for a period of five years from the date of creation and shall deliver such records to EPA upon request.

(iv) The renewable fuel producer, foreign ethanol producer, or biointermediate producer must retain records of the review and verification, as required in § 80.1454(b)(6) or (i)(4), as applicable.

(v) The third-party must provide to EPA documentation of his or her qualifications as part of the engineering review, including proof of appropriate professional license or foreign equivalent.

(vi) Owners and operators of facilities described in § 80.1403(c) and (d) must submit the engineering review no later than December 31, 2010.

(vii) Reports required under this paragraph (b)(2) must be electronically submitted directly to EPA by an independent third-party engineer using forms and procedures established by EPA.

(viii) The independent third-party engineer must conduct engineering reviews as follows:

(A)(1) To verify the accuracy of the information provided in paragraph (b)(1)(ii) of this section, the independent third-party engineer must conduct independent calculations of the throughput rate-limiting step in the production process, take digital photographs of all process units depicted in the process flow diagram during the site visit, and certify that all process unit connections are in place and functioning based on the site visit.

(2) Digital photographs of a process unit are not required if the third-party

engineer submits documentation demonstrating why they were unable to access certain locations due to access issues or safety concerns. EPA may not accept a registration if EPA is unable to determine whether the facility is capable of producing the requested renewable fuel, biointermediate, biogas, or RNG, as applicable, due to the lack of sufficient digital photographs of process units for the facility.

(B) To verify the accuracy of the information in paragraph (b)(1)(iii) of this section, the independent third-party engineer must obtain independent documentation from parties in contracts with the producer for any co-product sales or disposals. The independent third-party engineer may use representative sampling as specified in 40 CFR 1090.1805 to verify co-product sales or disposals.

(C) To verify the accuracy of the information provided in paragraph (b)(1)(iv) of this section, the independent third-party engineer must obtain independent documentation from all process heat fuel suppliers of the process heat fuel supplied to the facility. The independent third-party engineer may use representative sampling as specified in 40 CFR 1090.1805 to verify fuel suppliers.

(D) To verify the accuracy of the information provided in paragraph (b)(1)(v) of this section, the independent third-party engineer must conduct independent calculations of the Converted Fraction that will be used to generate RINs.

(ix) The independent third-party engineer must provide to EPA documentation demonstrating that a site visit, as specified in paragraph (b)(2) of this section, occurred. Such documentation must include digital photographs with date and geographic coordinates taken during the site visit and a description of what is depicted in the photographs.

(x) The independent third-party engineer must sign, date, and submit to EPA with the written report the following conflict of interest statement:

“I certify that the engineering review and written report required and submitted under 40 CFR 80.1450(b)(2) was conducted and prepared by me, or under my direction or supervision, in

accordance with a system designed to assure that qualified personnel properly gather and evaluate the information upon which the engineering review was conducted and the written report is based. I further certify that the engineering review was conducted and this written report was prepared pursuant to the requirements of 40 CFR part 80 and all other applicable auditing, competency, independence, impartiality, and conflict of interest standards and protocols. Based on my personal knowledge and experience, and inquiry of personnel involved, the information submitted herein is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.”

(c) *Importers.* Importers of renewable fuel must provide EPA the information specified under 40 CFR 1090.805, if such information has not already been provided under the provisions of this part and must receive an EPA-issued company identification number prior to generating or owning RINs. Registration information must be submitted and accepted by EPA by July 1, 2010, or 60 days prior to an importer importing any renewable fuel with assigned RINs or generating any RINs for renewable fuel, whichever dates comes later.

(d) *Registration updates.* (1)(i)(A) Any renewable fuel producer or any foreign ethanol producer that makes changes to their facility that will allow them to produce renewable fuel or use a biointermediate that is not reflected in the producer's registration information on file with EPA must update their registration information and submit a copy of an updated independent third-party engineering review on file with EPA at least 60 days prior to producing the new type of renewable fuel.

(B) Any biointermediate producer who makes changes to their biointermediate production facility that will allow them to produce a biointermediate for use in the production of a renewable fuel that is not reflected in the biointermediate producer's registration information on file with EPA must update their registration information and submit a copy of an updated independent third-party engi-

neering review on file with EPA at least 60 days prior to producing the new biointermediate for use in the production of the renewable fuel.

(ii) The renewable fuel producer, foreign ethanol producer, or biointermediate producer may also submit an addendum to the independent third-party engineering review on file with EPA provided the addendum meets all the requirements in paragraph (b)(2) of this section and verifies for EPA the most up-to-date information at the producer's existing facility.

(2)(i) Any renewable fuel producer or any foreign ethanol producer that makes any other changes to a facility that will affect the producer's registration information but will not affect the renewable fuel category for which the producer is registered per paragraph (b) of this section must update their registration information 7 days prior to the change.

(ii)(A) Any biointermediate producer that makes any other changes to a biointermediate production facility that will affect the biointermediate producer's registration must update their registration information 7 days prior to the change.

(B)(1) Any biointermediate producer that intends to change the designated renewable fuel production facility under paragraph (b)(1)(ii)(B)(1) of this section for one of its biointermediate production facilities must update their registration information with EPA at least 30 days prior to transferring the biointermediate to the newly designated renewable fuel production facility.

(2) A biointermediate producer may only change the designated renewable fuel production facility under paragraph (b)(1)(ii)(B)(1) of this section for each biointermediate production facility one time per calendar year unless EPA, in its sole discretion, allows the biointermediate producer to change the designated renewable fuel production facility more frequently.

(3) All renewable fuel producers, foreign ethanol producers, and biointermediate producers must update registration information and submit an updated independent third-party engineering review as follows:

(i) For all renewable fuel producers and foreign ethanol producers registered in calendar year 2010, the updated registration information and independent third-party engineering review must be submitted to EPA by January 31, 2013, and by January 31 of no less frequent than every third calendar year thereafter.

(ii) For all renewable fuel producers, foreign ethanol producers, and biointermediate producers registered in any calendar year after 2010, the updated registration information and independent third-party engineering review must be submitted to EPA by January 31 of no less frequent than every third calendar year after the date of the first independent third-party engineering review site visit conducted under paragraph (b)(2) of this section. For example, if a renewable fuel producer arranged for a third-party engineer to conduct the first site visit on December 15, 2023, the three-year independent third-party engineer review must be submitted by January 31, 2027.

(iii) For all renewable fuel producers, the updated independent third-party engineering review must include all the following:

(A) The engineering review and written report and verification required by paragraph (b)(2) of this section.

(B) A detailed review of the renewable fuel producer's calculations and assumptions used to determine V_{RIN} of a representative sample of batches of each type of renewable fuel produced since the last registration. This representative sampling must adhere to all the following, as applicable:

(1) The representative sample must be selected in accordance with the sample size guidelines set forth at 40 CFR 1090.1805.

(2) For updated independent third-party engineering reviews submitted after January 31, 2024, the representative sample must be selected from batches of renewable fuel produced through at least the second quarter of the calendar year prior to the applicable January 31 deadline.

(iv) For biointermediate producers, in addition to conducting the engineering review and written report and verification required by paragraph

(b)(2) of this section, the updated independent third-party engineering review must include a detailed review of the biointermediate producer's calculations used to determine the renewable biomass and cellulosic renewable biomass proportions, as required to be reported to EPA under § 80.1451(j), of a representative sample of batches of each type of biointermediate produced since the last registration. The representative sample must be selected in accordance with the sample size guidelines set forth at 40 CFR 1090.1805.

(v) For updated independent third-party engineering reviews submitted after January 31, 2024, independent third-party engineers must conduct site visits required under this paragraph (d) no sooner than July 1 of the calendar year prior to the applicable January 31 deadline.

(vi) For updated independent third-party engineering reviews submitted after January 31, 2024, the site visits required under this paragraph (d) must occur when the renewable fuel production facility is producing renewable fuel or when the biointermediate production facility is producing biointermediates.

(vii) If a renewable fuel producer, foreign ethanol producer, or biointermediate producer updates their registration information and independent third-party engineering review prior to the next applicable January 31 deadline, and the registration information and independent third-party engineering review meet all applicable requirements under paragraphs (b)(2) and (d)(3)(iii) of this section, the next required registration information and independent third-party engineering review update is due by January 31 of every third calendar year after the date of the updated independent third-party engineering review site visit.

(e) Any party who owns RINs, intends to own RINs, or intends to allow another party to separate RINs as per § 80.1440, but who is not covered by paragraph (a), (b), or (c) of this section, must provide EPA the information specified under 40 CFR 1090.805, if such information has not already been provided under the provisions of this part and must receive an EPA-issued company identification number prior to

owning any RINs. Registration information must be submitted at least 30 days prior to RIN ownership.

(f) Registration for any facility claiming an exemption under § 80.1403(c) or (d), must be submitted by July 1, 2013. EPA may in its sole discretion waive this requirement if it determines that the information submitted in any later registration can be verified by EPA in the same manner as would have been possible with a timely submission.

(g) *Independent third-party auditors.* Any independent third-party auditor described in § 80.1471 must register with the EPA as an independent third-party auditor and receive an EPA issued company identification number prior to conducting quality assurance audits pursuant to § 80.1472. Registration information must be submitted at least 30 days prior to conducting audits of renewable fuel production or biointermediate production facilities. The independent third-party auditor must provide to the EPA all the following:

(1) The information specified under 40 CFR 1090.805, if such information has not already been provided under the provisions of this part.

(2) Documentation of professional qualifications as follows:

(i) For a professional engineer as described in § 80.1450(b)(2)(i)(A) and (b)(2)(i)(B).

(ii) For a domestic independent third-party auditor or a foreign independent third-party auditor, a certified public accountant who is licensed by an appropriate state agency in the United States.

(iii) For a foreign independent third-party auditor, an accountant who is a foreign equivalent to a certified public accountant licensed in the United States.

(3) Documentation of professional liability insurance as described in § 80.1471(c).

(4) Any quality assurance plans as described in § 80.1469.

(5) *List of audited producers.* Name, address, and company and facility identification numbers of all renewable fuel production or biointermediate production facilities that the independent third-party auditor intends to audit under § 80.1472.

(6) *Audited producer associations.* An affidavit, or electronic consent, from each renewable fuel producer, foreign renewable fuel producer, or biointermediate producer stating its intent to have the independent third-party auditor conduct a quality assurance audit of any of the renewable fuel producer's or foreign renewable fuel producer's facilities.

(7) *Independence affidavits.* An affidavit stating that an independent third-party auditor and its contractors and subcontractors are independent, as described in § 80.1471(b), of any renewable fuel producer, foreign renewable fuel producer, or biointermediate producer.

(8) The name and contact information for each person employed (or under contract or subcontract) by the independent third-party auditor to conduct audits or verify RINs, as well as the name and contact information for any professional engineer and certified public accountant performing the review.

(9) *Registration updates.* (i) Any independent third-party auditor who makes changes to its quality assurance plan(s) that will allow it to audit new renewable fuel production or biointermediate production facilities that is not reflected in the independent third-party auditor's registration information on file with EPA must update its registration information and submit a copy of an updated QAP on file with EPA at least 60 days prior to auditing new renewable fuel production or biointermediate production facilities.

(ii) Any independent third-party auditor who makes any changes other than those specified in paragraphs (g)(9)(i), (iii), and (iv) of this section that will affect the third-party auditor's registration information must update its registration information 7 days prior to the change.

(iii) Independent third-party auditors must update their QAPs at least 60 days prior to verifying RINs generated or biointermediate produced by a renewable fuel or biointermediate production facility, respectively, for a pathway not covered in the independent third-party auditor's QAPs.

(iv) Independent third-party auditors must update their QAPs at least 60

days prior to verifying RINs generated or biointermediate produced by any renewable fuel or biointermediate production facility not identified in the independent third-party auditor's existing registration.

(10) *Registration renewal.* Registrations for independent third-party auditors expire December 31 of each calendar year. Previously approved registrations will renew automatically if all the following conditions are met:

(i) The independent third-party auditor resubmits all information, updated as necessary, described in §80.1450(g)(1) through (g)(7) no later than October 31 before the next calendar year.

(ii) The independent third-party auditor submits an affidavit affirming that they have only verified RINs and biointermediates using a QAP approved under §80.1469 and notified all appropriate parties of all potentially invalid RINs as described in §80.1471(d).

(iii) The auditor has not received a notice of deficiency from the EPA regarding its registration renewal materials.

(11) *Revocation of registration.* (i) EPA may issue a notice of intent to revoke the registration of a third-party auditor if EPA determines that the auditor has failed to fulfill any requirement of this subpart. The notice of intent shall include an explanation of the reasons for the proposed revocation.

(ii) Within 60 days of receipt of the notice of intent to revoke, the independent third-party auditor may submit written comments concerning the notice, including but not limited to a demonstration of compliance with the requirements which provide the basis for the proposed revocation. Communications should be sent to the EMTS support line (fuelsprogramsupport@epa.gov).

EPA shall review and consider any such submission before taking final action concerning the proposed revocation.

(iii) If the auditor fails to respond in writing within 60 days to the notice of intent to revoke, the revocation shall become final by operation of law and EPA shall notify the independent third-party auditor of such revocation.

(h) *Deactivation of registration.* (1) EPA may deactivate the registration of any party required to register under

this section §80.1450, using the process in paragraph (h)(2) of this section, if any of the following criteria are met:

(i) Unless the party is a biointermediate producer, the party has reported no activity in EMTS for twenty-four consecutive months.

(ii) The party has failed to comply with the registration requirements of this section.

(iii) The party has failed to submit any required notification or report within 30 days of the required submission date under §80.1451.

(iv) The attest engagement required under §80.1464 has not been received within 30 days of the required submission date.

(v) The party fails to pay a penalty or to perform any requirements under the terms of a court order, administrative order, consent decree, or administrative settlement between the party and EPA.

(vi) The party submits false or incomplete information.

(vii) The party denies EPA access or prevents EPA from completing authorized activities under sections 114 or 208 of the Clean Air Act despite presenting a warrant or court order. This includes a failure to provide reasonable assistance.

(viii) The party fails to keep or provide the records required by this subpart.

(ix) The party otherwise circumvents the intent of the Clean Air Act or of this subpart.

(2) Except as provided in paragraph (h)(3) of this section, EPA will use the following process whenever it decides to deactivate the registration of a party:

(i) EPA will provide written notification to the responsible corporate officer identifying the reasons or deficiencies for which EPA intends to deactivate the party's registration. The party will have 30 calendar days from the date of the notification to correct the deficiencies identified or explain why there is no need for corrective action.

(ii) If the basis for EPA's notice of intent to deactivate registration is the absence of EMTS activity under paragraph (h)(1)(i) of this section, a stated intent to engage in activity reported

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through EMTS will be sufficient to avoid deactivation of registration.

(iii) If the party does not correct identified deficiencies under paragraphs (h)(1)(ii) through (ix) of this section, or does not provide an adequate explanation regarding why such correction is not necessary within the time allotted for response, EPA may deactivate the party's registration without further notice to the party.

(3) In instances of willfulness or those in which public health, interest, or safety requires otherwise, EPA may deactivate the registration of the party without any notice to the party. EPA will provide written notification to the responsible corporate officer identifying the reasons EPA deactivated the registration of the party.

(4) Impact of registration deactivation:

(i) A party whose registration is deactivated shall still be liable for violation of any requirements of this subpart.

(ii) A party whose registration is deactivated will not be listed on any public list of actively registered parties that is maintained by EPA.

(iii) A party whose registration is deactivated will not have access to any of the electronic reporting systems associated with the renewable fuel standard program, including the EPA Moderated Transaction System (EMTS).

(iv) A party whose registration is deactivated must submit any corrections of deficiencies to EPA on forms, and following policies, established by EPA.

(v) If a party whose registration has been deactivated wishes to re-register, they may seek to do so by submitting a new registration pursuant to the requirements in paragraphs (a) through (c), (e), and (g) of this section, as applicable.

(i) *Registration procedures.* (1) Registration shall be on forms, and following policies, established by EPA.

(2) English language registrations—Any document submitted to EPA under this section must be submitted in

English, or shall include an English translation.

[75 FR 14863, Mar. 26, 2010, as amended at 75 FR 26043, May 10, 2010; 77 FR 1356, Jan. 9, 2012; 77 FR 74606, Dec. 17, 2012; 78 FR 41714, July 11, 2013; 78 FR 62471, Oct. 22, 2013; 79 FR 42163, July 18, 2014; 79 FR 42115, July 18, 2014; 85 FR 7077, Feb. 6, 2020; 85 FR 78467, Dec. 4, 2020; 87 FR 39665, July 1, 2022; 88 FR 44586, July 12, 2023; 88 FR 51239, Aug. 3, 2023; 88 FR 44587, July 12, 2023]

§ 80.1451 What are the reporting requirements under the RFS program?

(a) *Obligated parties and exporters.* Any obligated party or exporter of renewable fuel must submit to EPA reports according to the schedule, and containing all the information, that is set forth in this paragraph (a).

(1) Annual compliance reports must include all the following information:

(i) The obligated party's or exporter of renewable fuel's name.

(ii) The EPA company registration number.

(iii) Whether the refiner is complying on a corporate (aggregate) or facility-by-facility basis.

(iv) The EPA facility registration number, if complying on a facility-by-facility basis.

(v)(A) For the 2010 through 2019 compliance periods, the production volume and import volume of all of the products listed in § 80.1407(c) and (e) for the compliance period.

(B) For the 2020 compliance period, separately, the production volume and import volume of all of the gasoline products listed in § 80.1407(c), the production volume and import volume of all of the MVNRLM diesel fuel products listed in § 80.1407(e), and the combined volume of all gasoline products and MVNRLM diesel fuel listed in § 80.1407(c) and (e) for the compliance period.

(C) Beginning with the 2021 compliance period, separately, the production volume and import volume for the compliance period of all of the following:

(1) All of the gasoline products listed in § 80.1407(c).

(2) All of the MVNRLM diesel fuel products listed in § 80.1407(e).

(3) The combined production volume of all gasoline products and MVNRLM diesel fuel.

(4) Distillate fuel that is not transportation fuel.

(5) Distillate fuel that is certified NTDF.

(vi) The RVOs, as specified in § 80.1427(a) for obligated parties and § 80.1430(b) for exporters of renewable fuel, for the reporting year.

(vii) Any deficit RVOs carried over from the previous year.

(viii) The total current-year RINs by category of renewable fuel (*i.e.*, cellulosic biofuel, biomass-based diesel, advanced biofuel, renewable fuel, and cellulosic diesel), retired for compliance.

(ix) The total prior-year RINs by renewable fuel category retired for compliance.

(x) The total cellulosic biofuel waiver credits used to meet the party's cellulosic biofuel RVO.

(xi) A list of all RINs generated prior to July 1, 2010 that were retired for compliance in the reporting period.

(xii) Any deficit RVO(s) carried into the subsequent year.

(xiii) Any additional information that EPA may require.

(xiv)–(xv) [Reserved]

(xvi) The total current-year RINs by category of renewable fuel (*i.e.*, cellulosic biofuel, biomass-based diesel, advanced biofuel, renewable fuel, and cellulosic diesel), retired for compliance that are invalid as specified in § 80.1431(a).

(xvii) The total prior-year RINs by renewable fuel category retired for compliance that are invalid as specified in § 80.1431(a).

(xviii) A list of all RINs that were retired for compliance in the reporting period and are invalid as specified in § 80.1431(a).

(xix) For parties that redesignate certified NTDF as MVNRLM diesel fuel under § 80.1408 at any time during the compliance period, the volumes $MVNRLM_{BAL}$, $MVNRLM_O$, $MVNRLM_{INVCHG}$, and $MVNRLM_I$ as calculated in § 80.1408(a)(2).

(2) The RIN transaction reports required under paragraph (c)(1) of this section.

(3) The quarterly RIN activity reports required under paragraph (c)(2) of this section.

(4) Reports required under this paragraph (a) must be signed and certified as meeting all the applicable requirements of this subpart by the owner or a responsible corporate officer of the obligated party or exporter of renewable fuel.

(b) *Renewable fuel producers (domestic and foreign) and importers.* Any domestic producer or importer of renewable fuel who generates RINs, or any RIN-generating foreign producer must submit to EPA reports according to the schedule, and containing all of the following information:

(1)(i) For RINs generated beginning on July 1, 2010, RIN generation reports for each facility owned by the renewable fuel producer or importer shall be submitted according to the schedule specified in paragraph (f)(2) of this section.

(ii) The RIN generation reports shall include all the following information for each batch of renewable fuel produced or imported, where “batch” means a discrete quantity of renewable fuel produced or imported and assigned a unique batch-RIN per § 80.1426(d):

(A) The RIN generator's name.

(B) The RIN generator's EPA company registration number.

(C) The renewable fuel producer EPA facility registration number.

(D) The importer EPA facility registration number and foreign renewable fuel producer company registration number, if applicable.

(E) The applicable reporting period.

(F) The quantity of RINs generated for each batch according to § 80.1426.

(G) The production date of each batch.

(H) The fuel type of each batch.

(I) The volume of ethanol denaturant and applicable equivalence value of each batch.

(J) The volume of each batch produced.

(K) The types and quantities of feedstocks and biointermediates used.

(L) The process(es), feedstock(s), and biointermediate(s) used and proportion of renewable volume attributable to each process, feedstock, and biointermediate.

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(M) The type of co-products produced with each batch.

(N) The quantity of co-products produced in each quarter.

(O) A list of the RINs generated and an affirmation that the feedstock(s) used for each batch meets the definition of renewable biomass.

(P) Producers of renewable electricity and producers or importers of biogas used for transportation as described in § 80.1426(f)(10) and (11), shall report all of the following:

(1) The total energy produced and supplied for use as a transportation fuel, in units of energy (for example, MMBtu or MW) based on metering of gas volume or electricity.

(2) The name and location of where the fuel is sold for use as a transportation fuel.

(Q) Producers or importers of renewable fuel produced at facilities that use biogas for process heat as described in § 80.1426(f)(12), shall report the total energy supplied to the renewable fuel facility, in MMBtu based on metering of gas volume.

(R) Producers or importers of renewable fuel made from separated municipal solid waste must report the amount of paper, cardboard, plastics, rubber, textiles, metals, and glass separated from municipal solid waste for recycling. Reporting shall be in units of weight (in tons).

(S) Producers of advanced biofuel using grain sorghum shall report all of the following:

(1) The total amount of electricity that is purchased from the grid and used at the site, based on metering, in kWh.

(2) Total amount of ethanol produced.

(3) Calculation of the amount of grid electricity used at the site per gallon of ethanol produced in each batch.

(4) Each batch number as specified in § 80.1452(b).

(5) Reference ID for documents required by § 80.1454(k)(2)(D).

(T) Producers or importers of any renewable fuel other than ethanol, biodiesel, renewable gasoline, renewable diesel that meets the Grade No. 1-D or No. 2-D specification in ASTM D975 (incorporated by reference, see § 80.12), biogas or renewable electricity, must

report, on a quarterly basis, all the following for each volume of fuel:

(1) Total volume of renewable fuel produced or imported, total volume of renewable fuel blended into gasoline and distillate fuel by the producer or importer, and the percentage of renewable fuel in each batch of finished fuel.

(2) If the producer or importer generates RINs under § 80.1426(f)(17)(i)(B)(2), report the name, location, and contract information for each party that purchased the renewable fuel.

(U) Producers generating D code 3 or 7 RINs for cellulosic biofuel other than RNG or biogas-derived renewable fuel, and that was produced from two or more feedstocks converted simultaneously, at least one of which has less than 75% average adjusted cellulosic content, and using a combination of processes or a process other than a thermochemical process or a combination of processes, must report all the following:

(1) The cellulosic converted fraction as determined by collecting new representative process data and performing the same chemical analysis method accepted at registration. Producers shall calculate this information on an annual basis or within 10 business days of generating every 500,000 gallons of cellulosic biofuel, whichever is more frequent, and report quarterly. Reports shall include all values used to calculate feedstock energy according to § 80.1426(f)(3)(vi). If new data shows that the cellulosic Converted Fraction is different than previously calculated, the formula used to generate RINs under § 80.1426(f)(3) must be updated as soon as practical but no later than 5 business days after the producer receives the updated data. If new testing data results in a change to the cellulosic Converted Fraction, only RINs generated after the new testing data were received, subject to the 5-day allowance, would be affected.

(2) If the cellulosic Converted Fraction deviates from the previously calculated cellulosic Converted Fraction by 10% or more then the producer must notify EPA within 5 business days of receiving the new data and must adjust the formula used to generate RINs

under § 80.1426(f)(3) for all fuel generated as soon as practical but no later than 5 business days after the producer receives the new data. If new testing data results in a change to the cellulosic Converted Fraction, only RINs generated after the new testing data were received, subject to the 5-day allowance, would be affected.

(V) Producers of renewable fuel using crop residue as a feedstock shall report all of the following according to the schedule specified in paragraph (f)(2) of this section:

(1) The specific feedstock(s) utilized to produce renewable fuel under a pathway allowing the use of crop residue as feedstock.

(2) The total quantity of each specific feedstock used to produce renewable fuel.

(3) The total amount of qualifying renewable fuel produced under the crop residue pathway(s) in that quarter.

(W) Any additional information EPA may require.

(2) The RIN transaction reports required under paragraph (c)(1) of this section.

(3) The RIN activity reports required under paragraph (c)(2) of this section.

(4) Reports required under this paragraph (b) must be signed and certified as meeting all the applicable requirements of this subpart by the owner or a responsible corporate officer of the renewable fuel producer or importer.

(c) *All RIN-owning parties.* Any party, including any party specified in paragraphs (a) and (b) of this section, that owns RINs during a reporting period, must submit reports to EPA according to the schedule, and containing all the information, that is set forth in this paragraph (c).

(1)(i) For RIN transactions beginning on July 1, 2010, RIN transaction reports listing each RIN transaction shall be submitted according to the schedule in paragraph (f)(2) of this section.

(ii) As per § 80.1452, RIN transaction information listing each RIN transaction shall be submitted to the EMTS.

(iii) Each report required by paragraph (c)(1)(i) of this section shall include all of the following information:

(A) The submitting party's name.

(B) The submitting party's EPA company registration number.

(C) The applicable reporting period.

(D) Transaction type (i.e., RIN buy, RIN sell, RIN separation, RIN retire, reinstated 2009 or 2010 RINs).

(E) Transaction date.

(F) For a RIN purchase or sale, the trading partner's name.

(G) For a RIN purchase or sale, the trading partner's EPA company registration number. For all other transactions, the submitting party's EPA company registration number.

(H) RIN subject to the transaction.

