EMTS Transaction Instructions

United States
Environmental Protection
Agency

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Compliance and Innovative Strategies Division
Office of Transportation and Air Quality
U.S. Environmental Protection Agency

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EPA420-B-10-019a
May 2010

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Section 1: What Is the RFS?

The Renewable Fuel Standard (RFS), mandated by the Energy Policy Act of 2005 and revised in the Energy Independence and Security Act of 2007, defines a volume of renewable fuel that must be used in transportation fuel. The purpose of the RFS is to reduce petroleum use and emissions of some regulated pollutants, while increasing net farm income and energy security. Revised regulations apply to annual periods beginning March 2, 2010, changing initial RFS regulations which covered the May 1, 2007 – December 31, 2009 period.

Who should read Section 1:
All users unfamiliar with the RFS.

What you will find in Section 1:
This section is a general overview of the Renewable Fuel Standards program and includes information on important changes to reporting RINs.

Important Dates
Renewable Fuel Standards reporting begins March 2, 2010.

The RFS is a volume standard (expressed in gallons) and requires definition of an annual percentage of total projected gasoline or diesel fuel refined or imported that must comprise renewable fuel. Renewable fuels are defined on the basis of feedstock and production process. The RFS2 standard calls for EPA to define percentages for cellulosic fuel, biomass-based diesel, advanced biofuel, and renewable fuel annually. Application of the standard percentage to the volume of transportation fuel produced or imported, plus any deficit carryover from the preceding year, defines the Renewable Volume Obligation (RVO) for obligated parties. Obligated parties are defined as refiners that produce gas or diesel fuel within the 48 contiguous states and Hawaii, or importers that import gas or diesel fuel into the 48 contiguous states and Hawaii. Alaska and U.S. territories can opt-in by petition. Obligated parties must demonstrate compliance with the RVO annually. Small refineries are exempted.

The RFS also defines the RVO for exporters of renewable fuels as equivalent to the standardized volume of renewable fuel exported (plus any deficit carryover from the previous year). The purpose of this RVO is to ensure that RINs associated with renewable fuels produced and exported are not used for compliance because the renewable fuel was not used in the domestic market.

1.1 What Are RINs?

Compliance with the RVO is demonstrated through the use of renewable identification numbers, known as RINs, which are assigned to each gallon of renewable fuel produced or possibly imported. RINs track the volume of renewable fuel produced or imported. Obligated parties must acquire sufficient RINs to demonstrate compliance with the RVO. If an obligated party does not meet its RVO and if it did not carry a deficit for the same RVO in the preceding year then it is permitted to carry a deficit into the next year. The RVO must be satisfied in the subsequent year.

RIN trading is an essential component of the RFS program, ensuring compliance with the standard while providing the user flexibility to incorporate renewable fuel in the most economical way.

1.2 What Are All the Characteristics of a RIN?

The RFS1 program used a single 38-character numeric code to uniquely identify each gallon of renewable fuel produced or imported. This was represented in the form of KYYYYCCCCFFFFFBBBBBRRDSSSSSSSSEEEEEEEE. These characteristics still exist in the new RFS reporting format, however, most parties will not need to reference a specific RIN once it is the EMTS.

Change in RIN characteristics
The 38-character RIN will not be traded and tracked in the same form as RFS1.

The following table shows the old 38-digit numeric code and the new equivalent data names that are reported. The 38-digit RIN information will still be reported and kept for each batch and RIN trade, but this information will not be used to create a 38-digit code. (Note: Knowing the new equivalent data names are not necessary for all the different ways to report.) For more information on how these data are reported, please read Section 5.3, "How Do I Report Transactions on the EMTS Website?" and Section 6, "How Do I Report Transactions Using XML Files?"

Table 1-1: Cross-Reference Mapping of the 38-Character RIN to the New Reporting Format

Old Code	New Code	Example Data
K	Assignment Code	Code that indicates whether the RINs are assigned or separated. 1 = Assigned to a volume of fuel; 2 = Separated.
YYYY	Production Date RIN Year	For RIN generation only, the production date will be reported. During all other RIN transactions, the RIN Year will be reported.
CCCC	Organization Identifier or Organization RINPIN	The public (organization identifier) or private identification number (RINPin) for the organization as registered with OTAQ.
FFFFF	Facility Identifier	The public identification number of the facility registered with OTAQ.
BBBBB	Batch Number	A unique number assigned by the fuel producer.
RR	Equivalence Value	A multiplier (as per §80.1415), based on the type of renewable fuel produced, applied to the Batch Volume that determines the number of RINs generated per gallon of fuel produced.

(cont.)

Table 1-1: Cross Reference Mapping of the 38-Character RIN to the New Reporting Format (cont.)

Old Code	New Code	Example Data
D	Fuel Code	The renewable fuel code for RINs as defined in Part M §80.1426. New fuel codes reported for RFS2 are: 3 = Cellulosic Biofuel; 4 = Biomass-based Diesel; 5 = Advanced Biofuel; 6 = Renewable Fuel; and 7 = Cellulosic Diesel.
SSSSSSSS	Still in existence. EMTS users will not directly handle.	The starting serial number, as reported by the fuel producer representing the first gallon of fuel. The EMTS will calculate this number from the volume of fuel reported.
EEEEEEEE	Still in existence. EMTS users will not directly handle.	The ending serial number representing the last gallon of renewable fuel in the batch. The EMTS will calculate this number from the volume of fuel reported.

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Section 2: What Is the EMTS?

In the Renewable Fuel Standard (RFS2) program, the EPA Moderated Transaction System (EMTS) screens the generation and moderates the transfer of RINs between renewable fuel producers, importers, exporters, obligated parties, and non-obligated RIN owners. The EMTS screens submitted RINs and provides a structured environment in which to conduct RIN transactions.

Who should read Section 2:

Section 2 applies to all users who take ownership to RINs.

What you will find in Section 2:

This section provides an overview of the EMTS and how to submit RIN transactions through the internet or XML and review the transactions processed by the EMTS.

2.1 How Are RINs Moderated and Screened?

The EMTS monitors and logs all transactions between registered parties and performs quality assurance checks for the purpose of preventing discrepancies. Users may submit their transactions individually and in batch files, accessing EMTS through EPA's Central Data Exchange (CDX).

All RINs are characterized and tracked based on user-supplied company and facility registrations such as fuel category, production date, and the organization and facility that produced the fuel. The EMTS stores and tracks this data, moderating the life-cycle of all RINs used in separating, buying, selling, and retiring RINs.

2.2 What Tasks Can I Do with the EMTS?

As an industry user, you may submit generate, separate, sell, buy, and retire transactions through the EMTS website based on your organization's permissions as registered with EPA. Alternatively, XML file submissions may be ideal for organizations that transact frequently. These batch submissions can be sent through EPA's Exchange Network in a data flow using the EMTS reporting schema. You may also submit these files through the EMTS website. Your user permissions, as determined by your registration with EPA in addition to your organization's business activities, will restrict your user capabilities on the EMTS website.

The EMTS provides a variety of services to promote easy and accurate reporting of RIN transactions. Once the EMTS has processed a transaction, the results of that transaction will be placed into your organization's "RIN Holding Account." You may view your current RIN holdings, along with various other reports, on the EMTS website. All transactions that you have initiated, or responded to, are available for you to review in the system. Other EMTS services include providing feedback on any critical errors that were identified in a batch file, a variety of downloadable reports, notifications regarding your submissions, and access to support from EPA.

2.3 Do I Need to Keep Separate Records of My Transactions?

Though the EMTS logs and archives all transactions processed, recordkeeping is still a requirement as per 40 CFR §80.1454. It is important to remember that the EMTS is the system for trades and transactions that have already occurred at the time of input into the EMTS system. The EMTS will process only trade transactions where the buyer and seller have already engaged in a transfer of ownership of RINs.

Although the EMTS will greatly minimize errors and the occurrence of invalid RINs, EMTS only screens RINs that are being generated. The EMTS will also provide users with an advanced option to specify that they would **not** like to buy RINs that are generated by specific producers or importers as RFS is a "buyer beware" program.

Section 3: What Are the Key Reporting Deadlines?

3.1 When Do I Send in Reports to EPA?

Your organization is required to report quarterly and annual reports to EPA indicating your RIN holdings, total fuel volume owned, and annual compliance obligation. In addition to quarterly and annual reports, you are expected to send all transactions within five business days of a reportable event such as fuel production. At any time, you may review your RIN holdings in the EMTS to ensure the RINs recorded match your record keeping.

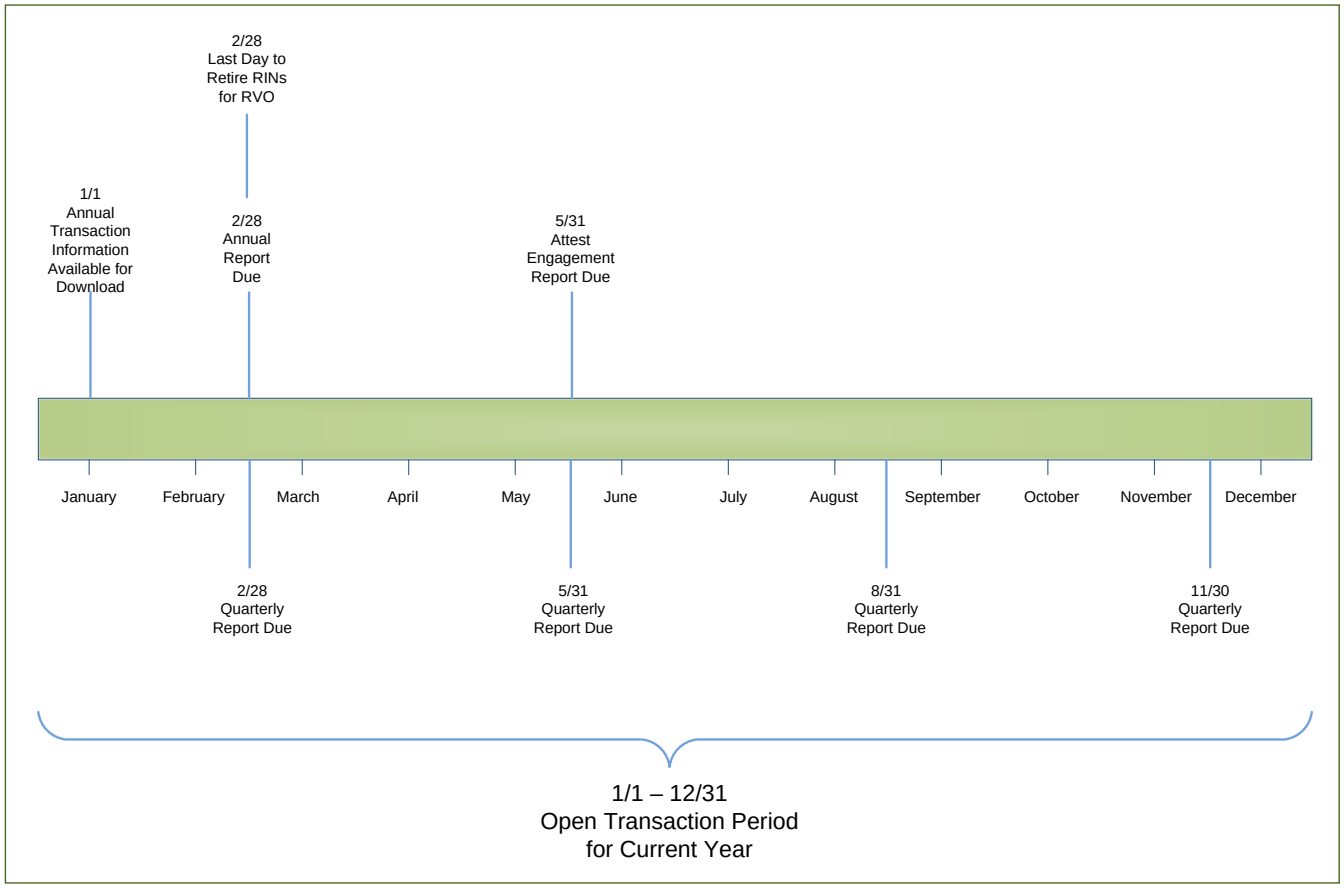
Who should read Section 3:

Section 3 is of interest to all RIN owners and obligated parties.

What you will find in Section 3:

The timeline for a typical annual reporting cycle.

The following figure shows the dates when quarterly and annual reports are due. Dates that appear in the top half of the timeline indicate the previous year's RFS deadlines. For example, in the year 2011, annual 2010 reports are due by February 28, 2011. Each date or milestone is discussed in detail below.



Quarterly Reports
May 31, August 31, November 30, and February 28

The EMTS will generate reports including your organization's current RIN holdings available for download at the end of every quarter. All parties have two months in which to review these reports and submit them to EPA.

Notification That Annual Report Is Due
December 31

The EMTS will send a reminder notification to parties with a Renewable Volume Obligation (RVO) that RINs must be retired by the end of February to meet their obligation. The notification will include the total number of RINs that have been retired thus far.

Annual Report Available for Download
January 1

The EMTS will send a notification of the total number of RINs retired for compliance on February 28. The information will be generated annually by the EMTS. The downloaded report must be signed and submitted to EPA through the OTAQ DC Fuels Submission program (CDX: DCFuels) or by mail. If a report is submitted on behalf of an RCO, then the RCO must mail in a Responsible Corporate Officer Letter. (Please see *http://www.epa.gov/otaq/regs/fuels/cdxinfo.htm*.)

Annual Report Is Due
February 28

No later than February 28, all parties with an RVO must download the "Annual Retired RINs to Meet RVO" report from the EMTS website, sign, and submit it to EPA through DC Fuels.

Attest Engagement Report
May 31

RFS requires Attest Engagements to provide regulated parties an independent review of their compliance with the fuel requirements, including a review of the regulated party's internal systems to monitor and document compliance. Attest engagements are intended to identify compliance problems to a company, so the company can implement early remedial actions and prevent the problem from growing into larger regulatory violations. This report is required to be mailed to EPA by May 31. For more information, please visit *http://www.epa.gov/otaq/regs/fuels/attestengage.htm*.

Open Transaction Period for Current Year
January – December

The EMTS is open to receive and process any type of transaction for the current year.

Year End Closing Period
January – February

The first two months of the current year may be used to finalize the buying, selling, and retiring of the previous year's RINs in order to meet an RVO. Any RINs generated in this time period will apply to the current year. RINs generated in those first two months cannot be retired for the previous year RVO (i.e., 2012 RINs cannot be used to meet an RVO for 2011 compliance).

Retire RINs to Meet RVO
February 28

All transactions involving RINs that are being retired to meet an RVO must be completed and reported no later than February 28, by both parties. Please note, you also must submit your annual compliance report and retire the necessary RINs on or before February 28.

Note: EMTS could experience processing delays near due dates. It is recommended that parties report all transactions to the EMTS prior to the deadlines. It is a violation if quarterly or annual transaction information is not downloaded from the EMTS and submitted through DC Fuels by the due date. EMTS will have reports available within a week of the end of the quarter.

3.2 What Is the Expected Response Time to Interacting with the EMTS?

There are various key dates and response times that stakeholders must be aware of to send transaction information in a timely manner.

3.2.1 Registration to Use the EMTS

All users must register through EPA's registration website to submit files or interact with the EMTS. Please review *http://www.epa.gov/otaq/regs/fuels/fuelsregistration.htm* for detailed instructions on the registration process. Each party required to send information to EMTS under §80.1452 must establish an account with the EMTS at least 60 days prior to engaging in any RIN transactions, or July 1, 2010, whichever is later.

In addition, some companies that produce transportation fuel must be registered for health effects under title 40 CFR part 79 Fuels and Fuel Additives Registration (FFARs) prior to manufacture or import. Depending on the fuel or additive, timelines may vary. These RIN generators will not be registered to use the EMTS until they are registered under title 40 CFR part 79. Please see *http://www.epa.gov/otaq/regs/fuels/ffarsfrms.htm* for more information.

3.2.2 Real Time Reporting

RIN generation and RIN transactions are reported in "real time" to the EMTS. Users are required to enter the reportable transactions to the EMTS within five business days of the actual business transaction. Real

time reporting applies to producers and importers who generate RINs and to any party that participates in a RIN buy/sell transaction.

3.2.3 Responding to Buy/Sell Transactions

When an organization receives a request for a buy or sell transaction, an authorized submitter for that organization has seven days to accept or deny the trade before the transaction will expire. If a response is not provided within the specified number of days, the transaction will time out and both parties will be notified.

Remember: Both parties involved in a trade are required to submit the trade transaction within five business days of the date on the PTD.

3.2.4 Quarterly and Annual Reports

Users will continue to comply with reporting quarterly and annual reports as established in the RFS regulation. These reports are submitted to EPA through DC Fuels or alternatively through mail. Additional information can be found at *http://www.epa.gov/otaq/regs/fuels/rfsforms.htm* for submitting quarterly and annual reports to EPA.

Section 4: How Do I Interact with the EMTS?

Users may interact with the EMTS in the following ways: through the submission of batch XML files with the Exchange Network (see Section 4.2.1) or the EMTS website, or the use of the EMTS website to report transactions. This section provides an overview of these methods. More detailed instructions can be found in Section 5, "What Can I Do in the EMTS Website?" and in Section 6, "How Do I Report Transactions Using XML Files?"

Who should read Section 4:

Section 4 applies to all RIN owners.

What you will find in Section 4:

This section provides an overview of the EMTS system requirements, a summary of what is needed before transactions can be submitted to the EMTS, and an overview of how transactions can be submitted and reviewed.

4.1 How Do I Get Started?

Before you can use the EMTS, there are several prerequisites you need to complete. This section provides information on these steps.

4.1.1 Browser Requirements

If you intend to use the EMTS website, you may use one of the following browsers:

- Internet Explorer (Version 6.0 or later); or
- Firefox (Version 2.0 or later).

You must also have internet access and an email account in order to receive notifications from the EMTS. Please note that DC Fuels, the system you will use to submit your quarterly and annual reports, supports Internet Explorer up to Version 7.0 and does not support Firefox.

4.1.2 Node Requirements

If you intend to submit batch XML files to the Exchange Network you may use either a node or the node client, or upload files via the EMTS website. The EMTS node only accepts files that meet Exchange Header 2.0 specifications. Details can be found at the Exchange Network website at *http://www.exchangenetwork.net.* You may also find additional information on these requirements in Section 6, "How Do I Report Transactions?" Information on preparing and submitting XML files can be found in Section 6 of these instructions as well.

4.1.3 CDX Registration

Access to the EMTS requires registration with CDX and OTAQ Fuels.

4.1.3.1 Obtaining a CDX Account

Every user who intends to use the EMTS must first obtain a CDX account. If you do not yet have a CDX account, first navigate to *http://cdx.epa.gov/epa_home.asp.*

From this page, you should click on the link "If you are new to CDX and wish to register." After continuing through several pages that include setting up a user account and providing other information, you will be brought to the "CDX Registration: Add Program" page from which the option "Office of Transportation and Air Quality Fuels Registration (OTAQReg)" can be selected.

If you already have a CDX account, navigate to the CDX login page at *https://cdx.epa.gov/SSL/cdx/login.asp.*

Once logged in, you should add "Office of Transportation and Air Quality Fuels Registration (OTAQReg)" to your profile.

Additional information on the registration process can be found at *http://www.epa.gov/OMS/regs/fuels/420b09011.pdf.*

General information regarding fuels program registration can be found at *http://www.epa.gov/OMS/regs/fuels/fuelsregistration.htm.*

4.1.3.2 Registering with OTAQ Fuels Programs

Once your CDX user account has been established, you need to be associated with your organization and identify its business characteristics (e.g., whether the company is a Refiner, Domestic Renewable Fuel Producer, etc.). This is done through the OTAQ Fuels Programs Registration (OTAQReg) system that should have been added to your user profile (see Section 4.1.3). You will not be able to interact with the EMTS until this step is completed.

Upon successful log in to My CDX, select "OTAQReg Fuels Programs Registration." This will bring first-time users to a page with a "New User" link. After a series of pages that request entry of personal and organization information, you must either select an existing organization (if the organization has previously registered), or add new company information.

- If you add a new company, then you will need to select the initial role of "Submitter" under the "User Info" tab in order to perform transactions in the EMTS. If you associate with an existing company, you must select the company's name tab in order to select the initial role of "Submitter." Without selecting "Submitter" a user will not be able to perform transactions in the EMTS.

- You will need to select only the initial role of "Company Viewer" if you do not wish to perform transactions in the EMTS, but you still wish to view information such as RIN holdings.

- If EPA finds errors in your registration submission, EPA will deny your request and you will need to restart the process. A list of common errors and the Fuels Registration User Guide may be found at the following website: *http://www.epa.gov/OMS/regs/fuels/fuelsregistration.htm.*

Once the information has been submitted, the resulting forms must be printed and mailed to EPA as instructed. Access to the EMTS will only be granted once the submitted documents have been reviewed and approved. This process may take several days after all the information on the forms is verified. You should initiate this process well in advance of the time when access to the EMTS is actually needed.

4.1.4 OTAQ DC Fuels

Once the steps described in Sections 4.1.3.1 and 4.1.3.2 have been completed, you will have access to the EMTS and can submit transactions. Completion of the steps described in 4.1.3.1 and 4.1.3.2 will also provide access to the OTAQ DC Fuels application. This program is used to submit quarterly reports and your annual statement to EPA. To activate this link, call the CDX help desk and follow the steps outlined in the "User Manual for CDX/OTAQ Fuels Reporting System -- Phase II." This manual is available at *http://www.epa.gov/otaq/regs/fuels/420b07012.pdf.*

4.2 How Does the EMTS Process My Transactions?

There are three distinct stages associated with RIN transactions. In the first stage, the user submits the transaction data to the EMTS. The methods by which this can be done are described in Section 4.2.1. In the second stage, the submitted data is processed by the EMTS. The various steps associated with this processing are described in Section 4.2.2. In the third stage, the user is notified that the transaction has been processed, and any necessary follow-up is indicated. This is described in more detail in Section 4.2.3.

4.2.1 What Are the Methods for Submitting Data to the EMTS?

There are two basic methods for submitting data to the EMTS. You can either submit your XML file via the EMTS website, or from your node or node client via the Exchange Network. Usage instructions for submitting data can be found in Section 5, "What Can I Do in the EMTS Website?" and in Section 6, "How Do I Report Transactions Using XML Files?"

4.2.2 Submitting Data through the EMTS Website

To submit data via the EMTS website, log into CDX at *https://cdx.epa.gov/SSL/cdx/login.asp.*

Enter your CDX user name and password. Once you are logged into the CDX portal, click the link "OTAQEMTS: OTAQ EMTS Application." You can review your holding account information and create transactions. The functions available to you are limited by your organization's business activities as registered with EPA as described in Section 4.1.3.2.

In addition to being able to create RIN transactions, you can also use the EMTS website to load XML files. It is important that any XML files created for uploading into the EMTS follow the XML conventions described in Section 6, "How Do I Report Transactions Using XML Files?"

4.2.3 Submitting Files via a Node

If you wish to submit your XML files to the EMTS without interacting with the EMTS website, you can submit your files via a node. A node is a piece of software that allows you to browse for XML files and uses Web Services to authenticate your CDX account and send XML files over the Exchange Network. Some node vendors allow the installation of only the node client in lieu of the full node software. If you wish to submit files via the Exchange Network, but do not want the overhead associated with a full node, you might consider installing just a node client. Contact the CDX Node support help desk for more information on node client providers. The node client allows the user to browse for XML files and submit them to the EMTS, as well. For more information on use of nodes, see Section 6.5.8.

