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(4) If the fuel or pathway described in the petition does not meet the definitions in § 80.1401 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.

(e) The petition under this section shall be submitted on forms and following procedures as prescribed by EPA.

[75 FR 26037, May 10, 2010]

§§ 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) FFFFF is the registration number assigned, according to § 80.1450, to the facility at which the batch of renewable fuel was produced or imported.

(e) BBBBB 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 by renewable fuel producers or importers?

(a) *General requirements.* (1) To the extent permitted under paragraphs (b) and (c) of this section, producers and importers of renewable fuel must generate RINs to represent that fuel if the fuel:

(i) Qualifies for a D code pursuant to § 80.1426(f), or EPA has approved a petition for use of a D code pursuant to § 80.1416; and

(ii) Is demonstrated to be produced from renewable biomass pursuant to the reporting requirements of § 80.1451 and the recordkeeping requirements of § 80.1454; and

(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) Was produced in compliance with the registration requirements of § 80.1450, the reporting requirements of § 80.1451, the recordkeeping requirements of § 80.1454, and all other applicable regulations of this subpart M.

(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 foreign 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 definition 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.

(b) *Regional applicability*. (1) Except as provided in paragraph (c) of this section, a RIN must 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 48 contiguous states or Hawaii.

(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) Fuel producers and importers may not generate RINs for fuel that is not designated or intended for use as transportation fuel, heating oil, or jet fuel.

(2) *Small producer/importer threshold*. Pursuant to § 80.1455(a) and (b), renewable fuel producers that produce less than 10,000 gallons a year of renewable fuel, and importers that import less than 10,000 gallons a year of renewable fuel, are not required to generate and assign RINs to batches of renewable fuel that satisfy the requirements of paragraph (a)(1) of this section that they produce or import.

(3) *Temporary new producer threshold*. Pursuant to § 80.1455(c) and (d), new renewable fuel producers that produce less than 125,000 gallons of renewable fuel a year are not required to generate and assign RINs to batches of renewable fuel to satisfy the requirements of paragraph (a)(1) of this section.

(i) The provisions of this paragraph (c)(3) apply only to new facilities, for a maximum of three years beginning with the calendar year in which the production facility produces its first gallon of renewable fuel.

(ii) [Reserved]

(4) Importers shall not generate RINs for renewable fuel imported from a foreign renewable fuel producer, or for renewable fuel made with ethanol produced by a foreign ethanol producer, unless the foreign renewable fuel producer or foreign ethanol 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 registered foreign producer.

(6) A party is prohibited from generating RINs for a volume of fuel that it produces if:

(i) The fuel does not meet the requirements of paragraph (a)(1) of this section; or

(ii) The fuel has been produced from a chemical conversion process that uses another renewable fuel as a feedstock, the renewable fuel used as a feedstock was produced by another party, and RINs were received with the renewable fuel.

(A) Parties who produce renewable fuel made from a feedstock which itself was a renewable fuel received with RINs, shall assign the original RINs to the new renewable fuel.

(B) [Reserved]

(7) For renewable fuel oil that is heating oil as defined in paragraph (2) of the definition of heating oil in § 80.1401, 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)(ii)(T)(*3*).

(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.

(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 to volumes 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.* D codes shall be used in RINs generated by producers or importers of renewable fuel according to the pathways listed in Table 1 to this section, paragraph (f)(6) of this section, or as approved by the Administrator. 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. 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.

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; Algal oil; Biogenic waste oils/fats/greases; Non-food grade corn oil *Camelina sativa* oil.	One of the following: Trans-Esterification Hydrotreating Excluding processes that co-process renewable biomass and petroleum.	4
G	Biodiesel, heating oil.	Canola/Rapeseed oil	Trans-Esterification using natural gas or biomass for process energy.	4