(I) For a RIN purchase or sale, the per gallon RIN price and/or the per gallon price of renewable fuel price with RINs included.

(J) The reason code for retiring RINs, separating RINs, buying RINs, or selling RINs.

(K) Any additional information that EPA may require.

(2) RIN activity reports must be submitted to EPA according to the schedule specified in paragraph (f)(2) of this section. Each report must summarize RIN activities for the reporting period, separately for RINs separated from a renewable fuel volume and RINs assigned to a renewable fuel volume.

(i) For compliance periods ending on or before December 31, 2019, each report must include all of the following information:

(A) The submitting party's name.

(B) The submitting party's EPA company registration number.

(C) The number of current-year RINs owned at the start of the quarter.

(D) The number of prior-year RINs owned at the start of the quarter.

(E) The total current-year RINs purchased.

(F) The total prior-year RINs purchased.

(G) The total current-year RINs sold.

(H) The total prior-year RINs sold.

(I) The total current-year RINs retired.

(J) The total current-year RINs retired that are invalid under § 80.1431(a).

(K) The total prior-year RINs retired.

(L) The total prior-year RINs retired that are invalid under § 80.1431(a).

(M) The number of current-year RINs owned at the end of the quarter.

(N) The number of prior-year RINs owned at the end of the quarter.

(O) The number of RINs generated.

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(P) The volume of renewable fuel (in gallons) owned at the end of the quarter.

(Q) The total 2009 and 2010 retired RINs reinstated.

(R) Any additional information that EPA may require.

(ii) For compliance periods starting on or after January 1, 2020, each report must include all of the following information:

(A) The submitting party's name.

(B) The submitting party's EPA-issued company identification number.

(C) Primary registration designation or compliance level for compliance year (*e.g.*, "Aggregated Refiner," "Exporter," "Renewable Fuel Producer," "RIN Owner Only," etc.).

(D) All of the following information:

(1) The number of current-year RINs owned at the start of the quarter.

(2) The number of prior-year RINs owned at the start of the quarter.

(3) The total current-year RINs purchased.

(4) The total prior-year RINs purchased.

(5) The total current-year RINs sold.

(6) The total prior-year RINs sold.

(7) The total current-year RINs retired.

(8) The total current-year RINs retired that are invalid under § 80.1431(a).

(9) The total prior-year RINs retired.

(10) The total prior-year RINs retired that are invalid under § 80.1431(a).

(11) The number of current-year RINs owned at the end of the quarter.

(12) The number of prior-year RINs owned at the end of the quarter.

(13) The number of RINs generated.

(14) The volume of renewable fuel (in gallons) owned at the end of the quarter.

(E)(1) Indicate if the submitting party or the submitting party's corporate affiliate group exceeded the primary threshold for any day in the quarter under § 80.1435(c)(1). If the submitting party is in an affiliate group that does not contain an obligated party, and the affiliate group has exceeded the primary threshold, then EPA may publish the name and EPA-issued company identification number of the submitting party.

(2) Indicate if the submitting party or the submitting party's corporate af-

filiate group exceeded the secondary threshold for any day in the quarter under § 80.1435(c)(2). If the submitting party is an obligated party and has exceeded the secondary threshold or is in a corporate affiliate group containing an obligated party that has exceeded the secondary threshold, then EPA may publish the name and EPA-issued company identification number of the submitting party.

(F) A list of all corporate and contractual affiliates during the reporting period. For each affiliate, include the identification information (including the EPA company ID number, if registered) and the affiliate type.

(G) The RVO used to calculate D6 RIN threshold, if alternative gasoline and diesel production volumes were used under § 80.1435(d).

(H) A list of contractual affiliates that had a contract with the party that did not result in transfer of RINs to the party during the reporting period.

(I) Any additional information that EPA may require.

(3) All reports required under this paragraph (c) must be signed and certified as meeting all the applicable requirements of this subpart by the RIN owner or a responsible corporate officer of the RIN owner.

(d) Except for those producers using feedstocks subject to the aggregate compliance approach described in § 80.1454(g), producers and RIN-generating importers of renewable fuel made from feedstocks that are planted crops and crop residue from existing foreign agricultural land, planted trees or tree residue from actively managed tree plantations, slash and pre-commercial thinnings from forestlands or biomass obtained from areas at risk of wildfire must submit quarterly reports according to the schedule in paragraph (f)(2) of this section that include all of the following:

(1) A summary of the types and quantities of feedstocks used in that quarter.

(2) Electronic data identifying the land by coordinates of the points defining the boundaries from which each type of feedstock listed per paragraph (d)(1) of this section was harvested.

(3) If electronic data identifying a plot of land have been submitted previously, producers and RIN-generating importers may submit a cross-reference to that electronic data.

(e) If EPA finds that the 2007 baseline amount of agricultural land has been exceeded in any year beginning in 2010, beginning on the first day of July of the following calendar year any producers or importers of renewable fuel that use planted crops and/or crop residue from existing U.S. agricultural lands as feedstock must submit quarterly reports according to the schedule in paragraph (f)(2) of this section that include all of the following:

(1) A summary of the types and quantities of feedstocks used in that quarter.

(2) Electronic data identifying the land by coordinates of the points defining the boundaries from which each type of feedstock listed per paragraph (d)(1) of this section was harvested.

(3) If electronic data identifying a plot of land have been submitted previously, producers and RIN-generating importers may submit a cross-reference to that electronic data.

(f) *Report submission deadlines.* The submission deadlines for annual and quarterly reports are as follows:

(1) *Annual compliance reports—(i) Obligated parties.* (A) Except as specified in paragraph (f)(1)(i)(B) of this section, for obligated parties, annual compliance reports must be submitted by whichever of the following dates is latest:

(I) March 31 of the subsequent calendar year.

(2) The next quarterly reporting deadline under paragraph (f)(2) of this section after the date the subsequent compliance year's renewable fuel standards become effective in § 80.1405(a).

(3) The next quarterly reporting deadline under paragraph (f)(2) of this section after the annual compliance reporting deadline for the prior compliance year.

(B)(I) For obligated parties that meet the requirements for a small refinery under § 80.1441(e)(2)(iii), for the 2019 compliance year, annual compliance reports must be submitted no later than the next quarterly reporting deadline under paragraph (f)(2) of this section

after the date the 2021 renewable fuel standards become effective in § 80.1405(a).

(2) For the 2020 compliance year, annual compliance reports must be submitted no later than the next quarterly reporting deadline in paragraph (f)(2) of this section after the deadline in paragraph (f)(1)(i)(B)(I) of this section.

(3) For the 2021 compliance year, annual compliance reports must be submitted no later than the next quarterly reporting deadline in paragraph (f)(2) of this section after the deadline in paragraph (f)(1)(i)(B)(2) of this section.

(4) For the 2022 compliance year, annual compliance reports must be submitted by whichever of the following dates is latest:

(i) The next quarterly reporting deadline under paragraph (f)(2) of this section after the date the 2023 renewable fuel standards become effective in § 80.1405(a).

(ii) The next quarterly reporting deadline in paragraph (f)(2) of this section after the deadline in paragraph (f)(1)(i)(B)(3) of this section.

(5) For the 2024 compliance year, annual compliance reports must be submitted by the next quarterly reporting deadline under paragraph (f)(2) of this section after the date the revised 2024 cellulosic biofuel standard becomes effective in § 80.1405(a).

(ii) *All other parties.* For all parties other than obligated parties, annual compliance reports must be submitted by March 31 of the subsequent year.

(iii) *Deadline publication.* The annual compliance reporting deadline will be calculated in accordance with paragraph (f)(1)(i) of this section and published on EPA's website.

(2) *Quarterly compliance reports.* Quarterly reports shall be submitted by the required deadline as shown in Table 1 of this section. Any reports generated by EMTS must be reviewed, supplemented, and/or corrected if not complete and accurate, and verified by the owner or responsible corporate officer prior to submittal. Table 1 follows:

TABLE 1 TO § 80.1451—QUARTERLY REPORTING DEADLINES

Calendar quarter	Time period covered	Quarterly report deadline
Quarter 1	January 1–March 31	June 1.
Quarter 2	April 1–June 30	September 1.
Quarter 3	July 1–September 30	December 1.
Quarter 4	October 1–December 31	March 31.

(3) *Report certification.* Reports required must be signed and certified as meeting all the applicable requirements of this subpart by the owner or a responsible corporate officer of the submitter.

(4) *Monthly reporting schedule.* Any party required to submit information or reports on a monthly basis must submit such information or reports by the end of the subsequent calendar month.

(g) *Independent third-party auditors.* Any independent third-party auditor must submit quarterly reports as follows:

(1) The following information for each verified batch, as applicable:

- (i) The audited party's name.
- (ii) The audited party's EPA company registration number.
- (iii) The audited party's EPA facility registration number.
- (iv)(A) The renewable fuel importer's EPA facility registration number and foreign renewable fuel producer's company registration number.
- (B) The RNG importer's EPA facility registration number and foreign RNG producer's company registration number.

(v) The applicable reporting period.

(vi) The quantity of RINs generated for each verified batch according to §§ 80.125, 80.130, and 80.1426.

(vii) The production date of each verified batch.

(viii) The D-code of each verified batch.

(ix) The volume of ethanol denaturant and applicable equivalence value of each verified batch.

(x) The volume of each verified batch produced.

(xi) The volume and type of each feedstock and biointermediate used to produce the verified batch.

(xii) Whether the feedstocks and biointermediates used to produce each

verified batch met the definition of renewable biomass.

(xiii) Whether appropriate RIN generation and verified batch volume calculations under this part were followed for each verified batch.

(xiv) The quantity and type of co-products produced.

(xv) Invoice document identification numbers associated with each verified batch.

(xvi) Laboratory sample identification numbers for each verified batch associated with the generation of any certificates of analysis used to verify fuel type and quality.

(xvii) Any additional information that EPA may require.

(2) The following aggregate verification information, as applicable:

- (i) The submitting party's name.
- (ii) The submitting party's EPA company registration number.
- (iii) The number of current-year RINs verified at the start of the quarter.
- (iv) The number of prior-year RINs verified at the start of the quarter.
- (v) The total current-year RINs verified.

(vi) The number of current-year RINs verified at the end of the quarter.

(vii) A list of all audited facilities, including the EPA's company and facility registration numbers, along with the date the independent third-party auditor conducted the on-site visit and audit.

(viii) Mass and energy balances calculated for each audited facility.

(ix) A list of all RINs that were identified as Potentially Invalid RINs (PIRs) pursuant to §§ 80.185 and 80.1474, along with a narrative description of why the RINs were not verified or were identified as PIRs.

(x) A list of all biointermediates that were identified as potentially improperly produced biointermediates under § 80.1477(d).

(xi) A list of all biogas that was identified as potentially inaccurate or non-qualifying under § 80.185(b).

(xii) Any additional information that EPA may require.

(3) All reports required under this paragraph (g) must be signed and certified as meeting all the applicable requirements of this subpart by the independent third-party auditor or a responsible corporate officer of the independent third-party auditor.

(h) Producers or importers of renewable fuel made from *Arundo donax* or *Pennisetum purpureum* per § 80.1426(f)(14) must report all the following:

(1) Any detected growth of *Arundo donax* or *Pennisetum purpureum* outside the intended planting areas, both surrounding the field of production and feedstock storage sites, along the transportation route, and around the biofuel production facility, within 5 business days after detection and in accordance with the Risk Mitigation Plan, if applicable.

(2) As available, any updated information related to the Risk Mitigation Plan, as applicable. An updated Risk Mitigation Plan must be approved by EPA in consultation with USDA and as appropriate other federal agencies prior to its implementation.

(3) On an annual basis, a description of and maps or electronic data showing the average and total size and prior use of lands planted with *Arundo donax* or *Pennisetum purpureum*, the average and total size and prior use of lands set aside to control the invasive spread of these crops, and a description and explanation of any change in land use from the previous year.

(4) On an annual basis, the report from an independent third party auditor evaluating monitoring and reporting activities conducted in accordance with the Risk Mitigation Plan, as applicable subject to approval of a different frequency by the EPA.

(5) Information submitted pursuant to paragraphs (h)(3) and (h)(4) of this section must be submitted as part of the producer or importer's fourth quarterly report, which covers the reporting period October-December, according to the schedule in paragraph (f)(2) of this section.

(i) Parties that redesignate certified NTDF as MVNRLM diesel fuel under § 80.1408 at any time during the compliance period, but do not incur an RVO under § 80.1408(a)(2)(i), must submit a report to EPA stating that they redesignated certified NTDF to MVNRLM diesel fuel during the compliance period, but that their net redesignated volume was less than or equal to zero, and they therefore did not incur an RVO for the compliance period.

(j) *Biointermediate producers.* For each biointermediate production facility, any biointermediate producer must submit quarterly reports for biointermediate batch production to EPA containing all of the information in this paragraph (j).

(1) Include all the following information for each batch of biointermediate produced:

(i) The biointermediate producer's name.

(ii) The biointermediate producer's EPA company registration number.

(iii) The biointermediate producer's EPA facility registration number.

(iv) The applicable compliance period.

(v) The production date.

(vi) The batch number.

(vii) For batches of biointermediates intended for use to produce cellulosic biofuels, the adjusted cellulosic content of each batch and certification that the cellulosic content of each batch was derived from cellulose, hemicellulose, or lignin that was derived from renewable biomass.

(viii) The volume of each batch produced.

(ix) The types and quantities of feedstocks used.

(x) The renewable fuel type(s) each batch of biointermediate was designated to be used as a feedstock material for.

(xi) The EPA company registration number and EPA facility registration number for each renewable fuel producer or foreign renewable fuel producer that received each batch.

(xii) The percentage of each batch of biointermediate that met the definition of renewable biomass and certification that this portion of the batch of biointermediate was derived from renewable biomass.

(xiii) The process(es) and feedstock(s) used and proportion of biointermediate volume attributable to each process and feedstock.

(xiv) The type of co-products produced with each batch.

(xv) The quantity of co-products produced in each quarter.

(xvi) Any additional information EPA may require.

(2) Quarterly reports under this paragraph (j) must be submitted according to the schedule in paragraph (f)(2) of this section.

(k) All reports required under this section shall be submitted on forms and following procedures prescribed by EPA.

(1) *English language reports.* Any document submitted to EPA under this section must be submitted in English, or shall include an English translation.

[75 FR 14863, Mar. 26, 2010]

EDITORIAL NOTE: For FEDERAL REGISTER citations affecting § 80.1451, see the List of CFR Sections Affected, which appears in the Finding Aids section of the printed volume and at www.govinfo.gov.

§ 80.1452 What are the requirements related to the EPA Moderated Transaction System (EMTS)?

(a) Each party required to submit information under this section must establish an account with the EPA Moderated Transaction System (EMTS) at least 60 days prior to engaging in any RIN transactions, or July 1, 2010, whichever is later.

(b) Starting July 1, 2010, each time a domestic or foreign producer or importer of renewable fuel assigns RINs to a batch of renewable fuel pursuant to § 80.1426(e), all the following information must be submitted to EPA via the submitting party's EMTS account within five (5) business days of the date of RIN assignment.

(1) The name of the renewable fuel producer or importer.

(2) The EPA company registration number of the renewable fuel producer or foreign ethanol producer, as applicable.

(3) The importer's EPA company registration number if applicable.

(4) The EPA facility registration number of the facility at which the renewable fuel producer or foreign eth-

anol producer produced the batch, as applicable.

(5) The EPA facility registration number of the importer that imported the batch, if applicable.

(6) The D code of RINs generated for the batch.

(7) The production process(es) used for the batch.

(8) The production date of the batch.

(9) The fuel type of the batch.

(10) The volume of the batch.

(11) The volume of ethanol denaturant and applicable equivalence value of each batch.

(12) Quantity of RINs generated for the batch.

(13) The type and quantity of feedstock(s) used for the batch.

(14) An affirmation that the feedstock(s) used for each batch meets the definition of renewable biomass.

(15) The type and quantity of co-products produced with the batch of renewable fuel.

(16) The type and quantity of each biointermediate used for the batch, if applicable.

(17) The EPA facility registration number of each biointermediate production facility at which a biointermediate used for the batch was produced, if applicable.

(18) Any additional information that EPA may require.

(c) Starting July 1, 2010, each time any party sells, separates, or retires RINs generated on or after July 1, 2010, all the following information must be submitted to EPA via the submitting party's EMTS account within five (5) business days of the reportable event. Starting July 1, 2010, each time any party purchases RINs generated on or after July 1, 2010, all the following information must be submitted to EPA via the submitting party's EMTS account within ten (10) business days of the reportable event. The reportable event for a RIN purchase or sale occurs on the date of transfer per § 80.1453(a)(4). The reportable event for a RIN separation or retirement occurs on the date of separation or retirement as described in § 80.1429 or § 80.1434.

(1) The submitting party's name.

(2) The submitting party's EPA company registration number.

(3) The generation year of the RINs.

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(4) The RIN status (Assigned or Separated).

(5) The D code of the RINs.

(6) Transaction type (i.e., RIN buy, RIN sell, RIN separation, RIN retire).

(7) The date of transfer per § 80.1453(a)(4), if applicable.

(8) For a RIN purchase or sale, the trading partner's name.

(9) For a RIN purchase or sale, the trading partner's EPA company registration number.

(10) For an assigned RIN purchase or sale, the renewable fuel volume associated with the sale.

(11) Quantity of RINs involved in a transaction.

(12)(i) For transactions through December 31, 2019, the per gallon RIN price or the per-gallon price of renewable fuel with RINs included.

(ii) For transactions on or after January 1, 2020:

(A) For RIN buy or sell transaction types including assigned RINs, the per-gallon RIN price or the per-gallon price of renewable fuel with RINs included.

(B) For RIN buy or sell transaction types including separated RINs, the per-gallon RIN price.

(13) The reason for retiring RINs, separating RINs, buying RINs, or selling RINs.

(14) Any additional information that EPA may require.

(15) For buy or sell transactions of separated RINs on or after January 1, 2020, the mechanism used to purchase the RINs (*e.g.*, spot market or fulfilling a term contract).

(d) All information required under this section shall be submitted on forms and following procedures prescribed by EPA.

[75 FR 14863, Mar. 26, 2010, as amended at 75 FR 79978, Dec. 21, 2010; 77 FR 1357, Jan. 9, 2012; 84 FR 27024, June 10, 2019; 85 FR 7079, Feb. 6, 2020; 87 FR 39669, July 1, 2022; 88 FR 44589, July 12, 2023]

§ 80.1453 What are the product transfer document (PTD) requirements for the RFS program?

(a) On each occasion when any party transfers ownership of neat or blended renewable fuels or RNG, except when such fuel is dispensed into motor vehicles or nonroad vehicles, engines, or equipment, or separated RINs subject

to this subpart, the transferor must provide to the transferee documents that include all the following information, as applicable:

(1) The name and address of the transferor and transferee.

(2) The transferor's and transferee's EPA company registration numbers.

(3) The volume of renewable fuel that is being transferred, if any.

(4) The date of the transfer.

(5) [Reserved]

(6) The quantity of RINs being traded.

(7) The D code of the RINs.

(8) The RIN status (Assigned or Separated).

(9) The RIN generation year.

(10) The associated reason for the sell or buy transaction (*e.g.*, standard trade or remedial action).

(11) Additional RIN-related information, as follows:

(i) If assigned RINs are being transferred on the same PTD used to transfer ownership of the renewable fuel, then the assigned RIN information shall be identified on the PTD.

(A) The identifying information for a RIN that is transferred in EMTS generically is the information specified in paragraphs (a)(1) through (a)(10) of this section.

(B) The identifying information for a RIN that is transferred in EMTS uniquely is the information specified in paragraphs (a)(1) through (a)(10) of this section, the RIN generator company ID, the RIN generator facility ID, and the batch number.

(C) The identifying information for a RIN that is generated prior to July 1, 2010, is the 38-digit code pursuant to § 80.1425, in its entirety.

(ii) If assigned RINs are being transferred on a separate PTD from that which is used to transfer ownership of the renewable fuel, then the PTD which is used to transfer ownership of the renewable fuel shall include all the following:

(A) The number of gallon-RINs being transferred.

(B) A unique reference to the PTD which is transferring the assigned RINs.

(C) The information specified in paragraphs (a)(11)(i)(A) through (a)(11)(i)(C) of this section, as appropriate.

(iii) If no assigned RINs are being transferred with the renewable fuel, the PTD which is used to transfer ownership of the renewable fuel shall state “No assigned RINs transferred.”

(iv) If RINs have been separated from the renewable fuel or fuel blend pursuant to § 80.1429(b)(4), then all PTDs which are at any time used to transfer ownership of the renewable fuel or fuel blend shall state “This volume of fuel must be used in the designated form, without further blending.”

(12) For the transfer of renewable fuel or RNG for which RINs were generated, an accurate and clear statement on the product transfer document of the fuel type from the approved pathway, and designation of the fuel use(s) intended by the transferor, as follows:

(i) Ethanol. “This volume of neat or blended ethanol is designated and intended for use as transportation fuel or jet fuel in the 48 U.S. contiguous states and Hawaii. Any person exporting this fuel is subject to the requirements of 40 CFR 80.1430.”

(ii) Biodiesel. “This volume of neat or blended biodiesel is designated and intended for use as transportation fuel, heating oil or jet fuel in the 48 U.S. contiguous states and Hawaii. Any person exporting this fuel is subject to the requirements of 40 CFR 80.1430.”

(iii) Renewable heating oil. “This volume of heating oil is designated and intended for use as heating oil in the 48 U.S. contiguous states and Hawaii. Any person exporting this fuel is subject to the requirements of 40 CFR 80.1430.”

(iv) Renewable diesel. “This volume of neat or blended renewable diesel is designated and intended for use as transportation fuel, heating oil or jet fuel in the 48 U.S. contiguous states and Hawaii. Any person exporting this fuel is subject to the requirements of 40 CFR 80.1430.”

(v) Naphtha. “This volume of neat or blended naphtha is designated and intended for use as transportation fuel or jet fuel in the 48 U.S. contiguous states and Hawaii. This naphtha may only be used as a gasoline blendstock, E85 blendstock, or jet fuel. Any person exporting this fuel is subject to the requirements of 40 CFR 80.1430.”

(vi) Butanol. “This volume of neat or blended butanol is designated and in-

tended for use as transportation fuel or jet fuel in the 48 U.S. contiguous states and Hawaii. This butanol may only be used as a gasoline blendstock or jet fuel. Any person exporting this fuel is subject to the requirements of 40 CFR 80.1430.”

(vii) Renewable fuels other than ethanol, biodiesel, heating oil, renewable diesel, naphtha or butanol. “This volume of neat or blended renewable fuel is designated and intended to be used as transportation fuel, heating oil, or jet fuel in the 48 U.S. contiguous states and Hawaii. Any person exporting this fuel is subject to the requirements of 40 CFR 80.1430.”

(viii) RNG. “This volume of RNG is designated and intended for transportation use in the 48 U.S. contiguous states and Hawaii or as a feedstock to produce a renewable fuel and may not be used for any other purpose. Any person exporting this fuel is subject to the requirements of 40 CFR 80.1430. Assigned RINs to this volume of RNG must not be separated unless the RNG is used as transportation fuel in the 48 U.S. contiguous states and Hawaii.”

(b) Except for transfers to truck carriers, retailers, or wholesale purchaser-consumers, product codes may be used to convey the information required under paragraphs (a)(1) through (11) and (e) of this section if such codes are clearly understood by each transferee.

(c) For renewable fuel, other than ethanol, that is not registered as motor vehicle fuel under 40 CFR Part 79, the PTD which is used to transfer ownership of the renewable fuel shall state “This volume of renewable fuel may not be used as a motor vehicle fuel.”

(d) For fuel oil meeting paragraph (2) of the definition of “heating oil” in § 80.2, the PTD of the fuel oil shall state: “This volume of renewable fuel oil is designated and intended to be used to heat or cool interior spaces of homes or buildings to control ambient climate for human comfort. Do NOT use for process heat or cooling or any other purpose, as these uses are prohibited pursuant to 40 CFR 80.1460(g).”

(e) Beginning January 1, 2021, on each occasion when any party transfers custody or ownership of certified NTDF, except when such fuel is dispensed into

motor vehicles or nonroad vehicles, engines, or equipment, the transferor must provide to the transferee documents that include all the following information, as applicable:

(1) The transferor of certified NTDF must list all applicable required information as specified at 40 CFR 1090.1115 and, if the distillate fuel contains renewable fuel, all applicable required information in paragraphs (a), (b), and (d) of this section.

(2) The transferor must include the following statement on the PTD: “15 ppm sulfur (maximum) certified NTDF—This fuel is designated for non-transportation use.”

(f)(1) On each occasion when any party transfers title or custody of a biointermediate, the transferor must provide to the transferee documents that include all of the following information:

(i) The name and address of the transferor and transferee.

(ii) The transferor’s and transferee’s EPA company registration and applicable facility registration numbers.

(iii) The volume of biointermediate that is being transferred.

(iv) The date of the transfer.

(v) The location of the biointermediate at the time of the transfer.

(vi) The following statement designating the volume of biointermediate as feedstock for the production of a renewable fuel: “This volume is designated and intended for use as biointermediate in the production of renewable fuel as defined in § 80.2. Parties may not generate RINs on this feedstock material and it must remain segregated from all products until received by a designated renewable fuel production facility.”

(vii) For biogas designated for use as a biointermediate, any applicable PTD requirements under § 80.150.

(2) In addition to the information specified in paragraph (f)(1) of this section, on each occasion when any party transfers title of a biointermediate or when any party transfers a biointermediate to a renewable fuel production facility, the transferor must provide to the transferee documents that include all of the following information:

(i) The renewable fuel type the biointermediate was designated to be used

as a feedstock material for by the biointermediate producer under § 80.1476(i).

(ii) The composition of the biointermediate being transferred, including:

(A) The type and quantity of each feedstock that was used to make the biointermediate.

(B) The percentage of each feedstock that is renewable biomass, rounded to two decimal places.

(C) For a biointermediate that contains both renewable and non-renewable feedstocks:

(1) The percentage of each feedstock that is not renewable biomass, rounded to two decimal places.

(2) The feedstock energy from the renewable biomass used to make the biointermediate, in Btu.

(3) The feedstock energy from the non-renewable biomass used to make the biointermediate, in Btu.

(4) The total percentage of the biointermediate that may generate RINs, rounded to two decimal places.

(5) The total percentage of the biointermediate that may not generate RINs, rounded to two decimal places.

(D) For a biointermediate that contains cellulosic material:

(1) The percentage of each feedstock that is cellulosic, rounded to two decimal places.