More technical information can be obtained on the Exchange Network website which you can find at *http://www.exchangenetwork.net/.*

4.2.4 What Is the Quality Assurance Process?

Whether you submit batch XML files or create online transactions via the EMTS website, all data is checked for critical errors before it is processed by the EMTS. QA checks apply not only to the batch files, but also to the data entered on the EMTS website.

There are three different ways that your data is checked for errors. These are:

- XML file validation;
- XML batch submissions; and
- EMTS website data entry.

The XML schema has several built-in checks that are applied to the XML files to ensure that the files are valid and well-formed.

For transactions submitted via a batch XML file, the EMTS runs QA checks after the file is retrieved from the queue. If the file passes the EMTS QA checks, the file is processed. If the file does not pass all of the QA checks, a notification is sent to the user that the submitted file was denied and that it should be corrected. No transactions in your file will be processed if any critical errors are identified. You can review a detailed feedback report about each submitted file on the EMTS website to help identify and correct errors.

Checks are also executed when a user enters data via the EMTS website. QA checks prevent data from being submitted if critical errors are discovered on each screen.

4.2.5 How Do I Review Notifications?

Notifications to EMTS users will be sent via email. The following are examples of different types of notifications you might receive from the EMTS:

- A file has been received by the EMTS.
- A group of files has been processed successfully.
- A group of files has not been processed successfully, and you should go to the EMTS website for additional details.
- A trade transaction has been initiated, and you should go to the EMTS website to complete the transaction.

Notifications may be sent immediately, or may be aggregated and sent nightly. You may also receive notifications regarding deadlines for submitting quarterly and annual reports. Transactional information will not be sent to you from the EMTS due to the fact that some corporate email servers block attachments. Notifications may instruct you to review or download a report from the EMTS website. Due to the time-critical nature of some of the notifications, it is important that you check your email on a regular basis. In most cases email will be sent to multiple individuals who have registered as submitters for your organization. If you will be unable to check your email or access the EMTS website for any required follow-up actions, consider having other submitters from your organization perform these tasks.

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Section 5: What Can I Do in the EMTS Website?

You can use the EMTS website for a variety of purposes, including managing your RIN transactions and viewing information about your RINs. This section provides an overview of the features of the EMTS website, all of which can easily be accessed via the EMTS homepage. Please note that all screen shots of the EMTS website are subject to change.

Figure 5-1 shows the EMTS homepage.

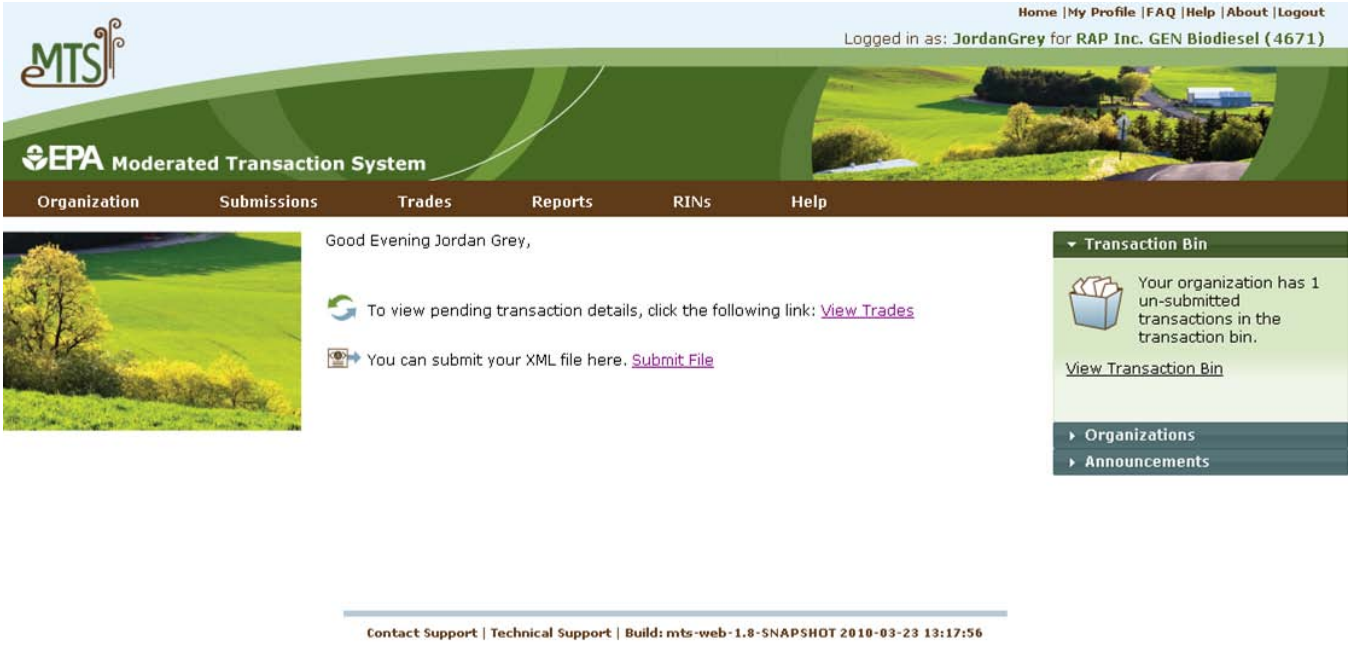
Who should read Section 5:

Section 5 applies to all users that intend to view or submit RIN transactions using the EMTS website.

What you will find in Section 5:

This section provides an overview of how RIN holdings, organization information, and reports can be viewed, and how transactions can be reported using the EMTS website.

Figure 5-1: EMTS Homepage



5.1 Where Can I Find Information Specific to My Organization?

The EMTS stores information about your organization as it is registered with OTAQReg Fuels Programs Registration through CDX. This information includes the business activities in which your organization is engaged (e.g., Refiner, Producer, Importer), your facility sites, the fuels you can produce, the processes and feedstocks you can use, and any co-products that may be produced. In addition, you will have a role which defines your ability to submit, view, or edit your organization's RIN holdings. Additional information

regarding your current RIN holdings and various reports on transactions involving your organization is available on the EMTS website.

5.1.1 Viewing Your Organization Information

One of the main menu items on the EMTS website is "Organization Information." This link has several items of interest to you, including:

- Your organization's address; and
- A list of producers from which your organization chooses not to acquire RINs.

In order to update this information, you must edit the information in OTAQReg Fuels Programs Registration through CDX.

If you are an agent and represent several organizations, you will see a list of all of the organizations you have been approved to represent. You must first select an organization to have access to information specific to the organization. Once you select an organization from the list, all your activities and reports will be limited for that one organization. You may always switch to another organization from your list at any time; however, the EMTS will not combine transactions from one user for many organizations in a report or data entry screen.

Figure 5-2 shows where to select your organization.

Figure 5-2: View Organizations

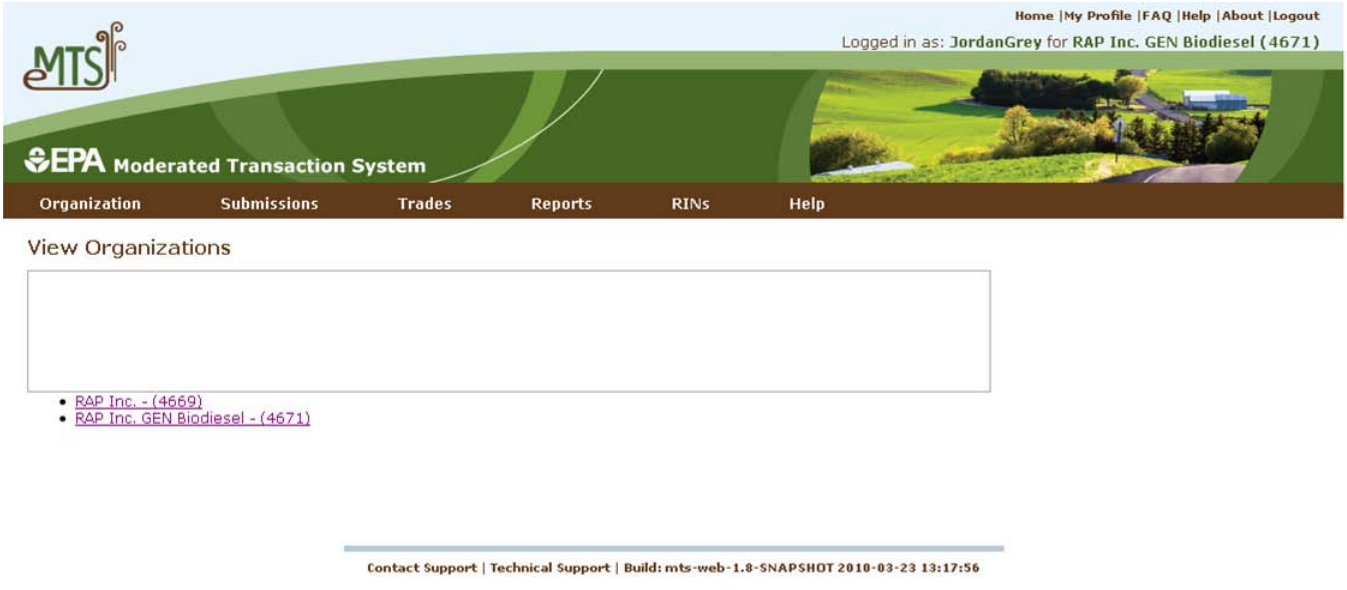
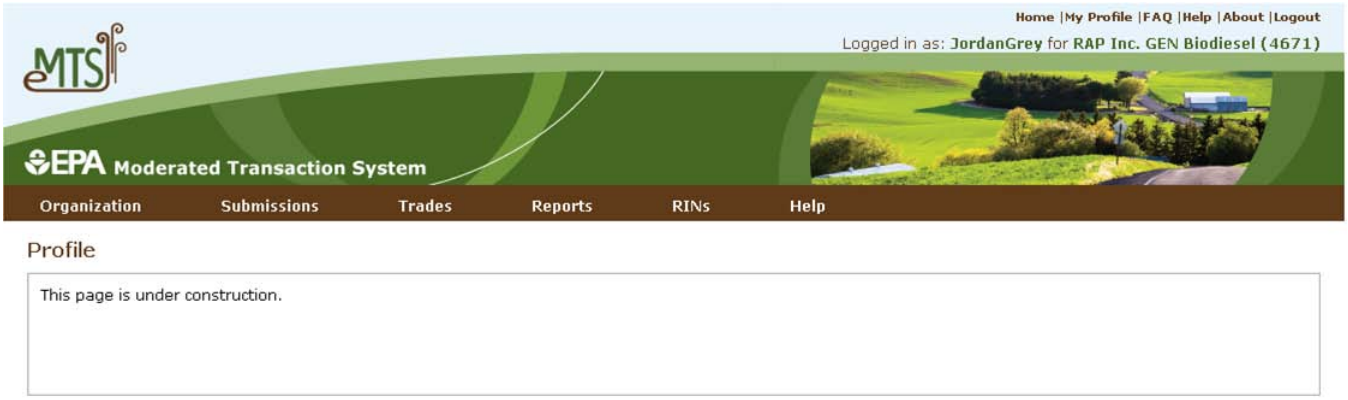


Figure 5-3 shows the information page for one organization. Please note that this page is under construction.

Figure 5-3: Organization Information

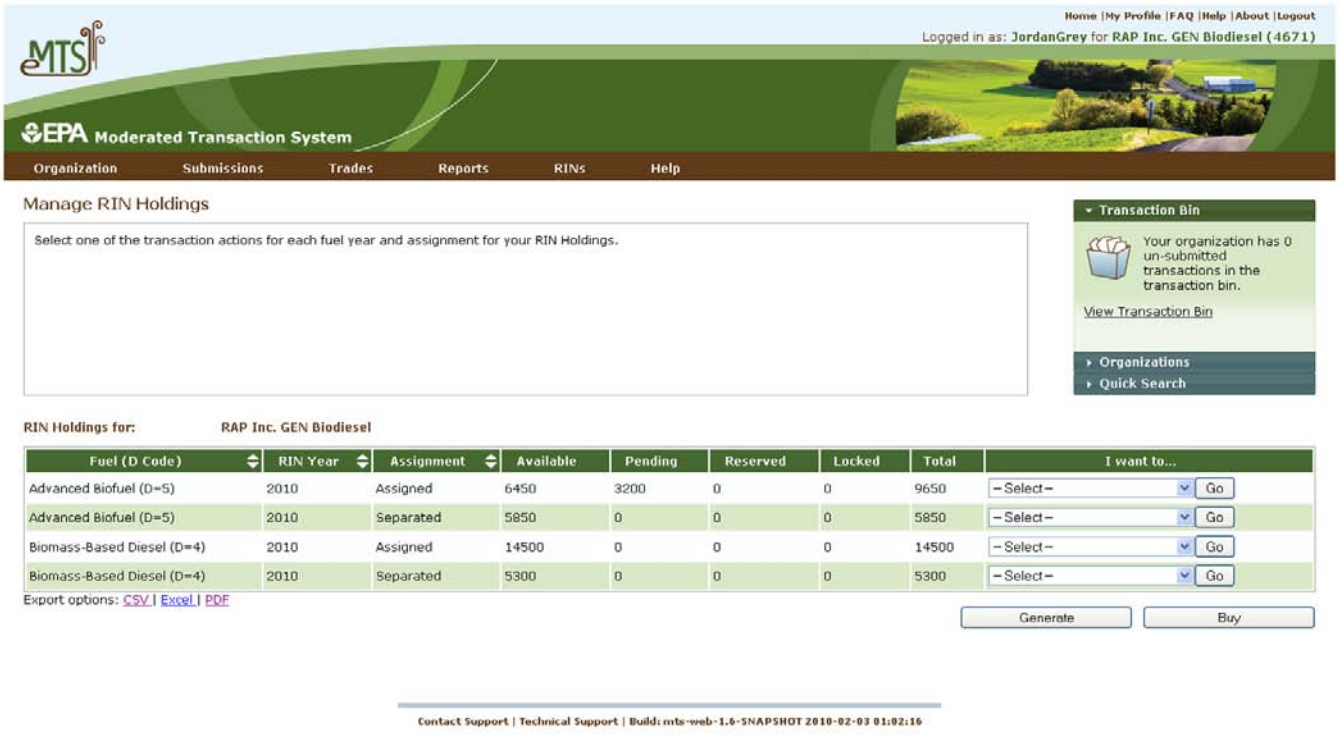


5.1.2 Viewing Your Organization's RIN Holding Account

Your organization has a single "RIN Holding Account" to which you and any other registered submitters for your organization have access. The RIN Holding Account contains all of the current RIN holdings and provides access to holdings that were previously in your RIN Holding Account, such as RINs that you have sold or RINs that you have retired. The RIN Holding Account data are aggregated showing your total RINs grouped by fuel code (D code), assignment code, and RIN year. Various sorting and filtering capabilities allow you work with this RIN data. For example, you can arrange data to compare the total number of RINs the EMTS has processed in your account to your own off-line transaction records. These data are also available for download in a variety of formats.

Figure 5-4 shows the RIN Holding Account.

Figure 5-4: RIN Holding Account



5.2 Where Can I Find Information on My Submitted Data?

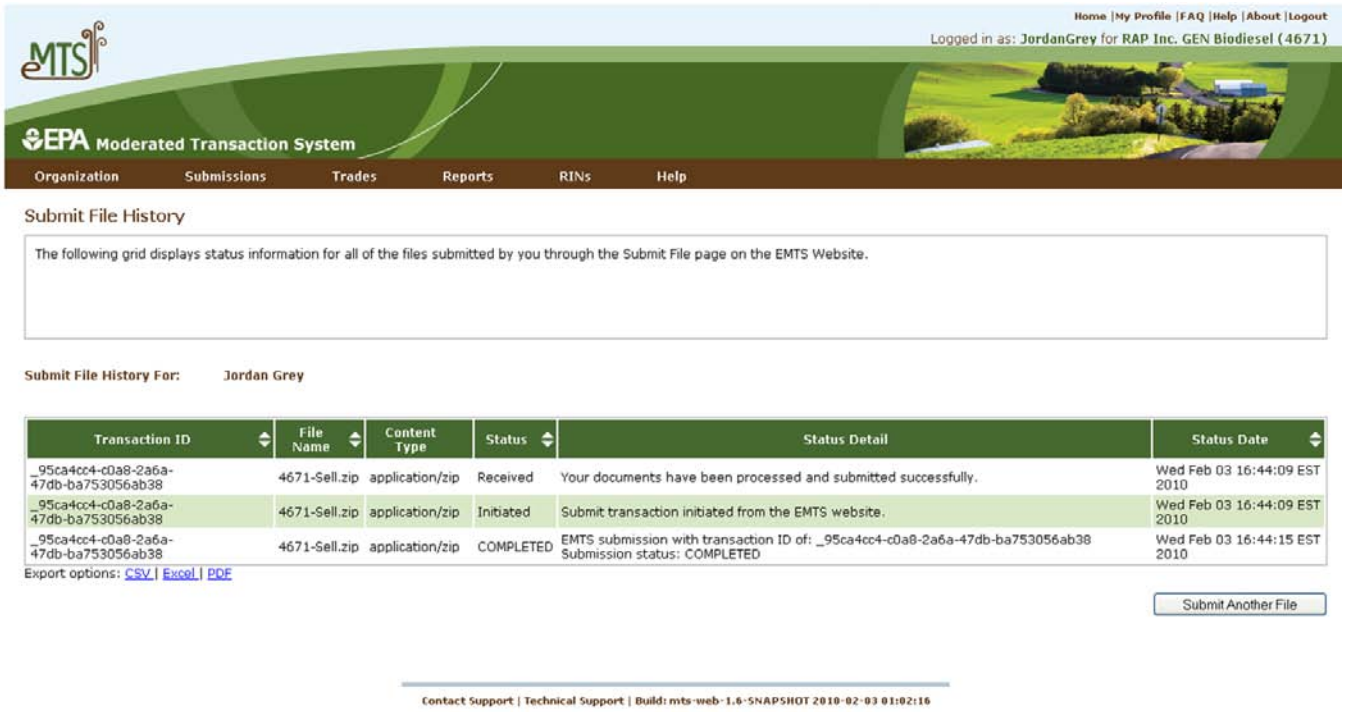
There are two methods for submitting transactions to the EMTS (by batch file submission or by online entries on the website). You can review the status of transactions submitted under each method as the EMTS processes them.

5.2.1 Viewing File Submissions and Feedback Results

You may view a log of all files that have been submitted to the EMTS by you or other submitters representing your organization. This log shows the date and time your file was received, the current status of the file, and whether it was successfully processed. You can also view detailed information regarding any submitted file and the results of the QA checks that were applied to the contents of the file. If the file was processed successfully, you will not find a linked QA Feedback report. Only files that have critical errors will have a feedback report.

Figure 5-5 shows a log of all submissions from one organization to the EMTS.

Figure 5-5: View Batch Submission

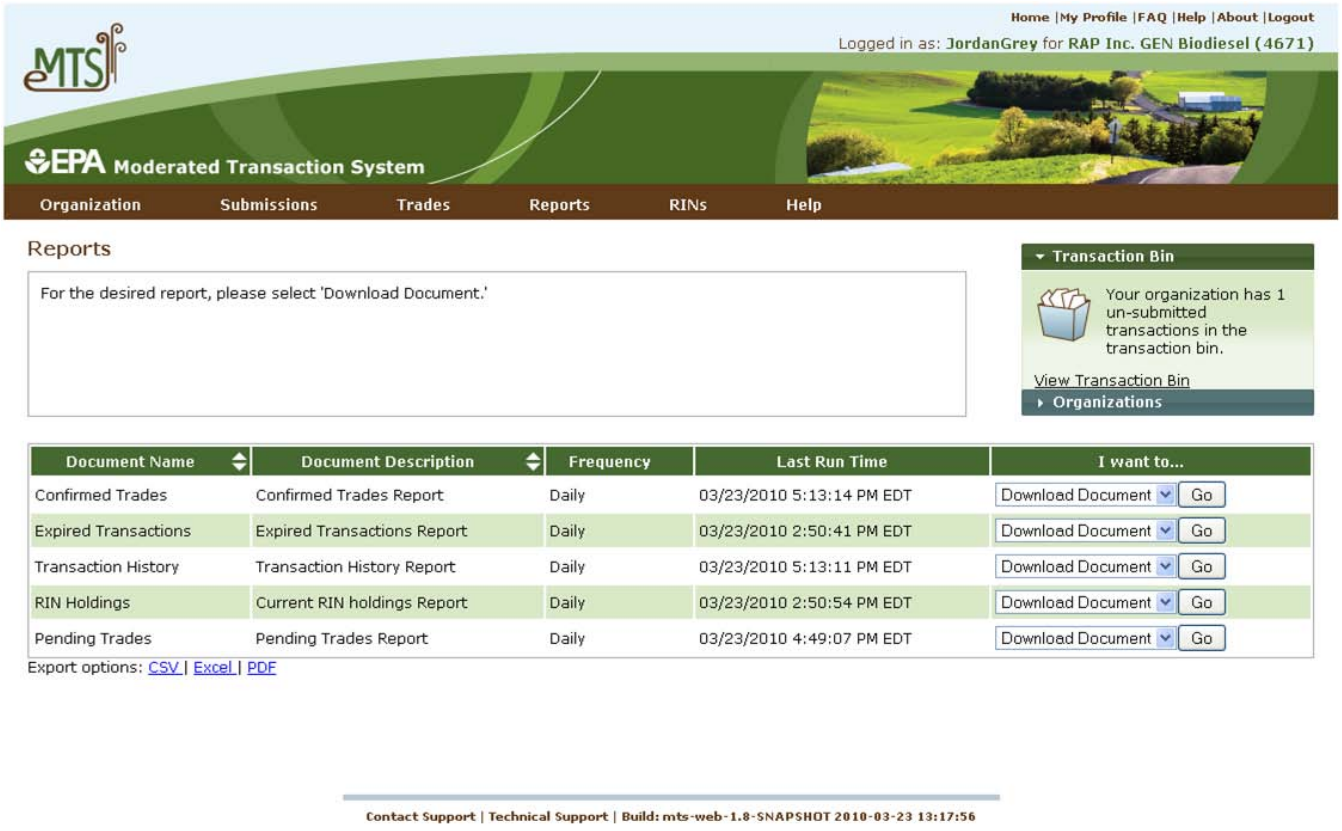


5.2.2 Viewing Reports

Various reports are available on the EMTS website that include information about data submitted for your organization. Most of these reports can be downloaded in a variety of formats. These reports restrict the data you see so that you can only see data associated with your organization. You will have sorting and filtering capabilities, allowing you to find specific data of interest to you. For more information on reports in the EMTS, see Section 7.1, "What Reports Does the EMTS Provide?"

Figure 5-6 shows the Reports page.

Figure 5-6: Reports



5.3 How Do I Submit Transactions on the EMTS Website?

You can use the EMTS website to report any type of RIN transaction for which you have permission. Based on the business activities your organization registered with the OTAQReg Fuels Programs Registration, some transactions may not be available to you. See Appendix E, "Business Activities by Transaction Type," to see what transactions you can perform based on your role and your organization's business activities.

Submitting Transactions:
You have five business days to submit a transaction, after which time your transaction will be cleared from the Transaction Bin.