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
H	Biodiesel, renewable diesel, jet fuel and heating oil.	Soy bean oil; Oil from annual covercrops; Algal oil; Biogenic waste oils/fats/greases; Non-food grade corn oil *Camelina sativa* oil.	One of the following: Trans-Esterification Hydrotreating Includes only processes that co-process renewable biomass and petroleum.	5
I	Naphtha, LPG	*Camelina sativa* oil	Hydrotreating	5
J	Ethanol	Sugarcane	Fermentation	5
K	Ethanol	Cellulosic Biomass from crop residue, slash, pre-commercial thinnings and tree residue, annual covercrops, switchgrass, miscanthus, Energy cane, *Arundo donax,* and *Pennisetum purpureum;* cellulosic components of separated yard waste; cellulosic components of separated food waste; and cellulosic components of separated MSW.	Any	3
L	Cellulosic diesel, jet fuel and heating oil.	Cellulosic Biomass from crop residue, slash, pre-commercial thinnings and tree residue, annual covercrops, switchgrass, miscanthus, energy cane, *Arundo donax,* and *Pennisetum purpureum;* cellulosic components of separated yard waste; cellulosic components of separated food waste; and cellulosic components of separated MSW.	Any	7
M	Renewable gasoline and renewable gasoline blendstock.	Cellulosic Biomass from crop residue, slash, pre-commercial thinnings, tree residue, annual cover crops; cellulosic components of separated yard waste; cellulosic components of separated food waste; and cellulosic components of separated MSW.	Catalytic Pyrolysis and Upgrading, Gasification and Upgrading, Thermo-Catalytic Hydrodeoxygenation and Upgrading, Direct Biological Conversion, Biological Conversion and Upgrading, all utilizing natural gas, biogas, and/or biomass as the only process energy sources Any process utilizing biogas and/or biomass as the only process energy sources.	3
N	Naphtha	Cellulosic biomass from switchgrass, miscanthus, energy cane, *Arundo donax,* and *Pennisetum purpureum*.	Gasification and upgrading	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.	Any	5
Q	Biogas	Landfills, sewage waste treatment plants, manure digesters.	Any	5
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

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.
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.
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.

(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:

$$V_{RIN} = EV * V_s$$

Where:

V_{RIN} = RIN volume, in gallons, for use in determining the number of gallon-RINs that shall be generated for the batch.

EV = 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 Table 1 to this section, or a D code as approved by the Administrator, which 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 Table 1 to this section, or D codes as approved by the Administrator, which 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:

$$V_{RIN} = EV * V_s$$

Where:

V_{RIN} = RIN volume, in gallons, for use in determining the number of gallon-RINs that shall be generated for the batch.

EV = 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:

$$V_{RIN} = \Sigma(EV_i * V_{s,i})$$

Where:

V_{RIN} = RIN volume, in gallons, for use in determining the number of gallon-RINs that shall be generated for the batch.

EV_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:

$$V_{RIN} = EV * V_s$$

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.

EV = 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} shall be calculated for each category of renewable fuel according to formulas in Table 3 to this section. All batch-RINs thus generated shall be assigned to unique batch identifiers for each portion of the batch with a different D code.

TABLE 3 TO § 80.1426—NUMBER OF GALLON-RINS TO ASSIGN TO BATCH-RINS WITH D CODES DEPENDENT ON FUEL TYPE

D code to use in batch-RIN	Number of gallon-RINs
D = 3	$V_{RIN,\ CB} = EV_{CB} * V_{s,\ CB}$
D = 4	$V_{RIN,\ BBD} = EV_{BBD} * V_{s,\ BBD}$
D = 5	$V_{RIN,\ AB} = EV_{AB} * V_{s,\ AB}$
D = 6	$V_{RIN,\ RF} = EV_{RF} * V_{s,\ RF}$
D = 7	$V_{RIN,\ CD} = EV_{CD} * V_{s,\ CD}$

Where:

$V_{RIN,CB}$ = RIN volume, in gallons, for use in determining the number of gallon-RINs that shall be generated for the cellulosic biofuel portion of the batch with a D code of 3.

$V_{RIN,BBD}$ = RIN volume, in gallons, for use in determining the number of gallon-RINs that shall be generated for the biomass-based diesel portion of the batch with a D code of 4.

$V_{RIN,AB}$ = RIN volume, in gallons, for use in determining the number of gallon-RINs that shall be generated for the advanced biofuel portion of the batch with a D code of 5.

$V_{RIN,RF}$ = RIN volume, in gallons, for use in determining the number of gallon-RINs that shall be generated for the renewable fuel portion of the batch with a D code of 6.

$V_{RIN,CD}$ = RIN volume, in gallons, for use in determining the number of gallon-RINs that shall be generated for the cellulosic diesel portion of the batch with a D code of 7.