(2) The percentage of each feedstock that is non-cellulosic, rounded to two decimal places, if applicable.

(3) If the biointermediate is intended for use in the production of a cellulosic biofuel, the total percentage of the biointermediate that may generate cellulosic RINs, rounded to two decimal places.

(4) For separated municipal solid waste, the cellulosic portion of the biointermediate is equivalent to the biogenic portion.

(5) For separated food waste, the non-cellulosic percentage is assumed to be zero percent unless it is demonstrated to be partially cellulosic.

(6) For separated yard waste, 100% of separated yard waste is deemed to be cellulosic.

(7) The following statement: “I certify that the cellulosic content of this feedstock was derived from cellulose, hemicellulose, or lignin that was derived from renewable biomass.”

(iii) Copies of records specified in § 80.1454(i)(3), (5), and (6) for the volume being transferred, as applicable.

[75 FR 14863, Mar. 26, 2010, as amended at 75 FR 26045, May 10, 2010; 78 FR 62471, Oct. 22, 2013; 79 FR 42118, July 18, 2014; 81 FR 23645, Apr. 22, 2016; 85 FR 7079, Feb. 6, 2020; 85 FR 78467, Dec. 4, 2020; 87 FR 39669, July 1, 2022; 88 FR 44589, July 12, 2023]

§ 80.1454 What are the recordkeeping requirements under the RFS program?

(a) *Requirements for obligated parties and exporters of renewable fuel.* Beginning July 1, 2010, any obligated party or exporter of renewable fuel must keep all of the following records:

(1) Product transfer documents consistent with § 80.1453 and associated with the obligated party's or exporter of renewable fuel's activity, if any, as transferor or transferee of renewable fuel or separated RINs.

(2) Copies of all reports submitted to EPA under § 80.1451(a), as applicable.

(3) Records related to each RIN transaction, including all of the following:

(i) A list of the RINs owned, purchased, sold, separated, retired, or reinstated.

(ii) The parties involved in each RIN transaction including the transferor, transferee, and any broker or agent.

(iii) The date of the transfer of the RIN(s).

(iv) Additional information, including contracts, correspondence, and invoices, related to details of the RIN transaction and its terms.

(4) Records related to the use of RINs (by facility, if applicable) for compliance, including all of the following:

(i) Methods and variables used to calculate the Renewable Volume Obligations pursuant to § 80.1407 or § 80.1430.

(ii) List of RINs used to demonstrate compliance.

(iii) Additional information related to details of RIN use for compliance.

(5) Records related to the separation of assigned RINs from renewable fuel volume.

(6) For exported renewable fuel, invoices, bills of lading and other documents describing the exported renewable fuel.

(i) For exporters of renewable fuel for which no RINs were generated, an affi-

davit signed by the producer of the exported renewable fuel affirming that no RINs were generated for that volume of renewable fuel.

(ii) [Reserved]

(7) Any obligated party that uses the provisions of § 80.1444 for a small refinery must keep the following records:

(i) Copies of any notifications submitted to EPA under § 80.1444(e)(2).

(ii) Copies of the methods and variables used to calculate the number of RINs retired for the alternative RIN retirement schedule under § 80.1444(f).

(b) *Requirements for all producers of renewable fuel.* Beginning July 1, 2010, any domestic or RIN-generating foreign producer of a renewable fuel must keep all of the following records in addition to those required under paragraphs (c) or (d) of this section:

(1) Product transfer documents consistent with § 80.1453 and associated with the renewable fuel producer's activity, if any, as transferor or transferee of renewable fuel or separated RINs.

(2) Copies of all reports submitted to EPA under §§ 80.1449 and 80.1451(b).

(3) Records related to the generation and assignment of RINs for each facility, including all of the following:

(i) Batch volume in gallons.

(ii) Batch number.

(iii) RIN as assigned under § 80.1426, if applicable.

(iv) Identification of batches by renewable category.

(v) Type and quantity of co-products produced.

(vi) Type and quantity of feedstocks used.

(vii) Type and quantity of biointermediates used.

(viii) Type and quantity of fuel used for process heat.

(ix) All facility-determined values used in the calculations under § 80.1426(f)(4) and the data used to obtain those values.

(x) Date of production.

(xi) Results of any laboratory analysis of batch chemical composition or physical properties.

(xii) For RINs generated for ethanol produced from corn starch at a facility using an approved pathway that requires the use of one or more of the advanced technologies listed in Table 2 to

§ 80.1426, documentation to demonstrate that employment of the required advanced technology or technologies was conducted in accordance with the specifications in the approved pathway and Table 2 to § 80.1426, including any requirement for application to 90% of the production on a calendar year basis.

(xiii) All commercial documents and additional information related to details of RIN generation.

(4) Records related to each RIN transaction, separately for each transaction, including all of the following:

(i) A list of the RINs owned, purchased, sold, separated, retired, or reinstated.

(ii) The parties involved in each transaction including the transferor, transferee, and any broker or agent.

(iii) The date of the transfer of the RIN(s).

(iv) Additional information related to details of the transaction and its terms.

(5) Records related to the production, importation, ownership, sale or use of any volume of renewable fuel for which RINs were generated or blend of renewable fuel for which RINs were generated and gasoline or diesel fuel that any party designates for use as transportation fuel, jet fuel, or heating oil and the use of the fuel or blend as transportation fuel, jet fuel, or heating oil without further blending, in the designated form.

(6) Copies of registration documents required under § 80.1450, including information on fuels and products, feedstocks, biointermediates, facility production processes, process changes, and capacity, energy sources, and a copy of the independent third party engineering review report submitted to EPA per § 80.1450(b)(2).

(7) For any producer of renewable fuel made from *Arundo donax* or *Pennisetum purpureum* per § 80.1426(f)(14), all the following:

(i) Records related to all requirements and duties set forth in the registration documents described in § 80.1450(b)(1)(x)(A), including but not limited to the Risk Mitigation Plan, monitoring records and reports, and adherence to state, local and federal

invasive species requirements and permits.

(ii) Records associated with feedstock purchases and transfers that identify where the feedstocks were produced and are sufficient to verify that feedstocks used were produced and transported in accordance with an EPA approved Risk Mitigation Plan or were produced on land that the EPA determined does not present a significant likelihood of invasive spread beyond the planting area of the feedstock used for production of the renewable fuel, including all the following:

(A) Maps or electronic data identifying the boundaries of the land where each type of feedstock was produced.

(B) Bills of lading, product transfer documents, or other commercial documents showing the quantity of feedstock purchased from each area identified above, and showing each transfer of custody of the feedstock from the location where it was produced to the renewable fuel production facility.

(8) A producer of fuel oil meeting paragraph (2) of the definition of heating oil in § 80.2 shall keep copies of all contracts which describe the fuel oil under contract with each end user.

(9) Records, including contracts, related to the implementation of a QAP under § 80.1469.

(10) Records related to any volume of renewable fuel where RINs were not generated by the renewable fuel producer or importer pursuant to § 80.1426(c).

(c) *Additional requirements for imports of renewable fuel.* (1) Beginning July 1, 2010, any RIN-generating foreign producer of a renewable fuel or RIN-generating importer must keep records of feedstock purchases and transfers associated with renewable fuel for which RINs are generated, sufficient to verify that feedstocks used are renewable biomass.

(i) RIN-generating foreign producers and importers of renewable fuel made from feedstocks that are planted crops or crop residue from existing foreign agricultural land, planted trees or tree residue from actively managed tree plantations, slash and pre-commercial thinnings from forestlands or biomass obtained from wildland-urban interface must maintain all the following

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records to verify the location where these feedstocks were produced:

(A) Maps or electronic data identifying the boundaries of the land where each type of feedstock was produced.

(B) Bills of lading, product transfer documents, or other commercial documents showing the quantity of feedstock purchased from each area identified in paragraph (c)(1)(i)(A) of this section, and showing each transfer of custody of the feedstock from the location where it was produced to the renewable fuel production facility.

(ii)(A) RIN-generating foreign producers and importers of renewable fuel made from planted crops or crop residue from existing foreign agricultural land must keep records that serve as evidence that the land from which the feedstock was obtained was cleared or cultivated prior to December 19, 2007 and actively managed or fallow, and nonforested on December 19, 2007. RIN-generating foreign producers or importers of renewable fuel made from planted trees or tree residue from actively managed tree plantations must keep records that serve as evidence that the land from which the feedstock was obtained was cleared prior to December 19, 2007 and actively managed on December 19, 2007.

(B) The records must be provided by the feedstock producer, traceable to the land in question, and consist of at least one of the following documents:

(1) Sales records for planted crops or trees, crop or tree residue, or livestock; purchasing records for fertilizer, weed control, or reseeding, including seeds, seedlings, or other nursery stock.

(2) A written management plan for agricultural or silvicultural purposes; documentation of participation in an agricultural or silvicultural program sponsored by a Federal, state, or local government agency.

(3) Documentation of land management in accordance with an agricultural or silvicultural product certification program, an agreement for land management consultation with a professional forester that identifies the land in question.

(4) Evidence of the existence and ongoing maintenance of a road system or other physical infrastructure designed and maintained for logging use, to-

gether with one of the aforementioned documents in this paragraph (c)(1)(ii)(B).

(iii) RIN-generating foreign producers and importers of renewable fuel made from any other type of renewable biomass must have documents from their feedstock supplier certifying that the feedstock qualifies as renewable biomass, describing the feedstock and identifying the process that was used to generate the feedstock.

(2) Beginning July 1, 2010, any RIN-generating importer of renewable fuel must keep all of the following records:

(i) Product transfer documents consistent with § 80.1453 and associated with the renewable fuel importer's activity, if any, as transferor or transferee of renewable fuel.

(ii) Copies of all reports submitted to EPA under §§ 80.1449 and 80.1451(b).

(iii) Records related to the generation and assignment of RINs for each facility, including all of the following:

(A) Batch volume in gallons.

(B) Batch number.

(C) RIN as assigned under § 80.1426.

(D) Identification of batches by renewable category.

(E) Type and quantity of feedstocks used.

(F) Type and quantity of fuel used for process heat.

(G) Date of import.

(H) Results of any laboratory analysis of batch chemical composition or physical properties.

(I) The EPA registration number of the foreign renewable fuel producers producing the fuel.

(J) Additional information related to details of RIN generation.

(iv) Records related to each RIN transaction, including all of the following:

(A) A list of the RINs owned, purchased, sold, separated, retired, or reinstated.

(B) The parties involved in each transaction including the transferor, transferee, and any broker or agent.

(C) The date of the transfer of the RIN(s).

(D) Additional information related to details of the transaction and its terms.

(v) Copies of registration documents required under § 80.1450.

(vi) Records related to the import of any volume of renewable fuel that the importer designates for use as transportation fuel, jet fuel, or heating oil.

(vii) For renewable fuel or biointermediate produced from a type of renewable biomass not specified in paragraphs (c)(1)(i) through (vi) of this section, documents from their feedstock suppliers and feedstock aggregators, as applicable, certifying that the feedstock qualifies as renewable biomass, describing the feedstock.

(3) Producers of renewable fuel or biointermediate produced from separated yard and food waste, biogenic oils/fats/greases, or separated MSW must comply with either the record-keeping requirements in paragraph (j) of this section or the alternative recordkeeping requirements in § 80.1479.

(d) *Additional requirements for domestic producers of renewable fuel.* (1) Except as provided in paragraphs (g) and (h) of this section, any domestic producer of renewable fuel that generates RINs for such fuel must keep documents associated with feedstock purchases and transfers that identify where the feedstocks were produced and are sufficient to verify that feedstocks used are renewable biomass if RINs are generated.

(2) Domestic producers of renewable fuel made from feedstocks that are planted trees or tree residue from actively managed tree plantations, slash and pre-commercial thinnings from forestlands or biomass obtained from areas at risk of wildfire must maintain all the following records to verify the location where these feedstocks were produced:

(i) Maps or electronic data identifying the boundaries of the land where each type of feedstock was produced.

(ii) Bills of lading, product transfer documents or other commercial documents showing the quantity of feedstock purchased from each area identified in paragraph (d)(2)(i) of this section, and showing each transfer of custody of the feedstock from the location where it was produced to the renewable fuel production facility.

(3) Domestic producers of renewable fuel made from planted trees or tree residue from actively managed tree plantations must keep records that serve as evidence that the land from

which the feedstock was obtained was cleared prior to December 19, 2007 and actively managed on December 19, 2007. The records must be provided by the feedstock producer and must include at least one of the following documents, which must be traceable to the land in question:

(i) Sales records for planted trees or tree residue.

(ii) Purchasing records for fertilizer, weed control, or reseeding, including seeds, seedlings, or other nursery stock.

(iii) A written management plan for silvicultural purposes.

(iv) Documentation of participation in a silvicultural program sponsored by a Federal, state, or local government agency.

(v) Documentation of land management in accordance with a silvicultural product certification program, an agreement for land management consultation with a professional forester.

(vi) Evidence of the existence and ongoing maintenance of a road system or other physical infrastructure designed and maintained for logging use, together with one of the aforementioned documents.

(4) Domestic producers of renewable fuel made from planted crops or crop residue from existing foreign agricultural land must keep all the following records:

(i) Records that serve as evidence that the land from which the feedstock was obtained was cleared or cultivated prior to December 19, 2007 and actively managed or fallow, and nonforested on December 19, 2007. The records must be provided by the feedstock producer and must include at least one of the following documents, which must be traceable to the land in question:

(A) Sales records for planted crops, crop residue, or livestock.

(B) Purchasing records for fertilizer, weed control, seeds, seedlings, or other nursery stock.

(C) A written management plan for agricultural purposes.

(D) Documentation of participation in an agricultural program sponsored by a Federal, State, or local government agency.

(E) Documentation of land management in accordance with an agricultural product certification program.

(ii) Records to verify the location where the feedstocks were produced:

(A) Maps or electronic data identifying the boundaries of the land where each type of feedstock was produced; and

(B) Bills of lading, product transfer documents or other commercial documents showing the quantity of feedstock purchased from each area identified in paragraph (d)(4)(ii)(A) of this section, and showing each transfer of custody of the feedstock from the location where it was produced to the renewable fuel facility.

(5) Domestic producers of renewable fuel or biointermediates produced from a type of renewable biomass not specified in paragraphs (d)(2) through (4) of this section must have documents from their feedstock suppliers and feedstock aggregators, as applicable, certifying that the feedstock qualifies as renewable biomass, describing the feedstock.

(6) Producers of renewable fuel or biointermediate produced from separated yard and food waste, biogenic oils/fats/greases, or separated MSW must comply with either the recordkeeping requirements in paragraph (j) of this section or the alternative recordkeeping requirements in § 80.1479.

(e) *Additional requirements for producers of fuel exempt from the 20% GHG reduction requirement.* Beginning July 1, 2010, any production facility with a baseline volume of fuel that is not subject to the 20% GHG threshold, pursuant to § 80.1403(c) and (d), must keep all of the following:

(1) Detailed engineering plans for the facility.

(2) Federal, State, and local (or foreign governmental) preconstruction approvals and permitting.

(3) Procurement and construction contracts and agreements.

(f) *Requirements for other parties that own RINs.* Beginning July 1, 2010, any party, other than those parties covered in paragraphs (a) and (b) of this section, that owns RINs must keep all of the following records:

(1) Product transfer documents consistent with § 80.1453 and associated with the party's activity, if any, as

transferor or transferee of renewable fuel or separated RINs.

(2) Copies of all reports submitted to EPA under § 80.1451(c).

(3) Records related to each RIN transaction by renewable fuel category, including all of the following:

(i) A list of the RINs owned, purchased, sold, separated, retired, or reinstated.

(ii) The parties involved in each RIN transaction including the transferor, transferee, and any broker or agent.

(iii) The date of the transfer of the RIN(s).

(iv) Additional information related to details of the transaction and its terms.

(4) Records related to any volume of renewable fuel that the party designated for use as transportation fuel, jet fuel, or heating oil and from which RINs were separated pursuant to § 80.1429(b)(4).

(g) *Aggregate compliance with renewable biomass requirement.* Any producer or RIN-generating importer of renewable fuel made from planted crops or crop residue from existing U.S. agricultural land as defined in § 80.1401, or from planted crops or crop residue from existing agricultural land in a country covered by a petition approved pursuant to § 80.1457, is covered by the aggregate compliance approach and is not subject to the recordkeeping requirements for planted crops and crop residue at § 80.1454(g)(2) unless EPA publishes a finding that the 2007 baseline amount of agricultural land in the U.S. has been exceeded or, for the aggregate compliance approach in a foreign country, that the withdrawal of EPA approval of the aggregate compliance approach is warranted pursuant to § 80.1457(e).

(1) EPA will make findings concerning whether the 2007 baseline amount of agricultural land in the U.S. or other country covered by a petition approved pursuant to § 80.1457 has been exceeded and will publish these findings in the FEDERAL REGISTER by November 30 of the year preceding the compliance period.

(2) If EPA finds that the 2007 baseline amount of agricultural land in the U.S. or other country covered by a petition approved pursuant to § 80.1457 has been

exceeded, beginning on the first day of July of the compliance period in question any producer or RIN-generating importer of renewable fuel made from planted crops or crop residue in the country for which such a finding is made must keep all the following records:

(i) Records that serve as evidence that the land from which the feedstock was obtained was cleared or cultivated prior to December 19, 2007 and actively managed or fallow, and nonforested on December 19, 2007. The records must be provided by the feedstock producer and must include at least one of the following documents, which must be traceable to the land in question:

(A) Sales records for planted crops, crop residue or livestock.

(B) Purchasing records for fertilizer, weed control, seeds, seedlings, or other nursery stock.

(C) A written management plan for agricultural purposes.

(D) Documentation of participation in an agricultural program sponsored by a Federal, state, or local government agency.

(E) Documentation of land management in accordance with an agricultural product certification program.

(ii) Records to verify the location where the feedstocks were produced:

(A) Maps or electronic data identifying the boundaries of the land where each type of feedstock was produced; and

(B) Bills of lading, product transfer documents or other commercial documents showing the quantity of feedstock purchased from each area identified in paragraph (g)(2)(ii)(A) of this section, and showing each transfer of custody of the feedstock from the location where it was produced to the renewable fuel facility.

(h) *Alternative renewable biomass tracking requirement.* Any foreign or domestic renewable fuel producer or RIN-generating importer may comply with the following alternative renewable biomass tracking requirement instead of the recordkeeping requirements in paragraphs (c)(1), (d), and (g) of this section:

(1) To comply with the alternative renewable biomass tracking requirement under this paragraph (h), a re-

newable fuel producer or importer must either arrange to have an independent third party conduct a comprehensive program of annual compliance surveys, or participate in the funding of an organization which arranged to have an independent third party conduct a comprehensive program of annual compliance surveys, to be carried out in accordance with a survey plan which has been approved by EPA.

(2) The annual compliance surveys under this paragraph (h) must be all the following:

(i) Planned and conducted by an independent surveyor that meets the requirements in 40 CFR 1090.55.

(ii) Conducted at renewable fuel production and import facilities and their feedstock suppliers.

(iii) Representative of all renewable fuel producers and importers in the survey area and representative of their feedstock suppliers.

(iv) Designed to achieve at least the same level of quality assurance required in paragraphs (c)(1), (d) and (g) of this section.

(3) The compliance survey program shall require the independent surveyor conducting the surveys to do all the following:

(i) Conduct feedstock audits of renewable fuel production and import facilities in accordance with the survey plan approved under this paragraph (h), or immediately notify EPA of any refusal of these facilities to allow an audit to be conducted.

(ii) Obtain the records and product transfer documents associated with the feedstocks being audited.

(iii) Determine the feedstock supplier(s) that supplied the feedstocks to the renewable fuel producer.

(iv) Confirm that feedstocks used to produce RIN-generating renewable fuels meet the definition of renewable biomass.

(v) Immediately notify EPA of any case where the feedstocks do not meet the definition of renewable biomass.

(vi) Immediately notify EPA of any instances where a renewable fuel producer, importer or feedstock supplier subject to review under the approved plan fails to cooperate in the manner described in this section.

(vii) Submit to EPA a report of each survey, within thirty days following the completion of each survey, such report to include all the following information:

(A) The identification of the person who conducted the survey.

(B) An attestation by the officer of the surveyor company that the survey was conducted in accordance with the survey plan and the survey results are accurate.

(C) Identification of the parties for whom the survey was conducted.

(D) Identification of the covered area surveyed.

(E) The dates on which the survey was conducted.

(F) The address of each facility at which the survey audit was conducted and the date of the audit.

(G) A description of the methodology used to select the locations for survey audits and the number of audits conducted.

(viii) Maintain all records relating to the survey audits conducted under this section (h) for a period of at least 5 years.

(ix) At any time permit any representative of EPA to monitor the conduct of the surveys, including observing audits, reviewing records, and analysis of the audit results.

(4) A survey plan under this paragraph (h) must include all the following:

(i) Identification of the parties for whom the survey is to be conducted.

(ii) Identification of the independent surveyor.

(iii) A methodology for determining all the following:

(A) When the audits will be conducted.

(B) The audit locations.

(C) The number of audits to be conducted during the annual compliance period.

(iv) Any other elements determined by EPA to be necessary to achieve the level of quality assurance required under paragraphs (c)(1), (d), and (g) of this section.

(5)(i) Each renewable fuel producer and importer who participates in the alternative renewable biomass tracking under this paragraph (h) must take all reasonable steps to ensure that each

feedstock producer, aggregator, distributor, or supplier cooperates with this program by allowing the independent surveyor to audit their facility and by providing to the independent surveyor and/or EPA, upon request, copies of management plans, product transfer documents, and other records or information regarding the source of any feedstocks received.

(ii) Reasonable steps under paragraph (h)(5)(i) of this section must include, but typically should not be limited to: Contractual agreements with feedstock producers, aggregators, distributors, and suppliers, which require them to cooperate with the independent surveyor and/or EPA in the manner described in paragraph (h)(5)(i) of this section.

(6) The procedure for obtaining EPA approval of a survey plan under this paragraph (h), and for revocation of any such approval, are as follows:

(i) A detailed survey plan which complies with the requirements of this paragraph (h) must be submitted to EPA, no later than September 1 of the year preceding the calendar year in which the surveys will be conducted.

(ii) The survey plan must be signed by a responsible corporate officer of the renewable fuel producer or importer, or responsible officer of the organization which arranges to have an independent surveyor conduct a program of renewable biomass compliance surveys, as applicable.

(iii) The survey plan must be sent to the attention of "RFS Program" to the address in § 80.10(a).

(iv) EPA will send a letter to the party submitting a survey plan under this section, either approving or disapproving the survey plan.

(v) EPA may revoke any approval of a survey plan under this section for cause, including an EPA determination that the approved survey plan had proved inadequate in practice or that it was not fully implemented.

(7)(i) No later than December 1 of the year preceding the year in which the surveys will be conducted, the contract with the independent surveyor shall be in effect, and an amount of money necessary to carry out the entire survey plan shall be paid to the independent

surveyor or placed into an escrow account with instructions to the escrow agent to pay the money to the independent surveyor during the course of the conduct of the survey plan.

(ii) No later than December 15 of the year preceding the year in which the surveys will be conducted, EPA must receive a copy of the contract with the independent surveyor, proof that the money necessary to carry out the survey plan has either been paid to the independent surveyor or placed into an escrow account, and, if placed into an escrow account, a copy of the escrow agreement, to be sent to the official designated in paragraph (h)(6)(iii) of this section.

(8) A failure of any renewable fuel producers or importer to fulfill or cause to be fulfilled any of the requirements of this paragraph (h) will cause the option for such party to use the alternative quality assurance requirements under this paragraph (h) to be void *ab initio*.

(i) *Requirements for biointermediate producers.* In addition to any other applicable records a biointermediate producer must maintain under this section, any biointermediate producer producing a biointermediate must keep all of the following records:

(1) Product transfer documents consistent with § 80.1453(f) and associated with the biointermediate producer's activities, if any, as transferor or transferee of biointermediates.

(2) Copies of all reports submitted to EPA under § 80.1451(i).

(3) Records related to the production of biointermediates for each biointermediate production facility, including all of the following:

- (i) Batch volume.
- (ii) Batch number.
- (iii) Type and quantity of co-products produced.
- (iv) Type and quantity of feedstocks used.
- (v) Type and quantity of fuel used for process heat.
- (vi) Calculations per § 80.1426(f), as applicable.
- (vii) Date of production.
- (viii) Results of any laboratory analysis of batch chemical composition or physical properties.

(4) Copies of registration documents required under § 80.1450, including information on products, feedstocks, facility production processes, process changes, and capacity, energy sources, and a copy of the independent third party engineering review submitted to EPA per § 80.1450(b)(2)(i).

(5) Records demonstrating that feedstocks are renewable biomass, as required under paragraphs (d), (g), (h), and (j) of this section, as applicable.

(6) For any biointermediate made from *Arundo donax* or *Pennisetum purpureum* per § 80.1426(f)(14), all applicable records described in paragraph (b)(7) of this section.

(7) Records, including contracts, related to the implementation of a QAP under §§ 80.1469 and 80.1477.

(j) *Additional requirements for producers that use separated yard waste, separate food waste, separated MSW, or biogenic waste oils/fats/greases.* Except for parties complying with the alternative recordkeeping requirements in § 80.1479, a renewable fuel or biointermediate producer that produces fuel or biointermediate from separated yard waste, separated food waste, separated MSW, or biogenic waste oils/fats/greases must keep all the following additional records:

(1) For separated yard waste, separated food waste, and biogenic waste oils/fats/greases:

(i) Documents demonstrating the amounts, by weight, purchased of separated yard waste, separated food waste, or biogenic waste oils/fats/greases for use as a feedstock in producing renewable fuel.

(ii) Documents demonstrating the location of any establishment(s) from which the waste stream consisting solely of separated yard waste, separated food waste, or biogenic waste oils/fats/greases is collected.

(iii) Such other records as may be requested by EPA.

(2) For separated municipal solid waste:

(i) Contracts and documents memorializing the sale of paper, cardboard, plastics, rubber, textiles, metals, and glass separated from municipal solid waste for recycling.

(ii) Documents demonstrating the amounts by weight purchased of post-

recycled separated yard and food waste for use as a feedstock in producing renewable fuel.

(iii) Documents demonstrating the fuel sampling methods used pursuant to § 80.1426(f)(9) and the results of all fuel analyses to determine the non-fossil fraction of fuel made from separated municipal solid waste.

(iv) Such other records as may be requested by EPA.