5.3.1 The Transaction Bin

Any transaction can be created from your "RIN Holding Account" page. As you create a transaction, the RINs in your holding account are placed in "reserve" so they cannot be used by other transactions. Your RIN Holding Account will show the status of your RINs, indicating how many are available for transactions and how many are reserved by transactions you have created during your web session. As you create transactions, the RINs are placed in a "Transaction Bin" where they will be stored temporarily until you are ready for the EMTS to process these transactions. Your Transaction Bin will not be cleared until you are

ready to review, confirm, and submit these transactions. At any time you can review the list of transactions in your Transaction Bin and remove a transaction. However, you cannot edit a transaction in the Transaction Bin; you must remove it and then create a new transaction.

If you exit the EMTS or close your browser prior to submitting the transactions in your Transaction Bin, these transactions will remain in a reserved state for five business days or until you return to the website and submit or remove them. If you do not submit these transactions within five business days, the EMTS will automatically remove them from your bin and "un-reserve" the RINs in your RIN Holding Account. For this reason, it is important that you complete your transactions as soon as possible to avoid loss of any transaction data that you have been working on during multiple web sessions.

Any submitter in your organization has the same permission to manage transactions for your RIN Holding Account. It is possible for you to create a transaction and have another person in your organization review, confirm, and submit the transaction.

Figure 5-7 shows the Transaction Bin.

Figure 5-7: Transaction Bin

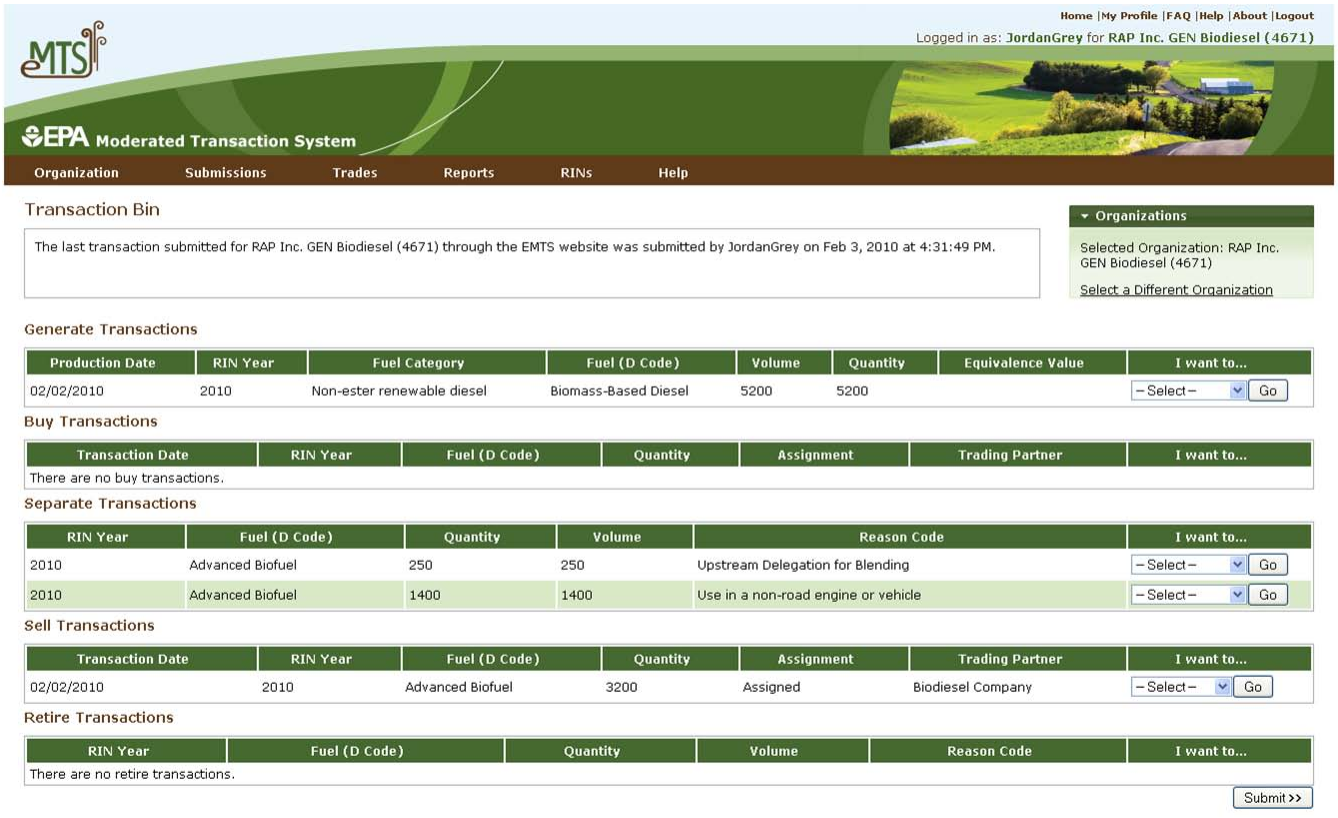


Figure 5-8 shows how to confirm and submit the transactions from the Transaction Bin.

Figure 5-8: Confirm and Submit

5.3.2 How Will the EMTS Assist with Data Entry and Screening?

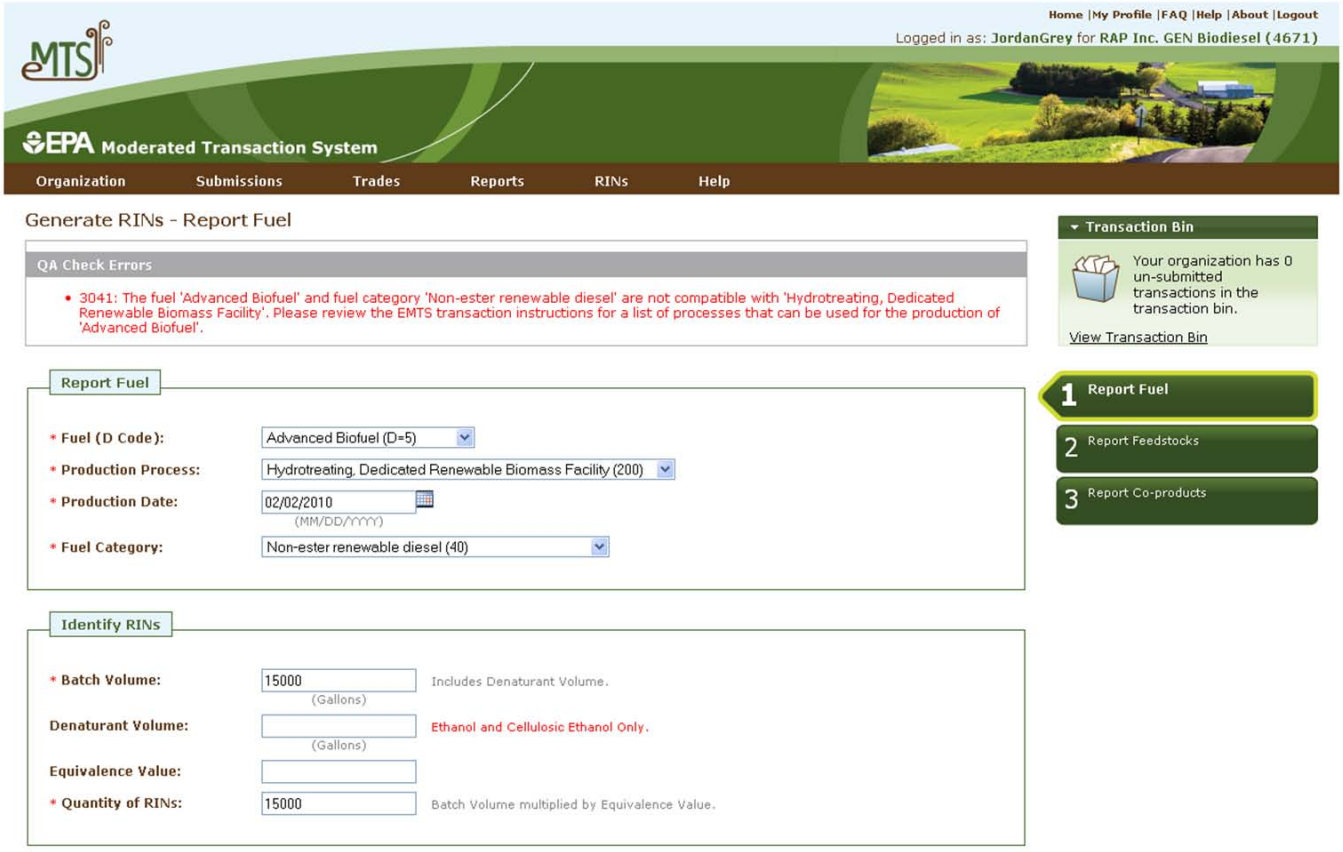
Whenever possible, the EMTS will auto-fill information into your transaction data entry form. For example, the fuel type that you can generate is limited based on your registered processes and feedstocks; therefore the choices available in your drop-down data entry box will be limited by your registration information. For this reason, it is imperative that your registration with EPA be up-to-date. The choices that your organization is not registered for will be grayed out.

Quality assurance checks are built into each page and assure valid data entry. In addition, available code values may be restricted based on business rule checks. For example, if you are a Renewable Fuel Producer, you will not be given the option to select "Retire for Compliance" as a reason code in a retire transaction.

Available Codes:
Available codes will be determined based on your organization's registration information.

Figure 5-9 shows a submission that has failed quality assurance checks.

Figure 5-9: QA Check Failure



5.3.3 Can I Submit Multiple Transactions for the Same Organization?

There is no restriction to the number of transactions that you can add to the Transaction Bin, provided they are originated on behalf of a single organization and that organization has sufficient RINs in its RIN Holding Account. Multiple transactions for the same organization can be entered, reviewed, and submitted at one time. If you are an agent and are reporting on behalf of several organizations, you may only submit transactions for one organization at a time.

5.3.4 Can I See a Record of All My Submitted Transactions?

The EMTS will keep active logs of all of your submitted transactions. To access a previously submitted transaction, you can either find the actual file that was submitted and review the contents of that file in the "Submission Log" (if you submitted an XML batch file), or you can look at the detailed RIN Holding Account report, which provides information on every transaction that resulted in RINs being moved to and from your RIN Holding Account.

5.3.5 What Happens to My RINs after the Time Period Expires?

If you have initiated a sell transaction, and RINs have been placed on reserve for the pending buy transaction, the buyer has seven business days to complete the pending trade before expiration. If the buyer fails to do so, your transaction will expire, and RINs are un-reserved and available for you to use in other transactions. Remember, you must submit transactional information within five days of the date on the Product Transfer Document.

The EMTS will also periodically clear your Transaction Bin, meaning that any transactions that you have entered but not yet confirmed will be lost. Once you place a transaction in your bin you have five days in which to confirm the transaction before the EMTS will remove it from the bin. However, sending transactional information to EMTS more than five business days after the transaction date is a violation.

Lastly, at the end of a compliance period, RINs that were produced two years older than the beginning of the new trading period will expire. For example, RINs produced in 2010 will expire on February 28, 2012, and all transactions should be completed by that time.

5.4 Creating Transactions

The EMTS requires specific data for all transaction types: generate, separate, retire, sell, and buy.

5.4.1 What Information Is Required to Generate RINs?

The following information is required to generate RINs:

- The type of fuel produced;
- The code that specifies the process used to create the renewable fuel;
- The date the renewable fuel was produced;
- The volume of renewable fuel produced;
- The volume of denaturant added to the renewable fuel (ethanol only);
- The number of RINs associated with the renewable fuel;
- The facility ID;
- The batch number;
- The codes for all feedstocks used to produce the renewable fuel;
- The volumes of all feedstocks used to produce the renewable fuel;
- The units of measure for all feedstock volumes;
- Affirmation that each feedstock meets the definition of renewable biomass; and
- The codes for all co-products produced along with the renewable fuel.

Figure 5-10 shows how to report information about the fuel for which RINs are being generated.

Figure 5-10: Generate RINs – Report Fuel

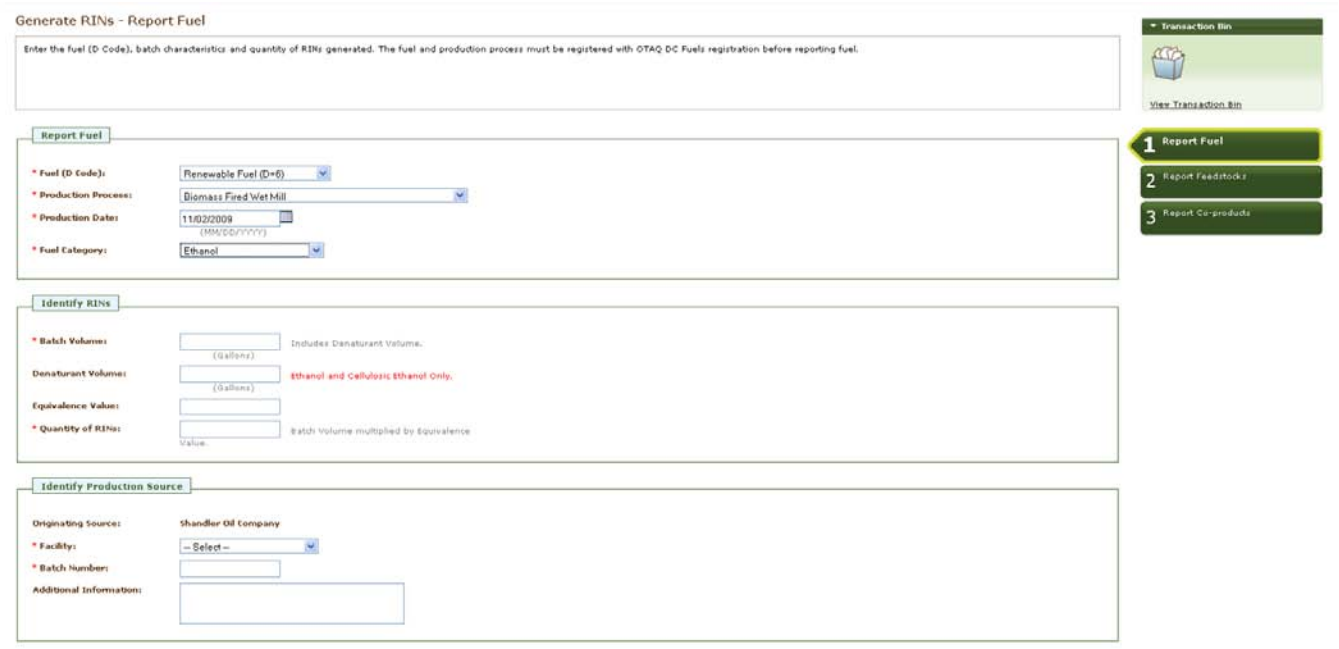
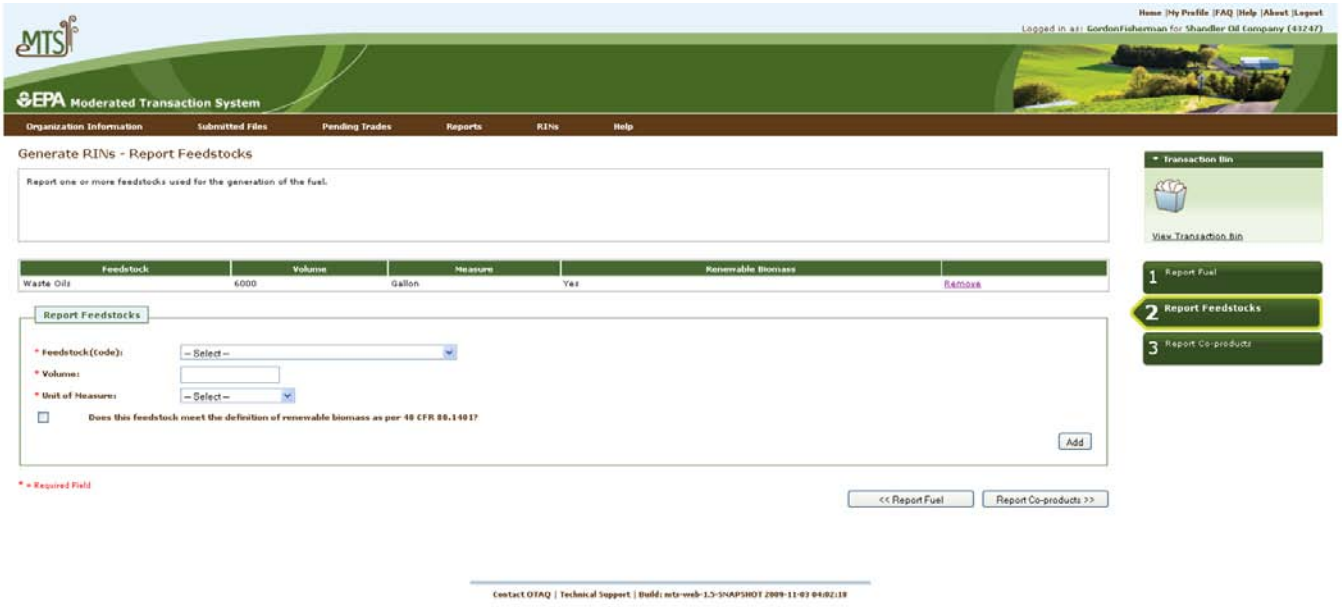


Figure 5-11 shows how to report feedstocks in a generate transaction.

Figure 5-11: Generate RINs – Report Feedstocks



5.4.1.1 How Do I Report Equivalence Value?

You do not need to report an equivalence value. The EMTS will automatically calculate the equivalence value based on the type of fuel for which you are generating RINs. The number of RINs you are allowed to generate for a specific fuel type will be determined by the volume of the batch of fuel multiplied by the equivalence value. The EMTS checks that the RINs you generate do not exceed your fuel volume by the equivalence value multiplier. If you report an equivalence value, the EMTS will re-calculate and check this value. The equivalence values (multipliers) are as follows:

Ethanol = 1.0
Biodiesel (mono-alkyl ester) = 1.5
Non-ester Renewable Diesel = 1.7
Cellulosic Ethanol = 1.0
Butanol = 1.3
Biogas = 1.0
Electricity = 1.0

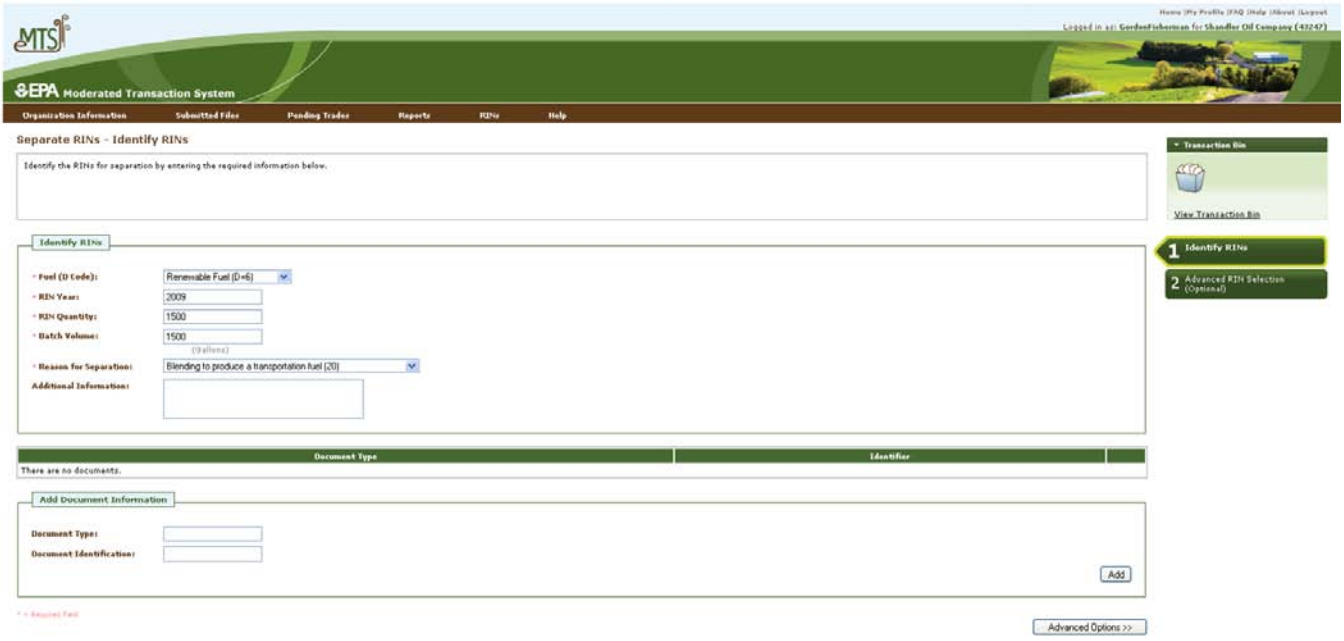
5.4.2 What Information Is Required to Separate RINs?

The following information is required to separate RINs:

- The number of RINs being separated;
- The volume of fuel associated with the RINs being separated;
- The renewable fuel code (D code);
- A code which specifies the reason for the separate transaction; and
- The year the RINs being separated were generated.

Figure 5-12 shows how to separate RINs.

Figure 5-12: Separate RINs



5.4.3 What Information Is Required to Retire RINs?

You may choose to retire RINs for compliance or for other reasons. The following information is required to retire RINs for compliance:

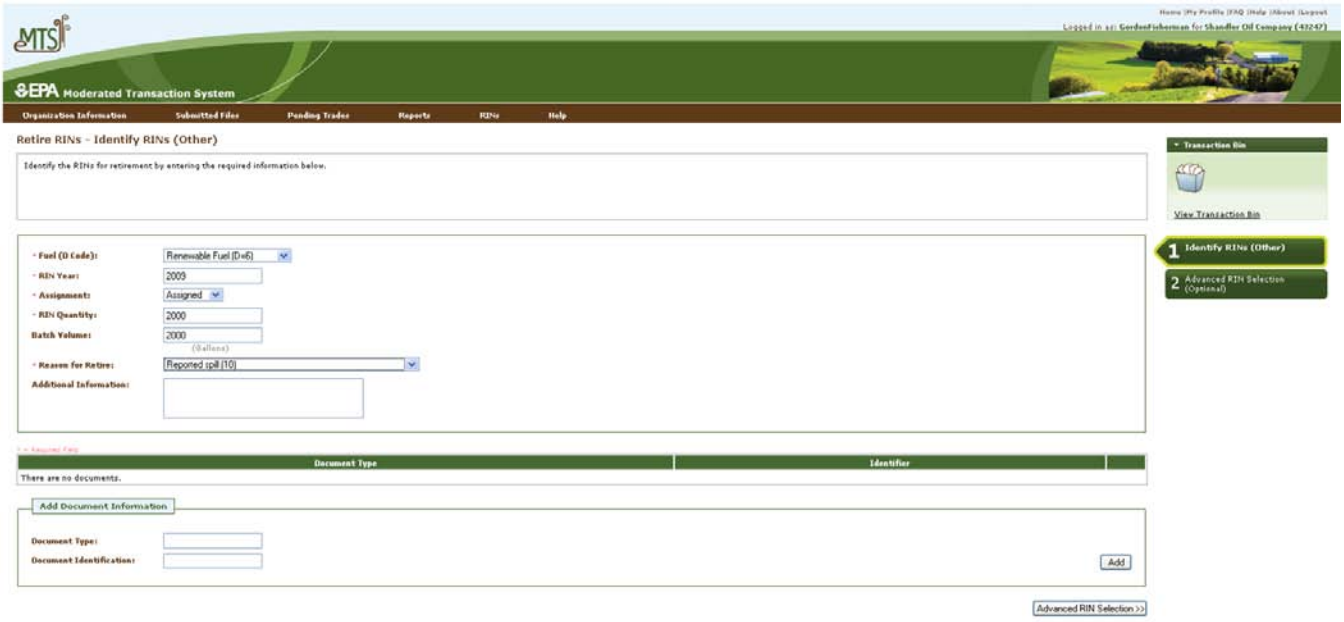
- The number of RINs being retired;
- The renewable fuel code (D code);
- The year the RINs being retired were generated; and
- The compliance level at which you are retiring.