EV_{CB} = Equivalence value for the cellulosic biofuel portion of the batch per § 80.1415.

EV_{BBD} = Equivalence value for the biomass-based diesel portion of the batch per § 80.1415.

EV_{AB} = Equivalence value for the advanced biofuel portion of the batch per § 80.1415.

EV_{RF} = Equivalence value for the renewable fuel portion of the batch per § 80.1415.

EV_{CD} = Equivalence value for the cellulosic diesel portion of the batch per § 80.1415.

$V_{s,CB}$ = Standardized volume at 60 °F of the portion of the batch that must be assigned a D code of 3, in gallons, calculated in accordance with paragraph (f)(8) of this section.

$V_{s,BBD}$ = Standardized volume at 60 °F of the portion of the batch that must be assigned a D code of 4, in gallons, calculated in accordance with paragraph (f)(8) of this section.

$V_{s,AB}$ = Standardized volume at 60 °F of the portion of the batch that must be assigned a D code of 5, in gallons, calculated in accordance with paragraph (f)(8) of this section.

$V_{s,RF}$ = Standardized volume at 60 °F of the portion of the batch that must be assigned a D code of 6, in gallons, calculated in accordance with paragraph (f)(8) of this section.

$V_{s,CD}$ = Standardized volume at 60 °F of the portion of the batch that must be assigned a D code of 7, in gallons, calculated in accordance with paragraph (f)(8) of this section.

(vi) If a producer produces a single type of renewable fuel using two or more different feedstocks which are processed simultaneously, and each batch is comprised of a single type of fuel, then the number of gallon-RINs that shall be generated for a batch of renewable fuel and assigned a particular D code shall be determined according to the formulas in Table 4 to this section.

Table 4 to §80.1426

Number of gallon-RINs to assign to batch-RINs with D codes dependent on feedstock

D code to use in batch-RIN	Number of gallon-RINs
D = 3	$V_{RIN,CB} = EV * V_s * \left(\frac{FE_3}{FE_3 + FE_4 + FE_5 + FE_6 + FE_7}\right)$
D = 4	$V_{RIN,BBD} = EV * V_s * \left(\frac{FE_4}{FE_3 + FE_4 + FE_5 + FE_6 + FE_7}\right)$
D = 5	$V_{RIN,AB} = EV * V_s * \left(\frac{FE_5}{FE_3 + FE_4 + FE_5 + FE_6 + FE_7}\right)$
D = 6	$V_{RIN,RF} = EV * V_s * \left(\frac{FE_6}{FE_3 + FE_4 + FE_5 + FE_6 + FE_7}\right)$
D = 7	$V_{RIN,CD} = EV * V_s * \left(\frac{FE_7}{FE_3 + FE_4 + FE_5 + FE_6 + FE_7}\right)$

Where:

$V_{RIN,CB}$ = RIN volume, in gallons, for use in determining the number of gallon-RINs that shall be generated for a batch of cellulosic biofuel with a D code of 3.

$V_{RIN,BBD}$ = RIN volume, in gallons, for use in determining the number of gallon-RINs that shall be generated for a batch of biomass-based diesel with a D code of 4.

$V_{RIN,AB}$ = RIN volume, in gallons, for use in determining the number of gallon-RINs that shall be generated for a batch of advanced biofuel with a D code of 5.

$V_{RIN,RF}$ = RIN volume, in gallons, for use in determining the number of gallon-RINs that shall be generated for a batch of renewable fuel with a D code of 6.

$V_{RIN,CD}$ = RIN volume, in gallons, for use in determining the number of gallon-RINs that shall be generated for a batch of cellulosic diesel with a D code of 7.

EV = Equivalence value for the 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.

FE_3 = Feedstock energy from all feedstocks whose pathways have been assigned a D code of 3 under Table 1 to this section, or a D code of 3 as approved by the Administrator, in Btu.

FE_4 = Feedstock energy from all feedstocks whose pathways have been assigned a D code of 4 under Table 1 to this section, or a D code of 4 as approved by the Administrator, in Btu.

FE_5 = Feedstock energy from all feedstocks whose pathways have been assigned a D code of 5 under Table 1 to this section, or a D code of 5 as approved by the Administrator, in Btu.