(k) *Additional requirements for producers of renewable fuel using biogas.* (1) Biogas/CNG/LNG and electricity in pathways involving feedstocks other than grain sorghum. A renewable fuel producer that generates RINs for renewable CNG, renewable LNG or renewable electricity pursuant to § 80.1426(f)(10) or (11), or that uses process heat from biogas to produce renewable fuel pursuant to § 80.1426(f)(12) shall keep all of the following additional records:

(i) Documentation recording the sale of renewable CNG, renewable LNG or renewable electricity for use as transportation fuel relied upon in § 80.1426(f)(10), § 80.1426(f)(11), or for use of biogas for process heat to make renewable fuel as relied upon in § 80.1426(f)(12) and the transfer of title of the biogas/CNG/LNG or renewable electricity from the point of biogas production to the facility which sells or uses the fuel for transportation purposes.

(ii) Documents demonstrating the volume and energy content of biogas/CNG/LNG, or kilowatts of renewable electricity, relied upon under § 80.1426(f)(10) that was delivered to the facility which sells or uses the fuel for transportation purposes.

(iii) Documents demonstrating the volume and energy content of biogas/CNG/LNG, or kilowatts of renewable electricity, relied upon under § 80.1426(f)(11), or biogas relied upon under § 80.1426(f)(12) that was placed into the commercial distribution.

(iv) Documents demonstrating the volume and energy content of biogas relied upon under § 80.1426(f)(12) at the point of distribution.

(v) Affidavits, EPA-approved documentation, or data from a real-time electronic monitoring system, confirming that the amount of the biogas/

CNG/LNG or renewable electricity relied upon under § 80.1426(f)(10) and (11) was used for transportation purposes only, and for no other purpose. The RIN generator shall obtain affidavits, or monitoring system data under this paragraph (k), at least once per calendar quarter.

(vi) The biogas or renewable electricity producer's Compliance Certification required under Title V of the Clean Air Act.

(vii) Any other records as requested by EPA.

(2) *Biogas and electricity in pathways involving grain sorghum as feedstock.* A renewable fuel producer that produces fuel pursuant to a pathway that uses grain sorghum as a feedstock must keep all the following additional records, as appropriate:

(i) Contracts and documents memorializing the purchase and sale of biogas and the transfer of biogas from the point of generation to the ethanol production facility.

(ii) If the advanced biofuel pathway is used, documents demonstrating the total kilowatt-hours (kWh) of electricity used from the grid, and the total kWh of grid electricity used on a per gallon of ethanol basis, pursuant to § 80.1426(f)(13).

(iii) Affidavits from the biogas producer used at the facility, and all parties that held title to the biogas, confirming that title and environmental attributes of the biogas relied upon under § 80.1426(f)(13) were used for producing ethanol at the renewable fuel production facility and for no other purpose. The renewable fuel producer must obtain these affidavits for each quarter.

(iv) The biogas producer's Compliance Certification required under Title V of the Clean Air Act.

(v) Such other records as may be requested by EPA.

(1) *Additional requirements for producers or importers of any renewable fuel other than ethanol, biodiesel, renewable gasoline, renewable diesel, biogas-derived renewable fuel, or renewable electricity.* A renewable fuel producer that generates RINs for any renewable fuel other than ethanol, biodiesel, renewable gasoline, renewable diesel that meets the Grade No. 1-D or No. 2-D specification in

ASTM D975 (incorporated by reference, see § 80.12), biogas-derived renewable fuel or renewable electricity must keep all the following additional records:

(1) Documents demonstrating the total volume of renewable fuel produced, total volume of renewable fuel blended into gasoline and distillate fuel, and the percentage of renewable fuel in each batch of finished fuel.

(2) Contracts and documents memorializing the sale of renewable fuel to parties who blend the fuel into gasoline or diesel fuel to produce a transportation fuel, heating oil or jet fuel, or who use the renewable fuel in its neat form for a qualifying fuel use.

(3) For each batch of renewable fuel that generated RINs under § 80.1426(f)(17)(i)(B)(2), one or more affidavits from the party that blended or used the renewable fuel that includes all the following information:

(i) Quantity of renewable fuel received from the producer or importer.

(ii) Date the renewable fuel was received from producer.

(iii) A description of the fuel that the renewable fuel was blended into and the blend ratios for each batch, if applicable.

(iv) A description of the finished fuel, and a statement that the fuel meets all applicable standards and was sold for use as a transportation fuel, heating oil or jet fuel.

(v) Quantity of assigned RINs received with the renewable fuel, if applicable.

(vi) Quantity of assigned RINs that the end user separated from the renewable fuel, if applicable.

(4) Such other records as may be requested by EPA.

(m) *Requirements for independent third-party auditors.* Any independent third-party auditor (as described at § 80.1471) must keep all of the following records for a period of at least five years:

(1) Copies of all reports submitted to the EPA under § 80.1451(g), as applicable.

(2) Records related to the implementation of a QAP under § 80.1469 for each facility including records from facility audits and ongoing and quarterly monitoring activities.

(3) Records related to the verification of RINs under § 80.1471(e).

(4) Copies of communications sent to and received from renewable fuel producers or foreign renewable fuel producers, feedstock suppliers, purchasers of RINs, and obligated parties.

(5) Copies of all notes relating to the implementation of a QAP under § 80.1469.

(6) List of RINs reported to the EPA and renewable fuel producers or foreign renewable fuel producers as potentially invalidly generated under § 80.1474 compliance.

(7) Records related to the professional liability insurance requirement under § 80.1471(c).

(8) Copies of all records related to any financial assurance instrument as required under § 80.1470 under a quality assurance plan implemented under § 80.1469(a) during the interim period.

(9) Copies of all records and notifications related to the identification of a potentially invalid RIN under § 80.1474(b).

(10) Copies of all reports required under § 80.1464.

(11) Such other records as may be requested by EPA.

(n) *Additional requirements for producers of renewable fuel using crop residue.* Producers of renewable fuel using crop residue must keep records of all of the following:

(1) The specific crop residue feedstock(s) utilized to produce renewable fuel for each batch of renewable fuel produced.

(2) The total quantity of each specific crop residue feedstock used for each batch.

(3) Total amount of fuel produced under the crop residue pathway for each batch.

(o) *Requirements for parties that redesignate certified NTDF as MVNRLM diesel fuel.* Parties that redesignate certified NTDF as MVNRLM diesel fuel under § 80.1408 must keep all of the following additional records:

(1) Records related to all transactions in which certified NTDF is redesignated as MVNRLM diesel fuel.

(2) Records related to all transactions in which MVNRLM diesel fuel is redesignated to a non-transportation use.

(3) Records related to the volume of MVNRLM diesel fuel received.

(4) Records related to the volume of MVNRLM diesel fuel delivered.

(5) Records related to the volume of certified NTDF received.

(6) Records related to the volume of certified NTDF delivered.

(p) *Requirements for recordkeeping of RIN holdings for all parties transacting or owning RINs.* (1) Starting January 1, 2020, parties must retain records related to end-of-day separated D6 RIN holdings, and any associated calculations recorded in order to meet the RIN holdings requirements described in § 80.1435 for a period of at least five years. Such records must include information related to any corporate affiliates, contractual affiliates, and their RIN holdings and calculations.

(2) Parties must retain records related to their reports to EPA regarding threshold compliance under §§ 80.1435 and 80.1451 for a period of at least five years.

(q) *Requirements for recordkeeping of contractual and corporate affiliates.* (1) Parties must retain records including, but not limited to, the name, address, business location, contact information, and description of relationship, for each RIN-holding corporate affiliate for a period of at least five years. For the corporate affiliate group, a relational diagram.

(2) Parties must retain records including, but not limited to, the name, address, business location, contact information, and contract or other agreement for each contractual affiliate for a period of at least five years.

(3) If a party claims an exemption from aggregation under § 80.1435(e), the party must retain all records in support of the exemption for a period of at least five years and must provide these records to the attest auditor under § 80.1464, and to EPA upon request.

(r) *Transaction requirement.* Beginning July 1, 2010, all parties must keep transaction information sent to EMTS in addition to other records required under this section.

(1) For buy or sell transactions of separated RINs, parties must retain records substantiating the price reported to EPA under § 80.1452.

(2) For buy or sell transactions of separated RINs on or after January 1, 2020, parties must retain records demonstrating the transaction mechanism (*e.g.*, spot market or fulfilling a term contract).

(s) *Record retention requirement.* (1) The records required under paragraphs (a) through (d), (f) through (l), (n), and (r) of this section and under § 80.1453 must be kept for five years from the date they were created, except that records related to transactions involving RINs must be kept for five years from the date of the RIN transaction.

(2) The records required under paragraph (e) of this section must be kept through calendar year 2022.

(t) *Record availability requirement.* On request by the EPA, the records required under this section and under § 80.1453 must be made available to EPA. For records that are electronically generated or maintained, the equipment or software necessary to read the records shall be made available; or, if requested by the EPA, electronic records shall be converted to paper documents.

(u) *Record transfer requirement.* The records required in paragraphs (b)(3) and (c)(1) of this section must be transferred with any renewable fuel sent to the importer of that renewable fuel by any non-RIN-generating foreign producer.

(v) *English language records.* Any document requested by EPA under this section must be submitted in English or must include an English translation.

[75 FR 14863, Mar. 26, 2010, as amended at 75 FR 26046, May 10, 2010; 75 FR 76829, Dec. 9, 2010; 75 FR 79978, Dec. 21, 2010; 77 FR 74606, Dec. 17, 2012; 78 FR 22789, Apr. 17, 2013; 78 FR 41715, July 11, 2013; 78 FR 62471, Oct. 22, 2013; 79 FR 42118, 42165, July 18, 2014; 84 FR 27024, June 10, 2019; 85 FR 7080, Feb. 6, 2020; 85 FR 78467, Dec. 4, 2020; 87 FR 39670, July 1, 2022; 87 FR 54166, Sept. 2, 2022; 88 FR 44589, July 12, 2023]

§ 80.1455 [Reserved]

§ 80.1456 What are the provisions for cellulosic biofuel waiver credits?

(a) If EPA reduces the applicable volume of cellulosic biofuel pursuant to section 211(o)(7)(D)(i) of the Clean Air Act (42 U.S.C. 7545(o)(7)(D)(i)) for any given compliance year, then EPA will

provide cellulosic biofuel waiver credits for purchase for that compliance year.

(1) The price of these cellulosic biofuel waiver credits will be set by EPA on an annual basis in accordance with paragraph (d) of this section.

(2) The total cellulosic biofuel waiver credits available will be equal to the reduced cellulosic biofuel volume established by EPA for the compliance year.

(b) *Use of cellulosic biofuel waiver credits.* (1) Cellulosic biofuel waiver credits are only valid for use in the compliance year that they are made available.

(2) Cellulosic biofuel waiver credits are nonrefundable.

(3) Cellulosic biofuel waiver credits are nontransferable.

(4) Cellulosic biofuel waiver credits may only be used for an obligated party's current year cellulosic biofuel RVO and not towards any prior year deficit cellulosic biofuel volume obligations.

(c) *Purchase of cellulosic biofuel waiver credits.* (1) Only parties with an RVO for cellulosic biofuel may purchase cellulosic biofuel waiver credits.

(2) Cellulosic biofuel waiver credits shall be purchased from EPA at the time that a party submits its annual compliance report to EPA pursuant to § 80.1451(a)(1).

(3) Parties may not purchase more cellulosic biofuel waiver credits than their current year cellulosic biofuel RVO minus cellulosic biofuel RINs with a D code of 3 that they own.

(4) Cellulosic biofuel waiver credits may only be used to meet an obligated party's cellulosic biofuel RVO.

(d) *Setting the price of cellulosic biofuel waiver credits.* (1) The price for cellulosic biofuel waiver credits shall be set equal to the greater of:

(i) \$0.25 per cellulosic biofuel waiver credit, adjusted for inflation in comparison to calendar year 2008; or

(ii) \$3.00 less the wholesale price of gasoline per cellulosic biofuel waiver credit, adjusted for inflation in comparison to calendar year 2008.

(2) The wholesale price of gasoline will be calculated by averaging the most recent twelve monthly values for U.S. Total Gasoline Bulk Sales (Price)

by Refiners as provided by the Energy Information Administration that are available as of September 30 of the year preceding the compliance period.

(3) The inflation adjustment will be calculated by comparing the Consumer Price Index for All Urban Consumers (CPI-U): U.S. City Average, Unadjusted Index for All Items expenditure category as provided by the Bureau of Labor Statistics for June of the year preceding the compliance period to the comparable value reported for January 2009.

(e) Cellulosic biofuel waiver credits under this section will only be able to be purchased on forms and following procedures prescribed by EPA.

[75 FR 14863, Mar. 26, 2010, as amended at 80 FR 18141, Apr. 3, 2015]

§ 80.1457 Petition process for aggregate compliance approach for foreign countries.

(a) EPA may approve a petition for application of the aggregate compliance approach to planted crops and crop residue from existing agricultural land in a foreign country if EPA determines that an aggregate compliance approach will provide reasonable assurance that planted crops and crop residue from the country in question meet the definition of renewable biomass and will continue to meet the definition of renewable biomass, based on the submission of credible, reliable, and verifiable data.

(1) As part of its evaluation, EPA will consider all of the following:

(i) Whether there has been a reasonable identification of the “2007 baseline area of land,” defined as the total amount of cropland, pastureland, and land that is equivalent to U.S. Conservation Reserve Program land in the country in question that was actively managed or fallow and nonforested on December 19, 2007.

(ii) Whether information on the total amount of cropland, pastureland, and land that is equivalent to U.S. Conservation Reserve Program land in the country in question for years preceding and following calendar year 2007 shows that the 2007 baseline area of land identified in paragraph (a)(1)(i) of this section is not likely to be exceeded in the future.

(iii) Whether economic considerations, legal constraints, historical land use and agricultural practices and other factors show that it is likely that producers of planted crops and crop residue will continue to use agricultural land within the 2007 baseline area of land identified in paragraph (a)(1)(i) of this section into the future, as opposed to clearing and cultivating land not included in the 2007 baseline area of land.

(iv) Whether there is a reliable method to evaluate on an annual basis whether the 2007 baseline area of land identified in paragraph (a)(1)(i) of this section is being or has been exceeded.

(v) Whether a credible and reliable entity has been identified to conduct data gathering and analysis, including annual identification of the aggregate amount of cropland, pastureland, and land that is equivalent to U.S. Conservation Reserve Program land, needed for the annual EPA evaluation specified in § 80.1454(g)(1), and whether the data, analyses, and methodologies are publicly available.

(2) [Reserved]

(b) Any petition and all supporting materials submitted under paragraph (a) of this section must be submitted both in English and its original language (if other than English), and must include all of the following or an explanation of why it is not needed for EPA to consider the petition:

(1) Maps or electronic data identifying the boundaries of the land for which the petitioner seeks approval of an aggregate compliance approach.

(2) The total amount of land that is cropland, pastureland, or land equivalent to U.S. Conservation Reserve Program land within the geographic boundaries specified in paragraph (b)(1) of this section that was cleared or cultivated prior to December 19, 2007 and that was actively managed or fallow and nonforested on that date, and

(3) Land use data that demonstrates that the land identified in paragraph (b)(1) of this section is cropland, pastureland or land equivalent to U.S. Conservation Reserve Program land that was cleared or cultivated prior to December 19, 2007, and that was actively managed or fallow and nonfor-

ested on that date, which may include any of the following:

(i) Satellite imagery or data.

(ii) Aerial photography.

(iii) Census data.

(iv) Agricultural survey data.

(v) Agricultural economic modeling data.

(4) Historical land use data for the land within the geographic boundaries specified in paragraph (b)(1) of this section to the current year, which may include any of the following:

(i) Satellite imagery or data.

(ii) Aerial photography.

(iii) Census data.

(iv) Agricultural surveys.

(v) Agricultural economic modeling data.

(5) A description of any applicable laws, agricultural practices, economic considerations, or other relevant factors that had or may have an effect on the use of agricultural land within the geographic boundaries specified in paragraph (b)(1) of this section, including information regarding the efficacy and enforcement of relevant laws and regulations.

(6) A plan describing how the petitioner will identify a credible and reliable entity who will, on a continuing basis, conduct data gathering, analysis, and submittal to assist EPA in making an annual determination of whether the criteria specified in paragraph (a) of this section remains satisfied.

(7) A letter, signed by a national government representative at the ministerial level or equivalent, confirming that the petition and all supporting data have been reviewed and verified by the ministry (or ministries) or department(s) of the national government with primary expertise in agricultural land use patterns, practices, data, and statistics, that the data support a finding that planted crops and crop residue from the specified country meet the definition of renewable biomass and will continue to meet the definition of renewable biomass, and that the responsible national government ministry (or ministries) or department(s) will review and verify the data submitted on an annual basis to facilitate EPA's annual evaluation of the 2007 baseline area of land specified in

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§ 80.1454(g)(1) for the country in question.

(8) Any additional information that EPA may require.

(c) EPA will issue a FEDERAL REGISTER notice informing the public of receipt of any petition submitted pursuant to this section and will provide a 60-day period for public comment. If EPA approves a petition it will issue a FEDERAL REGISTER notice announcing its decision and specifying an effective date for the application of the aggregate compliance approach to planted crops and crop residue from the country. Thereafter, the planted crops and crop residue from the country will be covered by the aggregate compliance approach set forth in § 80.1454(g), or as otherwise specified pursuant to paragraph (d) of this section.

(d) If EPA grants a petition to establish an aggregate compliance approach for planted crops and crop residue from a foreign country, it may include any conditions that EPA considers appropriate in light of the conditions and circumstances involved.

(e)(1) EPA may withdraw its approval of the aggregate compliance approach for the planted crops and crop residue from the country in question if:

(i) EPA determines that the data submitted pursuant to the plan described in paragraph (b)(6) of this section does not demonstrate that the amount of cropland, pastureland and land equivalent to U.S. Conservation Reserve Program land within the geographic boundaries covered by the approved petition does not exceed the 2007 baseline area of land;

(ii) EPA determines based on other information that the criteria specified in paragraph (a) of this section is no longer satisfied; or

(iii) EPA determines that the data needed for its annual evaluation has not been collected and submitted in a timely and appropriate manner.

(2) If EPA withdraws its approval for a given country, then producers using planted crops or crop residue from that country will be subject to the individual recordkeeping and reporting requirements of § 80.1454(b) through (d) in

accordance with the schedule specified in § 80.1454(g).

[75 FR 76829, Dec. 9, 2010, as amended at 88 FR 44590, July 12, 2023]

§ 80.1458 Storage of renewable fuel, RNG, or biointermediate prior to registration.

(a) *Applicability.* (1) A renewable fuel producer may store renewable fuel for the generation of RINs prior to EPA acceptance of their registration under § 80.1450(b) if all the requirements of this section are met.

(2) An RNG producer may store RNG prior to EPA acceptance of their registration under § 80.135 if all the requirements of this section are met.

(3) A biointermediate producer may store biointermediate (including biogas used to produce a biogas-derived renewable fuel) prior to EPA acceptance of their registration under § 80.1450(b) if all the requirements of this section are met.

(b) *Storage requirements.* In order for a renewable fuel, RNG, or biointermediate producer to store renewable fuel, RNG, or biointermediate under this section, the producer must do the following:

(1) Produce the stored renewable fuel, RNG, or biointermediate after an independent third-party engineer has conducted an engineering review for the renewable fuel, RNG, or biointermediate production facility under § 80.1450(b)(2).

(2) Produce the stored renewable fuel, RNG, or biointermediate in accordance with all applicable requirements under this part.

(3) Make no change to the facility after the independent third-party engineer completed the engineering review.

(4) Store the renewable fuel, RNG, or biointermediate at the facility that produced the renewable fuel, RNG, or biointermediate.

(5) Maintain custody and title to the stored renewable fuel, RNG, or biointermediate until EPA accepts the producer's registration under § 80.1450(b).

(c) *RIN generation.* (1) A RIN generator may only generate RINs for stored

renewable fuel, stored RNG, or renewable fuel produced from stored biointermediate if the RIN generator generates the RINs under §§ 80.125, 80.1426, and 80.1452, as applicable, after EPA accepts their registration under § 80.1450(b) and meets all other applicable requirements under this part for RIN generation.

(2) The RIN year of any RINs generated for stored renewable fuel, stored RNG, or renewable fuel produced from stored biointermediate is the year that the renewable fuel or RNG was produced.

(d) *Limitations.* RNG injected into a natural gas commercial pipeline system prior to EPA acceptance of a renewable fuel producer's registration under § 80.135 does not meet the requirements of this section and may not be stored.

[88 FR 44590, July 12, 2023]

§ 80.1459 [Reserved]

§ 80.1460 What acts are prohibited under the RFS program?

(a) *Renewable fuels producer or importer violation.* No person shall produce or import a renewable fuel without complying with the requirements of § 80.1426 regarding the generation and assignment of RINs.

(b) *RIN generation and transfer violations.* No person shall do any of the following:

(1) Generate a RIN for a fuel that is not a renewable fuel, or for which the applicable renewable fuel volume was not produced.

(2) Create or transfer to any person a RIN that is invalid under § 80.1431.

(3) Transfer to any person a RIN that is not properly identified as required under § 80.1425.

(4) Transfer to any person a RIN with a K code of 1 without transferring an appropriate volume of renewable fuel to the same person on the same day.

(5) Introduce into commerce any renewable fuel produced from a feedstock, biointermediate, or through a process that is not described in the person's registration information.

(6) Generate a RIN for fuel for which RINs have previously been generated unless the RINs were generated under § 80.1426(c)(6).

(7) Generate a RIN for fuel that fails to meet all the conditions set forth in an approval document for a pathway petition submitted under § 80.1416.

(8) Generate a RIN for fuel that was produced from a biointermediate for which the fuel and biointermediate were not audited under an EPA-approved quality assurance plan.

(c) *RIN use violations.* No person shall do any of the following:

(1) Fail to acquire sufficient RINs, or use invalid RINs, to meet the person's RVOs under § 80.1427.

(2) Use a validly generated RIN to meet the person's RVOs under § 80.1427, or separate and transfer a validly generated RIN, where the person using the RIN ultimately uses the renewable fuel volume associated with the RIN in an application other than for use as transportation fuel, jet fuel, or heating oil.

(3) Use a validly generated RIN to meet the person's RVOs under § 80.1427, or separate and transfer a validly generated RIN, where the person ultimately uses the renewable fuel volume associated with the RIN in an application other than for use as transportation fuel, jet fuel, or heating oil.

(d) *RIN retention violation.* No person shall retain RINs in violation of the requirements in § 80.1428(a)(4).

(e) *Causing a violation.* No person shall cause another person to commit an act in violation of any prohibited act under this section.

(f) *Failure to meet a requirement.* No person shall fail to meet any requirement that applies to that person under this subpart.

(g) *Failing to use a renewable fuel oil for its intended use.* No person shall use fuel oil that meets paragraph (2) of the definition of "heating oil" in § 80.2 and for which RINs have been generated in an application other than to heat or cool interior spaces of homes or buildings to control ambient climate for human comfort.

(h) *RIN separation violations.* No person shall do any of the following:

(1) Identify separated RINs in EMTS with the wrong separation reason code.

(2) Identify separated RINs in EMTS without having a qualifying separation event pursuant to § 80.1429.

(3) Separate more than 2.5 RINs per gallon of renewable fuel that has a

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valid qualifying separation event pursuant to § 80.1429.

(4) Separate RINs outside of the requirements in § 80.1452(c).

(5) Improperly separate RINs in any other way not listed in paragraphs (h)(1)–(4) of this section.

(i) *Independent third-party auditor violations.* No person shall do any of the following:

(1) Fail to fully implement a QAP approved under § 80.1469.

(2) Fail to fully, accurately, and timely notify all appropriate parties of potentially invalid RINs under § 80.1474(b).

(3) Verify a RIN under § 80.1471(e) without verifying every applicable requirement in § 80.1469 and verifying each element in an approved QAP.

(j) *Redesignation violations.* No person may exceed the balance requirements at § 80.1408(a)(2)(i) without incurring an RVO.

(k) *Biointermediate-related violations.* No person may do any of the following:

(1) Introduce into commerce for use in the production of a renewable fuel any biointermediate produced from a feedstock or through a process that is not described in the person's registration information.

(2) Produce a renewable fuel at more than one facility unless the person uses a biointermediate or the renewable biomass is not substantially altered. Form changes of renewable biomass such as bleaching through adsorption, rendering fats, chopping, crushing, grinding, pelletizing, filtering, compacting/compression, centrifuging, degumming, dewatering/drying, melting, triglycerides resulting from deodorizing, or the addition of water to produce a slurry do not constitute substantial alteration.

(3) Transfer a biointermediate from a biointermediate production facility to a facility other than the renewable fuel production facility specified in the biointermediate producer's registration under § 80.1450(b)(1)(ii)(B)(I).

(4) Isolate or concentrate non-characteristic components of the feedstock to yield a biointermediate not identified in a registration accepted by EPA.

(5) No person may transfer a biointermediate without complying with the PTD requirements in § 80.1453(f).

(1) *Independent third-party engineer violations.* No person shall do any of the following:

(1) Fail to identify any incorrect information submitted by any party as specified in § 80.1450(b)(2).

(2) Fail to meet any requirement related to engineering reviews as specified in § 80.1450(b)(2).

(3) Fail to disclose to EPA any financial, professional, business, or other interests with parties for whom the independent third-party engineer provides services under § 80.1450.

(4) Fail to meet any requirement related to the independent third-party engineering review requirements in § 80.1450(b)(2) or (d)(1).

[75 FR 14863, Mar. 26, 2010, as amended at 75 FR 26047, May 10, 2010; 77 FR 1357, Jan. 9, 2012; 78 FR 62471, Oct. 22, 2013; 79 FR 42119, July 18, 2014; 85 FR 7080, Feb. 6, 2020; 87 FR 39671, July 1, 2022; 88 FR 44591, July 12, 2023]

§ 80.1461 Who is liable for violations under the RFS program?

(a) *Liability for violations of prohibited acts.* (1) Any person who violates a prohibition under § 80.1460(a) through (d) or (g) through (k) is liable for the violation of that prohibition.

(2) Any person who causes another person to violate a prohibition under § 80.1460(a) through (d) or (g) through (k) is liable for a violation of § 80.1460(e).

(b) *Liability for failure to meet other provisions of this subpart.* (1) Any person who fails to meet a requirement of any provision of this subpart is liable for a violation of that provision.

(2) Any person who causes another person to fail to meet a requirement of any provision of this subpart is liable for causing a violation of that provision.

(c) *Parent corporation liability.* Any parent corporation is liable for any violation of this subpart that is committed by any of its subsidiaries.