The following information is required to retire RINs for reasons other than compliance:

- The number of RINs being retired;
- The renewable fuel code (D code);
- A code which indicates whether the RINs being retired are assigned or separated;
- The year the RINs being retired were generated; and
- A code which specifies the reason for the retire transaction.

Figure 5-13 shows how to retire RINs.

Figure 5-13: Retire RINs



5.4.3.1 What Happens to My RINs When I Retire for Compliance?

After you retire RINs for compliance, your RINs will be moved to an EPA Holding Account. You will still be able to view these RINs in your RIN Holdings (History) but you will be unable to use these RINs for any future transactions. Should you find an error or miscalculation in the number of RINs you retired, you should contact EPA to resolve the issue.

5.4.4 What Information Is Required to Report RIN Trades?

RIN Trades:
You must Accept or Deny a pending trade within seven business days or the EMTS will cancel the trade.

The information required for a RIN trade will differ somewhat depending on whether you have initiated the trade through a sell transaction, have accepted an invitation to buy, or have initiated the trade through a buy transaction. The preferred business process is for the seller to initiate the transaction by preparing an offer to sell first, followed by the buyer accepting the offer. Trades must be responded to within seven business days or the EMTS will expire the trade and notify both parties. In all cases, the actual purchase, sale, and transfer of ownership of the RINs will have occurred outside of the EMTS. You must send all trade information within five business days of the actual transaction.

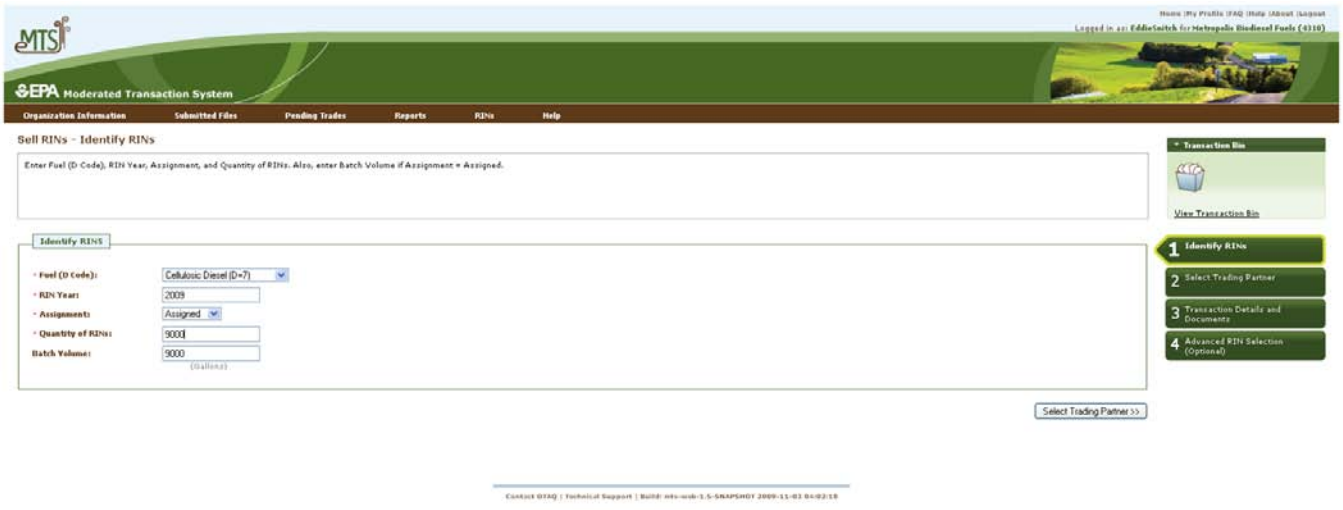
5.4.4.1 Creating a Sell Transaction

The following information is required to initiate a trade through a sell transaction:

- The identifier of the organization to which you are selling RINs;
- The name of the organization to which you are selling RINs;
- The number of RINs that were sold;
- The volume of renewable fuel sold with the RINs (for assigned RINs only);
- The renewable fuel code;
- A code which indicates whether the RINs that were sold were assigned or separated;
- The year in which the RINs that were sold were generated;
- A code which specifies the reason the RINs have been sold;
- Either the price per RIN or the price per gallon of renewable fuel that was agreed upon by both parties. Price must be rounded to two decimal places; and
- The date on which the trade occurred as recorded on the Product Transfer Document (PTD).

Figure 5-14 shows how to sell RINs in the EMTS.

Figure 5-14: Sell RINs



5.4.4.2 Accepting an Invitation to Buy or Sell RINs

By clicking the "View Trades" link on the homepage, you will have access to a list of all of the trades for which your organization has been identified as the buying partner or the selling partner. For each trade, information on both the buying and selling partners are displayed. You should check to verify that this information is correct before clicking the "Accept Trade" button next to the specified trade.

Figure 5-15 shows pending trades awaiting confirmation, denial, or cancellation.

Figure 5-15: Review Trades

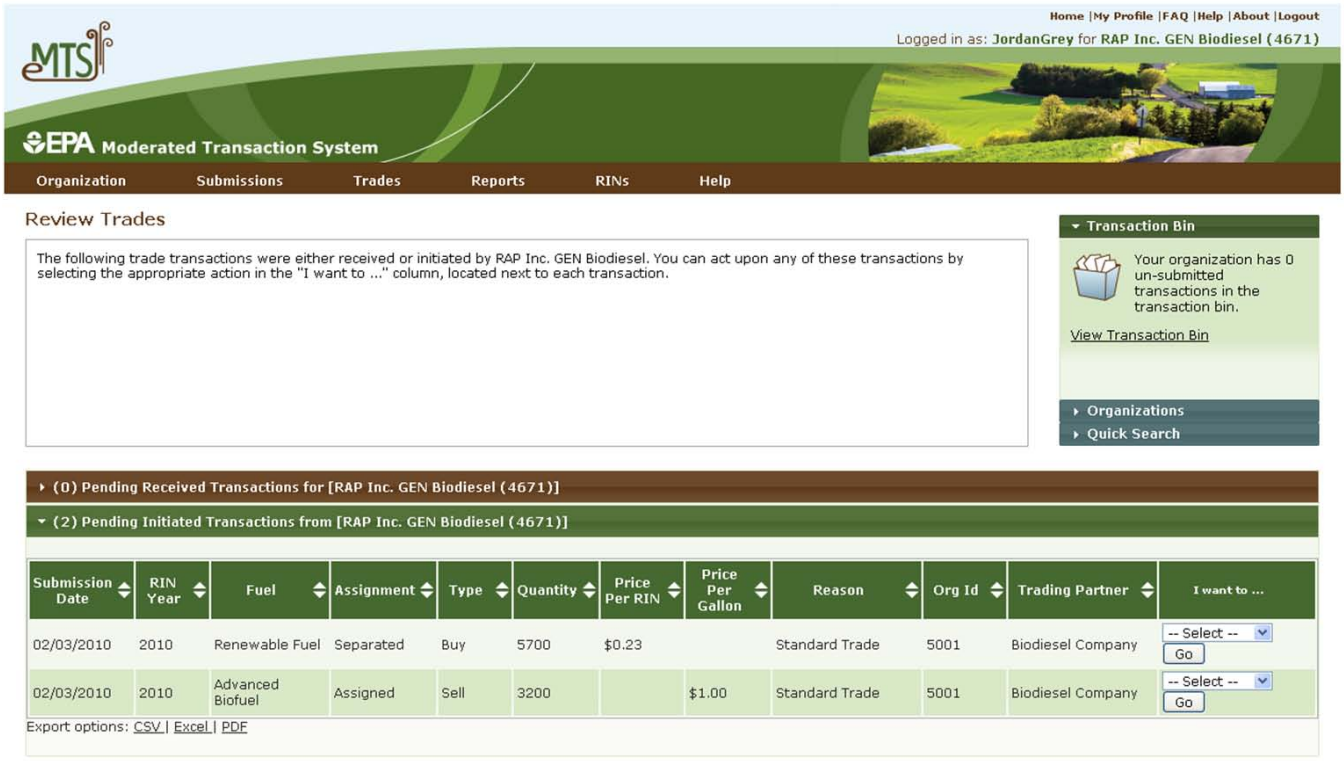
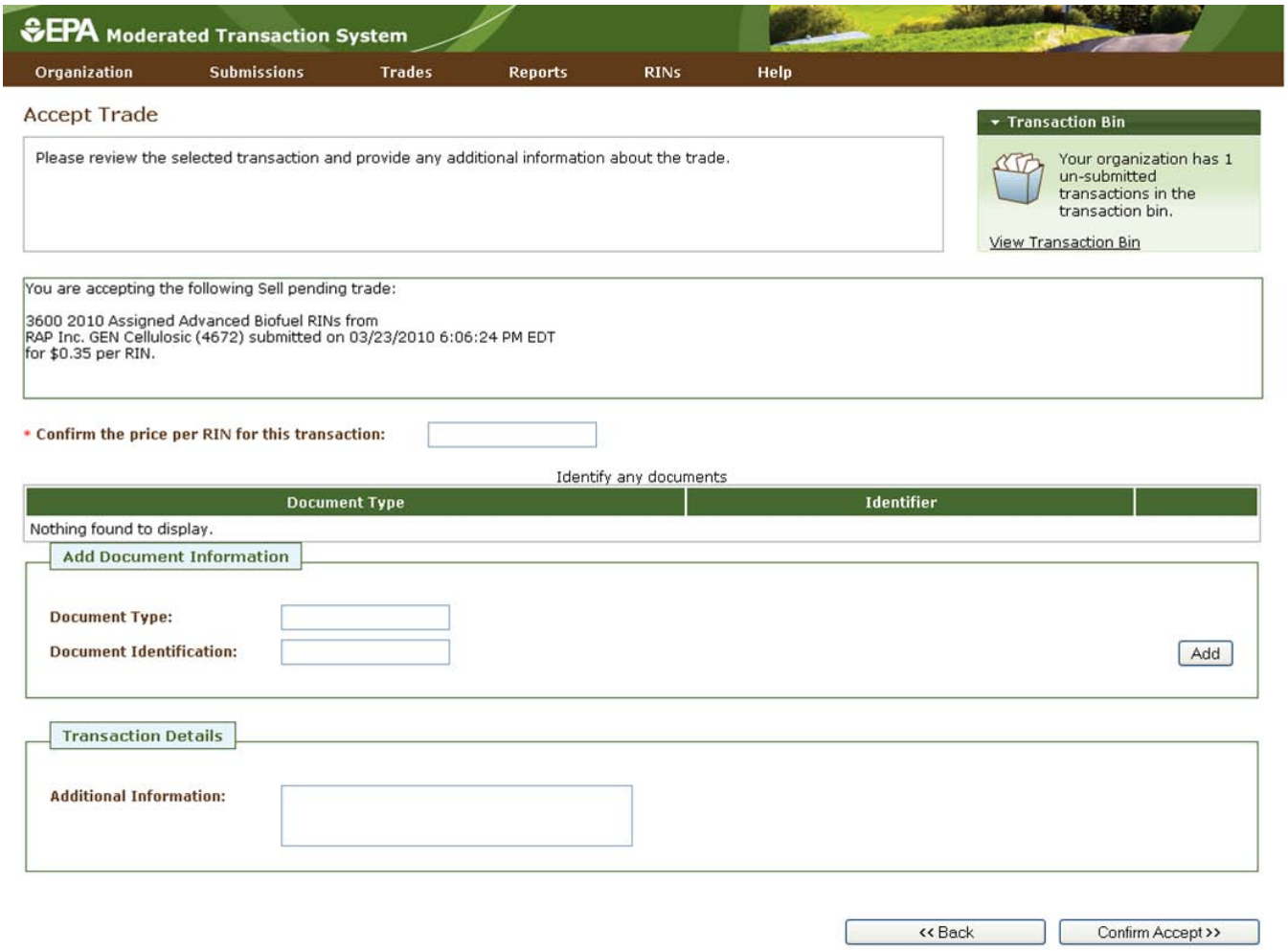


Figure 5-16 shows how to accept a trade transaction.

Figure 5-16: Accept Trade

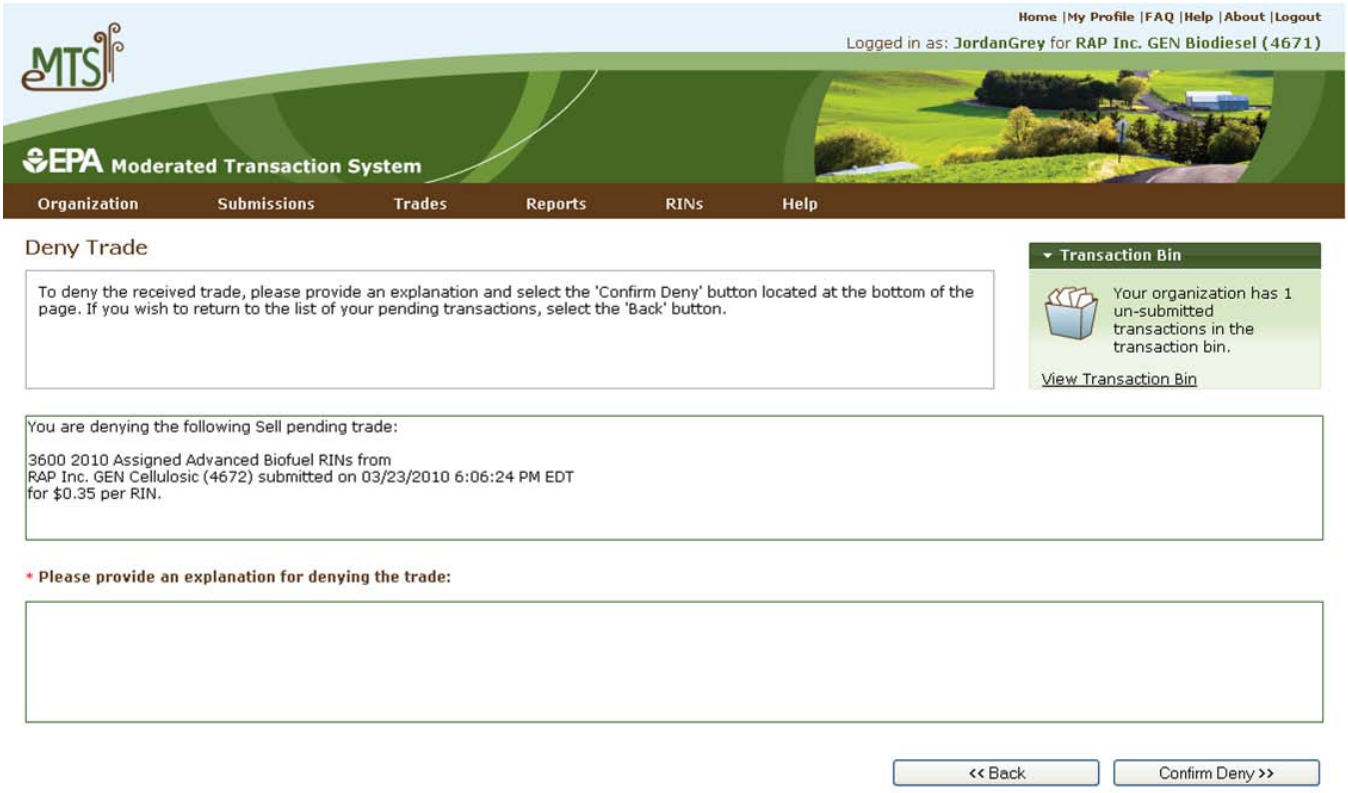


5.4.4.3 Denying an Invitation to Buy or Sell RINs

You can deny any trade transaction initiated by a buyer or seller by viewing your "Pending Trades." If the transaction does not contain accurate information based on information regarding the trade negotiated with the trading partner, you may deny the trade. To do this, click on the "Deny" option in the awaiting confirmation screen. You must provide the reason for the denial in a comment box. This comment will be sent to the buyer or seller upon completion of the denial.

Figure 5-17 shows how to deny a trade transaction.

Figure 5-17: Deny Trade



5.4.4.4 Can I Cancel My Buy and Sell Transactions?

You can cancel any trade transactions you have initiated if the buyer or seller has not yet accepted the transaction. To do this, go to the EMTS website homepage and click on the link for the list of buy and sell transactions that are awaiting confirmation. From this list, select the buy or sell transaction that you wish to cancel and click "Cancel." The trading partner will receive a notification that the trade was cancelled.

5.4.4.5 Initiating a Trade Transaction with a Buy Transaction

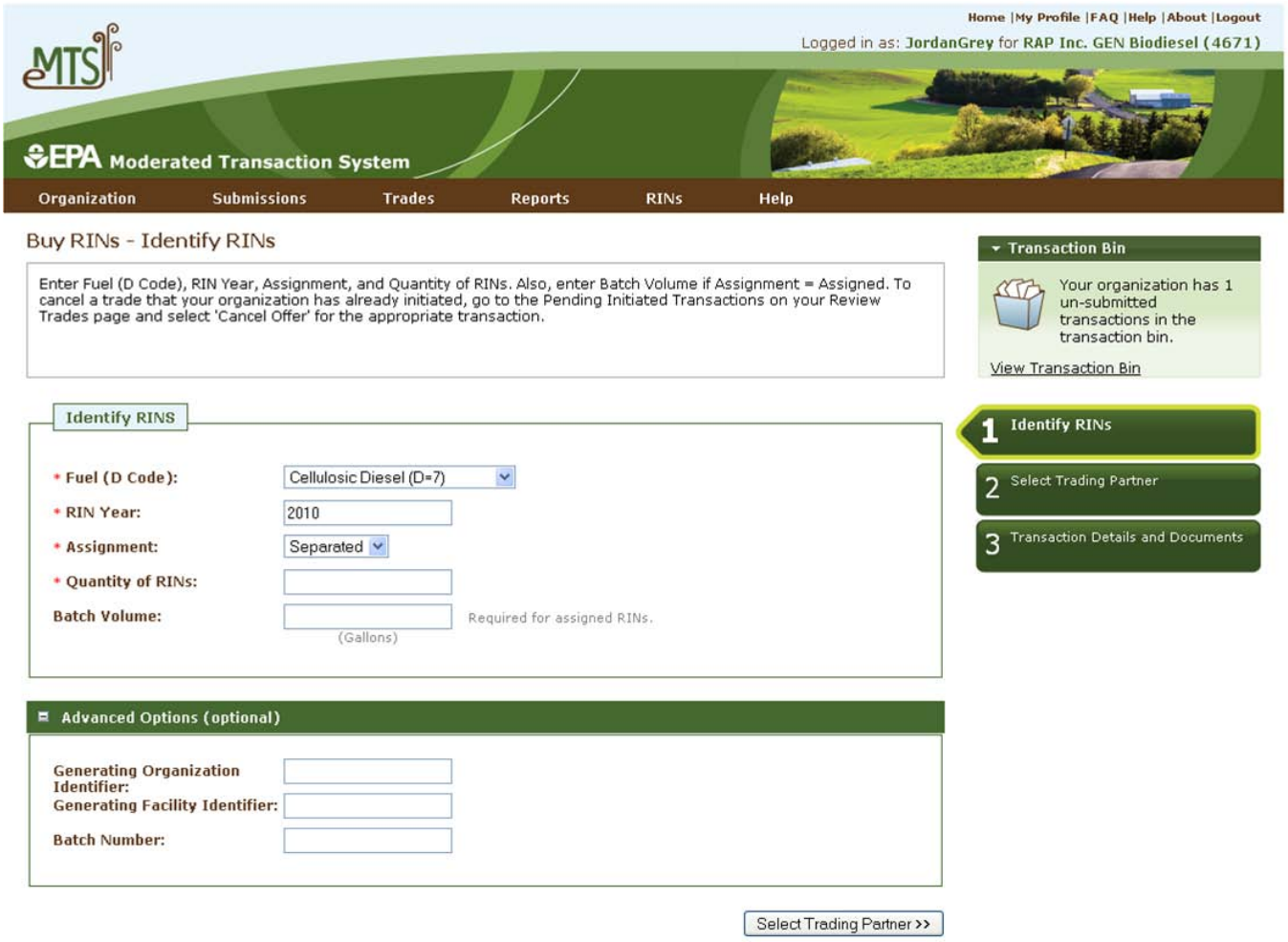
The preferred method for processing trades is for the seller to initiate the trade first and the buyer to respond to the invitation by accepting or denying the trade. However, it is possible that the buyer has submitted his part of the transaction prior to the seller initiating the trade. The following information is required to initiate a buy transaction:

- The identifier of the organization that has sold the RINs;
- The name of the organization that has sold the RINs;
- The number of RINs that were bought;

- The volume of renewable fuel sold with the RINs (for assigned RINs only);
- The renewable fuel code;
- A code which indicates whether the RINs that were bought were attached or separated;
- The year in which the RINs that were bought were generated;
- A code which specifies the reason the RINs have been bought;
- Either the price per RIN or the price per gallon of renewable fuel that was agreed upon by both parties. Price must be recorded to two decimal places; and
- The date on which the trade occurred as recorded on the PTD.

Figure 5-18 shows how to buy RINs on the EMTS.