FE_6 = Feedstock energy from all feedstocks whose pathways have been assigned a D code of 6 under Table 1 to this section, or a D code of 6 as approved by the Administrator, in Btu.

FE_7 = Feedstock energy from all feedstocks whose pathways have been assigned a D code of 7 under Table 1 to this section, or a D code of 7 as approved by the Administrator, in Btu.

Feedstock energy values, FE, shall be calculated according to the following formula:

$$FE = M * (1 - m) * CF * E$$

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, representing that portion of the feedstock that is converted into renewable fuel by the producer.

E = Energy content of the components of the feedstock that are converted to renewable fuel, in annual average Btu/lb, determined according to paragraph (f)(7) of this section.

(4) *Renewable fuel that is produced by co-processing renewable biomass 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:

$$V_{RIN} = EV * V_s * FE_R/(FE_R + FE_{NR})$$

Where:

V_{RIN} = RIN volume, in gallons, for use in determining the number of gallon-RINs that shall be generated for the batch.

EV = 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.

FE_R = Feedstock energy from renewable biomass used to make the transportation fuel, heating oil, or jet fuel, in Btu.

FE_{NR} = Feedstock energy from non-renewable feedstocks 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)(*1*) of this section shall be calculated from the following formula:

$$FE = M * (1-m) * CF * E$$

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, 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:

$$V_{RIN} = EV * V_s * R$$

Where:

V_{RIN} = RIN volume, in gallons, for use in determining the number of gallon-RINs that shall be generated for the batch.

EV = 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 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 Table 1 to this section, or a D code as approved by the Administrator, which 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.

(5) *Renewable fuel produced from separated yard and food waste.* (i) *Separated yard waste and food waste* means, for the purposes of this section, waste that is one of the following:

(A) *Separated yard waste*, which is a feedstock stream consisting of yard waste kept separate since generation from other waste materials. Separated yard waste is deemed to be composed entirely of cellulosic materials.

(B) *Separated food waste*, which is 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 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.

(C) *Separated municipal solid waste (separated MSW)*, which is 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.

(ii) (A) A feedstock qualifies under paragraph (f)(5)(i)(A) or (f)(5)(i)(B) of this section only if it is collected according to a plan submitted to and accepted by U.S. EPA under the registration procedures specified in § 80.1450(b)(1)(vii).

(B) A feedstock qualifies under paragraph (f)(5)(i)(C) of this section only if it is collected according to a plan submitted to and approved by U.S. EPA.

(iii) Separation and recycling actions specified in paragraph (f)(5)(i)(C) of this section 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 as defined in paragraph (f)(5)(i)(A) of this section shall be equal to a volume V_{RIN} and is calculated according to the following formula:

$$V_{RIN} = EV * V_s$$

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.

EV = 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 as defined in paragraph (f)(5)(i)(B) of this section shall be equal to a volume V_{RIN} and is calculated according to the following formula:

$$V_{RIN} = EV * V_s$$

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.

EV = 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 as defined in paragraph (f)(5)(i)(C) of this section shall be determined according to the following formula:

$$V_{RIN} = EV * V_s * R$$

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.

EV = 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.

(vi) The D code that shall be used in the RINs generated to represent separated yard waste, food waste, and MSW shall be the D code specified in Table 1 to this section, or a D code as approved by the Administrator, which corresponds to the pathway that describes the producer's operations and feedstocks.

(6) *Renewable fuel neither covered by the pathways in Table 1 to this section, nor given an approval by the Administrator for use of a specific D code.* If none of the pathways described in Table 1 to this section apply to a producer's operations, and the producer has not received approval for the use of a specific D code by the Administrator, the party may generate RINs if the fuel from its facility is made from renewable 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:

$$V_{RIN} = EV * V_s$$

Where:

V_{RIN} = RIN volume, in gallons, for use in determining the number of gallon-RINs that shall be generated for the batch.

EV = 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 E 870 or ASTM E 711 for gross calorific value (both incorporated by reference, see § 80.1468).

(B) ASTM D 4442 or ASTM D 4444 for moisture content (both incorporated by reference, see § 80.1468).

(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 (mono-alkyl esters), 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 D 1250 (incorporated by reference, see § 80.1468).