(d) *Joint venture liability.* Each partner to a joint venture is jointly and severally liable for any violation of this subpart that is committed by the joint venture operation.

(e) *Biointermediate liability.* When a biointermediate contained in any storage tank at any facility owned, leased, operated, controlled, or supervised by

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any biointermediate producer, biointermediate importer, renewable fuel producer, or foreign ethanol producer is found in violation of a prohibition described in §80.1460(k)(1) and (3), the following persons shall be deemed in violation:

(1) Each biointermediate producer, biointermediate importer, renewable fuel producer, renewable fuel importer, or foreign ethanol producer who owns, leases, operates, controls, or supervises the facility where the violation is found.

(2) Each biointermediate producer, biointermediate importer, renewable fuel producer, renewable fuel importer, or foreign ethanol producer who manufactured, imported, sold, offered for sale, dispensed, offered for supply, stored, transported, or caused the transportation of any biointermediate that is in the storage tank containing the biointermediate found to be in violation.

(3) Each carrier who dispensed, supplied, stored, or transported any biointermediate that was in the storage tank containing the biointermediate found to be in violation, provided that EPA demonstrates, by reasonably specific showings using direct or circumstantial evidence, that the carrier caused the violation.

(f) *Third-party liability.* Any party allowed under this subpart to conduct sampling and testing on behalf of a regulated party and does so to demonstrate compliance with the requirements of this subpart must meet those requirements in the same way that the regulated party must meet those requirements. The regulated party and the third party are both liable for any violations arising from the third party's failure to meet the requirements of this subpart.

[75 FR 14863, Mar. 26, 2010, as amended at 79 FR 42119, July 18, 2014; 85 FR 7080, Feb. 6, 2020; 87 FR 39671, July 1, 2022; 88 FR 44591, July 12, 2023]

§ 80.1462 [Reserved]

§ 80.1463 What penalties apply under the RFS program?

(a) Any person who is liable for a violation under §80.1461 is subject to a civil penalty as specified in sections 205

and 211(d) of the Clean Air Act, for every day of each such violation and the amount of economic benefit or savings resulting from each violation.

(b) Any person liable under §80.1461(a) for a violation of §80.1460(c) for failure to meet its RVOs, or §80.1460(e) for causing another person to fail to meet their RVOs during any compliance period, is subject to a separate day of violation for each day in the compliance period.

(c) Any person liable under §80.1461(b) for failure to meet, or causing a failure to meet, a requirement of any provision of this subpart is liable for a separate day of violation for each day such a requirement remains unfulfilled.

(d) Any person liable under §80.1461(a) for a violation of §80.1460(b)(1) through (4) or (6) through (8) is subject to a separate day of violation for each day that an invalid RIN remains available for an obligated party or exporter of renewable fuel to demonstrate compliance with the RFS program.

[75 FR 14863, Mar. 26, 2010, as amended at 75 FR 26047, May 10, 2010; 79 FR 42165, July 18, 2014; 85 FR 7080, Feb. 6, 2020; 87 FR 39671, July 1, 2022]

§ 80.1464 What are the attest engagement requirements under the RFS program?

The requirements regarding annual attest engagements in 40 CFR 1090.1800, also apply to any attest engagement procedures required under this subpart M. In addition to any other applicable attest engagement procedures, such as the requirements in §80.1466, the following annual attest engagement procedures are required under this subpart.

(a) *Obligated parties and exporters of renewable fuel.* The following attest procedures shall be completed for any obligated party or exporter of renewable fuel:

(1) *Annual compliance demonstration report.* (i) Obtain and read a copy of the annual compliance demonstration report required under §80.1451(a)(1) which contains information regarding all the following:

(A) The obligated party's volume of all products listed in §80.1407(c) and (e),

or the exporter of renewable fuel's volume of each category of exported renewable fuel identified in § 80.1430(b)(1) through (b)(4).

(B) RVOs.

(C) RINs used for compliance.

(ii) Obtain documentation of any volumes of renewable fuel used in products listed in § 80.1407(c) and (e) at the refinery or import facility or exported during the reporting year; compute and report as a finding the total volumes of renewable fuel represented in these documents.

(iii) For obligated parties, compare the volumes of products listed in § 80.1407(c), (e), and (f) reported to EPA in the report required under § 80.1451(a)(1) with the volumes, excluding any renewable fuel volumes, contained in the inventory reconciliation analysis under 40 CFR 1090.1810 and the volume of non-renewable diesel produced or imported. Verify that the volumes reported to EPA agree with the volumes in the inventory reconciliation analysis and the volumes of non-renewable diesel produced or imported, and report as a finding any exception.

(iv) For exporters of renewable fuel, perform all of the following:

(A) Obtain the database, spreadsheet, or other documentation that the exporter of renewable fuel maintains for all exported renewable fuel.

(B) Compare the volume of products identified in these documents with the volumes reported to EPA.

(C) Verify that the volumes reported to EPA agree with the volumes identified in the database, spreadsheet, or other documentation, and report as a finding any exception.

(D) Select sample batches in accordance with the guidelines in 40 CFR 1090.1805 from each separate category of renewable fuel exported and identified in § 80.1451(a); obtain invoices, bills of lading and other documentation for the representative samples; state whether any of these documents refer to the exported fuel as advanced biofuel or cellulosic biofuel; and report as a finding whether or not the exporter of renewable fuel calculated an advanced biofuel or cellulosic biofuel RVO for these fuels pursuant to § 80.1430(b)(1) or (3).

(v) Compute and report as a finding the RVOs for the obligated party or exporter of renewable fuel, and any deficit RVOs carried over from the previous year or carried into the subsequent year, and verify that the values agree with the values reported to EPA.

(vi) Obtain the database, spreadsheet, or other documentation for all RINs by type of renewable fuel used for compliance during the year being reviewed; calculate the total number of RINs associated with each type of renewable fuel used for compliance by year of generation represented in these documents; state whether this information agrees with the report to EPA and report as a finding any exceptions.

(vii) For obligated parties that redesignate certified NTDF as MVNRLM diesel fuel under § 80.1408, perform the additional attest engagement procedures described at § 80.1475 and report any findings in the report described in paragraph (d) of this section. Parties that do not incur an RVO under § 80.1408(a)(2)(i) and do not otherwise need to complete an attest engagement under this paragraph (a) do not need to arrange for the additional attest engagement procedures under § 80.1475 to be performed.

(2) *RIN transaction reports and product transfer documents.* (i) Obtain and read copies of a representative sample, selected in accordance with the guidelines in 40 CFR 1090.1805, of each RIN transaction type (RINs purchased, RINs sold, RINs retired, RINs separated, RINs reinstated) included in the RIN transaction reports required under § 80.1451(a)(2) for the compliance year.

(ii) Obtain contracts, invoices, or other documentation for the representative samples of RIN transactions; compute the transaction types, transaction dates, and RINs traded; state whether the information agrees with the party's reports to EPA and report as a finding any exceptions.

(iii) Verify that the product transfer documents for the representative samples under paragraph (a)(2)(i) of this section of RINs sold and the RINs purchased contain the applicable information required under § 80.1453 and report as a finding any product transfer document that does not contain the required information.

(iv) Verify the accuracy of the information contained in the product transfer documents reviewed pursuant to paragraph (a)(2)(iii) of this section and report as a finding any exceptions.

(3) *RIN activity reports.* (i) Obtain and read copies of all quarterly RIN activity reports required under § 80.1451(a)(3) for the compliance year.

(ii) Obtain the database, spreadsheet, or other documentation used to generate the information in the RIN activity reports; compare the RIN transaction samples reviewed under paragraph (a)(2) of this section with the corresponding entries in the database or spreadsheet and report as a finding any discrepancies; compute the total number of current-year and prior-year RINs owned at the start and end of each quarter, and for parties that reported RIN activity for RINs assigned to a volume of renewable fuel, the volume and type of renewable fuel owned at the end of each quarter, as represented in these documents; and state whether this information agrees with the party's reports to EPA.

(4) *RIN holdings.* (i) Obtain and read copies of the RIN holdings calculations performed under § 80.1435 for the party and any corporate affiliates and the applicable database, spreadsheet, or other documentation the party maintains.

(ii) Select sample calculations in accordance with the guidelines in 40 CFR 1090.1805; compute and report as a finding the results of these calculations and verify that the results agree with the values reported to EPA.

(iii) Identify any date(s) where the aggregated calculation exceeded the RIN holding threshold(s) specified in § 80.1435. Compute and state as a finding whether this information agrees with the party's reports (notification of threshold exceedance) to EPA.

(5) *Affiliates.* Review reports and records related to corporate and contractual affiliates and state whether this information agrees with the party's reports to EPA, and report as a finding any exceptions.

(6) *Exemption.* Review and confirm the existence of records supporting an exemption from aggregation claimed by the party under § 80.1435(e), and report as a finding any exceptions.

(7) *Compliance reports.* Compare the list of compliance reports submitted to EPA during the compliance period to the reporting requirements for the entity in § 80.1451. Report as a finding any reporting requirements that were not completed.

(b) *Renewable fuel producers and RIN-generating importers.* The following attest procedures shall be completed for any RIN-generating renewable fuel producer or importer:

(1) *RIN generation reports.* (i) Obtain and read copies of the reports required under § 80.1451(b)(1), (e), and (d) for the compliance year.

(ii) Obtain production data for each renewable fuel batch by type of renewable fuel that was produced or imported during the year being reviewed; compute the RIN numbers, production dates, types, volumes of ethanol denaturant and applicable equivalence values, and production volumes for each batch; report the total RINs generated during the year being reviewed; and state whether this information agrees with the party's reports to EPA. Report as a finding any exceptions.

(iii) Verify that the proper number of RINs were generated and assigned pursuant to the requirements of § 80.1426 for each batch of renewable fuel produced or imported. For RINs generated for ethanol produced from corn starch at a facility using an approved pathway that requires the use of one or more of the advanced technologies listed in Table 2 to § 80.1426, verify that the required advanced technology or technologies were employed in accordance with the specifications in Tables 1 and 2 to § 80.1426, including any requirement for application to 90% of the production on a calendar year basis.

(iv) Obtain product transfer documents for a representative sample, selected in accordance with the guidelines in 40 CFR 1090.1805, of renewable fuel batches produced or imported during the year being reviewed; verify that the product transfer documents contain the applicable information required under § 80.1453; verify the accuracy of the information contained in the product transfer documents; report

as a finding any product transfer document that does not contain the applicable information required under § 80.1453.

(v)(A) Obtain documentation, as required under § 80.1451(b), (d), and (e), associated with feedstock and biointermediate purchases for a representative sample of feedstocks and biointermediates separately, selected in accordance with the guidelines in 40 CFR 1090.1805, of renewable fuel batches produced or imported during the year being reviewed.

(B) Verify that feedstocks were properly identified in the reports and met the definition of renewable biomass.

(C) Verify that biointermediates were properly identified in the reports, as applicable.

(2) *RIN transaction reports and product transfer documents.* (i) Obtain and read copies of a representative sample, selected in accordance with the guidelines in 40 CFR 1090.1805, of each transaction type (RINs purchased, RINs sold, RINs retired, RINs separated, RINs reinstated) included in the RIN transaction reports required under § 80.1451(b)(2) for the compliance year.

(ii) Obtain contracts, invoices, or other documentation for the representative samples of RIN transactions; compute the transaction types, transaction dates, and the RINs traded; state whether this information agrees with the party's reports to EPA and report as a finding any exceptions.

(iii) Verify that the product transfer documents for the representative samples under paragraph (b)(2)(i) of this section of RINs sold and the RINs purchased contain the applicable information required under § 80.1453 and report as a finding any product transfer document that does not contain the required information.

(iv) Verify the accuracy of the information contained in the product transfer documents reviewed pursuant to paragraph (b)(2)(iii) of this section and report as a finding any exceptions.

(3) *RIN activity reports.* (i) Obtain and read copies of the quarterly RIN activity reports required under § 80.1451(b)(3) for the compliance year.

(ii) Obtain the database, spreadsheet, or other documentation used to generate the information in the RIN activ-

ity reports; compare the RIN transaction samples reviewed under paragraph (b)(2) of this section with the corresponding entries in the database or spreadsheet and report as a finding any discrepancies; report the total number of each RIN generated during each quarter and compute and report the total number of current-year and prior-year RINs owned at the start and end of each quarter, and for parties that reported RIN activity for RINs assigned to a volume of renewable fuel, the volume of renewable fuel owned at the end of each quarter, as represented in these documents; and state whether this information agrees with the party's reports to EPA.

(4) *Independent Third Party Engineering Review.* (i) Obtain documentation of independent third-party engineering reviews required under § 80.1450(b)(2). Such documentation must include the date of the last engineering review along with date of the actual site visit by the professional engineer.

(ii) Review and verify the written verification and records generated as part of the independent third party engineering review.

(iii) Verify that independent third-party engineering reviews conducted under § 80.1450(d)(3) occurred within the three-year cycle. Report as a finding if the engineering review was not updated as part of the three-year cycle under § 80.1450(d)(3).

(5) *RIN holdings.* (i) Obtain and read copies of the RIN holdings calculations performed under § 80.1435 for the party and any corporate affiliates and the applicable database, spreadsheet, or other documentation the party maintains.

(ii) Select sample calculations in accordance with the guidelines in 40 CFR 1090.1805; compute and report as a finding the results of these calculations and verify that the results agree with the values reported to EPA.

(iii) Identify any date(s) where the aggregated calculation exceeded the RIN holding threshold(s) specified in § 80.1435. Compute and state as a finding whether this information agrees with the party's reports (notification of threshold exceedance) to EPA.

(6) *Affiliates.* Review reports and records related to corporate and contractual affiliates and state whether

this information agrees with the party's reports to EPA, and report as a finding any exceptions.

(7) *Exemption.* Review and confirm the existence of records supporting an exemption from aggregation claimed by the party under § 80.1435(e), and report as a finding any exceptions.

(8) *Compliance reports.* Compare the list of compliance reports submitted to EPA during the compliance period to the reporting requirements for the entity in § 80.1451. Report as a finding any reporting requirements that were not completed.

(c) *Other parties owning RINs.* Except as specified in paragraph (c)(6) of this section, the following attest procedures must be completed for any party other than an obligated party or renewable fuel producer or importer that owns any RINs during a calendar year:

(1) *RIN transaction reports and product transfer documents.*

(i) Obtain and read copies of a representative sample, selected in accordance with the guidelines in 40 CFR 1090.1805, of each RIN transaction type (RINs purchased, RINs sold, RINs retired, RINs separated, RINs reinstated) included in the RIN transaction reports required under § 80.1451(c)(1) for the compliance year.

(ii) Obtain contracts, invoices, or other documentation for the representative samples of RIN transactions; compute the transaction types, transaction dates, and the RINs traded; state whether this information agrees with the party's reports to EPA and report as a finding any exceptions.

(iii) Verify that the product transfer documents for the representative samples under paragraph (c)(1)(i) of this section of RINs sold and RINs purchased contain the applicable information required under § 80.1453 and report as a finding any product transfer document that does not contain the required information.

(iv) Verify the accuracy of the information contained in the product transfer documents reviewed pursuant to paragraph (c)(1)(iii) of this section and report as a finding any exceptions.

(2) *RIN activity reports.*

(i) Obtain and read copies of the quarterly RIN activity reports required

under § 80.1451(c)(2) for the compliance year.

(ii) Obtain the database, spreadsheet, or other documentation used to generate the information in the RIN activity reports; compare the RIN transaction samples reviewed under paragraph (c)(1) of this section with the corresponding entries in the database or spreadsheet and report as a finding any discrepancies; compute the total number of current-year and prior-year RINs owned at the start and end of each quarter, and for parties that reported RIN activity for RINs assigned to a volume of renewable fuel, the volume of renewable fuel owned at the end of each quarter, as represented in these documents; and state whether this information agrees with the party's reports to EPA.

(3) *RIN holdings.* (i) Obtain and read copies of the RIN holdings calculations performed under § 80.1435 for the party and any corporate affiliates and the applicable database, spreadsheet, or other documentation the party maintains.

(ii) Select sample calculations in accordance with the guidelines in 40 CFR 1090.1805; compute and report as a finding the results of these calculations and verify that the results agree with the values reported to EPA.

(iii) Identify any date(s) where the aggregated calculation exceeded the RIN holding threshold(s) specified in § 80.1435. Compute and state as a finding whether this information agrees with the party's reports (notification of threshold exceedance) to EPA.

(4) *Affiliates.* Review reports and records related to corporate and contractual affiliates and state whether this information agrees with the party's reports to EPA, and report as a finding any exceptions.

(5) *Exemption.* Review and confirm the existence of records supporting an exemption from aggregation claimed by the party under § 80.1435(e), and report as a finding any exceptions.

(6) *Low-volume RIN owner exemption.* Any party who meets all the following criteria in a given compliance period is not required to submit an attest engagement for that compliance period:

(i) The party must be solely registered as a party owning RINs (*i.e.*, a "RIN Owner Only") and must not also

be registered in any other role under § 80.1450 (*e.g.*, the party must not also be an obligated party, exporter of renewable fuel, renewable fuel producer, RIN generating importer, etc.).

(ii) The party must have transacted (*e.g.*, generated, bought, sold, separated, or retired) 10,000 or fewer RINs in the given compliance period.

(iii) The party has not exceeded the RIN holding threshold(s) specified in § 80.1435.

(7) *Compliance reports.* Compare the list of compliance reports submitted to EPA during the compliance period to the reporting requirements for the entity in § 80.1451. Report as a finding any reporting requirements that were not completed.

(d) *Report submission deadlines—*

(1) *Obligated parties.* Obligated parties must submit annual attest engagement reports to EPA by the next June 1 annual attest engagement reporting deadline after the annual compliance reporting deadline under § 80.1451(f)(1)(i).

(2) *All other parties.* All parties other than obligated parties must submit annual attest engagement reports to EPA by June 1 of the subsequent calendar year.

(3) *Deadline publication.* The annual attest engagement reporting deadline will be calculated in accordance with paragraph (d)(1) of this section and published on EPA's website.

(e) The party conducting the procedures under this section shall obtain a written representation from a company representative that the copies of the reports required under this section are complete and accurate copies of the reports filed with EPA.

(f) The party conducting the procedures under this section shall identify and report as a finding the commercial computer program used by the party to track the data required by the regulations in this subpart, if any.

(g) [Reserved]

(h) *Biointermediate producers.* The following attest reports must be completed for any biointermediate producer that produces a biointermediate in a compliance year:

(1) *Biointermediate production reports.*

(i) Obtain and read copies of the quarterly biointermediate production reports required under § 80.1451(i); com-

pare the reported information to the requirements under § 80.1451(i); and report as a finding any missing or incomplete information in the reports.

(ii) Obtain any database, spreadsheet, or other documentation used to generate the information in the biointermediate production reports; compare the corresponding entries in the database or spreadsheet and report as a finding any discrepancies.

(iii) For a representative sample of biointermediate batches, selected in accordance with the guidelines in 40 CFR 1090.1805, obtain records required under § 80.1454(i); compare these records to the corresponding batch entries in the reports procured in paragraph (h)(1)(i) of this section and report as a finding any discrepancies.

(iv) Obtain the list of designated renewable fuel production facilities under § 80.1450(b)(1)(ii)(B)(I); compare the list of registered designated renewable fuel production facilities to those identified in the biointermediate production report; and report as a finding any discrepancies.

(v) Provide the list of renewable fuel producers receiving any transfer of biointermediate batches and calculate the total volume from the batches received.

(2) *Independent third-party engineering review.* (i) Obtain documentation of independent third-party engineering reviews required under § 80.1450(b)(2).

(ii) Review and verify the written verification and records generated as part of the independent third-party engineering review.

(iii) Provide the date of the submission of the last engineering review along with the date of the actual site visit by the professional engineer. Report as a finding if the engineering review was not updated as part of the three-year cycle under § 80.1450(d)(3).

(iv) Compare and provide the total volume of produced biointermediate during the compliance year as compared to the production capacity stated in the engineering review and report as a finding if the volume of produced biointermediate is greater than the stated production capacity.

(3) *Product transfer documents.* (i) Obtain contracts, invoices, or other documentation for each batch in the representative sample under paragraph (h)(1)(iii) of this section and the corresponding copies of product transfer documents required under § 80.1453; compare the product transfer documents with the contracts and invoices and report as a finding any discrepancies.

(ii) Verify that the product transfer documents obtained in paragraph (h)(3)(i) of this section contain the applicable information required under § 80.1453 and report as a finding any product transfer document that does not contain the required information.

(iii) Verify the accuracy of the information contained in the product transfer documents reviewed pursuant to paragraph (h)(3)(ii) of this section with the records obtained and reviewed under paragraph (h)(1)(iii) of this section and report as a finding any exceptions.

(i) *Independent third-party auditors.* The following attest procedures shall be completed for any independent third-party auditor that implements a quality assurance plan in a calendar year:

(1) *Comparing verification reports with approved QAPs.* (i) Obtain and read copies of reports required under § 80.1451(g)(1). Compare the list of compliance reports submitted to EPA during the compliance period to the reporting requirements for the entity in § 80.1451. Report as a finding any reporting requirements that were not completed.

(ii) Obtain and read copies of any quality assurance plans approved under § 80.1469.

(iii) Confirm that the independent third-party auditor only verified RINs and biointermediates covered by approved QAPs under § 80.1469. Identify as a finding any discrepancies.

(2) *Checking third-party auditor's verification.* (i) Obtain and read copies of reports required under § 80.1451(g)(2). Compare the list of compliance reports submitted to EPA during the compliance period to the reporting requirements for the entity in § 80.1451. Report as a finding any reporting requirements that were not completed.

(ii) Obtain all notifications of potentially invalid RINs and potentially improperly produced biointermediate submitted to the EPA under §§ 80.1474(b)(3) and 80.1477(d)(2) respectively.

(iii)(A) Obtain the database, spreadsheet, or other documentation used to generate the information in the RIN verification reports;

(B) Obtain all underlying documents that the QAP provider relied upon to verify the RINs;

(C) Review the documents that the QAP auditor relied on to prepare the reports obtained in paragraph (d)(2)(i) of this section, verify that the underlying documents appropriately reflect the information reported to the EPA, and identify as a finding any discrepancies between the underlying documents and the information in the RIN verification reports;

(D) Compute the total number of current-year RINs and current-year potentially invalid RINs verified at the start and end of each quarter, as represented in these documents; and state whether this information agrees with the party's reports to the EPA; and

(E) Verify that all parties were appropriately notified under § 80.1474(b)(3) and report any missing notifications as a finding.

[75 FR 14863, Mar. 26, 2010]

EDITORIAL NOTE: For FEDERAL REGISTER citations affecting § 80.1464, see the List of CFR Sections Affected, which appears in the Finding Aids section of the printed volume and at www.govinfo.gov.

§ 80.1465 [Reserved]

§ 80.1466 What are the additional requirements under this subpart for foreign renewable fuel producers and importers of renewable fuels?

(a) *Applicability.* This section only applies to foreign renewable fuel producers that are located outside the United States, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, American Samoa, and the Commonwealth of the Northern Mariana Islands (collectively referred to in this section as "the United States").

(b) *General requirements.* A registered foreign renewable fuel producer under

this section must meet all requirements that apply to renewable fuel producers under this subpart.

(c) *Designation, RIN-generating foreign producer certification, and product transfer documents.* (1) Any registered foreign renewable fuel producer must designate each batch of such renewable fuel as “RFS-FRRF” at the time the renewable fuel is produced.

(2) On each occasion when RFS-FRRF is transferred for transport to a vessel or loaded onto a vessel or other transportation mode for transport to the United States, the RIN-generating foreign producer shall prepare a certification for each batch of RFS-FRRF; the certification shall include the report of the independent third party under paragraph (d) of this section, and all the following additional information:

(i) The name and EPA registration number of the company that produced the RFS-FRRF.

(ii) The identification of the renewable fuel as RFS-FRRF.

(iii) The identification of the renewable fuel by type, D code, and number of RINs generated.

(iv) The volume of RFS-FRRF, standardized per § 80.1426(f)(8), being transported, in gallons.

(3) On each occasion when any person transfers custody or title to any RFS-FRRF prior to its being imported into the United States, it must include all the following information as part of the product transfer document information:

(i) Designation of the renewable fuel as RFS-FRRF.

(ii) The certification required under paragraph (c)(2) of this section.

(d) *Load port independent testing and producer identification.* (1) On each occasion that RFS-FRRF is loaded onto a vessel for transport to the United States the RIN-generating foreign producer shall have an independent third party do all the following:

(i) Inspect the vessel prior to loading and determine the volume of any tank bottoms.

(ii) Determine the volume of RFS-FRRF, standardized per § 80.1426(f)(8), loaded onto the vessel (exclusive of any tank bottoms before loading).

(iii) Obtain the EPA-assigned registration number of the foreign renewable fuel producer.

(iv) Determine the name and country of registration of the vessel used to transport the RFS-FRRF to the United States.

(v) Determine the date and time the vessel departs the port serving the RIN-generating foreign producer.

(vi) Review original documents that reflect movement and storage of the RFS-FRRF from the RIN-generating foreign producer to the load port, and from this review determine all the following:

(A) The facility at which the RFS-FRRF was produced.

(B) That the RFS-FRRF remained segregated from Non-RFS-FRRF and other RFS-FRRF produced by a different foreign producer.

(2) The independent third party shall submit a report to the following:

(i) The RIN-generating foreign producer, containing the information required under paragraph (d)(1) of this section, to accompany the product transfer documents for the vessel.

(ii) EPA, containing the information required under paragraph (d)(1) of this section, within thirty days following the date of the independent third party’s inspection. This report shall include a description of the method used to determine the identity of the foreign producer facility at which the renewable fuel was produced, assurance that the renewable fuel remained segregated as specified in paragraph (j)(1) of this section, and a description of the renewable fuel’s movement and storage between production at the source facility and vessel loading.

(3) The independent third party must:

(i) Be approved in advance by EPA, based on a demonstration of ability to perform the procedures required in this paragraph (d);

(ii) Be independent under the criteria specified in 40 CFR 1090.1805; and

(iii) Sign a commitment that contains the provisions specified in paragraph (f) of this section with regard to activities, facilities and documents relevant to compliance with the requirements of this paragraph (d).

(e) *Comparison of load port and port of entry testing.* (1)(i) Any RIN-generating

foreign producer and any United States importer of RFS-FRRF shall compare the results from the load port testing under paragraph (d) of this section, with the port of entry testing as reported under paragraph (k) of this section, for the volume of renewable fuel, standardized per § 80.1426(f)(8), except as specified in paragraph (e)(1)(ii) of this section.