Figure 5-18: Buy RINs



5.4.5 Which RINs Will Be Used in a Transaction?

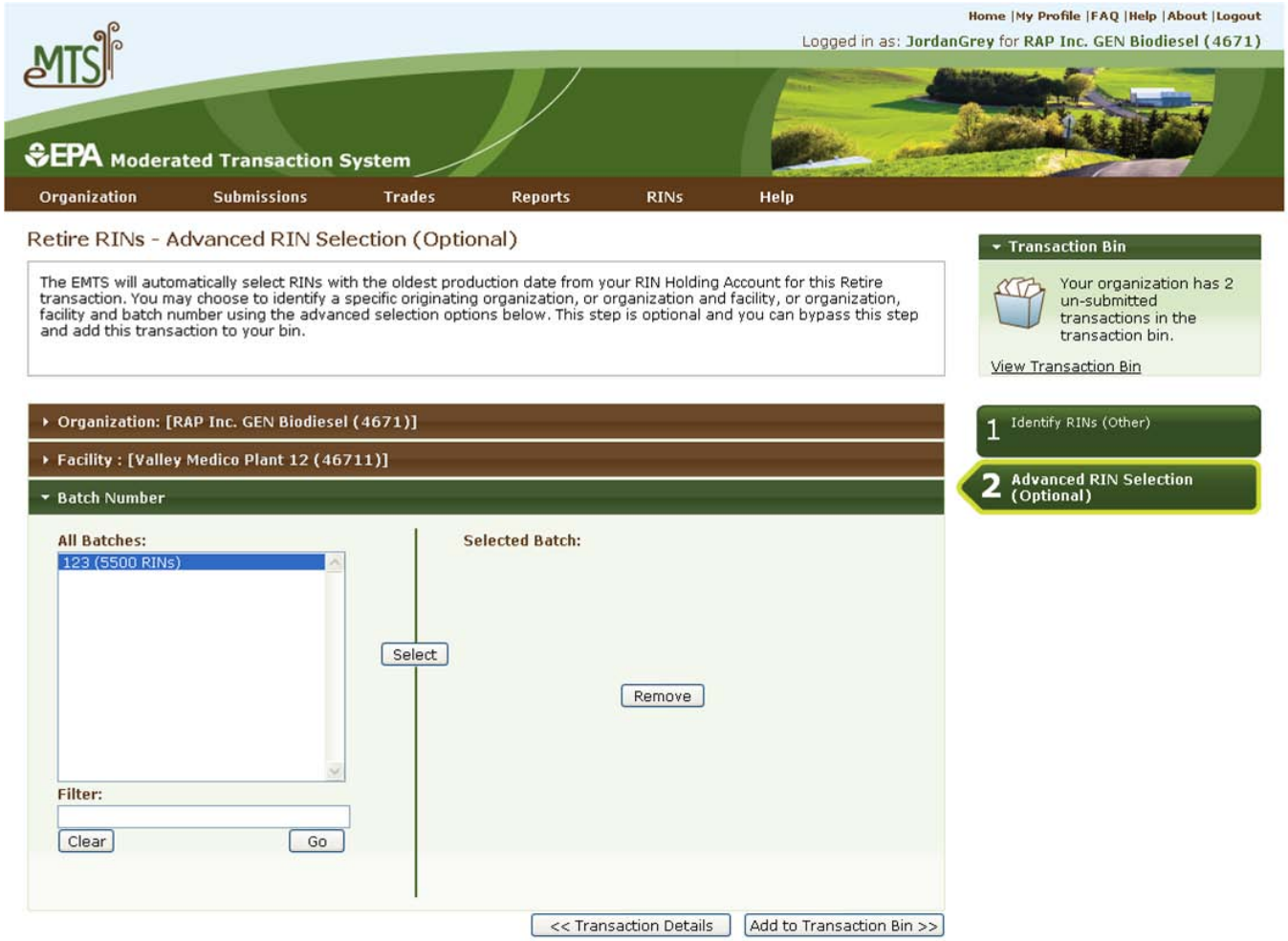
When you create a sell transaction, at a minimum you will have to identify the fuel code (D code), assignment code, RIN year (the year in which the RINs were generated), and the number of RINs you are selling. The EMTS will find the oldest RINs in your holding account that match your criteria and reserve these for the trade. By default, the EMTS will always use the oldest RINs you have in your account when separating, retiring, or trading RINs. This assures that you are trading or retiring RINs that have the shortest expiration date. However, should you wish to specify a specific batch that you want to sell, separate, or retire, you may do so by using the advanced selection option for identifying RINs. This allows you to specify a quantity of RINs by:

- The organization that produced the fuel;
- The facility that produced the fuel; and
- The specific batch number of the fuel.

When you provide these specifications, the EMTS will attempt to identify RINs that meet these characteristics and reserve them for the transaction.

Figure 5-19 shows how to select specific RINs for use in a retire transaction.

Figure 5-19: Advanced Options

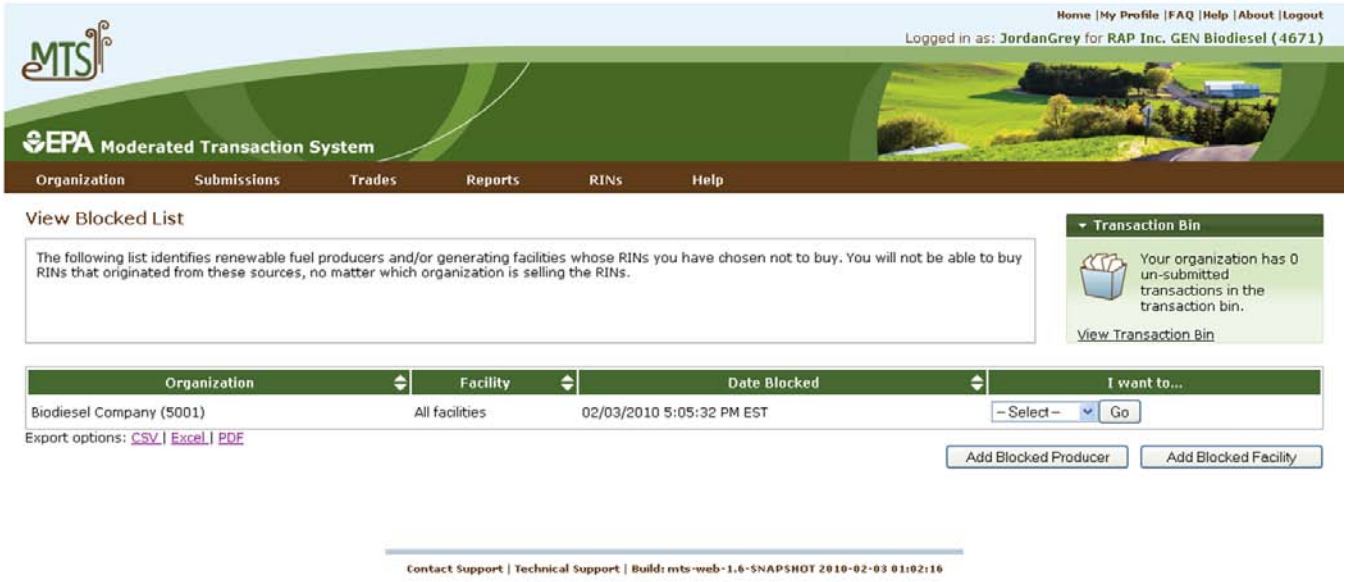


5.4.6 Can I Block RINs That Were Generated By a Specific Organization?

In some cases, you may wish to ensure that you do not buy or own RINs that have been generated by a specific fuel producer. The EMTS has the capability for you to "block" trades involving the producer you have identified as undesirable. In order to use this feature, you must create a list of organizations that you wish to block. When a transaction includes RINs from a blocked fuel producer, the transaction will automatically be denied by the EMTS and notification will be sent to both parties indicating that the transaction was not processed.

Figure 5-20 shows how to manage the blocked list. Please note that this page is under construction.

Figure 5-20: Manage Blocked List



5.4.7 How Do I Report an Invalid Batch of RINs?

If you are in possession of a batch of fuel with which the associated fuel has become unusable, you must retire RINs in the EMTS. To do so, you will submit a retire transaction indicating an appropriate "Retire Reason Code." If you select "Reportable Spill," "Contaminated or Spoiled Fuel," "Import Volume Correction," "Invalid RINs," "Volume error correction," or "Enforcement Obligation," then you must provide a comment further explaining the reason for the retire transaction in the Additional Comments field. Once the transaction is complete, the RINs will no longer be available for future transactions.

It is not necessary to report a specific batch of fuel when retiring for spillage or spoilage, although, you do have the option to identify the generating source of the RINs.

5.4.8 How Do I Reverse a Transaction?

EMTS is a forward moving system, so a true "reversal" is not possible. However, RINs may be transferred back to the original selling party if an appropriate remedial action has been discussed and agreed upon with EPA. Any situation that involves a reason code other than Standard Trade should first be reported to EPA. A "reversal" sell must be negotiated between the previous owner and the current holder of the RINs. You must submit a buy or sell transaction identifying a specific reason code. Exactly as the original trade was processed, both the buyer and the seller must complete their portions of the trade.

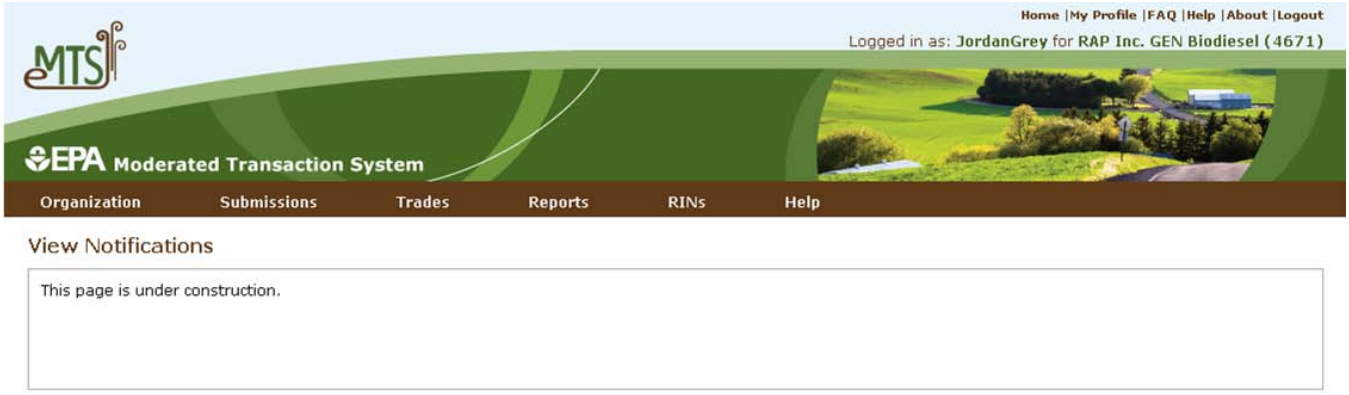
5.4.9 Where Can I See All the Notifications Sent to My Organization?

The EMTS sends many notifications to you and to other submitters in your organization. Every notification sent by the EMTS can be seen in your "notification log." You may filter and sort this list by notification type

and date sent. By default the EMTS will only display the most recent notifications; however, you will be able to see notifications that are over 30 days old by using the "Advanced Search" feature.

Figure 5-21 shows where to view notifications. Please note that this page is under construction.

Figure 5-21: View Notifications

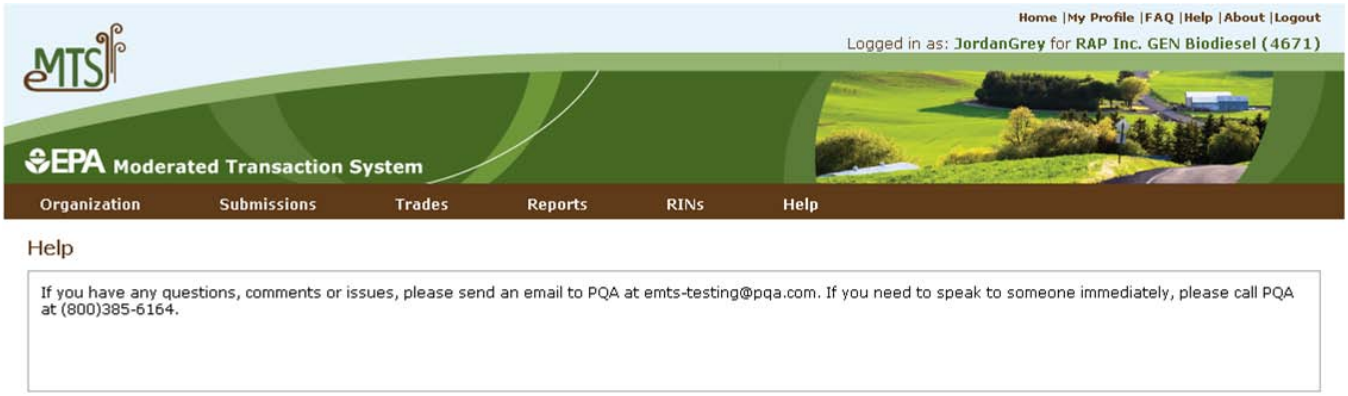


5.5 Where Can I Go to Get Help?

At the bottom of every page on the EMTS website are several links that allow you to contact EPA to send them an email message or to request technical support. In addition, these transaction instructions are available on the EMTS website and will be updated as needed. Each screen of the EMTS website has content-sensitive help available, allowing you to understand how to use the website and what data the system is expecting. Should these resources not provide the help you need, you can contact the EMTS help desk. An email address and a phone number are available on the EMTS website. Further information on where to find help can be found in Section 8 of these transaction instructions, "How Do I Contact EMTS Support?"

Figure 5-22 shows where to find help on the EMTS.

Figure 5-22: Help



Section 6: How Do I Report Transactions Using XML Files?

This section provides instructions on using the EPA Moderated Transaction System (EMTS) schema to submit data to the EMTS. This includes:

- A brief overview of using EPA's exchange network;
- Best practices for preparing and formatting data for the EMTS;
- How to submit your file; and
- Detailed instructions for all transaction types.

Who should read Section 6:

Information Technology and Data Preparers who are responsible for implementing the EMTS schema and submitting XML files to the EMTS.

What you will find in Section 6:

This section provides an overview of the EMTS schema and detailed instructions on how to report data using the new file format. This section also includes instructions on how to submit your file using a node on EPA's Exchange Network.

For information on the resources available from EPA to convert your data into an XML document, see *http://www.epa.gov/otaq/renewablefuels/epamts.htm.*

6.1 What Are the Steps to Submitting My File?

The following are basic steps to submitting your file to the EMTS. Please note that these are general instructions; personal nodes and node clients may behave differently.

1. Create a single XML file which includes both the exchange header 2.0 document and your EMTS XML file.
2. Compress the XML file. This step may be done automatically by your node client software.
3. Log into your node client or the CDX Exchange Network web client with your CDX credentials, and select the "submit" option.
4. Create a description for the submission, select the EMTS destination node and dataflow, and choose your file to submit.
5. After you submit the file, the node will transmit your submit request to the EMTS node via the Exchange Network.
6. The EMTS will receive the submit request, decompress the XML file, and process its contents.

Exchange Node 2.0

The EMTS node is 2.0 compliant. This section includes specifications for 2.0 exchanges.

6.2 What Is the Purpose of an XML Schema?

An XML schema is the definition that constrains the structure and content of an XML document. It is written in XML schema language as defined by the World Wide Web Consortium (W3C). An XML schema defines:

- The elements and attributes that are expected;
- The allowable data types for each element;
- The hierarchy and order in which elements must appear;
- Which elements are optional and which are required; and
- The maximum number of occurrences allowed for each element.

Like the architectural blueprint that describes the structural design of a house, an XML schema describes the structural design of an XML file. Files submitted to the EMTS are accepted or not accepted based on their conformity to the EMTS XML schema.

6.2.1 General Principles Used in Developing the EMTS

XML schemas can be created in many different ways; however, there are principles that govern the definition and use of the EMTS schema for reporting transactions. The following approach to developing and managing the EMTS XML schema has been adopted.

- XML element tag names adhere as closely as possible to EPA's XML data standards. Information about EPA's XML data standards can be found at EPA Data Registry Services: *http://iaspub.epa.gov/sor_internet/registry/datastds/findadatastandard/epaapproved/.*

- XML element tag names are specific to a transaction category where possible in order to minimize ambiguity (e.g., "GenerateTransactionComment" rather than "Comment").

- No two elements share the same tag name. XML elements are defined unambiguously.

- Tag names are understandable to both data preparers and information technology staff.

- The EMTS schema was not designed to minimize submitted file size. See Section 6.5.3 for best practices on the size and content limits for file submission.

- The EMTS schema contains few restrictions on the content of the submission, and is limited primarily to indicating whether the submission is a valid and well-formed XML file. The schema contains some business rules; however, these are limited to the semantic properties of the file structure. Additional business rules are applied to the content of the XML file after the data have been submitted to the EMTS. This allows more flexible management of quality assurance checks and more informative feedback on check results. The submitter will receive feedback on all business checks and technical checks through a feedback report available on the EMTS website. For

more information on the EMTS QA approach, see Appendix D, "QA Checks."

- Conforms to EPA Guidelines.

6.3 Codes, Identifiers, and Data Types

The following section provides guidance on how to report certain types of data content.

6.3.1 How Do I Report Codes?

If the last word in an XML tag is "code," the element must contain a value from a code list. A complete list of codes can be found in Appendix C, "Reporting Codes," of these transaction instructions. Codes are validated by the EMTS QA check process for appropriate use given an organization's business activities. Some code tables may change over time. If codes change, a new version of the schema will be released; the new codes will be published in the EMTS Transaction Instructions and incorporated in the QA Check process.

6.3.2 How Do I Report Comments and Additional Information?

If an XML tag contains the word "comment," it is generally an optional element in which you can provide explanations, caveats, or any other information about the data in the schema. In some cases, you may be required to provide a comment based on the reason code you provide.

6.3.3 How Do I Report Identifiers?

If an XML tag contains the word "identifier," it must contain the specific alphanumeric identifier assigned by EPA to an organization or facility site. Both Organization and Facility identifiers are assigned by EPA once you have completed registration through the OTAQReg Fuels Programs Registration system. These identifiers should always be included in your submission file when identifying your organization, or if you are identifying the generating source of the renewable fuel. You must always identify your organization as the source of the submission.

6.3.3.1 Organization Identifiers

The four-digit numeric public identifier assigned by EPA is used to identify your organization and should be reported for all submission files unless you wish to keep the contents of the file.

Several transaction types require you to either identify an organization's identification number as a trading partner (sell and buy transactions) or give you the option to identify the originating source of the fuel. In either case, you must identify the trading partner organization or originating source organization using the public identifier.

6.3.4 Data Types

Most data types in the EMTS schema are string, date, year, and number. Each data element will have a length, or a precision assigned that is constrained in the schema. Data which are not consistent with the formats defined in the schema will fail schema validation, causing the submission file to fail.

6.3.4.1 Dates and Years

All date and year tags are handled as xsd:date and xsd:gYear in the schema.

- **Date –** If a tag name contains the word "date," the data element is for a specific day. These should be represented as an eight-digit sequence of numeric characters in a string format of YYYY-MM-DD and should include leading zeros between the representative elements containing only one digit. For example August 7, 2009 is 2009-08-07.

- **Year –** If a tag name contains the word "year," the data element is for a calendar year. This data should be reported as a four-digit sequence of numeric characters in a string format of YYYY, otherwise, if not required, it may be left null.

6.3.4.2 Reporting Numbers

There are several different reporting formats for numbers. The schema allows for various precisions; however, you are expected to report numeric values as prescribed in the schema for each numeric data type.

The following table describes each numeric data type and an example of what to report in the EMTS.

Figure 6-1: Reporting Formats for Numbers

Content Type	Reporting Format	Example
Integer (width)	Whole number (no decimal places, preceding zeroes not retained). *Width* = Maximum number of digits allowed.	Int (3) Valid: 2, 15, 930 Invalid: 4000, -1
Decimal (width, scale)	Decimal number with fixed number of decimal places. *Width* = Maximum number of digits including those on both sides of the decimal point, and includes the decimal point. *Scale* = Number of decimal places; that is, digits to the right of the decimal point.	Dec (5, 1) Valid: 100.0, 34.6, 0.3, 0.0 Invalid: 99.75, 256.45

- **Precision –** Precision refers to the number of significant digits provided in the number of decimal places for a fixed decimal number. The EMTS schema will enforce numbers be reported in the proper precision.

6.4 Constructing the XML File

The following section explains how to create an EMTS conformant XML document. It includes advice on best practices for reporting your data as well as how to construct your XML document.

6.4.1 Will the Conversion Tool Create a Valid XML File?

For users that do not have the technical capabilities to modify their systems to produce valid XML, EPA provides a conversion tool that will convert XLS, CSV, or TXT files. EPA will provide a standard template for the XLS or TXT data. You can output your data into the XLS template then use these data files as inputs to the Conversion Tool. The tool will output valid EMTS XML files; however, the tool will not check for business content or valid code numbers. For more information on the Conversion Tool, see *http://www.epa.gov/otaq/renewablefuels/epamts.htm.*

6.4.2 Is There a Limit on the Size of the Submission File?

There are no business rules that limit the size of the file during transport through the Exchange Network. However, you are strongly encouraged to submit sell transactions prior to the receiving party submitting their corresponding buy transactions, so you may consider categorizing your submissions into two submission types: all sell transactions and all other transactions. During peak submission periods, which are expected to occur in January and February, a substantially larger number of files are expected to be

submitted which may delay the EMTS's response time. These files will be placed in the system's queue and processed as in a first-come, first-serve order.

If your file contains one or more critical errors, the entire file will not be processed and you will receive a notification indicating that your submission has failed. You must correct the critical errors and resubmit your file. Therefore, limiting the contents of your file to include a smaller number of transactions is a good practice, likely resulting in smaller feedback reports and fewer submission failures. You can also expect better response times submitting smaller files over the exchange network and when downloading your feedback reports.

6.4.3 Schema Validation

The following section describes the various tools that are available and validation rules you should implement prior to submitting your XML document to the EMTS. This includes information on how to validate your XML document, the built-in constraints that the schema will enforce, and the cardinality rules that you should avoid when constructing your data.

6.4.3.1 Validating Your File Prior to Submission

Before submitting your file to the EMTS dataflow, you should validate your XML file against the EMTS_EMTS_v1.0.xsd file structure. This will ensure that your file is well-formed and valid. You can do this by using one of several tools found at EPA's *http://tools.epacdxnode.net/.*

The EMTS contains few validation business rules regarding the content of the submission; however, data types are constrained. You will receive all business logic checks, including invalid reporting codes used through a feedback report available on the EMTS website once the quality assurance checking process has completed. For more information on the QA approach with the EMTS, see Section 4.2.4.

6.4.4 Submitting Your File

All file submissions require the user to have an authorized CDX account and access to the EMTS dataflow. All files must utilize EPA's Exchange Network to transport files. EPA's network of nodes makes it possible for users to exchange data with other exchanges, providing their organizations have nodes. However, not all organizations will have nodes.

Once files are pushed into the data flow, CDX will submit the XML document to the EMTS back-end node. Once the EMTS back-end node accepts the XML file it generates submittal identification information and begins processing the data content within the payload. For more information regarding obtaining and installing a node on your server, please see *www.epa.gov/cdx.*

6.4.5 Quality Assurance and Receiving Feedback

After you have submitted your file, you will receive an email with information about your submission. If there were errors in processing the data, you will receive information on a feedback report, which indicates

critical errors and potential issues. You are expected to correct the problems with your data content or the XML document structure and resubmit the file. After the EMTS processes the payload content, the resulting data can be viewed on the EMTS website. In all cases, you will receive notification when the processing of your data is complete; however during peak load periods, the response time may be slow.

6.5 Overview of Major Data Blocks

The following section contains information on the major groupings of data in the EMTS schema. This section describes the basic XML blocks that are used for reporting the various transaction types: generate, separate, sell, buy, and retire. For each transaction type, a table of data elements including the data type, name of the XML tag name, required indicator, and description is provided. In addition, if a critical check is applied to the data, the description and reference number to the check is provided. You can see the complete list of checks in Appendix D, "QA Checks." If a data element is referenced as a complex type, there will be another table that documents the elements for that complex type.

Supporting implementation documents can be found on the following website: *http://www.exchangenetwork.net/exchanges/air/.* In addition to the EMTS, the flow configuration document (FCD), data exchange template (DET), and sample XML documents are available for download on the registry site.

6.5.1 EMTS Root Elements

The elements under the EMTS root must be included in every submission. These XML elements identify the person who prepared the data along with organization identifiers. If different people within your organization are responsible for different transactions, consider submitting separate submission files for each person responsible for the preparation of the data.

Converter Tool

Data that have been converted by EPA's XML Converter Tool may not contain all the required data based on the content of the input files used.

How these data elements are processed: The root elements identify the person who has prepared the data, and the date on which the file was created by the user. The identity of the organization can be referenced by the public identifier.

The root elements are reported once in the entire submission file; however, you must report at least one associated transaction (such as a generate transaction). The root elements in the submission file will be stored in the EMTS website in association with each transaction submitted in the file.