(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 D 6866 (incorporated by reference, *see* § 80.1468), 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, renewable electricity or biogas that is not introduced into a distribution system with fuels derived from non-renewable feedstocks is considered renewable fuel and the producer may generate RINs if all of the following apply:

(A) The fuel 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 the Administrator;

(B) The fuel producer has entered into a written contract for the sale and use of a specific quantity of renewable electricity or biogas as transportation fuel; and

(C) The renewable electricity or biogas is used as a transportation fuel.

(ii) A producer of renewable 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, renewable electricity or biogas that is introduced into a commercial distribution system may be considered renewable fuel and the producer may generate RINs if:

(A) The fuel 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 the Administrator;

(B) The fuel producer has entered into a written contract for the sale of a specific quantity of fuel derived from renewable biomass sources with a party that uses fuel taken from a commercial distribution system for transportation purposes, and such fuel has been introduced into that commercial distribution system (e.g., pipeline, transmission line); and

(C) The quantity of biogas or renewable electricity for which RINs were generated was sold for use as transportation fuel and for no other purposes.

(ii) For biogas that is introduced into a commercial distribution system, the producer may generate RINs only for the volume of biogas that has been gathered, processed, and injected into a common carrier pipeline if:

(A) The gas that is ultimately withdrawn from that pipeline for transportation purposes is withdrawn in a manner and at a time consistent with the transport of fuel between the injection and withdrawal points; and

(B) The volume and heat content of biogas injected into the pipeline and the volume of gas used as transportation fuel are measured by continuous metering.

(iii) The fuel used for transportation purposes is considered produced from renewable biomass only to the extent that:

(A) The amount of fuel sold for use as transportation fuel matches the amount of fuel derived from renewable biomass that the producer contracted to have placed into the commercial distribution system; and

(B) No other party relied upon the contracted volume of biogas for the creation of RINs.

(iv) 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) For purposes of Table 1 to this section, process heat produced from combustion of gas at a renewable fuel facility is considered derived from biomass if the gas is biogas.

(i) For biogas directly transported to the facility without being placed in a commercial distribution system, all of the following conditions must be met:

(A) The 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 and heat content of biogas injected into the pipeline and the volume of gas used as process heat are measured by continuous metering.

(ii) For biogas that has been gathered, processed and injected into a common carrier pipeline, all of the following conditions must be met:

(A) The 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 that is withdrawn from the pipeline is withdrawn in a manner and at a time consistent with the transport of fuel between the injection and withdrawal points.

(D) The volume and heat content of biogas injected into the pipeline and the volume of gas used as process heat are measured by continuous metering.

(E) The common carrier pipeline into which the biogas is placed ultimately serves the producer's renewable fuel facility.

(iii) The process heat produced from combustion of gas at a renewable fuel facility described in paragraph (f)(12)(i) of this section shall not be considered derived from biomass if any other party relied upon the contracted volume of biogas for the creation of RINs.

(13) In order for facilities to satisfy the requirements of the advanced biofuel grain sorghum pathway all of the following conditions (in addition to other applicable requirements) apply.

(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 directly transported to the facility without being placed in a commercial distribution system, all of the following conditions must be met:

(A) The producer has entered into a written contract for the procurement of biogas that specifies the volume of biogas, its heat content, and that the biogas must be derived from a landfill, waste treatment plant and/or waste digester.

(B) The volume of biogas was sold to the renewable fuel production facility, and to no other facility.

(C) The volume and heat content of biogas injected into the pipeline and

the volume of gas used at the renewable fuel production facility are measured by continuous metering.

(iv) [Reserved]

(v) For biogas that has been gathered, processed and injected into a common carrier pipeline, all of the following conditions must be met:

(A) The producer has entered into a written contract for the procurement of biogas that specifies a specific volume of biogas, with a specific heat content, and that the biogas must be derived from a landfill, waste treatment plant and/or waste digester.

(B) The volume of biogas was sold to the renewable fuel production facility, and to no other facility.

(C) The volume of biogas that is withdrawn from the pipeline is withdrawn in a manner and at a time consistent with the transport of fuel between the injection and withdrawal points.

(D) The volume and heat content of biogas injected into the pipeline and the volume of gas used at the renewable fuel production facility are measured by continuous metering.

(E) The common carrier pipeline into which the biogas is placed ultimately serves the producer's renewable fuel facility.