(ii) Where a vessel transporting RFS-FRRF offloads the renewable fuel at more than one United States port of entry, the requirements of paragraph (e)(1)(i) of this section do not apply at subsequent ports of entry if the United States importer obtains a certification from the vessel owner that the requirements of paragraph (e)(1)(i) of this section were met and that the vessel has not loaded any renewable fuel between the first United States port of entry and the subsequent ports of entry.

(2)(i) If the temperature-corrected volumes, after accounting for tank bottoms, determined at the port of entry and at the load port differ by more than one percent, the number of RINs associated with the renewable fuel shall be calculated based on the lesser of the two volumes in paragraph (e)(1)(i) of this section.

(ii) Where the port of entry volume is the lesser of the two volumes in paragraph (e)(1)(i) of this section, the importer shall calculate the difference between the number of RINs originally assigned by the RIN-generating foreign producer and the number of RINs calculated under § 80.1426 for the volume of renewable fuel as measured at the port of entry, and acquire and retire that amount of RINs in accordance with paragraph (k)(3) of this section.

(f) *Foreign producer commitments.* Any foreign renewable fuel producer shall commit to and comply with the following provisions as a condition to being registered as a foreign renewable fuel producer under this subpart:

(1) Any EPA inspector or auditor must be given full, complete, and immediate access to conduct inspections and audits of the foreign renewable fuel producer facility.

(i) Inspections and audits may be either announced in advance by EPA, or unannounced.

(ii) Access will be provided to any location where:

(A) Renewable fuel is produced;

(B) Documents related to renewable fuel producer operations are kept; and

(C) Renewable fuel is stored or transported between the foreign renewable fuel producer and the United States, including storage tanks, vessels and pipelines.

(iii) EPA inspectors and auditors may be EPA employees or contractors to EPA.

(iv) Any documents requested that are related to matters covered by inspections and audits must be provided to an EPA inspector or auditor on request.

(v) Inspections and audits may include review and copying of any documents related to the following:

(A) The volume of renewable fuel.

(B) The proper classification of renewable fuel as being RFS-FRRF.

(C) Transfers of title or custody to renewable fuel.

(D) Work performed and reports prepared by independent third parties and by independent auditors under the requirements of this section, including work papers.

(vi) Inspections and audits by EPA may include interviewing employees.

(vii) Any employee of the foreign renewable fuel producer must be made available for interview by the EPA inspector or auditor, on request, within a reasonable time period.

(viii) English language translations of any documents must be provided to an EPA inspector or auditor, on request, within 10 business days.

(ix) English language interpreters must be provided to accompany EPA inspectors and auditors, on request.

(2) An agent for service of process located in the District of Columbia shall be named, and service on this agent constitutes service on the foreign renewable fuel producer or any employee of the foreign renewable fuel producer for any action by EPA or otherwise by the United States related to the requirements of this subpart.

(3) The forum for any civil or criminal enforcement action related to the provisions of this section for violations of the Clean Air Act or regulations promulgated thereunder shall be governed

by the Clean Air Act, including the EPA administrative forum where allowed under the Clean Air Act.

(4) United States substantive and procedural laws shall apply to any civil or criminal enforcement action against the foreign renewable fuel producer or any employee of the foreign renewable fuel producer related to the provisions of this section.

(5) Applying to be an approved foreign renewable fuel producer under this section, or producing or exporting renewable fuel under such approval, and all other actions to comply with the requirements of this subpart relating to such approval constitute actions or activities covered by and within the meaning of the provisions of 28 U.S.C. 1605(a)(2), but solely with respect to actions instituted against the foreign renewable fuel producer, its agents and employees in any court or other tribunal in the United States for conduct that violates the requirements applicable to the foreign renewable fuel producer under this subpart, including conduct that violates the False Statements Accountability Act of 1996 (18 U.S.C. 1001) and section 113(c)(2) of the Clean Air Act (42 U.S.C. 7413).

(6) The foreign renewable fuel producer, or its agents or employees, will not seek to detain or to impose civil or criminal remedies against EPA inspectors or auditors for actions performed within the scope of EPA employment or contract related to the provisions of this section.

(7) The commitment required by this paragraph shall be signed by the owner or president of the foreign renewable fuel producer company.

(8) In any case where renewable fuel produced at a foreign renewable fuel production facility is stored or transported by another company between the production facility and the vessel that transports the renewable fuel to the United States, the foreign renewable fuel producer shall obtain from each such other company a commitment that meets the requirements specified in paragraphs (f)(1) through (7) of this section, and these commitments shall be included in the foreign renewable fuel producer's application to be an approved foreign renewable fuel producer under this subpart.

(g) *Sovereign immunity.* By submitting an application to be an approved foreign renewable fuel producer under this subpart, or by producing and exporting renewable fuel to the United States under such approval, the foreign renewable fuel producer, and its agents and employees, without exception, become subject to the full operation of the administrative and judicial enforcement powers and provisions of the United States without limitation based on sovereign immunity, with respect to actions instituted against the foreign renewable fuel producer, its agents and employees in any court or other tribunal in the United States for conduct that violates the requirements applicable to the foreign renewable fuel producer under this subpart, including conduct that violates the False Statements Accountability Act of 1996 (18 U.S.C. 1001) and section 113(c)(2) of the Clean Air Act (42 U.S.C. 7413).

(h) *Bond posting.* Any RIN-generating foreign producer shall meet the following requirements as a condition to approval as a RIN-generating foreign producer under this subpart:

(1) The RIN-generating foreign producer must post a bond of the amount calculated using the following equation.

$$\text{Bond} = G * \$0.22$$

Where:

Bond = Amount of the bond in U.S. dollars.
G = The greater of: (1) The largest volume of renewable fuel produced by the RIN-generating foreign producer and exported to the United States, in gallons, during a single calendar year among the five preceding calendar years; or (2) The largest volume of renewable fuel that the RIN-generating foreign producers expects to export to the United States during any calendar year identified in the Production Outlook Report required by § 80.1449. If the volume of renewable fuel exported to the United States increases above the largest volume identified in the Production Outlook Report during any calendar year, the RIN-generating foreign producer must increase the bond to cover the shortfall within 90 days.

(2) Bonds must be obtained in the proper amount from a third-party surety agent that is payable to satisfy United States administrative or judicial judgments against the foreign producer, provided EPA agrees in advance

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as to the third party and the nature of the surety agreement.

(3) Bonds posted under this paragraph (h) shall:

(i) Be used to satisfy any judicial judgment that results from an administrative or judicial enforcement action for conduct in violation of this subpart, including where such conduct violates the False Statements Accountability Act of 1996 (18 U.S.C. 1001) and section 113(c)(2) of the Clean Air Act (42 U.S.C. 7413);

(ii) Be provided by a corporate surety that is listed in the United States Department of Treasury Circular 570 “Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds”; and

(iii) Include a commitment that the bond will remain in effect for at least five years following the end of latest annual reporting period that the RIN-generating foreign producer produces renewable fuel pursuant to the requirements of this subpart.

(4) On any occasion a RIN-generating foreign producer bond is used to satisfy any judgment, the RIN-generating foreign producer shall increase the bond to cover the amount used within 90 days of the date the bond is used.

(i) *English language reports.* Any document submitted to EPA by a foreign renewable fuel producer shall be in English, or shall include an English language translation.

(j) *Prohibitions.* (1) No person may combine RFS-FRRF with any Non-RFS-FRRF, and no person may combine RFS-FRRF with any RFS-FRRF produced at a different production facility, until the importer has met all the requirements of paragraph (k) of this section.

(2) No foreign renewable fuel producer or other person may cause another person to commit an action prohibited in paragraph (j)(1) of this section, or that otherwise violates the requirements of this section.

(3) No foreign renewable fuel producer or importer may generate RINs for the same volume of renewable fuel.

(4) A foreign renewable fuel producer is prohibited from generating RINs in excess of the number for which the bond requirements of this section have been satisfied.

(k) *Requirements for United States importers of RFS-FRRF.* Any United States importers of RFS-FRRF shall meet all the following requirements:

(1) Renewable fuel shall be classified as RFS-FRRF according to the designation by the RIN-generating foreign producer if this designation is supported by product transfer documents prepared by the foreign producer as required in paragraph (c) of this section.

(2) For each renewable fuel batch classified as RFS-FRRF, any United States importer shall have an independent third party do all the following:

(i) Determine the volume of renewable fuel, standardized per § 80.1426(f)(8), in the vessel.

(ii) Use the RIN-generating foreign producer’s RFS-FRRF certification to determine the name and EPA-assigned registration number of the RIN-generating foreign producer that produced the RFS-FRRF.

(iii) Determine the name and country of registration of the vessel used to transport the RFS-FRRF to the United States.

(iv) Determine the date and time the vessel arrives at the United States port of entry.

(3) Where the importer is required to retire RINs under paragraph (e)(2) of this section, the importer must report the retired RINs in the applicable reports under § 80.1451.

(4) Any importer shall submit reports within 30 days following the date any vessel transporting RFS-FRRF arrives at the United States port of entry to all the following:

(i) EPA, containing the information determined under paragraph (k)(2) of this section.

(ii) The RIN-generating foreign producer, containing the information determined under paragraph (k)(2)(i) of this section, and including identification of the port at which the product was offloaded, and any RINs retired under paragraph (e)(2) of this section.

(5) Any United States importer shall meet all other requirements of this subpart for any imported renewable fuel that is not classified as RFS-FRRF under paragraph (k)(1) of this section.

(1) *Truck imports of RFS-FRRF produced by a RIN-generating foreign producer.* (1) Any RIN-generating foreign producer whose RFS-FRRF is transported into the United States by truck may petition EPA to use alternative procedures to meet all the following requirements:

(i) Certification under paragraph (c)(2) of this section.

(ii) Load port and port of entry testing under paragraphs (d) and (e) of this section.

(iii) Importer testing under paragraph (k)(2) of this section.

(2) These alternative procedures must ensure RFS-FRRF remains segregated from Non-RFS-FRRF until it is imported into the United States. The petition will be evaluated based on whether it adequately addresses all of the following:

(i) Contracts with any facilities that receive and/or transport RFS-FRRF that prohibit the commingling of RFS-FRRF with Non-RFS-FRRF or RFS-FRRF from other foreign renewable fuel producers.

(ii) Attest procedures to be conducted annually by an independent third party that review loading records and import documents based on volume reconciliation to confirm that all RFS-FRRF remains segregated.

(3) The petition described in this section must be submitted to EPA along with the application for approval as a RIN-generating foreign producer under this subpart.

(m) *Additional attest requirements for producers of RFS-FRRF.* The following additional procedures shall be carried out by any producer of RFS-FRRF as part of the attest engagement required for renewable fuel producers under this subpart M.

(1) Obtain listings of all tenders of RFS-FRRF. Agree the total volume of tenders from the listings to the volumes determined by the third party under paragraph (d) of this section.

(2) For each tender under paragraph (m)(1) of this section, where the renewable fuel is loaded onto a marine vessel, report as a finding the name and country of registration of each vessel, and the volumes of RFS-FRRF loaded onto each vessel.

(3) Select a sample from the list of vessels identified in paragraph (m)(2) of this section used to transport RFS-FRRF, in accordance with the guidelines in 40 CFR 1090.1805, and for each vessel selected perform all the following:

(i) Obtain the report of the independent third party, under paragraph (d) of this section, and of the United States importer under paragraph (k) of this section.

(A) Agree the information in these reports with regard to vessel identification and renewable fuel volume.

(B) Identify, and report as a finding, each occasion the load port and port of entry volume results differ by more than the amount allowed in paragraph (e) of this section, and determine whether the importer retired the appropriate amount of RINs as required under paragraph (e)(2) of this section, and submitted the applicable reports under § 80.1451 in accordance with paragraph (k)(4) of this section.

(ii) Obtain the documents used by the independent third party to determine transportation and storage of the RFS-FRRF from the RIN-generating foreign producer's facility to the load port, under paragraph (d) of this section. Obtain tank activity records for any storage tank where the RFS-FRRF is stored, and activity records for any mode of transportation used to transport the RFS-FRRF prior to being loaded onto the vessel. Use these records to determine whether the RFS-FRRF was produced at the RIN-generating foreign producer's facility that is the subject of the attest engagement, and whether the RFS-FRRF was mixed with any Non-RFS-FRRF or any RFS-FRRF produced at a different facility.

(4) Select a sample from the list of vessels identified in paragraph (m)(2) of this section used to transport RFS-FRRF, in accordance with the guidelines in 40 CFR 1090.1805, and for each vessel selected perform the following:

(i) Obtain a commercial document of general circulation that lists vessel arrivals and departures, and that includes the port and date of departure of the vessel, and the port of entry and date of arrival of the vessel.

(ii) Agree the vessel's departure and arrival locations and dates from the

independent third party and United States importer reports to the information contained in the commercial document.

(5) Obtain a separate listing of the tenders under this paragraph (m)(5) where the RFS-FRRF is loaded onto a marine vessel. Select a sample from this listing in accordance with the guidelines in 40 CFR 1090.1805, and obtain a commercial document of general circulation that lists vessel arrivals and departures, and that includes the port and date of departure and the ports and dates where the renewable fuel was offloaded for the selected vessels. Determine and report as a finding the country where the renewable fuel was offloaded for each vessel selected.

(6) In order to complete the requirements of this paragraph (m) an auditor shall:

(i) Be independent of the RIN-generating foreign producer;

(ii) Be licensed as a Certified Public Accountant in the United States and a citizen of the United States, or be approved in advance by EPA based on a demonstration of ability to perform the procedures required in 40 CFR 1090.1800, § 80.1464, and this paragraph (m); and

(iii) Sign a commitment that contains the provisions specified in paragraph (f) of this section with regard to activities and documents relevant to compliance with the requirements of 40 CFR 1090.1800, § 80.1464, and this paragraph (m).

(n) *Withdrawal or suspension of foreign renewable fuel producer approval.* EPA may withdraw or suspend a foreign renewable fuel producer's approval where any of the following occur:

(1) A foreign renewable fuel producer fails to meet any requirement of this section.

(2) A foreign government fails to allow EPA inspections or audits as provided in paragraph (f)(1) of this section.

(3) A foreign renewable fuel producer asserts a claim of, or a right to claim, sovereign immunity in an action to enforce the requirements in this subpart.

(4) A foreign renewable fuel producer fails to pay a civil or criminal penalty that is not satisfied using the foreign renewable fuel producer bond specified in paragraph (h) of this section.

(o) *Additional requirements for applications, reports, and certificates.* Any application for approval as a foreign renewable fuel producer, alternative procedures under paragraph (l) of this section, any report, certification, or other submission required under this section shall be:

(1) Submitted in accordance with procedures specified by EPA, including use of any forms that may be specified by EPA.

(2) Signed by the president or owner of the foreign renewable fuel producer company, or by that person's immediate designee, and shall contain the following declarations:

(i) "I hereby certify:

(A) That I have actual authority to sign on behalf of and to bind [NAME OF FOREIGN RENEWABLE FUEL PRODUCER] with regard to all statements contained herein;

(B) That I am aware that the information contained herein is being Certified, or submitted to the United States Environmental Protection Agency, under the requirements of 40 CFR part 80, subpart M, and that the information is material for determining compliance under these regulations; and

(C) That I have read and understand the information being Certified or submitted, and this information is true, complete and correct to the best of my knowledge and belief after I have taken reasonable and appropriate steps to verify the accuracy thereof."

(ii) "I affirm that I have read and understand the provisions of 40 CFR part 80, subpart M, including 40 CFR 80.1466 apply to [NAME OF FOREIGN RENEWABLE FUEL PRODUCER]. Pursuant to Clean Air Act section 113(c) and 18 U.S.C. 1001, the penalty for furnishing false, incomplete or misleading information in this certification or submission is a fine of up to \$10,000 U.S., and/or imprisonment for up to five years."

(p) *Requirements for non-RIN-generating foreign producer.* Any non-RIN-generating foreign producer must comply with the requirements of this section beginning on the effective date of

the final rule or prior to EPA acceptance, whichever is later.

[75 FR 14863, Mar. 26, 2010, as amended at 77 FR 1357, Jan. 9, 2012; 85 FR 7081, Feb. 6, 2020; 85 FR 78467, Dec. 4, 2020; 88 FR 44591, July 12, 2023]

§ 80.1467 What are the additional requirements under this subpart for a foreign RIN owner?

(a) *Foreign RIN owner.* For purposes of this subpart, a foreign RIN owner is a person located outside the United States, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, American Samoa, and the Commonwealth of the Northern Mariana Islands (collectively referred to in this section as “the United States”) that has been approved by EPA to own RINs.

(b) *General requirement.* An approved foreign RIN owner must meet all requirements that apply to parties who own RINs under this subpart.

(c) *Foreign RIN owner commitments.* Any person shall commit to and comply with the provisions contained in this paragraph (c) as a condition to being approved as a foreign RIN owner under this subpart.

(1) Any United States Environmental Protection Agency inspector or auditor must be given full, complete, and immediate access to conduct inspections and audits of the foreign RIN owner’s place of business.

(i) Inspections and audits may be either announced in advance by EPA, or unannounced.

(ii) Access will be provided to any location where documents related to RINs the foreign RIN owner has obtained, sold, transferred or held are kept.

(iii) Inspections and audits may be by EPA employees or contractors to EPA.

(iv) Any documents requested that are related to matters covered by inspections and audits must be provided to an EPA inspector or auditor on request.

(v) Inspections and audits by EPA may include review and copying of any documents related to the following:

(A) Transfers of title to RINs.

(B) Work performed and reports prepared by independent auditors under the requirements of this section, including work papers.

(vi) Inspections and audits by EPA may include interviewing employees.

(vii) Any employee of the foreign RIN owner must be made available for interview by the EPA inspector or auditor, on request, within a reasonable time period.

(viii) English language translations of any documents must be provided to an EPA inspector or auditor, on request, within 10 business days.

(ix) English language interpreters must be provided to accompany EPA inspectors and auditors, on request.

(2) An agent for service of process located in the District of Columbia shall be named, and service on this agent constitutes service on the foreign RIN owner or any employee of the foreign RIN owner for any action by EPA or otherwise by the United States related to the requirements of this subpart.

(3) The forum for any civil or criminal enforcement action related to the provisions of this section for violations of the Clean Air Act or regulations promulgated thereunder shall be governed by the Clean Air Act, including the EPA administrative forum where allowed under the Clean Air Act.

(4) United States substantive and procedural laws shall apply to any civil or criminal enforcement action against the foreign RIN owner or any employee of the foreign RIN owner related to the provisions of this section.

(5) Submitting an application to be a foreign RIN owner, and all other actions to comply with the requirements of this subpart constitute actions or activities covered by and within the meaning of the provisions of 28 U.S.C. 1605(a)(2), but solely with respect to actions instituted against the foreign RIN owner, its agents and employees in any court or other tribunal in the United States for conduct that violates the requirements applicable to the foreign RIN owner under this subpart, including conduct that violates the False Statements Accountability Act of 1996 (18 U.S.C. 1001) and section 113(c)(2) of the Clean Air Act (42 U.S.C. 7413).

(6) The foreign RIN owner, or its agents or employees, will not seek to detain or to impose civil or criminal remedies against EPA inspectors or auditors, whether EPA employees or EPA contractors, for actions performed

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within the scope of EPA employment related to the provisions of this section.

(7) The commitment required by this paragraph (c) shall be signed by the owner or president of the foreign RIN owner business.

(d) *Sovereign immunity.* By submitting an application to be a foreign RIN owner under this subpart, the foreign entity, and its agents and employees, without exception, become subject to the full operation of the administrative and judicial enforcement powers and provisions of the United States without limitation based on sovereign immunity, with respect to actions instituted against the foreign RIN owner, its agents and employees in any court or other tribunal in the United States for conduct that violates the requirements applicable to the foreign RIN owner under this subpart, including conduct that violates the False Statements Accountability Act of 1996 (18 U.S.C. 1001) and section 113(c)(2) of the Clean Air Act (42 U.S.C. 7413).

(e) *Bond posting.* Any foreign entity shall meet the requirements of this paragraph (e) as a condition to approval as a foreign RIN owner under this subpart.

(1) The foreign entity must post a bond of the amount calculated using the following equation:

$$\text{Bond} = G * \$ 0.22$$

Where:

Bond = Amount of the bond in U.S. dollars.
G = The total of the number of gallon-RINs the foreign entity expects to obtain, sell, transfer, or hold during the first calendar year that the foreign entity is a RIN owner, plus the number of gallon-RINs the foreign entity expects to obtain, sell, transfer, or hold during the next four calendar years. After the first calendar year, the bond amount must be based on the actual number of gallon-RINs obtained, sold, or transferred so far during the current calendar year plus the number of gallon-RINs obtained, sold, or transferred during the four calendar years immediately preceding the current calendar year. For any year for which there were fewer than four preceding years in which the foreign entity obtained, sold, or transferred RINs, the bond must be based on the total of the number of gallon-RINs sold or transferred so far during the current calendar year plus the number of gallon-RINs ob-

tained, sold, or transferred during any immediately preceding calendar years in which the foreign entity owned RINs, plus the number of gallon-RINs the foreign entity expects to obtain, sell or transfer during subsequent calendar years, the total number of years not to exceed four calendar years in addition to the current calendar year.

(2) Bonds must be obtained in the proper amount from a third-party surety agent that is payable to satisfy United States administrative or judicial judgments against the foreign RIN owner, provided EPA agrees in advance as to the third party and the nature of the surety agreement.

(3) All the following shall apply to bonds posted under this paragraph (e); bonds shall:

(i) Be used to satisfy any judicial judgment that results from an administrative or judicial enforcement action for conduct in violation of this subpart, including where such conduct violates the False Statements Accountability Act of 1996 (18 U.S.C. 1001) and section 113(c)(2) of the Clean Air Act (42 U.S.C. 7413).

(ii) Be provided by a corporate surety that is listed in the United States Department of Treasury Circular 570 "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds".

(iii) Include a commitment that the bond will remain in effect for at least five years following the end of latest reporting period in which the foreign RIN owner obtains, sells, transfers, or holds RINs.

(4) On any occasion a foreign RIN owner bond is used to satisfy any judgment, the foreign RIN owner shall increase the bond to cover the amount used within 90 days of the date the bond is used.

(f) *English language reports.* Any document submitted to EPA by a foreign RIN owner shall be in English, or shall include an English language translation.

(g) *Prohibitions.* (1) A foreign RIN owner is prohibited from obtaining, selling, transferring, or holding any RIN that is in excess of the number for which the bond requirements of this section have been satisfied.

(2) Any RIN that is obtained, sold, transferred, or held that is in excess of

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the number for which the bond requirements of this section have been satisfied is an invalid RIN under § 80.1431.

(3) Any RIN that is obtained from a person located outside the United States that is not an approved foreign RIN owner under this section is an invalid RIN under § 80.1431.

(4) No foreign RIN owner or other person may cause another person to commit an action prohibited in this paragraph (g), or that otherwise violates the requirements of this section.

(h) *Additional attest requirements for foreign RIN owners.* The following additional requirements apply to any foreign RIN owner as part of the attest engagement required for RIN owners under this subpart M.

(1) The attest auditor must be independent of the foreign RIN owner.

(2) The attest auditor must be licensed as a Certified Public Accountant in the United States and a citizen of the United States, or be approved in advance by EPA based on a demonstration of ability to perform the procedures required in 40 CFR 1090.1800 and § 80.1464.

(3) The attest auditor must sign a commitment that contains the provisions specified in paragraph (c) of this section with regard to activities and documents relevant to compliance with the requirements of 40 CFR 1090.1800 and § 80.1464.

(i) *Withdrawal or suspension of foreign RIN owner status.* EPA may withdraw or suspend its approval of a foreign RIN owner where any of the following occur:

(1) A foreign RIN owner fails to meet any requirement of this section, including, but not limited to, the bond requirements.

(2) A foreign government fails to allow EPA inspections as provided in paragraph (c)(1) of this section.

(3) A foreign RIN owner asserts a claim of, or a right to claim, sovereign immunity in an action to enforce the requirements in this subpart.

(4) A foreign RIN owner fails to pay a civil or criminal penalty that is not satisfied using the foreign RIN owner bond specified in paragraph (e) of this section.

(j) *Additional requirements for applications, reports and certificates.* Any appli-

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cation for approval as a foreign RIN owner, any report, certification, or other submission required under this section shall be:

(1) Submitted in accordance with procedures specified by EPA, including use of any forms that may be specified by EPA.

(2) Signed by the president or owner of the foreign RIN owner company, or by that person's immediate designee, and shall contain the following declaration:

I hereby certify: (1) That I have actual authority to sign on behalf of and to bind [INSERT NAME OF FOREIGN RIN OWNER] with regard to all statements contained herein; (2) that I am aware that the information contained herein is being Certified, or submitted to the United States Environmental Protection Agency, under the requirements of 40 CFR part 80, subpart M, and that the information is material for determining compliance under these regulations; and (3) that I have read and understand the information being Certified or submitted, and this information is true, complete and correct to the best of my knowledge and belief after I have taken reasonable and appropriate steps to verify the accuracy thereof. I affirm that I have read and understand the provisions of 40 CFR part 80, subpart M, including 40 CFR 80.1467 apply to [INSERT NAME OF FOREIGN RIN OWNER]. Pursuant to Clean Air Act section 113(c) and 18 U.S.C. 1001, the penalty for furnishing false, incomplete or misleading information in this certification or submission is a fine of up to \$10,000 U.S., and/or imprisonment for up to five years.

[75 FR 14863, Mar. 26, 2010, as amended at 77 FR 1358, Jan. 9, 2012; 85 FR 78467, Dec. 4, 2020; 88 FR 44591, July 12, 2023]

§ 80.1468 [Reserved]

§ 80.1469 Requirements for Quality Assurance Plans.

This section specifies the requirements for Quality Assurance Plans (QAPs) for renewable fuels and biointermediates.

(a) Option A QAP Requirements, for Option A QAPs that were performed during the interim period.

(1) *Feedstock-related components.* (i) Components requiring ongoing monitoring:

(A) Feedstocks are renewable biomass.

(B) Feedstocks are being separated according to a separation plan, if applicable under § 80.1426(f)(5)(ii).

(C) Crop and crop residue feedstocks meet land use restrictions, or alternatively the aggregate compliance provisions of § 80.1454(g).

(D) If applicable, verify that feedstocks with additional recordkeeping requirements meet requirements of § 80.1454(d).

(E) Feedstocks are valid for the D code being used, and are consistent with information recorded in EMTS.