Figure 6-8: EMTS Root Elements

Data Element				QA Check	
Data Type	**Name**	**Required**	**Description**	**Description**	**Number**
xsd:string	UserLoginText	Yes	The CDX user login of the party responsible for preparing the submission file.	The user specified in the submission file must be actively registered with CDX and have permission to participate in the EMTS.	2000
				The user specified in the submission file must have an active association with the organization for which he is submitting data.	2001
				The user specified in the submission file must be authorized to perform the requested transactions on behalf of the organization.	2002
xsd:date	SubmittalCreationDate	Yes	The date that the submission file was created.	The submission date associated with the submission file may not be a date occurring in the future.	2008

(cont.)

Figure 6-8: EMTS Root Elements (cont.)

Data Element				QA Check	
Data Type	**Name**	**Required**	**Description**	**Description**	**Number**
xsd:string	OrganizationIdentifier	Yes	The public identification number for the organization as designated by OTAQReg.	The organization identifier must be specified in the submission file.	2003
				The organization in the submission file must be registered with EPA and be active.	2005
				The organization's RIN Holding Account must be active.	2006
xsd:string	SubmittalCommentText	No	Comment provided by the user on submission file.		
complex	***GenerateTransactionDetail***	***No***	Information on the RINs being generated.		
complex	***SeparateTransactionDetail***	***No***	Information on RINs being separated.		
complex	***SellTransactionDetail***	***No***	Information on RINs being sold.		
complex	***BuyTransactionDetail***	***No***	Information on RINs being bought.		
complex	***RetireTransactionDetail***	***No***	Information on RINs being retired.		

6.5.2 Generating RINs

The complex type ***GenerateTransactionDetail*** is used to report RINs that have been generated as a result of fuel production. This transaction type requires basic information regarding the production of the fuel, the feedstock used, and the co-products that were created from the process. For each generate transaction, you must report at least one feedstock.

How these data elements are processed: All data elements that are identified as required must be reported. The fuel, feedstock, and process that you report to the EMTS must be one of the fuels, feedstocks, and processes you registered for your organization in the OTAQReg Fuels Programs Registration system. If you report an unregistered code, your submission file will not pass critical QA checks and your file will fail to be processed. In some cases, based on fuel reported and process identified, you will need to report denaturant volume in addition to the batch volume. The equivalence value that you report must also be applicable for the fuel type, process, and biomass indication for feedstock used. See Section 5.4.1.1 for determining how to determine your equivalence value.

By default, it is assumed that your organization is the producer of the renewable fuel. You need only report the number of the facility where the fuel was produced and the unique identification of the batch number for the fuel in the complex type ***GenerateOriginatingSourceDetail.*** If, however, you are an importer and the fuel has been produced at a foreign facility, you will need to identify both the organization identifier and the facility identifier of the foreign producer. These identifiers are required to be provided on records by the foreign producer.

Report the feedstock used in the production of the fuel using the ***FeedstockDetail*** complex type. You must report at least one feedstock, including the volume and unit of measure. In addition, you must affirm that the feedstock meets the definition of renewable biomass. If any co-products result from the process, you must report the co-product code in the ***CoProductDetail*** complex type.

Figures 6-9, 6-10, 6-11, and 6-12 below show the data elements for ***GenerateTransactionDetail, GenerateOriginatingSourceDetail, FeedstockDetail,*** and ***CoProductDetail.***

Figure 6-9: Data Elements for *GenerateTransactionDetail*

Data Elements				QA Checks	
Data Type	**Name**	**Required**	**Description**	**Description**	**Number**
xsd:string	FuelCode	Yes	The renewable fuel code for the RINs being separated as defined in Part M Section 80.1426.	The fuel code reported must be registered with EPA.	3032
				The fuel code reported in the production of fuel must be a valid code that is recognized by EPA.	3034
				The fuel code reported must be compatible with the fuel category used in the production of fuel.	3040
				The fuel code and fuel category reported must be compatible with the process used in the production of fuel.	3041

(cont.)

Figure 6-9: Data Elements for *GenerateTransactionDetail* (cont.)

Data Elements				QA Checks	
Data Type	**Name**	**Required**	**Description**	**Description**	**Number**
xsd:string	ProcessCode	Yes	A code that identifies the process used for producing the renewable fuel.	The process reported in the production of fuel must be registered with EPA.	3007
				The process code reported in the production of fuel must be a valid code that is recognized by EPA.	3024
xsd:date	ProductionDate	Yes	The date the renewable fuel was produced as designated by the producing facility.	The production date must not occur after the date specified in submittal data.	3011

(cont.)

Figure 6-9: Data Elements for *GenerateTransactionDetail* (cont.)

Data Elements				QA Checks	
Data Type	**Name**	**Required**	**Description**	**Description**	**Number**
xsd:string	FuelCategory	Yes	The type of fuel that has been produced.	If "Ethanol" or "Cellulosic Ethanol" RINs are reported in the generate transaction, then denaturant volume must be reported.	3013
				The fuel category code reported in the production of fuel must be a valid code that is recognized by EPA.	3033
xsd:positiveInteger	BatchVolume	Yes	The volume of renewable fuel associated with a batch number designated by the producing facility.	RIN Quantity must equal the product of Batch Volume and Equivalence Value.	3022

(cont.)

Figure 6-9: Data Elements for *GenerateTransactionDetail* (cont.)

Data Elements				QA Checks	
Data Type	**Name**	**Required**	**Description**	**Description**	**Number**
xsd:positiveInteger	DenaturantVolume	No	The volume of non-renewable fuel added to a volume of ethanol to create the BatchVolume for a given BatchNumber of renewable fuel.	If denaturant volume is reported, then "Ethanol" or "Cellulosic Ethanol" must be reported.	3014
				When denaturant gallons are reported for ethanol fuel, the amount specified cannot exceed two percent of the total volume of fuel produced.	3016
xsd:decimal	EquivalenceValue	No	A multiplier applied to Batch Volume to determine the number of RINs that will be generated per gallon of renewable fuel.	The equivalence value reported may not exceed the specified value for the fuel type produced.	3026

(cont.)

Figure 6-9: Data Elements for *GenerateTransactionDetail* (cont.)

Data Elements				QA Checks	
Data Type	**Name**	**Required**	**Description**	**Description**	**Number**
xsd:positiveInteger	RINQuantity	Yes	The total number of RINs specified in the transaction.	RIN Quantity must equal the product of Batch Volume and Equivalence Value.	3022
xsd:string	ImportFacilityIdentifier	No	The facility identifier, as registered in OTAQReg, of the plant to which the fuel was imported.		
complex	***GenerateOriginatingSourceDetail***	Yes	Information on the original renewable fuel production.		
xsd:string	TransactionDetailCommentText	No	Comment provided by the user on the transaction.		
complex	***FeedstockDetail***	Yes	Information on the types of feedstock used to produce fuel.		
complex	***CoProductDetail***	No	Information on the one or more co-products that result from the renewable fuel production process.		

Figure 6-10: Data Elements for *GenerateOriginatingSourceDetail*

Data Element				QA Checks	
Data Type	**Name**	**Required**	**Description**	**Description**	**Number**
xsd:string	GenerateOrganizationIdentifier	No	The organization identifier, as registered in OTAQReg, for the organization that produced the fuel.	If the generate organization is different than the submitting organization identifier, then the organization must be an importer.	3000
				If the generate organization is provided, then it must be registered with EPA and be active.	3001
xsd:string	GenerateFacilityIdentifier	Yes	The facility identifier, as registered in OTAQReg, for the facility that produced the fuel.	For generate transactions, the generate facility identifier must be provided.	3002
				The generate facility specified in the submission file must be registered with EPA and be active.	3003
				If generate organization is provided, then generate facility must be actively associated with the generate organization.	3004

(cont.)

Figure 6-10: Data Elements for *GenerateOriginatingSourceDetail* (cont.)

Data Element				QA Checks	
Data Type	**Name**	**Required**	**Description**	**Description**	**Number**
				If generate organization is not provided, then the generate facility must be actively associated with the submitting organization.	3005
xsd:string	BatchNumberText	Yes	The batch number for the renewable fuel as designated by the producing facility.	Batch number must be provided.	3018
				Batch number must be unique for an organization, facility, and RIN year.	3019

Figure 6-11: Data Elements for *FeedstockDetail*

Data Element				QA Check	
Data Type	**Name**	**Required**	**Description**	**Description**	**Number**
xsd:string	FeedstockCode	Yes	A code that identifies the feedstock used to produce the renewable fuel associated with the batch number.	The feedstock reported in the production of fuel must be registered with EPA.	3008
				The feedstock code reported in the production of fuel must be a valid code that is recognized by EPA.	3023
				The feedstock reported must be compatible with the fuel code, fuel category, and process used in the production of fuel.	3042
xsd:boolean	RenewableBiomassIndicator	Yes	An indicator whether the feedstock used qualifies as renewable biomass.	If RINs are generated (RIN Quantity greater than or equal to "1"), then at least one of the specified feedstocks must be indicated as "Renewable Biomass."	3030
xsd:decimal	FeedstockVolume	Yes	Total volume of feedstock used in the production of the fuel.		
xsd:string	FeedstockMeasure	Yes	The unit of measure for the feedstock volume.		

Figure 6-12: Data Elements for *CoProductDetail*

Data Element				QA Check	
Data Type	**Name**	**Required**	**Description**	**Description**	**Number**
xsd:string	CoProductCode	Yes	A code that identifies the co-product created from the renewable fuel process.	The co-product code reported in the production of fuel must be a valid code that is recognized by EPA.	3025

6.5.3 Separating RINs

To identify that RINs have been separated from the fuel, you will report this information using the ***SeparateTransactionDetail*** complex type*.*

How these data elements are processed: Separating RINs requires that you identify the number of RINs being separated and the volume of fuel from which the RINs are being separated. The preferred method to separate a quantity of RINs from any fuel is to specify the RINQuantity, batch volume, fuel code, and the year in which the fuel was produced. By default, the EMTS will find the oldest batch of assigned fuel in your inventory and separate the RINs. This ensures that you are separating, on a first-in, first-out (FIFO) basis, the earliest RINs that you own as defined by production date.

If you as a party have been delegated to perform the separate transaction by a small blender (a blender that blends less than 125,000 gallons per year), then you must report both the name and public identifier of the small blender in the ***BlenderOrganizationIdentifier*** and ***BlenderOrganizationName*** data elements.

If you need to provide supporting information regarding the separation, such as document identifiers or notes, use the ***SeparateSupportingDocumentDetail*** complex type*.* Use this complex type to create user-defined information by providing the type of document that contains the information and an identification number or code for the document. For example, if you wish to report an invoice number, place "invoice" as the text for ***SupportingDocumentText*** and the invoice number for ***SupportingDocumentNumber.***

If you wish to identify a specific batch of fuel to be separated, you can do so by using the ***SeparateOriginatingSourceDetail*** complex type to identify the facility and batch number. The EMTS will try to match the specific batch in your RIN Holding Account; however, if you no longer own these RINs or the batch cannot be found, the transaction will fail.

Figure 6-13 shows the data elements for ***SeparateTransactionDetail.***

Figure 6-13: Data Elements for *SeparateTransactionDetail*

Data Element				QA Check	
Data Type	**Name**	**Required**	**Description**	**Description**	**Number**
xsd:positiveInteger	RINQuantity	Yes	The total number of RINs specified in the transaction.	The organization must have enough available RINs in its holding account to complete the transaction.	5900
				For assigned RINs that are being separated from a volume of fuel, the ratio of RINs to fuel must be greater than "0" but less than "2.5."	5032
xsd:decimal	BatchVolume	Yes	The volume of renewable fuel for which RINs are being separated.	For assigned RINs that are being separated from a volume of fuel, the ratio of RINs to fuel must be greater than "0" but less than "2.5."	5032
xsd:string	FuelCode	Yes	The renewable fuel code for the RINs being separated as defined in Part M Section 80.1426.	The fuel code reported must be a valid code that is recognized by EPA.	5024

(cont.)

Figure 6-13: Data Elements for *SeparateTransactionDetail* (cont.)

Data Element				QA Check	
Data Type	**Name**	**Required**	**Description**	**Description**	**Number**
xsd:string	SeparateReasonCode	Yes	This code identifies the reason for a separate transaction.	The allowable reason code reported by an organization when separating RINS are dependent on their business activities as registered with EPA.	5035
xsd:gYear	RINYear	Yes	The RIN year is the year in which the fuel is produced.	The RIN year cannot be in the future.	5019
xsd:string	BlenderOrganizationIdentifier	No	The public identification number for the blending organization as designated by OTAQReg.	The blender organization name and blender organization identifier must be specified when identifying "Upstream Delegation for Blending" as the separation reason.	5033
				If a blender organization is provided, then it must be registered with EPA and be active.	5034

(cont.)

Figure 6-13: Data Elements for *SeparateTransactionDetail* (cont.)

Data Element				QA Check	
Data Type	**Name**	**Required**	**Description**	**Description**	**Number**
				If a Blender organization is specified then the organization must have a business activity of small blender.	5036
xsd:string	BlenderOrganizationName	No	Name of the organization that is blending the fuel.	The blender organization name and blender organization identifier must be specified when identifying "Upstream Delegation for Blending" as the separation reason.	5033
xsd:string	TransactionDetailCommentText	No	Comment provided by the user on the transaction.		
complex	***SeparateSupportingDocumentDetail***	No	Information for the industry user to create user defined data to report supporting document identifiers.		

(cont.)

Figure 6-13: Data Elements for *SeparateTransactionDetail* (cont.)

Data Element				QA Check	
Data Type	**Name**	**Required**	**Description**	**Description**	**Number**
complex	***SeparateOriginatingSourceDetail***	No	Information on the original renewable fuel production.		

6.5.4 Selling RINs

The complex type ***SellTransactionDetail*** is used to report RINs that are being traded to another organization as a result of a sell transaction. This transaction type requires basic information regarding the quantity of RINs, fuel code, and year in which the fuel was produced.

How these data elements are processed: Selling RINs requires that you identify the number of RINs being sold and the trading partner (or buyer) to whom you are selling the RINs. The preferred method to sell a quantity of RINs is to specify the RINQuantity, batch volume (if the RINs are assigned), fuel code, assignment code, and the year in which the fuel was produced. The EMTS will find the oldest batch of fuel you acquired that matches these characteristics in your inventory. This ensures that you are selling one or more batches, on a first-in, first-out (FIFO) basis, the earliest RINs that you own as defined by production date. You must provide a reason for why you are selling the RINs. In addition, you must provide either the agreed upon price per RIN or the price per gallon established between you and the buyer.

If you need to provide supporting information regarding the sell of RINs, such as document identifiers or notes, use the ***SellSupportingDocumentDetail*** complex type. Use this complex type to create user-defined information by providing the type of document that contains the information and an identification number or code for the document. For example, if you wish to report an invoice number, place "invoice" as the text for ***SupportingDocumentText*** and the invoice number for ***SupportingDocumentNumber.***

If you wish to identify a specific batch of fuel to be sold, you can do so by using the ***SellOriginatingSourceDetail*** complex type to identify the facility and batch number. The EMTS will try to match the specific batch in your RIN Holding Account; however, if you no longer own these RINs or the batch cannot be found, the transaction will fail.

Figure 6-14 shows the data elements for ***SellTransactionDetail.***

Figure 6-14: Data Elements for *SellTransactionDetail*

Data Element				QA Checks	
Data Type	**Name**	**Required**	**Description**	**Description**	**Number**
xsd:string	TransactionPartnerOrganization Identifier	Yes	This identifies the buyer organization for a sell transaction or the selling organization for the buy transaction using either the OrganizationIdentifier designated by OTAQReg.	The transaction partner organization must be registered at EPA and be active.	6018
xsd:string	TransactionPartnerOrganization Name	Yes	The name of the organization trading partner.		
xsd:positive Integer	RINQuantity	Yes	The total number of RINs specified in the transaction.	The organization must have enough available RINs in its holding account to complete the transaction.	6900
xsd:decimal	BatchVolume	No	The volume of renewable fuel sold in the transaction.	If the assignment code is "1," then batch volume must be specified.	6011
xsd:string	FuelCode	Yes	The renewable fuel code for the RINs being sold as defined in 40 CFR Section 80.1426.	The fuel code reported must be a valid code that is recognized by EPA.	6024

(cont.)

Figure 6-14: Data Elements for *SellTransactionDetail* (cont.)

Data Element				QA Checks	
Data Type	**Name**	**Required**	**Description**	**Description**	**Number**
xsd:string	AssignmentCode	Yes	A code that indicates whether the RIN is transacting as an assigned RIN or a separated RIN.	If the assignment code is "1," then batch volume must be specified.	6011
xsd:gYear	RINYear	Yes	The RIN year is the year in which the fuel is produced.	The RIN year may not be in the future.	6019
xsd:string	SellReasonCode	Yes	This code identifies the reason for a sell transaction.	The allowable reason code reported by an organization when selling RINS are dependent on their business activities as registered with EPA.	6035
xsd:decimal	RINPriceAmount	No	Price paid per RIN.	The RIN price or gallon price must be provided.	6036
				The RIN Price Amount or Gallon Price Amount must be reported to two decimal places.	6039

(cont.)

Figure 6-14: Data Elements for *SellTransactionDetail* (cont.)

Data Element				QA Checks	
Data Type	**Name**	**Required**	**Description**	**Description**	**Number**
xsd:decimal	GallonPriceAmount	No	Price paid per gallon of renewable fuel.	The RIN price or gallon price must be provided.	6036
				The RIN Price Amount or Gallon Price Amount must be reported to two decimal places.	6039
xsd:date	TransactionDate	Yes	The date of the RIN transaction.	The transaction date specified may not occur in the future.	6020
xsd:string	PTDNumber	No	The PTD number associated with the transaction.		
xsd:string	TransactionDetailCommentText	No	Comment provided by the user on the transaction.	If reason "Standard Trade" or "Cancel" is not provided for a sell transaction then a comment must be provided.	6037
complex	***SellSupportingDocumentDetail***	No	Information for the industry user to create user defined data to report supporting document identifiers.		
complex	***SellOriginatingSourceDetail***	No	Information on the original renewable fuel production.		

6.5.5 Buying RINs

The complex type ***BuyTransactionDetail*** is used to acquire RINs that are being traded from another organization as a result of a sell transaction. This transaction type requires basic information regarding the quantity of RINs, fuel code, and year in which the fuel was produced.

How these data elements are processed: Buying RINs requires that you identify the number of RINs being sold and the trading partner (or seller) you are buying RINs from.

One method is to wait for a sell transaction to be sent to you with the specifications for the quantity of RINs, batch volume, fuel code, assignment code, and the year in which the fuel was produced. You should use these exact specifications when responding to the sell transaction. The EMTS will match these specifications to any existing sell transactions that are pending with your trading partner and complete the trade. You may also initiate a buy transaction prior to the seller sending you a notification. If your buy transaction is received by the EMTS before the seller has initiated a sell transaction, your request will be queued until a matching sell has been submitted to the EMTS by the seller. If no sell transaction is forthcoming or the sell transaction does not match your buy transaction, both trades will be cancelled. If the seller does not respond to your buy request within seven business days, the trade will expire. In both cases, a record of this incomplete submission is recorded in the EMTS.

You must provide a reason for why you are buying RINs. In addition, you must provide either the agreed upon price per RIN or the price per gallon established between you and the seller.

If you need to provide supporting information regarding the trade, such as document identifiers or notes, use the ***BuySupportingDocumentDetail*** complex type. Use this complex type to create user-defined information by providing the type of document that contains the information and an identification number or code for the document. For example, if you wish to report an invoice number, place "invoice" as the text for ***SupportingDocumentText*** and the invoice number for ***SupportingDocumentNumber.***

If you wish to identify a specific batch of fuel to be sold, you can do so by using the ***BuyOriginatingSourceDetail*** complex type to identify the facility and batch number. The EMTS will try to match the specific batch in the seller's RIN Holding Account; however, if the batch cannot be found, the transaction will fail.

Figure 6-15 shows the data elements for ***BuyTransactionDetail.***

Figure 6-15: Data Elements for *BuyTransactionDetail*

Data Element				QA Checks	
Data Type	**Name**	**Required**	**Description**	**Description**	**Number**
xsd:string	TransactionPartnerOrganization Identifier	Yes	This identifies the buyer organization for a sell transaction or the selling organization for the buy transaction using either the OrganizationIdentifier designated by OTAQReg.	The transaction partner organization must be registered at EPA and be active.	4018
xsd:string	TransactionPartnerOrganization Name	Yes	The name of the organization trading partner.		
xsd:positive Integer	RINQuantity	Yes	The total number of RINs specified in the transaction.		
xsd:decimal	BatchVolume	No	The volume of renewable fuel sold in the transaction.	If the assignment code is "1," then batch volume must be specified.	4011
xsd:string	FuelCode	Yes	The renewable fuel code for the RINs being sold as defined in 40 CFR Section 80.1426.	The fuel code reported must be a valid code that is recognized by EPA.	4024
xsd:string	AssignmentCode	Yes	A code that indicates whether the RIN is transacting as an assigned RIN or a separated RIN.	If assignment code is "1," then the batch volume must be specified.	4011

(cont.)

Figure 6-15: Data Elements for *BuyTransactionDetail* (cont.)

Data Element				QA Checks	
Data Type	**Name**	**Required**	**Description**	**Description**	**Number**
xsd:gYear	RINYear	Yes	The RIN year is the year in which the fuel is produced.	The RIN year may not be in the future.	4019
xsd:string	BuyReasonCode	Yes	This code identifies the reason for a buy transaction.	The allowable reason code reported by an organization when buying RINS are dependent on their business activities as registered with EPA.	4035
xsd:decimal	RINPriceAmount	No	Price paid per RIN.	The RIN price or gallon price must be provided.	4036
				The RIN Price Amount or Gallon Price Amount must be reported to two decimal places.	4039

(cont.)

Figure 6-15: Data Elements for *BuyTransactionDetail* (cont.)

Data Element				QA Checks	
Data Type	**Name**	**Required**	**Description**	**Description**	**Number**
xsd:decimal	GallonPriceAmount	No	Price paid per gallon of renewable fuel.	The RIN price or gallon price must be provided.	4036
				The RIN Price Amount or Gallon Price Amount must be reported to two decimal places.	4039
xsd:date	TransactionDate	Yes	The date of the RIN transaction.	The transaction date specified may not occur in the future.	4020
xsd:string	PTDNumber	No	The PTD number associated with the transaction.		
xsd:string	TransactionDetailCommentText	No	Comment provided by the user on the transaction.	If reason "Standard Trade" or "Cancel" is not provided for a buy transaction then a comment must be provided.	4037
complex	***BuySupportingDocumentDetail***	No	Information for the industry user to create user defined data to report supporting document identifiers.		
complex	***BuyOriginatingSourceDetail***	No	Information on the original renewable fuel production.		

6.5.6 Retiring RINs

To identify RINs that you wish to retire, in order to meet your RVO, or to record a batch of RINs that are no longer valid due to spillage or other issue, report this information using the ***RetireTransactionDetail*** complex type.

How these data elements are processed: Retiring RINs requires that you identify the number of RINs being retired, the fuel code, assignment code, year in with the fuel was produced, and the compliance year which the RINs are being retired. The EMTS will find the oldest batch of fuel in your inventory and transfer ownership of the RINs to an EPA RIN Holding Account. This ensures that you are retiring, on a first-in, first-out (FIFO) basis, the earliest RINs that you own as defined by production date. In addition to the RINs that you identify to retire, you must provide a reason for retirement.