(vi) No party relied upon the contracted volume of biogas for the creation 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 feedstock 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).

(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 pathway that has been added to Table 1 to § 80.1426, or approved by petition pursuant to § 80.1416, 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 48 contiguous states plus Hawaii 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 48 contiguous states plus Hawaii.

(2) When a new pathway is added to Table 1 to § 80.1426 or approved by petition pursuant to § 80.1416, 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 48 contiguous states plus Hawaii or imported into the

48 contiguous states plus Hawaii 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 48 contiguous states plus Hawaii or imported into the 48 contiguous states plus Hawaii, 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 48 contiguous states plus Hawaii or imported into the 48 contiguous states plus Hawaii 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 48 contiguous states plus Hawaii or imported into the 48 contiguous states plus Hawaii 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 48 contiguous states plus Hawaii.

(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.

[75 FR 14863, Mar. 26, 2010, as amended at 75 FR 26038, May 10, 2010; 75 FR 37733, June 30, 2010; 75 FR 59632, Sept. 28, 2010; 75 FR 76828, Dec. 9, 2010; 75 FR 79977, Dec. 21, 2010; 77 FR 1355, Jan. 9, 2012; 77 FR 61294, Oct. 9, 2012; 77 FR 74605, Dec. 17, 2012; 78 FR 14216, Mar. 5, 2013; 78 FR 41714, July 11, 2013; 78 FR 62470, Oct. 22, 2013]

§ 80.1427 How are RINs used to demonstrate compliance?

(a) *Renewable Volume Obligations.* (1) Except as specified in paragraph (b) of this section or § 80.1456, each party that is an obligated party under § 80.1406 and is obligated to meet the Renewable Volume Obligations under § 80.1407, or is an exporter of renewable fuels that is obligated to meet Renewable Volume Obligations under § 80.1430, must demonstrate pursuant to § 80.1451(a)(1) that it is retiring for compliance purposes a sufficient number of RINs to satisfy the following equations:

(i) *Cellulosic biofuel.*

$$(\Sigma RINNUM)_{CB,i} + (\Sigma RINNUM)_{CB,i-1} = RVO_{CB,i}$$

Where:

$(\Sigma RINNUM)_{CB,i}$ = 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 $RVO_{CB,i}$, in gallons.

$(\Sigma RINNUM)_{CB,i-1}$ = 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 $RVO_{CB,i}$, in gallons.

$RVO_{CB,i}$ = The Renewable Volume Obligation for cellulosic biofuel for the obligated party or renewable fuel exporter for calendar year i, in gallons, pursuant to § 80.1407 or § 80.1430.

(ii) *Biomass-based diesel.* Use the equation in this paragraph, except as provided in paragraph (a)(7) of this section.

$$(\Sigma RINNUM)_{BBD,i} + (\Sigma RINNUM)_{BBD,i-1} = RVO_{BBD,i}$$

Where:

$(\Sigma RINNUM)_{BBD,i}$ = 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 $RVO_{BBD,i}$, in gallons.

$(\Sigma RINNUM)_{BBD,i-1}$ = 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 $RVO_{BBD,i}$, in gallons.

$RVO_{BBD,i}$ = The Renewable Volume Obligation for biomass-based diesel for the obligated party or renewable fuel exporter for calendar year i after 2010, in gallons, pursuant to § 80.1407 or § 80.1430.

(iii) *Advanced biofuel.*

$$(\Sigma RINNUM)_{AB,i} + (\Sigma RINNUM)_{AB,i-1} = RVO_{AB,i}$$

Where

$(\Sigma RINNUM)_{AB,i}$ = 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 $RVO_{AB,i}$, in gallons.

$(\Sigma RINNUM)_{AB,i-1}$ = 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 $RVO_{AB,i}$, in gallons.

$RVO_{AB,i}$ = The Renewable Volume Obligation for advanced biofuel for the obligated party or renewable fuel exporter for calendar year i, in gallons, pursuant to § 80.1407 or § 80.1430.

(iv) *Renewable fuel.*

$$(\Sigma RINNUM)_{RF,i} + (\Sigma RINNUM)_{RF,i-1} = RVO_{RF,i}$$

Where:

$(\Sigma RINNUM)_{RF,i}$ = Sum of all owned gallon-RINs that are valid for use in complying