(F) Feedstock is consistent with production process and D code being used from the approved pathway.

(G) Feedstock is not renewable fuel for which RINs were previously generated.

(ii) Components requiring quarterly monitoring:

(A) Separated food waste or separated yard waste plan is accepted and up to date, if applicable under § 80.1426(f)(5)(ii).

(B) Separated municipal solid waste plan is approved and up to date, if applicable under § 80.1426(f)(5)(ii).

(C) Contracts or agreements for feedstock acquisition are sufficient for facility production.

(D) Feedstock processing and storage equipment are sufficient and are consistent with the most recent engineering review under § 80.1450(b)(2).

(E) If applicable, accuracy of feedstock energy FE calculation factors related to feedstocks, including average moisture content *m* and feedstock energy content *E*.

(2) *Production process-related components.* (i) Components requiring ongoing monitoring:

(A) Production process is consistent with that reported in EMTS.

(B) Production process is consistent with D code being used from the approved pathway.

(C) Certificates of analysis verifying fuel type and quality, as applicable.

(ii) Components requiring quarterly monitoring:

(A) Mass and energy balances are appropriate for type and size of facility.

(B) Workforce size is appropriate for type and size of facility, and sufficient workers are on site for facility operations.

(C) If applicable, process-related factors used in feedstock energy FE calculation are accurate, in particular the converted fraction *CF*.

(D) Verify existence of quality process controls designed to ensure that fuel continues to meet applicable property and quality specifications.

(E) Volume production is consistent with that reported to the EPA and EIA, as well as other federal or state reporting.

(F) Volume production is consistent with storage and distribution capacity.

(G) Volume production capacity is consistent with RFS registration.

(3) *RIN generation-related components.*

(i) Components requiring ongoing monitoring:

(A) Standardization of volumes pursuant to § 80.1426(f)(8) are accurate.

(B) Renewable fuel type matches the D code being used.

(C) RIN generation is consistent with wet gallons produced or imported.

(D) Fuel shipments are consistent with production volumes.

(E) If applicable, renewable content *R* is accurate pursuant to § 80.1426(f)(9).

(F) Equivalence value *EqV* is accurate and appropriate.

(G) Renewable fuel was intended and sold for qualifying uses as transportation fuel, heating oil, or jet fuel.

(H) Verify that appropriate RIN generation calculations are being followed under § 80.1426(f)(3), (f)(4), or (f)(5), as applicable.

(ii) Components requiring quarterly monitoring:

(A) Registration, reporting and recordkeeping components.

(B) [Reserved]

(4) *RIN separation-related components.*

(i) Components requiring ongoing monitoring:

(A) If applicable, verify that RIN separation is appropriate under § 80.1429(b)(4).

(B) If applicable, verify that RINs were retired for any fuel that the producer produced and exported.

(ii) Components requiring quarterly monitoring:

(A) Verify that annual attestation report is accurate.

(B) [Reserved]

(b) Option B QAP Requirements, for Option B QAPs that were performed

during the interim period. All components specified in this paragraph (b) require quarterly monitoring, except for paragraph (b)(4)(iii) of this section, which must be done annually.

(1) *Feedstock-related components.* (i) Feedstocks are renewable biomass.

(ii) If applicable, separated food waste or separated yard waste plan under § 80.1426(f)(5)(ii) is accepted and up to date.

(iii) If applicable, separated municipal solid waste plan under § 80.1426(f)(5)(ii) is approved and current.

(iv) Feedstocks are being separated according to a separation plan, if applicable under § 80.1426(f)(5)(ii).

(v) Crop and crop residue feedstocks meet land use restrictions, or alternatively the aggregate compliance provisions of § 80.1454(g).

(vi) Feedstock is consistent with production process and D code being used from the approved pathway, and is consistent with information recorded in EMTS.

(vii) Feedstock is not renewable fuel for which RINs were previously generated.

(viii) If applicable, accuracy of feedstock energy FE calculation factors related to feedstocks, including average moisture content m and feedstock energy content E.

(2) *Production process-related components.* (i) Production process is consistent with that reported in EMTS.

(ii) Production process is consistent with D code being used from the approved pathway.

(iii) Mass and energy balances are appropriate for type and size of facility.

(iv) If applicable, process-related factors used in feedstock energy FE calculation are accurate, in particular the converted fraction CF.

(3) *RIN generation-related components.*

(i) Renewable fuel was intended and sold for qualifying uses as transportation fuel, heating oil, or jet fuel.

(ii) Certificates of analysis verifying fuel type and quality, as applicable.

(iii) Renewable fuel type matches the D code being used.

(iv) If applicable, renewable content R is accurate pursuant to § 80.1426(f)(9).

(v) Equivalence value EqV is accurate and appropriate.

(vi) Volume production capacity is consistent with RFS registration.

(vii) Verify that appropriate RIN generation calculations are being followed under § 80.1426(f)(3), (f)(4), or (f)(5), as applicable.

(4) *RIN separation-related components.*

(i) If applicable, verify that RIN separation is appropriate under § 80.1429(b)(4).

(ii) Verify that fuel that is exported was not used to generate RINs, or alternatively that were generated but retired.

(iii) Verify that annual attestation report is accurate.

(c) *QAP Requirements.* All components specified in this paragraph (c) require quarterly monitoring, except for paragraph (c)(4)(iii) of this section which must be done annually.

(1) *Feedstock-related components.* (i) Feedstocks are renewable biomass.

(ii) If applicable, plans under § 80.1426(f)(5)(ii) are accepted and up to date.

(iii) If applicable, separated municipal solid waste plan under § 80.1426(f)(5) is approved and current.

(iv) Feedstocks are being separated according to a separation plan, if applicable under § 80.1426(f)(5).

(v) Crop and crop residue feedstocks meet land use restrictions, or alternatively the aggregate compliance provisions of § 80.1454(g).

(vi) Feedstock(s) and biointermediate(s) are consistent with production process and D code being used as permitted under the approved pathway and is consistent with information recorded in EMTS.

(vii) Feedstock(s) and biointermediate(s) are not renewable fuel for which RINs were previously generated unless the RINs were generated under § 80.1426(c)(6). For renewable fuels that have RINs generated under § 80.1426(c)(6), verify that renewable fuels used as a feedstock meet all applicable requirements of this paragraph (c)(1).

(viii) If applicable, accuracy of feedstock energy FE calculation factors related to feedstocks, including average moisture content m and feedstock energy content E.

(2) *Production process-related components.* (i) Production process is consistent with the renewable fuel producer or biointermediate producer's registration under § 80.1450(b).

(ii) Mass and energy balances are appropriate for type and size of facility.

(iii) If applicable, process-related factors used in feedstock energy FE calculation are accurate, in particular the converted fraction CF, pursuant to § 80.1426(f)(3).

(3) *RIN generation-related components.*

(i) If applicable, renewable fuel was designated for qualifying uses as transportation fuel, heating oil, or jet fuel in the covered location pursuant to § 80.1453.

(ii) Certificates of analysis verifying fuel type and quality, as applicable.

(iii) Renewable fuel type matches the D code being used.

(iv) If applicable, renewable content R is accurate pursuant to § 80.1426(f)(9).

(v) Equivalence value EqV is accurate and appropriate.

(vi) Volume production capacity is consistent with RFS registration.

(vii) Verify that appropriate RIN generation calculations are being followed under § 80.1426(f)(3), (f)(4), or (f)(5), as applicable.

(viii) RIN generation is consistent with wet gallons produced or imported.

(4) *Other RIN-related components.* (i) If applicable, verify that RIN separation is appropriate under § 80.1429(b).

(ii) Verify that fuel that is exported was not used to generate RINs, or alternatively that were generated but retired pursuant to § 80.1430.

(iii) Verify that annual attestation report is accurate.

(5) *Representative sampling.* Independent third-party auditors may use a representative sample of batches of renewable fuel or biointermediate in accordance with the procedures described in 40 CFR 1090.1805 for all components of this paragraph (c) except for paragraphs (c)(1)(ii) and (iii), (c)(2)(ii), (c)(3)(vi), and (c)(4)(ii) and (iii) of this section. If a facility produces both a renewable fuel and a biointermediate, the independent third-party auditor must select separate representative samples for the renewable fuel and biointermediate.

(6) *Documentation.* Independent third-party auditors must review all relevant registration information under § 80.1450, reporting information under § 80.1451, and recordkeeping information under § 80.1454, as well as any other relevant information and documentation required under this part, to verify elements in a QAP approved by EPA under this section.

(d) In addition to a general QAP encompassing elements common to all pathways, for each QAP there must be at least one pathway-specific plan for an approved pathway, which must contain elements specific to particular feedstocks, production processes, and fuel types, as applicable.

(e) *Submission and approval of a QAP.*

(1) Each independent third-party auditor shall annually submit a general and at least one pathway-specific QAP to the EPA which demonstrates adherence to the requirements of paragraphs (a) and (d), (b) and (d), or (c) and (d) of this section, as applicable, and request approval on forms and using procedures specified by EPA.

(2) No third-party independent auditor may present a QAP as approved by the EPA without having received written approval from the EPA.

(3) A QAP is approved on the date that the EPA notifies the third-party independent auditor of such approval.

(4) The EPA may revoke its approval of a QAP for cause, including, but not limited to, an EPA determination that the approved QAP has proven to be inadequate in practice.

(5) The EPA may void *ab initio* its approval of a QAP upon the EPA's determination that the approval was based on false information, misleading information, or incomplete information, or if there was a failure to fulfill, or cause to be fulfilled, any of the requirements of the QAP.

(f) *Conditions for revisions of a QAP.*

(1) A new QAP must be submitted to EPA according to paragraph (e) of this section and the independent third-party auditor must update their registration according to § 80.1450(g)(9) whenever any of the following changes occur at a renewable fuel or biointermediate production facility audited by an independent third-party auditor and

the auditor does not possess an appropriate pathway-specific QAP that encompasses the change:

(i) Change in feedstock or biointermediates.

(ii) Change in type of fuel or biointermediate produced.

(iii) Change in facility operations or equipment that may impact the capability of the QAP to verify that RINs are validly generated or biointermediates are properly produced.

(2) A QAP ceases to be valid as the basis for verifying RINs or a biointermediate under a new pathway until a new pathway-specific QAP, submitted to the EPA under this paragraph (f), is approved pursuant to paragraph (e) of this section.

[79 FR 42119, July 18, 2014, as amended at 85 FR 7083, Feb. 6, 2020; 85 FR 78467, Dec. 4, 2020; 87 FR 39673, July 1, 2022; 88 FR 44592, July 12, 2023]

§ 80.1470 RIN replacement mechanisms for Option A independent third party auditors.

(a) *Applicability.* This section applies to independent third-party auditors using a QAP approved under Option A pursuant to § 80.1469(a) and (d) during the interim period.

(b) *Requirements.* An independent third party auditor must establish or participate in the establishment of a RIN replacement mechanism. The RIN replacement mechanism must fulfill, at a minimum, all the following conditions:

(1) The RIN replacement mechanism must be capable of fulfilling the independent third party auditor's RIN replacement responsibility, as described in § 80.1474(b)(5)(i).

(2) The independent third party auditor is responsible for calculating and maintaining the minimum coverage afforded by the RIN replacement mechanism at all times.

(3) RINs held by the RIN replacement mechanism (if any) must be identified in a unique EMTS account designated for the exclusive use of the replacement mechanism.

(4) Distribution and removal of RINs from the replacement mechanism may not be under the sole operational control of the third-party auditor.

(5) An originally signed duplicate of the agreement or contract establishing the RIN replacement mechanism must be submitted to the EPA by the independent third party auditor in accordance with § 80.1450(g)(7).

(6) Any substantive change to the agreement establishing the RIN replacement mechanism must be submitted to the EPA within 30 days of the change.

(c) *Cap on RIN replacement for independent third party auditors of A-RINs.*

(1) If required to replace invalid A-RINs pursuant to paragraph (b) of this section, the independent third party auditor shall be required to replace no more than the percentage specified in paragraph (c)(2) of this section of each D code of A-RINs verified by the auditor in the current calendar year and four previous calendar years.

(2) The cap on RIN replacement for auditors of A-RINs shall be two percent for A-RINs generated in the interim period.

(3) The auditor's potential replacement responsibility for a given RIN will expire at the end of the fourth calendar year after the calendar year in which the RIN was verified.

(d) *Applicability of the RIN replacement cap.* The cap on RIN replacement does not apply when invalid verified RINs are a result of auditor error, omission, negligence, fraud, collusion with the renewable fuel producer, or a failure to implement the QAP properly or fully.

[79 FR 42121, July 18, 2014]

§ 80.1471 Requirements for QAP auditors.

(a) QAP audits conducted pursuant to § 80.1472 must be conducted by an independent third-party auditor.

(b) To be considered an independent third-party auditor under paragraph (a) of this section, all the following conditions must be met:

(1) The independent third-party auditor and its contractors and subcontractors must not be owned or operated by the audited party or any subsidiary or employee of the audited party.

(2) The independent third-party auditor and its contractors and subcontractors shall not be owned or operated by an obligated party or any subsidiary or employee of an obligated party.

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(3) The independent third-party auditor shall not own, buy, sell, or otherwise trade RINs unless required to maintain a financial assurance mechanism for a QAP implemented under QAP Option A pursuant to § 80.1469(a) during the interim period or to replace an invalid RIN pursuant to § 80.1474.

(4) The independent third-party auditor and its contractors and subcontractors must be free from any interest or the appearance of any interest in the audited party's business.

(5) The audited party must be free from any interest or the appearance of any interest in the third-party auditor's business and the businesses of third-party auditor's contractors and subcontractors.

(6) The independent third-party auditor and its contractors and subcontractors must not have performed an attest engagement under § 80.1464(b) for the audited party for the same compliance period as a QAP audit conducted pursuant to § 80.1472.

(7) The independent third-party auditor and its contractors and subcontractors must not be debarred, suspended, or proposed for debarment pursuant to the Government-wide Debarment and Suspension regulations, 40 CFR part 32, or the Debarment, Suspension and Ineligibility provisions of the Federal Acquisition Regulations, 48 CFR part 9, subpart 9.4.

(8) The independent third-party auditor and its contractors and subcontractors must act impartially when performing all activities under this section.

(9) The independent third-party auditor and its contractors and subcontractors must be free from any interest in the audited party's business and receive no financial benefit from the outcome of auditing service, apart from payment for the auditing services.

(10) The independent third-party auditor and its contractors and subcontractors must not have been involved in the design or construction of the audited facility.

(11) The independent third-party auditor and its contractors and subcontractors must ensure that all personnel involved in the third-party audit (including the verification activities) under this section are not negoti-

ating for future employment with the owner or operator of the audited party. At a minimum, prior to conducting the audit, the independent third-party auditor must obtain an attestation (or similar document) from each person involved in the audit stating that they are not negotiating for future employment with the owner or operator of the audited party.

(12) The independent third-party auditor and its contractors and subcontractors must have written policies and procedures to ensure that the independent third-party auditor and all personnel under the independent third-party auditor's direction or supervision comply with the competency, independence, and impartiality requirements of this section.

(c) Independent third-party auditors must maintain professional liability insurance. Independent third-party auditors must use insurance providers that possess a financial strength rating in the top four categories from Standard & Poor's or Moody's (*i.e.*, AAA, AA, A, or BBB for Standard & Poor's and Aaa, Aa, A, or Baa for Moody's), or a comparable rating acceptable to EPA. Independent third-party auditors must disclose the level of professional liability insurance they possess when entering into contracts to provide RIN verification services.

(d)(1) In the event that an independent third-party auditor identifies a RIN that may have been invalidly generated, the independent third-party auditor shall, within five business days, send notification of the potentially invalidly generated RIN to the EPA and the renewable fuel producer that generated the RIN.

(2) The independent third-party auditor shall provide the notification required under paragraph (d)(1) of this section in writing (which includes email or facsimile) and, if requested by the party being notified of a potentially invalidly generated RIN, by telephone.

(e) The independent third-party auditor shall identify RINs generated from a renewable fuel producer or foreign renewable fuel producer as having been verified under a QAP.

(1) For RINs verified under QAP Option A pursuant to § 80.1469(a) during

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the interim period, RINs shall be designated as A–RINs.

(2) For RINs verified under QAP Option B pursuant to § 80.1469(b), during the interim period, RINs shall be designated as B–RINs.

(3) For RINs verified under a QAP pursuant to § 80.1469(c), RINs shall be designated as Q–RINs and shall be identified as having been verified under a QAP in EMTS.

(4) The independent third-party auditor shall not identify RINs generated from a renewable fuel producer or foreign renewable fuel producer as having been verified under a QAP if a revised QAP must be submitted to and approved by the EPA under § 80.1469(f).

(5) The independent third-party auditor must not identify RINs generated for renewable fuel produced using a biointermediate as having been verified under a QAP unless the biointermediate used to produce the renewable fuel was verified under an approved QAP pursuant to § 80.1477.

(f)(1) Except as specified in paragraph (f)(2) of this section, auditors may only verify RINs that have been generated after the audit required under § 80.1472 has been completed. Auditors may only verify biointermediates that were produced after the audit required under § 80.1472 has been completed. Auditors must only verify RINs generated from renewable fuels produced from biointermediates after the audit required under § 80.1472 has been completed for both the biointermediate production facility and the renewable fuel production facility.

(i) For A–RINs, ongoing monitoring must have been initiated.

(ii) Verification of RINs or biointermediates may continue for no more than 200 days following an on-site visit or 380 days after an on-site visit if a previously the EPA-approved remote monitoring system is in place at the renewable fuel production facility.

(2) Auditors may verify RINs that were generated before the audit required under § 80.1472 has been completed, under the following conditions:

(i) The RINs in question were generated during the interim period.

(ii) The audit is completed during the interim period.

(iii) The audit is performed in accordance with the elements specified in a QAP that has been approved by the EPA per § 80.1469(e).

(iv) The audit requirements of § 80.1472 are met for every batch of renewable fuel for which RINs were generated and are being verified.

(v) The auditor may not perform more than one audit under this subparagraph for any single RIN generator.

(g) The independent third-party auditor must permit any representative of the EPA to monitor at any time the implementation of QAPs and renewable fuel and biointermediate production facility audits.

(h) Any person who fails to meet a requirement under of this section shall be subject to a separate violation pursuant to § 80.1460(f).

[79 FR 42122, July 18, 2014, as amended at 80 FR 9098, Feb. 19, 2015; 87 FR 39674, July 1, 2022; 88 FR 44592, July 12, 2023]

§ 80.1472 Requirements for quality assurance audits.

(a) *General requirements.* (1) An audit shall be performed by an auditor who meets the requirements of § 80.1471.

(2) An audit shall be based on either an Option A QAP per § 80.1469(a) during the interim period, an Option B QAP per § 80.1469(b) during the interim period, or a QAP per § 80.1469(c).

(3) Each audit shall verify every element contained in an applicable and approved QAP.

(4) Each audit shall include a review of documents generated by the renewable fuel producer or biointermediate producer.

(b) *On-site visits*—(1) *Option A QAP during the interim period.* (i) The auditor shall conduct an on-site visit at the renewable fuel production facility at least 4 times per calendar year.

(ii) The on-site visits specified in paragraph (b)(1)(i) of this section shall occur at least 60 days apart. The 60-day period shall start the day after the previous on-site ends.

(iii) The on-site visit shall include verification of all QAP elements that require inspection or evaluation of the physical attributes of the renewable fuel production facility, except for any physical attribute that is verified

through remote monitoring equipment per the applicable QAP.

(2) *Option B QAP during the interim period.* (i) The auditor shall conduct an on-site visit at the renewable fuel production facility at least 4 times per calendar year.

(ii) The on-site visits specified in paragraph (b)(2)(i) of this section shall occur at least 60 days apart. The 60-day period shall start the day after the previous on-site ends.

(iii) The on-site visit shall include verification of all QAP elements that require inspection or evaluation of the physical attributes of the renewable fuel production facility.

(3) *QAP.* (i) As applicable, the independent third-party auditor shall conduct an on-site visit at the renewable fuel production facility, foreign ethanol production facility, or biointermediate production facility:

(A) At least two times per calendar year; or

(B) In the event an auditor uses a remote monitoring system approved by the EPA, at least one time per calendar year.

(ii) An on-site visit specified in paragraph (b)(3)(i) of this section shall occur no more than:

(A) 200 days after the previous on-site visit. The 200-day period shall start the day after the previous on-site visit ends; or

(B) 380 days after the previous on-site visit if a previously approved (by EPA) remote monitoring system is in place at the renewable fuel production facility, foreign ethanol production facility, or biointermediate production facility, as applicable. The 380-day period shall start the day after the previous on-site visit ends.

(iii) An on-site visit shall include verification of all QAP elements that require inspection or evaluation of the physical attributes of the renewable fuel production facility, foreign ethanol production facility, or biointermediate production facility, as applicable.

(iv) The on-site visit shall be overseen by a professional engineer, as specified in § 80.1450(b)(2)(i)(A) and (b)(2)(i)(B).

[79 FR 42122, July 18, 2014, as amended at 85 FR 7083, Feb. 6, 2020; 87 FR 39674, July 1, 2022]

§ 80.1473 Affirmative defenses.

(a) *Criteria.* Any person who engages in actions that would be a violation of the provisions of either § 80.1460(b)(2) or (c)(1), other than the generator of an invalid RIN, will not be deemed in violation if the person demonstrates that the criteria under paragraphs (c), (d), or (e) of this section are met.

(b) *Applicability of affirmative defenses.* The following provisions apply to affirmative defenses asserted under paragraph (a) of this section:

(1) Affirmative defenses only apply to RINs that were invalidly generated and verified through a quality assurance audit using an EPA-approved QAP.

(2) Affirmative defenses only apply in situations where an invalidly generated verified RIN is either transferred to another person (violation of § 80.1460(b)(2)) or used for compliance for an obligated party's RVO (use violation of § 80.1460(c)(1)).

(3) Affirmative defenses do not apply to the generator of an invalid RIN.

(c) *Asserting an affirmative defense for invalid A-RINs verified during the interim period.* To establish an affirmative defense to a violation of § 80.1460(b)(2) or (c)(1) involving invalid A-RINs, the person must meet the notification requirements of paragraph (f) of this section and prove by a preponderance of evidence all of the following:

(1) The RIN in question was verified through a quality assurance audit pursuant to § 80.1472 using an approved Option A QAP as specified in § 80.1469(a).

(2) The person did not know or have reason to know that the RINs were invalidly generated prior to being verified by the independent third-party auditor.

(3) If the person self-identified the RIN as having been invalidly generated, the person notified the EPA within five business days of discovering the invalidity.

(4) The person did not cause the invalidity.

(5) The person did not have a financial interest in the company that generated the invalid RIN.

(d) *Asserting an affirmative defense for invalid B-RINs verified during the interim period.* To establish an affirmative defense to a violation of § 80.1460(b)(2) or (c)(1) involving invalid B-RINs, the

person must meet the notification requirements of paragraph (f) of this section and prove by a preponderance of evidence all of the following:

(1) The RIN in question was verified through a quality assurance audit pursuant to § 80.1472 using an approved Option B QAP as specified in § 80.1469(b).

(2) The person did not know or have reason to know that the RINs were invalidly generated at the time of transfer or use for compliance, unless the RIN generator replaced the RIN pursuant to § 80.1474.

(3) If the person self-identified the RIN as having been invalidly generated, the person notified the EPA within five business days of discovering the invalidity.

(4) The person did not cause the invalidity.

(5) The person did not have a financial interest in the company that generated the invalid RIN.

(6) If the person used the invalid B-RIN for compliance, the person adjusted its records, reports, and compliance calculations in which the invalid B-RIN was used as required by § 80.1431, unless the RIN generator replaced the RIN pursuant to § 80.1474.

(e) *Asserting an affirmative defense for invalid Q-RINs.* To establish an affirmative defense to a violation of § 80.1460(b)(2) or (c)(1) involving invalid Q-RINs, the person must meet the notification requirements of paragraph (f) of this section and prove by a preponderance of evidence all of the following:

(1) The RIN in question was verified through a quality assurance audit pursuant to § 80.1472 using an approved QAP as specified in § 80.1469(c).

(2) The person did not know or have reason to know that the RINs were invalidly generated at the time of transfer or use for compliance, unless the RIN generator replaced the RIN pursuant to § 80.1474.

(3) If the person self-identified the RIN as having been invalidly generated, the person notified the EPA within five business days of discovering the invalidity.

(4) The person did not cause the invalidity.

(5) The person did not have a financial interest in the company that generated the invalid RIN.

(6) If the person used the invalid Q-RIN for compliance, the person adjusted its records, reports, and compliance calculations in which the invalid Q-RIN was used as required by § 80.1431, unless the RIN generator replaced the RIN pursuant to § 80.1474.

(f) *Notification requirements.* A person asserting an affirmative defense to a violation of § 80.1460(b)(2) or (c)(1), arising from the transfer or use of an invalid A-RIN, B-RIN, or Q-RIN must submit a written report to the EPA via the EMTS support line (fuelsprogramsupport@epa.gov), including all pertinent supporting documentation, demonstrating that the requirements of paragraphs (c), (d), or (e) of this section were met. The written report must be submitted within 30 days of the person discovering the invalidity.

[79 FR 42123, July 18, 2014, as amended at 87 FR 39674, July 1, 2022; 88 FR 44592, July 12, 2023]

§ 80.1474 Replacement requirements for invalidly generated RINs.

(a) *Responsibility for replacement of invalid verified RINs.* (1) The generator of the A-RIN and the independent third-party auditor that verified the A-RIN are required to replace invalidly generated A-RINs with valid RINs pursuant to the procedures specified in paragraph (b) of this section.

(2) The generator of the B-RIN and the obligated party that owns the B-RIN are required to replace invalidly generated B-RINs with valid RINs pursuant to the procedures specified in paragraph (b) of this section.

(3) The generator of the Q-RIN and the obligated party that owns the Q-RIN are required to replace invalidly generated Q-RINs with valid RINs pursuant to the procedures specified in paragraph (b) of this section.

(4) The generator of an unverified RIN and the obligated party that owns an unverified RIN are required to replace invalidly generated and unverified RINs pursuant to the procedures specified in paragraph (b) of this section.

(b) *Identification and treatment of potentially invalid RINs (PIRs).* (1) Any RIN can be identified as a PIR by the RIN generator, an independent third-party auditor that verified the RIN, or the EPA.

(2) For PIRs identified by the RIN generator, the generator is required to notify the EPA via the EMTS support line (fuelsprogramsupport@epa.gov) within five business days of the identification, including an initial explanation of why the RIN is believed to be invalid, and is required to take any of the following corrective actions within 30 days:

(i) Retire the PIR.