If you are retiring RINs to meet an obligation, you must also provide the level of compliance being met. You may retire RINs to meet an organization's overall obligation, or a specific facility level obligation (refiners only). If you are retiring RINs for a specific facility site, report the public facility identifier for the site.

If you are retiring RINs for non-obligation purposes, do not report the compliance year or compliance level. In both cases, provide a reason for the retirement of the RINs.

If you need to provide supporting information regarding the retire transaction, such as document identifiers or notes, use the ***RetireSupportingDocumentDetail*** complex type. Use this complex type to create user-defined information by providing the type of document that contains the information and an identification number or code for the document. For example, if you wish to report an invoice number, place "invoice" as the text for ***SupportingDocumentText*** and the invoice number for ***SupportingDocumentNumber.***

If you wish to identify a specific batch of fuel to be retired (particularly for spillage or spoilage of fuel batches), you can do so by using the ***RetireOriginatingSourceDetail*** complex type to identify the facility and batch number. The EMTS will try to match the specific batch in your RIN Holding Account; however, if you no longer own these RINs, or the batch cannot be found, the transaction will fail.

Figure 6-16 shows the data elements for ***RetireTransactionDetail.***

Figure 6-16: Data Elements for *RetireTransactionDetail*

Data Elements				QA Checks	
Data Type	**Name**	**Required**	**Description**	**Description**	**Number**
xsd:positive Integer	RINQuantity	Yes	The total number of RINs specified in the transaction.	If Batch Volume is provided, then the ratio of RINs to fuel must be greater than "0" but less than "2.5."	7032
				The organization must have enough available RINs in its holding account to complete the transaction.	7900
xsd:decimal	BatchVolume	No	The volume of renewable fuel, if any, associated with the RINs that are being retired.		
xsd:string	FuelCode	Yes	The renewable fuel code for the RINs being retired as defined in 40 CFR Section 80.1426.	The fuel code reported must be a valid code that is recognized by EPA.	7024
xsd:string	AssignmentCode	Yes	A code that indicates whether the RIN is transacting as an assigned RIN or a separated RIN.	If the assignment is "1," then batch volume must be specified.	7011
xsd:gYear	RINYear	Yes	The RIN year is the year in which the fuel is produced.		

(cont.)

Figure 6-16: Data Elements for *RetireTransactionDetail* (cont.)

Data Elements				QA Checks	
Data Type	**Name**	**Required**	**Description**	**Description**	**Number**
xsd:string	RetireReasonCode	Yes	This code identifies the reason for a retire transaction.	The allowable reason code reported by an organization when retiring RINs are dependent on their business activities registered with EPA.	7035
				The reason code reported must be a valid code that is recognized by EPA.	7039
xsd:gYear	ComplianceYear	No	The compliance year for which the transaction is applied.	Compliance year is required if the reason code "Demonstrate Annual Compliance" is reported.	7016
				If the submittal date is March 1 or later, then the compliance year must be the current year.[1]	7017

(cont.)

Figure 6-16: Data Elements for *RetireTransactionDetail* (cont.)

Data Elements				QA Checks	
Data Type	**Name**	**Required**	**Description**	**Description**	**Number**
				If the submittal date is before March 1, then the compliance year must be either the current year or the previous year.	7018
xsd:string	ComplianceLevelCode	No	The compliance basis for the submitting organization: Facility, Aggregated Importer, Aggregated Refiner, Aggregated Exporter, Non-Obligated Party.	If the compliance level code reported is "Facility Level," the facility identifier must be reported.	7021
				The compliance level code reported must be a valid code that is recognized by EPA.	7042
				The allowable compliance level code reported by an organization when retiring RINs is dependent on their business activities registered with EPA.	7034

(cont.)

Figure 6-16: Data Elements for *RetireTransactionDetail* (cont.)

Data Elements				QA Checks	
Data Type	**Name**	**Required**	**Description**	**Description**	**Number**
xsd:string	ComplianceFacilityIdentifier	No	The facility identifier, as registered in OTAQReg, for the facility that has a compliance obligation.	If the compliance level code reported is "Facility Level," the facility identifier must be reported.	7021
				If a facility identifier is reported for compliance, then the compliance level code must be "Facility Level."	7022
				If a compliance facility identifier is reported, then the facility identifier must be registered at EPA and be active.	7023
xsd:string	TransactionDetailComment	No	Comment provided by the user on the transaction.		

(cont.)

Figure 6-16: Data Elements for *RetireTransactionDetail* (cont.)

Data Elements				QA Checks	
Data Type	**Name**	**Required**	**Description**	**Description**	**Number**
complex	***RetireSupportingDocumentDetail***	No	Information for the industry user to create user defined data to report supporting document identifiers.		
complex	***RetireOriginatingSourceDetail***	No	Information on the original renewable fuel production.		

[1] During the months of January and February, you may retire RINs for compliance for either the current or previous year.

6.6 What Is the FIFO Process for Finding RINs?

When you identify a quantity of RINs that you wish to sell, separate, or retire, the EMTS will find the closest match of available RINs in your holding account for the specified fuel, RIN year, and assignment code. From these RINs, the EMTS will select the oldest batch of RINs based on the fuel production date. If the number of RINs that you have specified in your transaction is smaller than the oldest batch the EMTS finds in your account, then that batch will be split into two smaller batches, one of which will be used for the transaction. The batch not used in the transaction will remain in your RIN Holding Account with all the characteristics of the original batch. As a consequence of this action, the number of RIN batches in your account may grow as larger batches split into several smaller batches.

Alternatively, if the quantity requested is larger than one or more of the batches in your account, the EMTS will sum as many of the oldest batches together to reach the quantity desired.

If you specify an exact batch of RINs by reporting the originating source of the fuel (organization identifier, facility identifier, and batch number), then the EMTS will not use the first-in, first-out method, but look for the specific batch.

6.7 How Do I Cancel a Buy or Sell Transaction?

EMTS has the capability to allow parties to cancel initiated buy and sell transactions if any party deems it appropriate to cancel the transaction(s). A user may cancel transactions they have initiated either through the EMTS website, or they can submit XML files through the node to cancel the transactions. Cancel

transactions must be identical (with the exception of the reason code) to the original transaction they are intended to cancel. A cancel transaction must be submitted as a single transaction in a submission file. If a cancel transaction is submitted in an XML file with other transactions (including other cancel transactions), then the entire submission will fail.

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Section 7: How Can I Access Information about My Organization's RINs?

The EMTS provides you with a variety of documents to access information regarding your organization's RIN holdings, and current and past transactions. These documents may be downloaded from the "Reports" page of the EMTS website. Some data, such as your RIN holdings, can also be exported from the "RIN Holdings" page.

Who should read Section 7:

Section 7 applies to all users responsible for preparing data for EPA reports.

What you will find in Section 7:

This section includes information on how to access the information you need from the EMTS and what information is available through standard reports.

7.1 What Documents Does the EMTS Provide?

For each organization with which you are affiliated, the EMTS provides downloadable data to aid in recordkeeping and reporting. Documents should be used to supplement your organization's internal records and to check that the EMTS has properly recorded your transactions. (Note: EMTS does not take the place of the recordkeeping provisions as specified in 40 CFR 80.1454; those recordkeeping requirements are in addition to reporting through the EMTS.) "Quick Search" options on any report allow you to filter or constrain data to meet your needs. The following is a list and short description of all documents available on the EMTS website.

Transaction History. Summary information on all transactions in which your organization initiated a transaction or is the recipient of a trade. This document includes both transactions sent by XML file submission or through online transactions on the EMTS website.

Pending Trades. A list of all pending buy and sell transactions that your organization has either initiated or received.

Confirmed Trades. A list of all of your organization's trades that have been completed in the last ten days. This document includes trades that were initiated by your organization and trades that were initiated by your trading partner.

Expired Trades. A list of an organization's pending trades that have expired in the previous ten days, as well as all pending trades that will expire within the next 24 hours.

QA Feedback Report. A detailed list of all quality assurance check failures for a single submission file. This document is available for download from the View Node Submissions page.

RIN Holdings. This document lists the current aggregate total RIN holdings for an organization grouped by fuel code, assignment, and RIN year.

Information about the number of RINs in your organization's account can be found on your "RIN Holding" page. This page is accessible from the EMTS homepage. RINs are grouped by fuel code, RIN year, and assignment code. By selecting a group of RINs you may navigate to more detailed information about those RINs.

7.2 How Do I Certify My Transactions?

All transactions processed by the EMTS must be certified by your organization on a quarterly basis. The EMTS will send you a notification at the end of a quarter. A quarterly report of your RIN holdings will be generated for you and is available for download on the EMTS website. A recommended practice is to periodically review your current RIN holdings on the EMTS website, checking the total quantity of RINs against your own transaction records. You may download data from this page at any time.

Submit Certified Transactions:
Certified reports of all transactions must be certified and submitted to EPA on a quarterly basis through the OTAQ DC Fuels Submission (CDX: DCFuels).

It is your organization's responsibility to verify that all transactions represented in the quarterly report are true and accurate. After resolving any discrepancies between the downloaded report from EMTS and your organization's internal records, you must sign and submit the report to EPA through the OTAQ DC Fuels Submission program (CDX: DCFuels). Reports are due May 31, August 31, November 30, and February 28.

Section 8: How Do I Contact EMTS Support?

The EMTS will provide you with several avenues for obtaining support for all of your EMTS and RFS questions. Access to the "Help" page is available via a link on every page. From the "Help" page you can find EMTS Support Line and EPA Fuels Programs Support Line contact information. In addition, the EMTS website (*http://www.epa.gov/otaq/renewablefuels/epamts.htm*) will contain downloads, help, FAQs, tutorials, and other referenced documents of interest.

Who should read Section 8:
All EMTS users.

What you will find in Section 8:
Directions on how to obtain help and information regarding changes in the EMTS.

8.1 How Does EPA Communicate Changes to Me?

EPA will keep you informed on the latest developments to the EMTS and the RFS program. Upon entering the EMTS you can find current notices and information in "Announcements," located to the right of the homepage. Here, EPA will post the latest EMTS news and reminders of upcoming deadlines. Each announcement can be viewed in detail by clicking on it to retrieve the full text. You may also receive news regarding the EMTS and RFS by signing up for Enviroflash.

Figure 8-1 shows the Announcements feature.

Figure 8-1: Announcements

Once you are registered with the OTAQ Fuels Programs Registration (OTAQReg), notification of major changes to the EMTS will be emailed to you 30 days before implementation. When changes necessitate updates to the conversion tool or the EMTS schema, you will be notified of this and the newest version of the tool and the schema will be made available for download on the EMTS website.

8.2 Where Do I Go If I Have a Question about the EMTS?

Answers to most of your EMTS questions may be found on the EMTS website or in the transaction instructions. Transaction instructions and similar informational documents are available for download on the EMTS website.

If you need additional information that is not provided in the FAQs or transaction instructions you also have the option of emailing the EMTS Support Line. In the header of every page of the EMTS you will find a link to "Help" where you will find the email and phone number of the EMTS Support Line.

8.3 Where Do I Go If I Have a Question about the Renewable Fuel Standard?

For RFS questions, just as with EMTS questions, you may always email EPA Fuels Programs Support or the EMTS Support Line. Emails may be sent to EPAFuelsPrograms@epa.gov. If you require immediate assistance, you may call 202-343-9755.

The Renewable Fuel Standard is available to view and download from the U.S. Federal Register website. Further information regarding the RFS rule can be obtained from the EPA website at *http://www.epa.gov/OMS/renewablefuels/*.

8.4 Who Should I Contact If I Need Help Resolving a Problem in the EMTS?

If you are experiencing a technical problem with the EMTS, please first view the FAQ page which provides solutions to common issues users encounter. If you cannot find the appropriate information by browsing the EMTS FAQs, or if you have questions regarding the data that appears in your RIN Holding Account, you may wish to contact the support lines for help. You will find at the top of each page of the EMTS a link for "Help" where you will find contact information for the technical support staff. Emails may be sent to emts-testing@pqa.com. If you require immediate assistance and wish to speak to a technical representative to help you troubleshoot the issue, you may call the technical support help line at 1-800-385-6164.

Appendix A: Referenced Documents

- Attest Engagements
  http://www.epa.gov/otaq/regs/fuels/attestengage.htm

- OTAQ Fuel Registration Instructions
  http://www.epa.gov/otaq/regs/fuels/fuelsregistration.htm

- OTAQ Fuel and Fuels Additives Registration (FFARs)
  http://www.epa.gov/otaq/regs/fuels/ffarsfrms.htm

- Quarterly and Annual Report Forms
  http://www.epa.gov/otaq/regs/fuels/rfsforms.htm

- Central Data Exchange
  http://www.cdx.epa.gov/epa_home.asp

- OTAQ Fuels Registration Process
  http://www.epa.gov/otaq/regs/fuels/fuelsregistration.htm
  http://www.epa.gov/OMS/regs/fuels/420b09011.pdf

- User Manual for CDX/OTAQ Fuels Reporting System -- Phase II
  http://www.epa.gov/otaq/regs/fuels/420b07012.pdf

- EPA Exchange Network
  http://www.exchangenetwork.net

- EPA Data Registry Services
  http://iaspub.epa.gov/sor_internet/registry/datastds/findadatastandard/epaapproved/

- EMTS Website
  http://www.epa.gov/otaq/renewablefuels/epamts.htm

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Appendix B: Glossary

EMTS Transaction Instructions Glossary

Title	Definition
Agent	An agent acts on behalf of a company or facility. An agent has one user account and can be associated with one or more companies or facilities.
Assigned RIN	A RIN attached to a gallon of renewable fuel that can only be transferred along with a volume of fuel.
Asynchronous	Communication between two parties or systems in which data can be transmitted intermittently rather than in a steady stream.
Audit Trail	The set of data that has been stored in the EMTS providing historical details about specific actions.
Authentication	The process to confirm the identity of the user.
Authorization	The process to verify a user's permission to perform some functionality.
Batch	A volume of renewable fuel.
Batch RIN	A RIN number that represents a specific batch of renewable fuel produced or imported.
Blender	Party who blends renewable fuel into gasoline or diesel fuel at or below the levels that allow the separation of RINs.
Business Activities	The characteristics of a company that determine the type of transactions it can do in the EMTS.
CDX Central Data Exchange (CDX)	Central Data Exchange. EPA's gateway for receiving environmental information through the Web. Serves as the EPA node on the Exchange Network.
Check	A discrete unit of logic used to implement a business rule, or other validation of data.
Company	A business entity with one or more users in the EMTS.
Data Exchange Standard	Specification identifying content and format of data that will be exchanged between multiple parties or systems.
Dataflow	Within CDX, the identification of how data moves from one specified location to another specified location.
Deficit Carryover	Deficit of RINs from a previous year RVO that is added to a current year RVO as specified in 40 CFR §80.1407.

(cont.)

EMTS Reporting Instructions Glossary (cont.)

Title	Definition
Delegation (Upward)	The act by which a party that would normally be responsible for RIN management transfers this responsibility to another party. For instance, a blender may delegate this responsibility to a renewable fuel producer. There is a limit of 125,000 gallons per year that a company can delegate upwards as per 40 CFR §80.1440.
Delegation (User)	The act by which a responsible corporate officer of a regulated party authorizes another party to perform transactions on the regulated party's behalf.
EPA Moderated Transaction System (EMTS)	EPA's centralized messaging, screening, and transaction system that moderates RIN transactions.
Facility	An actual or virtual location where renewable fuel is produced or imported.
Fuel Category	The code that identifies the type of fuel for which an organization is generating RINs.
Fuel (D Code)	The code that identifies the category of renewable fuel. There are five different fuel types: Cellulosic Biofuel D = 3, Biomass-based Diesel D = 4, Advanced Biofuel D = 5, Renewable Fuel D = 6 and Cellulosic Diesel D = 7.
Gallon-RIN	A RIN that represents one gallon of renewable fuel.
Generate Transaction	A transaction that creates a batch RIN. RINs may only be generated when a batch of renewable fuel is produced or imported.
Importer	An entity that imports transportation fuel.
Industry User	An EMTS user represents a regulated party.
Invalid RIN	A RIN described in 40 CFR §80.1431(a).
Logging	Functionality of a software system that stores information on the system for auditing and tracking.
Message	A communication between a registered party and the EMTS using EPA's exchange network. It includes all the data needed to process a transaction.
Node	A web server that facilitates the interface between database systems and the Exchange Network. It is a registered party's "point of presence" on the Exchange Network. Occasionally referred to as "network node" or "Exchange Network Node."

(cont.)

EMTS Reporting Instructions Glossary (cont.)

Title	Definition
Node Client	The software program that provides integration with the Exchange Network Directory Service (ENDS). Within the node client, the user selects a dataflow, enters the dataflow, enters authentication information, and then uses the Exchange Network and CDX services.
Notification	The communication that is returned by the EMTS to the sender or receiver of a transaction. Notifications may occur before the message is evaluated in any way other than format checks.
Obligated Party	A party which is subject to a RVO(s) and produces gasoline or diesel, or imports gasoline or diesel as per 40 CFR §80.1406.
Permissions	The ability to perform certain actions within the EMTS.
Refiner	A company who refines gasoline or diesel fuel.
Registered Party	Any user of the EMTS who has gained access through the registration process with EPA.
RFS Regulated Party	Any party that takes ownership of a RIN.
Renewable Fuel	Transportation, heating oil, or jet fuel that is used to replace or reduce the quantity of fossil fuel present in a fuel mixture used to operate a motor vehicle, and which meets the definition in 40 CFR §80.1401.
Renewable Fuel Exporter	A party that exports renewable fuel and therefore has an RVO as per 40 CFR §80.1430
Renewable Fuel Producer	A party that produces renewable fuel.
Renewable Fuel Standard (RFS)	The rule which sets the percentage of fuel produced which must be renewable, for parties that produce gasoline or diesel, or import gasoline or diesel.
Renewable Identification Number (RIN)	An identifier that uniquely identifies a gallon of renewable fuel, generated by a renewable fuel producer or importer. RINs are assigned to batches of renewable fuel and are transferred to other regulated parties.
Renewable Volume Obligation (RVO)	The volume of renewable fuel, represented by RINs, that an obligated party must obtain to be in compliance with the RFS.
Retire Transaction	A transaction where a regulated party removes a RIN from trading in the EMTS. Reasons for retiring RINs can be found in the Appendix D of the EMTS transaction instructions.

(cont.)

EMTS Reporting Instructions Glossary (cont.)

Title	Definition
RIN Account	An account in the EMTS used to store RINs.
RIN Assignment Code	A code that identifies whether or not a RIN is assigned to a gallon of renewable fuel.
RIN Block	A group of sequential RINs identified by a start number and end number. Larger RIN blocks can be split into smaller blocks, each block being contiguous and sequential. RIN blocks cannot contain duplicate RINs.
RIN Credit	Credits that are transacted between renewable fuel producers to refiners, importers exporters, and other obligated parties. RIN credits are identified by unique identification numbers (RINs).
RIN Generation	See Generate Transaction.
RIN Owner	An owner of either assigned and/or separated RINs.
Role	A set of permissions for functions that a person is allowed to perform. A role is assigned to a user (person).
Separate Transaction	A transaction that terminates the assignment of the RIN to a volume of renewable fuel. The resulting RINs are thereafter "separated."
Separated RIN	A RIN which has been separated from a gallon of renewable fuel. RINs may only be separated if a party has met the requirements in §80.1429. A separated RIN can be transferred without an associated volume of fuel.
Small Refiner	A refiner that processes <75,000 bpd crude, or who has <1500 employees and processes <155,000 bpd crude.
Splash Blending	The act of transferring and blending fuel simultaneously. Either party involved in the transfer can separate the RINs if the requirements in §80.1429 are met. However, both parties must agree on who will separate the RINs.
Stage	The stage of a transaction defines where in the process of data exchange a particular message or evaluation occurs. A stage ends and a new stage begins when a message has been successfully transmitted, queued, checked, processed, routed, and finalized.
Submission	Sending an XML file to the EMTS, for the purposes of completing a transaction. "Sending" can potentially occur via a node, a node client, or a webform that takes inputted data and creates an XML file.
Submission Date	The date an XML file is sent to the EMTS, for the purpose of completing a transaction.

(cont.)

EMTS Reporting Instructions Glossary (cont.)

Title	Definition
Trade	A two-part transaction, consisting of a sell transaction initiated by one party and a buy transaction initiated by another party.
Transaction	A transaction describes an operation on a batch RIN or gallon-RIN. A transaction comprises a series of actions related to a specific process. Each transaction is processed in stages and results in the return of a message to the sending party identifying subsequent data on the transaction.
Transaction Date	The date on which a transaction occurs outside of the EMTS. This is the date recorded on the Product Transfer Document (PTD).
Transaction Instructions	A document made available to EMTS users that identifies procedures needed to ensure adherence with the data exchange standard.
Transaction Log	The history of all of transactions which have been processed by the EMTS.
Transfer	The process of deducting RINs from one RIN account and adding the same RINs to a different RIN account.
User	A person who interacts with the EMTS. A person authorized to use the EMTS.
XML	A markup language for documents containing structured information. The XML specifications define a standard way to add markup to documents. Its primary purpose is to facilitate the sharing of structured data across different information systems, particularly over the internet.
XML Document	An XML document is a file containing data organized into a structured document. An XML document is considered "well-formed" if it conforms to all XML syntax rules. An XML document is considered valid if it conforms to all the semantic rules defined by an associated XML schema. An XML document cannot be processed if it is not well-formed. XML documents have the extension .xml.
XML Schema	An XML schema describes the structure of an XML document. An XML schema defines the set of rules to which the XML document must conform in order to be considered "valid" according to the schema. An instance of an XML schema is an XML document and is a file with the extension .xsd.

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Appendix C: Reporting Codes

When reporting transactions in an XML batch file submission use the code values found in this section. Reporting codes not listed in this appendix will result in a critical error and your file will not be processed.

Figure C-1: Assignment Code

Code	Description
1	Assigned to Fuel
2	Separated

Figure C-2: Buy/Sell Reason Code

Code	Description
10	Standard Trade
30	Incorrect Trading Partner
40	Remedial Action Specified by EPA
50	Deny Trade
60	Cancel

Figure C-3: Compliance Level Code

Code	Description
10	Aggregated Importer Compliance (AGIMP)
20	Aggregated Refiner Compliance (AGREF)
30	Exporter Compliance (EXPRT)
40	Non-obligated Party (NOTOP)
50	Facility by Facility Level Compliance

Figure C-4: Co-product Code

Code	Description
10	Wet Distillers Grains
20	Dry Distillers Grains

Figure C-5: Feedstock Code

Code	Description
10	Starch -- Corn
70	Cellulosic Biomass – Agricultural Residues
80	Cellulosic Biomass – Switchgrass
90	Cellulosic Biomass – Miscanthus
120	Sugarcane
140	Cellulosic Biomass – Separated Yard Wastes
160	Waste Oils/Fats/Grease
200	Non-food Grade Corn Oil
210	Soybean Oil
220	Cellulosic Biomass – Separated Municipal Solid Waste
230	Algal Oil
240	Oil from Annual Covercrops
250	Cellulosic Biomass – Annual Cover Crops
260	Cellulosic Biomass – Forest Product Residues
270	Cellulosic Biomass – Forest Thinnings
280	Cellulosic Biomass – Separated Food Wastes
290	Cellulosic Biomass – Slash
300	Starch – Agricultural Residues
310	Starch – Annual Covercrops
320	Manure Digesters

(cont.)