(ii) Retire a valid RIN meeting the requirements of paragraph (d) of this section.

(3) For PIRs identified by the independent third-party auditor that verified the RIN, the independent third-party auditor is required to notify the EPA via the EMTS support line (fuelsprogramsupport@epa.gov) and the RIN generator in writing within five business days of the identification, including an initial explanation of why the RIN is believed to be invalid.

(4) Within 30 days of being notified by the EPA or the independent third-party auditor that verified the RIN that a RIN is a PIR, the RIN generator is required to take one of the following actions:

(i) In the event that the EPA identifies a RIN as a PIR, do one of the following:

(A) Retire the PIR.

(B) Retire a valid RIN following the requirements of paragraph (d) of this section.

(C) Submit a demonstration in writing to the EPA via the EMTS support line (fuelsprogramsupport@epa.gov) that the PIR is valid.

(1) If the EPA determines that the demonstration is satisfactory, the RIN will no longer be considered a PIR.

(2) If the EPA determines that the demonstration is not satisfactory, the PIR will be deemed invalid and the PIR generator must retire the PIR or a valid RIN following the requirements of paragraph (d) of this section within 30 days of notification by the EPA.

(ii) In the event that the independent third-party auditor identifies a RIN as a PIR, do one of the following:

(A) Retire the PIR.

(B) Retire a valid RIN following the requirements of paragraph (d) of this section.

(C) Submit a demonstration in writing to the independent third-party auditor and the EPA via the EMTS support line (fuelsprogramsupport@epa.gov) that the PIR is valid.

(1) If the independent third-party auditor determines that the demonstration is satisfactory, the PIR will be deemed to be a valid RIN; however, the EPA reserves the right to make a determination regarding the validity of the RIN.

(2) If the independent third-party auditor determines that the demonstration is not satisfactory, the EPA will then make a determination whether the demonstration is not satisfactory, and if so, the PIR will be deemed invalid and the PIR generator must retire the PIR or a valid RIN following the requirements of paragraph (d) of this section within 30 days of notification by the EPA.

(5) Within 60 days of receiving a notification from the EPA that a PIR generator has failed to perform a corrective action required pursuant to this section:

(i) For A-RINs, the independent third-party auditor that verified the PIR is required to retire valid RINs meeting the requirements of paragraph (d) of this section.

(ii) For Q-RINs, B-RINs, and unverified RINs, the party that owns the invalid RIN is required to do one of the following:

(A) Retire the invalid RIN.

(B) If the invalid RIN has already been used for compliance with an obligated party's RVO, correct the RVO to subtract the invalid RIN.

(c) *Failure to take corrective action.* Any person who fails to meet a requirement under paragraph (b)(4) or (b)(5) of this section shall be liable for full performance of such requirement, and each day of non-compliance shall be deemed a separate violation pursuant to § 80.1460(f). The administrative process for replacement of invalid RINs

does not, in any way, limit the ability of the United States to exercise any other authority to bring an enforcement action under section 211 of the Clean Air Act, the fuels regulations at 40 CFR part 80, or any other applicable law.

(d) The following specifications apply when retiring valid RINs to replace PIRs or invalid RINs:

(1) When a RIN is retired to replace a PIR or invalid RIN, the D code of the retired RIN must be eligible to be used towards meeting all the renewable volume obligations as the PIR or invalid RIN it is replacing, as specified in § 80.1427(a)(2).

(2) The number of RINs retired must be equal to the number of PIRs or invalid RINs being replaced, subject to paragraph (e) or (f) of this section if applicable, and § 80.1470(c).

(e) *Limited exemption for invalid B-RINs verified during the interim period.*

(1) In the event that an obligated party is required to retire or replace an invalid RIN that is a B-RIN pursuant to paragraph (b) of this section, the obligated party will be afforded a “limited exemption” (LE) equal to two percent of its annual Renewable Volume Obligation (RVO) for calendar years 2013 and 2014 during the interim period.

(2) Limited exemptions are calculated as follows:

$$\begin{aligned} LE_{CB,i} &= 0.02 \times RVO_{CB,i} \\ LE_{BBD,i} &= 0.02 \times RVO_{BBD,i} \\ LE_{AB,i} &= 0.02 \times RVO_{AB,i} \\ LE_{RF,i} &= 0.02 \times RVO_{RF,i} \end{aligned}$$

Where:

$LE_{CB,i}$ = Limited exemption for cellulosic biofuel for year i.

$LE_{BBD,i}$ = Limited exemption for biomass-based diesel for year i.

$LE_{AB,i}$ = Limited exemption for advanced biofuel for year i.

$LE_{RF,i}$ = Limited exemption for renewable for year i.

$RVO_{CB,i}$ = The Renewable Volume Obligation for cellulosic biofuel for the obligated party for calendar year i, in gallons, pursuant to § 80.1407.

$RVO_{BBD,i}$ = The Renewable Volume Obligation for biomass-based diesel for the obligated party for calendar year i after 2010, in gallons, pursuant to § 80.1407.

$RVO_{AB,i}$ = The Renewable Volume Obligation for advanced biofuel for the obligated party for calendar year i, in gallons, pursuant to § 80.1407.

$RVO_{RF,i}$ = The Renewable Volume Obligation for renewable fuel for the obligated party for calendar year i, in gallons, pursuant to § 80.1407.

(3) If the number of invalidly generated B-RINs required to be retired or replaced in a calendar year is less than or equal to LE as calculated in paragraph (d)(2) of this section, the entire RIN retirement obligation is excused.

(4) If the number of invalidly generated B-RINs required to be retired or replaced in a calendar year is greater than LE as calculated in paragraph (d)(2) of this section, the retirement of a number of B-RINs equal to two percent of the obligated party’s RVO is excused.

(5) The limited exemption for B-RINs applies only in calendar years 2013 and 2014 during the interim period.

(f) *Limited exemption for invalid Q-RINs.* (1) In the event that an obligated party is required to retire or replace an invalid RIN that is a Q-RIN pursuant to paragraph (b) of this section, the obligated party will be afforded a “limited exemption” (LE) equal to two percent of its annual Renewable Volume Obligation (RVO) for calendar years 2014, 2015, and 2016.

(2) Limited exemptions are calculated as follows:

$$\begin{aligned} LE_{CB,i} &= 0.02 \times RVO_{CB,i} \\ LE_{BBD,i} &= 0.02 \times RVO_{BBD,i} \\ LE_{AB,i} &= 0.02 \times RVO_{AB,i} \\ LE_{RF,i} &= 0.02 \times RVO_{RF,i} \end{aligned}$$

Where:

$LE_{CB,i}$ = Limited exemption for cellulosic biofuel for year i.

$LE_{BBD,i}$ = Limited exemption for biomass-based diesel for year i.

$LE_{AB,i}$ = Limited exemption for advanced biofuel for year i.

$LE_{RF,i}$ = Limited exemption for renewable for year i.

$RVO_{CB,i}$ = The Renewable Volume Obligation for cellulosic biofuel for the obligated party for calendar year i, in gallons, pursuant to § 80.1407.

$RVO_{BBD,i}$ = The Renewable Volume Obligation for biomass-based diesel for the obligated party for calendar year i after 2010, in gallons, pursuant to § 80.1407.

$RVO_{AB,i}$ = The Renewable Volume Obligation for advanced biofuel for the obligated party for calendar year i, in gallons, pursuant to § 80.1407.

$RVO_{RF,i}$ = The Renewable Volume Obligation for renewable fuel for the obligated party

for calendar year *i*, in gallons, pursuant to § 80.1407.

(3) If the number of invalidly generated Q-RINs required to be retired or replaced in a calendar year is less than or equal to LE as calculated in paragraph (d)(2) of this section, the entire RIN retirement obligation is excused.

(4) If the number of invalidly generated Q-RINs required to be retired or replaced in a calendar year is greater than LE as calculated in paragraph (d)(2) of this section, the retirement of a number of Q-RINs equal to two percent of the obligated party's RVO is excused.

(5) The limited exemption for Q-RINs applies only in calendar years 2014, 2015, and 2016.

(g) All parties who retire RINs under this section shall use the forms and follow the procedures prescribed by EPA.

[79 FR 42123, July 18, 2014, as amended at 87 FR 39674, July 1, 2022; 88 FR 44592, July 12, 2023]

§ 80.1475 What are the additional attest engagement requirements for parties that redesignate certified NTDF as MVNRLM diesel fuel?

(a) *General requirements.* (1) In addition to the attest engagement requirements under § 80.1464, all obligated parties required to arrange for additional attest engagement procedures under § 80.1464(a)(1)(vii) must have an annual attest engagement conducted by an auditor using the minimum attest procedures specified in this section.

(2) All applicable requirements and procedures outlined in 40 CFR 1090.1800 through 1090.1850 apply to the auditors and attest engagement procedures specified in this section.

(3) Obligated parties must include any additional information required under this section in the attest engagement report under § 80.1464(d).

(4) Report as a finding if the party failed to either incur or satisfy an RVO if required.

(b) *EPA reports.* Auditors must perform the following:

(1) Obtain and read a copy of the obligated party's reports filed with EPA as required by § 80.1451(a)(1)(xix) for the reporting period.

(2) In the case of an obligated party's report to EPA that represents aggregate

calculations for more than one facility, obtain the facility-specific volume and property information that was used by the refiner to prepare the aggregate report. Foot and crossfoot the facility-specific totals and agree to the values in the aggregate report. The procedures in paragraphs (b) and (c) of this section are then performed separately for each facility.

(3) Obtain a written representation from a company representative that the report copies are complete and accurate copies of the reports filed with EPA.

(4) Identify, and report as a finding, the name of the commercial computer program used by the refiner or importer to track the data required by the regulations in this part, if any.

(c) *Inventory reconciliation analysis.* Auditors must perform the following:

(1) Obtain an inventory reconciliation analysis for the facility for the reporting period for each of the following and perform the procedures at paragraphs (c)(2) through (4) of this section separately for each of the following products:

(i) The volume of certified NTDF that was redesignated as MVNRLM diesel fuel.

(ii) The volume of MVNRLM diesel fuel that was redesignated to a non-transportation use.

(iii) The volume of MVNRLM diesel fuel owned when the fuel was received at the facility and acquired at the facility during the compliance period.

(iv) The volume of MVNRLM diesel fuel owned and sold or transferred to other parties at the facility during the compliance period.

(v) The volume of certified NTDF received.

(vi) The volume of certified NTDF delivered.

(2) Foot and crossfoot the volume totals reflected in the analysis.

(3) Agree the beginning and ending inventory amounts in the analysis to the facility's inventory records.

(4) If the obligated party delivered more MVNRLM diesel fuel than received, agree the annual balance with the reports obtained at § 80.1475(b)(1) and verify whether the obligated party incurred and satisfied its RVO under § 80.1408(a)(2)(i).

(5) Report as a finding each of the volume totals along with any discrepancies.

(d) *Listing of tenders.* Auditors must perform the following:

(1) For each of the volumes listed in paragraphs (c)(1)(iii) through (vi) of this section, obtain a separate listing of all tenders from the refiner or importer for the reporting period. Each listing should provide for each tender the volume shipped and other information as needed to distinguish tenders.

(2) Foot to the volume totals per the listings.

(3) Agree the volume totals on the listing to the tender volume total in the inventory reconciliation analysis obtained in paragraph (c) of this section.

(4) For each of the listings select a representative sample of the tenders in accordance with the guidelines in 40 CFR 1090.1805, and for each tender selected perform the following:

(i) Obtain product transfer documents associated with the tender and agree the volume on the tender listing to the volume on the product transfer documents.

(ii) Note whether the product transfer documents include the information required by 40 CFR 1090.1115 and, for tenders involving the transfer of certified NTDF, the information required by § 80.1453(e).

(5) Report as a finding any discrepancies.

[85 FR 7083, Feb. 6, 2020, as amended at 85 FR 78468, Dec. 4, 2020; 87 FR 39674, July 1, 2022]

§ 80.1476 Requirements for biointermediate producers.

Biointermediate producers must comply with the following requirements:

(a) *Registration.* No later than 60 days prior to the transfer of any biointermediate to be used in the production of a renewable fuel for which RINs may be generated, biointermediate producers must register with EPA pursuant to the requirements of § 80.1450(b).

(b) *Reporting.* Biointermediate producers must comply with the reporting requirements in § 80.1451(j).

(c) *Recordkeeping.* Biointermediate producers must comply with the recordkeeping requirements in § 80.1454(i).

(d) *PTDs.* Biointermediate producers must comply with the PTD requirements in § 80.1453(f).

(e) *Quality Assurance Plans.* Prior to the transfer of any biointermediate to be used in the production of a renewable fuel for which RINs may be generated, biointermediate producers must have an approved quality assurance plan pursuant to § 80.1477(b) and the independent third-party auditor must have conducted a site visit of the biointermediate production facility under § 80.1472.

(f) *Attest engagements.* Biointermediate producers must comply with the annual attest engagement requirements in § 80.1464(h).

(g) *Limitations on biointermediate transfers and production.* (1) A biointermediate producer must transfer all biointermediates produced from a single biointermediate facility to a single renewable fuel production facility as designated under § 80.1450(b)(1)(ii)(B)(I).

(2)(i) Except as specified in paragraph (g)(2)(ii) of this section, a batch of biointermediate must be segregated from other batches of biointermediate (even if it is the same type of biointermediate), other feedstocks, foreign ethanol, and renewable fuels from the point that the batch of biointermediate is produced to the point where the batch of biointermediate is received at the renewable fuel production facility designated under § 80.1450(b)(1)(ii)(B)(I).

(ii)(A) Batches of biointermediate may be commingled between the biointermediate production facility and the designated renewable fuel production facility as long as each batch is produced at the same biointermediate production facility, is the same type of biointermediate, and no other feedstocks, biointermediates, foreign ethanol, or renewable fuels are comingled.

(B) A renewable fuel producer may commingle batches of biointermediate at an off-site storage tank if all the following conditions are met:

(I) Only batches of the same type of biointermediate are commingled and no other feedstocks, biointermediates, foreign ethanol, or renewable fuels are comingled in the off-site storage tank.

(2) The renewable fuel producer owns or is the sole position holder in the off-site storage tank.

(3) Renewable fuel producers that receive biointermediate at a renewable fuel production facility may not be a biointermediate producer.

(4) A biointermediate must not be used to make another biointermediate.

(5) A foreign biointermediate producer must not transfer biointermediate to a non-RIN-generating foreign producer.

(h) *Batch numbers and volumes.* (1) Each batch of biointermediate produced at a biointermediate production facility must be assigned a number (the “batch number”), consisting of the EPA-assigned company registration number, the EPA-assigned facility registration number, the last two digits of the year in which the batch was produced, and a unique number for the batch, beginning with the number one for the first batch produced each calendar year and each subsequent batch during the calendar year being assigned the next sequential number (e.g., 4321-54321-95-000001, 4321-54321-95-000002, etc.).

(2) For biointermediates measured on a volume basis, the volume of each batch of biointermediate must be adjusted to a standard temperature of 60 °F as specified in § 80.1426(f)(8).

(i) *Designation.* Each batch of biointermediate produced at a biointermediate production facility must be designated for use in the production of a renewable fuel in accordance with the biointermediate producer’s registration under § 80.1450. The designation for the batch of biointermediate must be clearly indicated on PTDs for the biointermediate as described in § 80.1453(f)(1)(vi). The same batch or a portion of a batch may not be designated as both a biointermediate and a renewable fuel.

[87 FR 39675, July 1, 2022]

§ 80.1477 Requirements for QAPs for biointermediate producers.

(a) Independent third-party auditors that verify biointermediate production must meet the requirements of § 80.1471(a) through (c) and (f) through (h), as applicable.

(b) QAPs approved by EPA to verify biointermediate production must meet the requirements in § 80.1469(c) through (f), as applicable.

(c) Quality assurance audits, when performed, must be conducted in accordance with the requirements in § 80.1472(a) and (b)(3).

(d)(1) If an independent third-party auditor identifies a potentially improperly produced biointermediate, the independent third-party auditor must notify EPA, the biointermediate producer, and the renewable fuel producer that may have been transferred the biointermediate within five business days of the identification, including an initial explanation of why the biointermediate may have been improperly produced.

(2) If RINs were generated from the potentially improperly produced biointermediate, the RIN generator must follow the applicable identification and treatment of PIRs as specified in § 80.1474.

(e) For the generation of Q-RINs for renewable fuels that were produced from a biointermediate, the biointermediate must be verified under an approved QAP as described in paragraph (b) of this section and the RIN generating facility must be verified under an approved QAP as described in § 80.1469.

[87 FR 39675, July 1, 2022]

§ 80.1478 Requirements for foreign biointermediate producers and importers.

(a) *Foreign biointermediate producer.* For purposes of this subpart, a foreign biointermediate producer is a person located outside the United States, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, American Samoa, and the Commonwealth of the Northern Mariana Islands (collectively referred to in this section as “the United States”) that has been approved by EPA to produce biointermediate for use in the production of renewable fuel by a RIN-generating renewable fuel producer.

(b) *Foreign biointermediate producer requirements.* Any foreign biointermediate producer must meet all requirements that apply to biointermediate producers under this subpart as a condition of being approved as a foreign biointermediate producer under this subpart.

(c) *Foreign biointermediate producer commitments.* Any foreign biointermediate producer must commit to the following provisions as a condition of being registered as a foreign biointermediate producer under this subpart:

(1) Any EPA inspector or auditor must be given full, complete, and immediate access to conduct inspections and audits of the foreign biointermediate producer facility.

(i) Inspections and audits may be either announced in advance by EPA, or unannounced.

(ii) Access will be provided to any location where:

(A) Biointermediate is produced.

(B) Documents related to foreign biointermediate producer operations are kept.

(C) Biointermediate is stored or transported between the foreign biointermediate producer and the renewable fuel producer, including storage tanks, vessels, and pipelines.

(iii) EPA inspectors and auditors may be EPA employees or contractors to EPA.

(iv) Any documents requested that are related to matters covered by inspections and audits must be provided to an EPA inspector or auditor on request.

(v) Inspections and audits may include review and copying of any documents related to the following:

(A) The volume of biointermediate produced or delivered to renewable fuel production facilities.

(B) Transfers of title or custody to the biointermediate.

(C) Work performed and reports prepared by independent third parties and by independent auditors under the requirements of this section, including work papers.

(vi) Inspections and audits by EPA may include interviewing employees.

(vii) Any employee of the foreign biointermediate producer must be made available for interview by the EPA inspector or auditor, on request, within a reasonable time period.

(viii) English language translations of any documents must be provided to an EPA inspector or auditor, on request, within 10 business days.

(ix) English language interpreters must be provided to accompany EPA inspectors and auditors, on request.

(2) An agent for service of process located in the District of Columbia must be named, and service on this agent constitutes service on the foreign biointermediate producer or any employee of the foreign biointermediate producer for any action by EPA or otherwise by the United States related to the requirements of this subpart.

(3) The forum for any civil or criminal enforcement action related to the provisions of this section for violations of the Clean Air Act or regulations in this title promulgated thereunder must be governed by the Clean Air Act, including the EPA administrative forum where allowed under the Clean Air Act.

(4) United States substantive and procedural laws apply to any civil or criminal enforcement action against the foreign biointermediate producer or any employee of the foreign biointermediate producer related to the provisions of this section.

(5) Applying to be an approved foreign biointermediate producer under this section, or producing or exporting biointermediate under such approval, and all other actions to comply with the requirements of this subpart relating to such approval constitute actions or activities covered by and within the meaning of the provisions of 28 U.S.C. 1605(a)(2), but solely with respect to actions instituted against the foreign biointermediate producer, its agents and employees in any court or other tribunal in the United States for conduct that violates the requirements applicable to the foreign biointermediate producer under this subpart, including conduct that violates the False Statements Accountability Act of 1996 (18 U.S.C. 1001) and section 113(c)(2) of the Clean Air Act (42 U.S.C. 7413).

(6) The foreign biointermediate producer, or its agents or employees, will not seek to detain or to impose civil or criminal remedies against EPA inspectors or auditors for actions performed within the scope of EPA employment or contract related to the provisions of this section.

(7) The commitment required by this paragraph (c) must be signed by the

owner or president of the foreign bio-intermediate producer company.

(8) In any case where the biointermediate produced at a foreign biointermediate production facility is stored or transported by another company between the production facility and the vessel that transports the biointermediate to the United States, the foreign biointermediate producer must obtain from each such other company a commitment that meets the requirements specified in paragraphs (c)(1) through (7) of this section, and these commitments must be included in the foreign biointermediate producer's application to be an approved foreign biointermediate producer under this subpart.

(d) *Sovereign immunity.* By submitting an application to be an approved foreign biointermediate producer under this subpart, or by producing and exporting biointermediate fuel to the United States under such approval, the foreign biointermediate producer, and its agents and employees, without exception, become subject to the full operation of the administrative and judicial enforcement powers and provisions of the United States without limitation based on sovereign immunity, with respect to actions instituted against the foreign biointermediate producer, its agents and employees in any court or other tribunal in the United States for conduct that violates the requirements applicable to the foreign biointermediate producer under this subpart, including conduct that violates the False Statements Accountability Act of 1996 (18 U.S.C. 1001) and section 113(c)(2) of the Clean Air Act (42 U.S.C. 7413).

(e) *English language reports.* Any document submitted to EPA by a foreign biointermediate producer must be in English or must include an English language translation.

(f) *Withdrawal or suspension of foreign biointermediate producer approval.* EPA may withdraw or suspend a foreign biointermediate producer's approval where any of the following occur:

(1) A foreign biointermediate producer fails to meet any requirement of this section.

(2) A foreign government fails to allow EPA inspections or audits as pro-

vided in paragraph (c)(1) of this section.

(3) A foreign biointermediate producer asserts a claim of, or a right to claim, sovereign immunity in an action to enforce the requirements in this subpart.

(g) *Additional requirements for applications, reports, and certificates.* Any application for approval as a foreign biointermediate producer, any report, certification, or other submission required under this section shall be:

(1) Submitted in accordance with procedures specified by EPA, including use of any forms that may be specified by EPA.

(2) Signed by the president or owner of the foreign biointermediate producer company, or by that person's immediate designee, and must contain the following declarations:

(i) *Certification.*

"I hereby certify:

That I have actual authority to sign on behalf of and to bind [NAME OF FOREIGN BIOINTERMEDIATE PRODUCER] with regard to all statements contained herein;

That I am aware that the information contained herein is being Certified, or submitted to the United States Environmental Protection Agency, under the requirements of 40 CFR part 80, subpart M, and that the information is material for determining compliance under these regulations; and

That I have read and understand the information being Certified or submitted, and this information is true, complete and correct to the best of my knowledge and belief after I have taken reasonable and appropriate steps to verify the accuracy thereof."

(ii) *Affirmation.*

"I affirm that I have read and understand the provisions of 40 CFR part 80, subpart M, including 40 CFR 80.1478 apply to [NAME OF FOREIGN BIOINTERMEDIATE PRODUCER]. Pursuant to Clean Air Act section 113(c) and 18 U.S.C. 1001, the penalty for furnishing false, incomplete or misleading information in this certification or submission is a fine of up to \$10,000 U.S., and/or imprisonment for up to five years."

(h) *Requirements for biointermediate importers.* Any biointermediate importer must meet all the following requirements:

(1) For each biointermediate batch, any biointermediate importer must have an independent third party do all the following:

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(i) Determine the volume of biointermediate in the truck, railcar, vessel, or other shipping container.

(ii) Determine the name and EPA-assigned registration number of the foreign biointermediate producer that produced the biointermediate.

(iii) Determine the name and country of registration of the truck, railcar, vessel, or other shipping container used to transport the biointermediate to the United States.

(iv) Determine the date and time the truck, railcar, vessel, or other shipping container arrives at the United States port of entry.

(2) Any biointermediate importer must submit documentation of the information determined under paragraph (h)(1) of this section within 30 days following the date any truck, railcar, vessel, or other shipping container transporting biointermediate arrives at the United States port of entry to all the following:

(i) The foreign biointermediate producer.

(ii) The renewable fuel producer.

(3) The biointermediate importer and the independent third party must keep records of the audits and reports required under paragraphs (h)(1) and (2) of this section for five years from the date of creation.

[87 FR 39675, July 1, 2022, as amended at 88 FR 44592, July 12, 2023]

§ 80.1479 Alternative recordkeeping requirements for separated yard waste, separated food waste, separated MSW, and biogenic waste oils/fats/greases.

(a) *Alternative recordkeeping.* In lieu of complying with the recordkeeping requirements in § 80.1454(j), a renewable fuel producer or biointermediate producer that produces renewable fuel or biointermediate from separated yard waste, separated food waste, separated MSW, or biogenic waste oils/fats/greases and uses a feedstock aggregator to supply these feedstocks

may comply with the alternative recordkeeping requirements of this section.

(b) *Registration of the feedstock aggregator.* The feedstock aggregator must register under 40 CFR 1090.805.

(c) *QAP participation.* (1) The renewable fuel or biointermediate producer must have their RINs or biointermediate, as applicable, verified by an independent third-party auditor under an approved QAP that includes a description of how the independent third-party auditor will audit each feedstock aggregator.

(2) The independent third-party auditor must conduct a site visit of each feedstock aggregator's establishment as specified in § 80.1471(f). Instead of verifying RINs with a site visit of the feedstock aggregator's establishment every 200 days as specified in § 80.1471(f)(1)(ii), the independent third-party auditor may verify RINs with a site visit every 380 days.

(d) *PTDs.* PTDs must accompany transfers of separated yard waste, separated food waste, separated MSW, and biogenic waste oils/fats/greases from the point where the feedstock leaves the feedstock aggregator's establishment to the point the feedstock is delivered to the renewable fuel production facility, as specified in § 80.1453(f)(1)(i) through (v).

(e) *Recordkeeping.* The feedstock aggregator must keep all applicable records for the collection of separated yard waste, separated food waste, separated MSW, and biogenic waste oils/fats/greases as specified in § 80.1454(j).

(f) *Liability.* The feedstock aggregator and renewable fuel producer are liable for violations as specified in § 80.1461(e).

[88 FR 44592, July 12, 2023]

Subparts N–O [Reserved]

APPENDIXES A–G TO PART 80
[RESERVED]

FINDING AIDS

A list of CFR titles, subtitles, chapters, subchapters and parts and an alphabetical list of agencies publishing in the CFR are included in the CFR Index and Finding Aids volume to the Code of Federal Regulations which is published separately and revised annually.

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