Figure C-5: Feedstock Code (cont.)

Code	Description
330	Landfills
340	Sewage and Waste Treatment Plants
350	Non-cellulosic Portions of Separated Food Wastes
888	Feedstock (Not Listed) – Used at a Grandfathered Facility

Figure C-6: Fuel Code

Code	Description
3	Cellulosic Biofuel
4	Biomass-based Diesel
5	Advanced Biofuel
6	Renewable Fuel
7	Cellulosic Diesel

Figure C-7: Fuel Category Code

Code	Description
10	Ethanol
20	Biodiesel
30	Cellulosic Diesel
40	Non-ester Renewable Diesel
60	Cellulosic Ethanol
70	Butanol
80	Biogas
90	Cellulosic Jet Fuel
100	Cellulosic Heating Oil
110	Cellulosic Naphtha

(cont.)

Figure C-7: Fuel Category Code (cont.)

Code	Description
130	Renewable Naphtha
140	Renewable Jet Fuel
150	Renewable Heating Oil

Figure C-8: Process Code

Code	Description
10	Grandfathered (Dry Mill, Natural Gas Fired)
20	Dry Mill, Natural Gas Fired (CHP, 65% or less of DGS dried annually)
60	Grandfathered (Dry Mill, Coal Fired)
110	Grandfathered (Dry Mill, Biomass Fired)
120	Grandfathered (Wet Mill, Natural Gas Fired)
130	Grandfathered (Wet Mill, Coal Fired)
140	Grandfathered (Wet Mill, Biomass Fired)
180	Transesterification
190	Hydrotreating, Co-processing Facility
200	Hydrotreating, Dedicated Renewable Biomass Facility
280	Cellulosic Production Process
290	Fischer-Tropsch Process
300	Dry Mill, Biogas Fired (50% or less of DGS dried annually)
310	Dry Mill, Biogas Fired (CHP, 65% or less of DGS dried annually)
320	Dry Mill, Biogas Fired (CHP, Corn Oil Fractionation)
330	Dry Mill, Biogas Fired (CHP, Corn Oil Fractionation, Corn Oil Extraction)
340	Dry Mill, Biogas Fired (CHP, Corn Oil Fractionation, Corn Oil Extraction, Membrane Separation)

(cont.)

Figure C-8: Process Code (cont.)

Code	Description
350	Dry Mill, Biogas Fired (CHP, Corn Oil Fractionation, Corn Oil Extraction, Membrane Separation, Raw Starch Hydrolysis)
360	Dry Mill, Biogas Fired (Corn Oil Extraction, 65% or less of DGS dried annually)
370	Dry Mill, Biogas Fired (Corn Oil Extraction, Membrane Separation)
380	Dry Mill, Biogas Fired (Corn Oil Extraction, Membrane Separation, Raw Starch Hydrolysis)
390	Dry Mill, Biogas Fired (Corn Oil Fractionation, 65% or less of DGS dried annually)
400	Dry Mill, Biogas Fired (Corn Oil Fractionation, Corn Oil Extraction)
410	Dry Mill, Biogas Fired (Corn Oil Fractionation, Corn Oil Extraction, Membrane Separation)
420	Dry Mill, Biogas Fired (Corn Oil Fractionation, Corn Oil Extraction, Membrane Separation, Raw Starch Hydrolysis)
430	Dry Mill, Biogas Fired (Membrane Separation, 65% or less of DGS dried annually)
440	Dry Mill, Biogas Fired (Membrane Separation, Raw Starch Hydrolysis)
450	Dry Mill, Biogas Fired (Raw Starch Hydrolysis, 65% or less of DGS dried annually)
460	Dry Mill, Biomass Fired (50% or less of DGS dried annually)
470	Dry Mill, Biomass Fired (CHP, 65% or less of DGS dried annually)
480	Dry Mill, Biomass Fired (CHP, Corn Oil Fractionation)
490	Dry Mill, Biomass Fired (CHP, Corn Oil Fractionation, Corn Oil Extraction)
500	Dry Mill, Biomass Fired (CHP, Corn Oil Fractionation, Corn Oil Extraction, Membrane Separation)
510	Dry Mill, Biomass Fired (CHP, Corn Oil Fractionation, Corn Oil Extraction, Membrane Separation, Raw Starch Hydrolysis)

(cont.)

Figure C-8: Process Code (cont.)

Code	Description
520	Dry Mill, Biomass Fired (Corn Oil Extraction, 65% or less of DGS dried annually)
530	Dry Mill, Biomass Fired (Corn Oil Extraction, Membrane Separation)
540	Dry Mill, Biomass Fired (Corn Oil Extraction, Membrane Separation, Raw Starch Hydrolysis)
550	Dry Mill, Biomass Fired (Corn Oil Fractionation, 65% or less of DGS dried annually)
560	Dry Mill, Biomass Fired (Corn Oil Fractionation, Corn Oil Extraction)
570	Dry Mill, Biomass Fired (Corn Oil Fractionation, Corn Oil Extraction, Membrane Separation)
580	Dry Mill, Biomass Fired (Corn Oil Fractionation, Corn Oil Extraction, Membrane Separation, Raw Starch Hydrolysis)
590	Dry Mill, Biomass Fired (Membrane Separation, 65% or less of DGS dried annually)
600	Dry Mill, Biomass Fired (Membrane Separation, Raw Starch Hydrolysis)
610	Dry Mill, Biomass Fired (Raw Starch Hydrolysis, 65% or less of DGS dried annually)
620	Dry Mill, Natural Gas Fired (50% or less of DGS dried annually)
630	Dry Mill, Natural Gas Fired (CHP, Corn Oil Fractionation)
640	Dry Mill, Natural Gas Fired (CHP, Corn Oil Fractionation, Corn Oil Extraction)
650	Dry Mill, Natural Gas Fired (CHP, Corn Oil Fractionation, Corn Oil Extraction, Membrane Separation)
660	Dry Mill, Natural Gas Fired (CHP, Corn Oil Fractionation, Corn Oil Extraction, Membrane Separation, Raw Starch Hydrolysis)
670	Dry Mill, Natural Gas Fired (Corn Oil Extraction, 65% or less of DGS dried annually)

(cont.)

Figure C-8: Process Code (cont.)

Code	Description
680	Dry Mill, Natural Gas Fired (Corn Oil Extraction, Membrane Separation)
690	Dry Mill, Natural Gas Fired (Corn Oil Extraction, Membrane Separation, Raw Starch Hydrolysis)
700	Dry Mill, Natural Gas Fired (Corn Oil Fractionation, 65% or less of DGS dried annually)
710	Dry Mill, Natural Gas Fired (Corn Oil Fractionation, Corn Oil Extraction)
720	Dry Mill, Natural Gas Fired (Corn Oil Fractionation, Corn Oil Extraction, Membrane Separation)
730	Dry Mill, Natural Gas Fired (Corn Oil Fractionation, Corn Oil Extraction, Membrane Separation, Raw Starch Hydrolysis)
740	Dry Mill, Natural Gas Fired (Membrane Separation, 65% or less of DGS dried annually)
750	Dry Mill, Natural Gas Fired (Membrane Separation, Raw Starch Hydrolysis)
760	Dry Mill, Natural Gas Fired (Raw Starch Hydrolysis, 65% or less of DGS dried annually)
770	Wet Mill, Biomass Fired
780	Wet Mill, Biogas Fired
790	Fermentation (Sugarcane only)
800	Fermentation using biomass for process energy
810	Fermentation using natural gas for process energy
820	Fermentation using biogas for process energy
830	Grandfathered (Dry Mill, Biogas Fired)
840	Grandfathered (Wet Mill, Biogas Fired)
850	Biogas Production

(cont.)

Figure C-8: Process Code (cont.)

Code	Description
860	Eligible Renewable Fuels From Non-cellulosic Portions of Separated Food Wastes Process
888	Grandfathered (Other)

Figure C-9: Retire Reason Code

Code	Description
10	Reportable Spill
20	Contaminated or Spoiled Fuel
30	Import Volume Correction
40	Renewable Fuel Used in a Boiler or Ocean-going Vessel
50	Invalid RIN
60	Volume Error Correction
70	Enforcement Obligation
80	Demonstrate Annual Compliance

Figure C-10: Separate Reason Code

Code	Description
10	Receipt of Renewable Fuel by Obligated Party as per §80.1429(b)(1)
20	Blending to Produce a Transportation Fuel as per §80.1429(b)(2)
30	Designation of Renewable Fuel as Transportation Fuel as per §80.1429(b)(4)
40	Upstream Delegation for Blending as per §80.1440
50	Export of Renewable Fuel as per §80.1429(b)(4)
60	Use as Heating Oil or Jet Fuel as per §80.1429(b(2)
70	Use in a Non-road Engine or Vehicle
80	Designation of Renewable Fuel as Heating Oil or Jet Fuel as per §80.1429(b)(4)(i)

Figure C-11: Transaction Type Code

Code	Description
1	Generate
2	Separate
3	Retire
4	Buy
5	Sell

Figure C-12: Unit of Measure Code

Code	Description
10	Cubic Feet
20	100 Cubic Feet
30	1,000,000 Cubic Feet
40	Gallon
50	Liter
60	Short Ton
70	Cubic Meters
80	Therm
90	Decatherm
100	Bushel
110	Pounds

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Appendix D: QA Checks

The following table shows the checks that the EMTS will apply to all data. Checks are categorized by functional area or "Check Group." The check number indicates the type of transaction for which the check applies.

Checks by transaction type are as follows:

1000 – 1999	XSD Validation
2000 – 2999	Submission File
3000 – 3999	Generate RINs
4000 – 4999	Buy RINs
5000 – 5999	Separate RINs
6000 – 6999	Sell RINs
7000 – 7999	Retire RINs

EMTS QA Checks

Number	Name	Check Group	Description
1000	XML Validation	XML Validation	The XML document must adhere to the EMTS xsd and be well-formed and valid.
1010	Invalid Code	XML Validation	The XML document must contain valid codes.
2000	User must be Registered with CDX and Active	Submission	The user specified in the submission file must be actively registered with CDX and have permission to participate in the EMTS.
2001	User is associated with the Submitting Organization and Active	Submission	The user specified in the submission file must have an active association with the organization for which he is submitting data.
2002	User Privileges	Submission	The user specified in the submission file must be authorized to perform the requested transactions on behalf of the organization.
2005	Organization must be Registered with EPA and Active	Submission	The organization in the submission file must be registered with EPA and be active.

(cont.)

EMTS QA Checks (cont.)

Number	Name	Check Group	Description
2006	Organization RIN Holding Account is Enabled	Submission	The organization's RIN Holding Account must be active.
2008	Submittal Date Within Range	Submission	The submission date associated with the submission file may not be a date occurring in the future.
2009	At least one Transaction per Submission	Submission	There must be at least one transaction in the submission file.
2011	Submitter must be Registered with EPA and Active	Submission	The data submitter must be registered with EPA and be active.
2012	Submitter is associated with the Submitting Organization and Active	Submission	The user specified in the submission file header must be authorized to perform the requested transactions on behalf of the organization.
3000	Generate Organization differs from Organization	Generate	If the generate organization is different than the submitting organization identifier or RINPin, then the organization must be an importer.
3001	Generate Organization must be Registered with EPA and Active	Generate	If the generate organization is provided, then it must be registered with EPA and be active.
3002	Generate Facility must be provided	Generate	For generate transactions, the generate facility identifier must be provided.
3004	Generate Facility Association with Generate Organization	Generate	If generate organization is provided, then generate facility must be actively associated with the generate organization.
3005	Generate Facility Association with Organization	Generate	If generate organization is not provided, then the generate facility must be actively associated with the submitting organization.
3007	Process Code Matches Registration	Generate	The process reported in the production of fuel must be registered with EPA.
3008	Feedstock Code Matches Registration	Generate	The feedstock reported in the production of fuel must be registered with EPA.

(cont.)

EMTS QA Checks (cont.)

Number	Name	Check Group	Description
3009	Fuel Category Code Matches Registration	Generate	The fuel category reported in the production of fuel must be registered with EPA.
3010	CoProduct Code Matches Registration	Generate	If the co-product is reported for a fuel, it must be registered with EPA.
3011	Production Date within Range	Generate	The production date must not occur after the date specified in submittal data.
3012	Organization Permissions	Generate	The transactions that can be reported by an organization are dependent on its active business activities as registered with EPA.
3013	Ethanol Production	Generate	If "Ethanol" or "Cellulosic Ethanol" RINs are reported in the generate transaction, then denaturant volume must be reported.
3014	Denaturant Volume	Generate	If denaturant volume is reported, then "Ethanol" or "Cellulosic Ethanol" must be reported.
3016	Denaturant Volume within Allowed Range	Generate	When denaturant gallons are reported for ethanol fuel, the amount specified cannot exceed two percent of the total volume of fuel produced.
3018	Batch Number must be Provided	Generate	Batch number must be provided.
3019	Batch Number must be Unique	Generate	Batch number must be unique for an organization, facility, and RIN year.
3022	RIN Quantity must equal the Product of Equivalence Value and Batch Volume	Generate	RIN Quantity must equal the product of Batch Volume and Equivalence Value.
3023	Feedstock Code must be valid	Generate	The feedstock code reported in the production of fuel must be a valid code that is recognized by EPA.
3024	Process Code must be valid	Generate	The process code reported in the production of fuel must be a valid code that is recognized by EPA.
3025	Coproduct Code must be valid	Generate	The co-product code reported in the production of fuel must be a valid code that is recognized by EPA.

(cont.)

EMTS QA Checks (cont.)

Number	Name	Check Group	Description
3026	Equivalence Value Range	Generate	The equivalence value reported may not exceed the specified value for the fuel type produced.
3027	Feedstock Measure Code must be valid	Generate	The feedstock measure code reported in the production of fuel must be a valid code that is recognized by EPA.
3029	RIN Quantity must not exceed the Product of Equivalence Value and Batch Volume	Generate	If Equivalence Value is not reported then RIN Quantity must not exceed the product of Batch Volume and the allowable Equivalence Value.
3030	Renewable Biomass	Generate	If RINs are generated (RIN Quantity greater than or equal to "1"), then at least one of the specified feedstocks must be indicated as "Renewable Biomass."
3032	Fuel Code Matches Registration	Generate	The fuel code reported must be registered with EPA.
3033	Fuel Category Code must be valid	Generate	The fuel category code reported in the production of fuel must be a valid code that is recognized by EPA.
3034	Fuel Code must be valid	Generate	The fuel code reported in the production of fuel must be a valid code that is recognized by EPA.
3040	Fuel Code Compatible with Fuel Category	Generate	The fuel code reported must be compatible with the fuel category used in the production of fuel.
3041	Fuel Code, Fuel Category Compatible with Process	Generate	The fuel code and fuel category reported must be compatible with the process used in the production of fuel.
3042	Feedstock Compatible with Fuel Code, Fuel Category and Process	Generate	The feedstock reported must be compatible with the fuel code, fuel category, and process used in the production of fuel.
3044	Foreign Producer must be Bonded	Generate	If the Submission Organization is a Foreign Producer, they must be bonded.
4001	Generate Organization must be Registered with EPA and Active	Buy	If the generate organization is provided, then it must be registered with EPA and be active.

(cont.)

EMTS QA Checks (cont.)

Number	Name	Check Group	Description
4004	Generate Facility Association with Generate Organization	Buy	If the generate organization is provided, then generate facility must be actively associated with the generate organization.
4005	Facility Identifier on Blocked List	Buy	If you have created a list of facilities for which you do not want to own any fuel, should a transaction include the facility as the originating source, the transaction will automatically fail.
4006	Batch Number	Buy	If a batch number is reported, then both the organization and facility identifiers where the fuel was produced must be reported as well.
4007	Generate Facility	Buy	If a generate facility is reported, then the organization where the fuel was produced must also be reported.
4011	Assignment Code of "1"	Buy	If assignment is "1," then the batch volume must be specified.
4012	Organization Permissions	Buy	The transactions that can be reported by an organization are dependent on its active business activities as registered with EPA.
4013	Organization Identifier on Blocked List	Buy	If you have created a list of organizations for which you do not want to own any fuel, should a transaction include the organization as the originating source, the transaction will automatically fail.
4014	Facility Identifier on Blocked List	Buy	If you have created a list of facilities for which you do not want to own any fuel, should a transaction include the organization as the originating source, the transaction will automatically fail.
4015	Trade Contains Blocked RINs	Buy	If the buy transaction has a matched sell transaction, the RINs reserved for the Sell cannot have been generated by an organization or facility on the submitting organizations blocked list.

(cont.)

EMTS QA Checks (cont.)

Number	Name	Check Group	Description
4018	Transaction Partner Organization Registered at EPA and Active	Buy	The transaction partner organization must be registered at EPA and be active.
4019	RIN Year Range	Buy	The RIN year cannot be in the future.
4020	Transaction Date Consistent	Buy	The transaction date specified may not occur in the future.
4024	Fuel Code must be valid	Buy	The fuel code reported must be a valid code that is recognized by EPA.
4025	Assignment Code must be valid	Buy	The assignment code reported must be a valid code that is recognized by EPA.
4032	RIN Quantity Ratio to Batch Volume	Buy	For assigned RINs that are being bought, the ratio of RINs to fuel must be greater than "0" but less than "2.5."
4034	Reason Code must be valid	Buy	The reason code reported in the production of fuel must be a valid code that is recognized by EPA.
4035	Allowable Reason Code	Buy	The allowable reason code reported by an organization when buying RINs are dependent on their business activities as registered with EPA.
4036	RIN Price or Gallon Price Provided	Buy	The RIN price or gallon price must be provided.
4037	Reason Comment	Buy	If reason "Standard Trade" or "Cancel" is not provided for a buy transaction then a comment must be provided.
4039	Price Format	Buy	The RIN Price Amount or Gallon Price Amount must be reported to two decimal places.
4041	Cancel Trade	Buy	A Cancel trade must match a pending trade.
4042	Same Buy and Sell Organization	Buy	The buying organization cannot be the same as the selling organization.
4043	One Cancel per Submission	Buy	If a Cancel transaction is reported then no other transaction may be reported in the submission.
5001	Generate Organization must be Registered with EPA and Active	Separate	If the generate organization is provided, then it must be registered with EPA and be active.

(cont.)

EMTS QA Checks (cont.)

Number	Name	Check Group	Description
5004	Generate Facility Association with Generate Organization	Separate	If the generate organization and generate facility are provided, then generate facility must be actively associated with the generate organization.
5006	Batch Number	Separate	If a batch number is reported, then both the organization and facility identifiers where the fuel was produced must also be reported.
5007	Generate Facility	Separate	If a generate facility is reported, then the organization where the fuel was produced must be reported as well.
5012	Organization Permissions	Separate	The transactions that can be reported by an organization are dependent on their active business activities as registered with EPA.
5019	RIN Year Range	Separate	The RIN year cannot be in the future.
5024	Fuel Code must be valid	Separate	The fuel code reported must be a valid code that is recognized by EPA.
5032	RIN Quantity Ratio to Batch Volume	Separate	For assigned RINs that are being separated from a volume of fuel, the ratio of RINs to fuel must be greater than "0" but less than "2.5."
5034	Blender Organization must be Registered with EPA and Active	Separate	If a blender organization is provided, then it must be registered with EPA and be active.
5035	Allowable Reason Code	Separate	The allowable reason code reported by an organization when separating RINs are dependent on their business activities as registered with EPA.
5036	Blender Organization Business Activity	Separate	If a Blender organization is specified then the organization must have a business activity of small blender.
5038	Sufficient RINs	Separate	The organization must have enough available RINs in its holding account for the specified Fuel and RIN Year to complete the transaction.
5900	Sufficient RINs (FIFO)	Separate	The organization must have enough available RINs in its holding account to complete the transaction.

(cont.)

EMTS QA Checks (cont.)

Number	Name	Check Group	Description
5901	Sufficient RINs (Organization)	Separate	The organization must have enough available RINs from the specified organization in its holding account to complete the transaction.
5902	Sufficient RINs (Facility)	Separate	The organization must have enough available RINs from the specified facility in its holding account to complete the transaction.
5903	Sufficient RINs (Batch)	Separate	The organization must have enough available RINs from the specified batch in its holding account to complete the transaction.
6001	Generate Organization must be Registered with EPA and Active	Sell	If the generate organization is provided, then it must be registered with EPA and be active.
6004	Generate Facility Association with Generate Organization	Sell	If the generate organization is provided, then generate facility must be actively associated with the generate organization.
6006	Batch Number	Sell	If a batch number is reported, then both the organization and facility identifiers where the fuel was produced must also be reported.
6007	Generate Facility	Sell	If a generate facility is reported, then the organization where the fuel was produced must be reported as well.
6011	Assignment Code of "1"	Sell	If the assignment is "1," then batch volume must be specified.
6012	Organization Permissions	Sell	The transactions that can be reported by an organization are dependent on its active business activities as registered with EPA.
6018	Transaction Partner Organization Registered at EPA and Active	Sell	The transaction partner organization must be registered at EPA and be active.
6019	RIN Year Range	Sell	The RIN year may not be in the future.
6020	Transaction Date Consistent	Sell	The transaction date specified may not occur in the future.

(cont.)

EMTS QA Checks (cont.)

Number	Name	Check Group	Description
6024	Fuel Code must be valid	Sell	The fuel code reported must be a valid code that is recognized by EPA.
6032	RIN Quantity Ratio to Batch Volume	Sell	For assigned RINs that are being sold, the ratio of RINs to fuel must be greater than "0" but less than "2.5."
6034	Reason Code must be valid	Sell	The reason code reported in the production of fuel must be a valid code that is recognized by EPA.
6035	Allowable Reason Code	Sell	The allowable reason code reported by an organization when selling RINs are dependent on their business activities as registered with EPA.
6036	RIN Price or Gallon Price Provided	Sell	The RIN price or gallon price must be provided.
6037	Reason Comment	Sell	If reason "Standard Trade" or "Cancel" is not provided for a sell transaction then a comment must be provided.
6038	Sufficient RINs	Sell	The organization must have enough available RINs in its holding account for the specified Fuel, RIN Year, and Assignment Code to complete the transaction.
6039	Price Format	Sell	The RIN Price Amount or Gallon Price Amount must be reported to two decimal places.
6040	Trading Partner Cannot Accept RINs	Sell	The trading partner was unable to complete the transaction.
6041	Cancel Trade	Sell	A Cancel trade must match a pending trade.
6042	Same Buy and Sell Organization	Sell	The selling organization cannot be the same as the buying organization.
6043	One Cancel per Submission	Sell	If a Cancel transaction is reported then no other transaction may be reported in the submission.
6900	Sufficient RINs (FIFO)	Sell	The organization must have enough available RINs in its holding account to complete the transaction.
6901	Sufficient RINs (Organization)	Sell	The organization must have enough available RINs from the specified organization in its holding account to complete the transaction.

(cont.)

EMTS QA Checks (cont.)

Number	Name	Check Group	Description
6902	Sufficient RINs (Facility)	Sell	The organization must have enough available RINs from the specified facility in its holding account to complete the transaction.
6903	Sufficient RINs (Batch)	Sell	The organization must have enough available RINs from the specified batch in its holding account to complete the transaction.
7001	Generate Organization must be Registered with EPA and Active	Retire	If the generate organization is provided, then it must be registered with EPA and be active.
7004	Generate Facility Association with Generate Organization	Retire	If the generate organization and generate facility are provided, then generate facility must be actively associated with the generate organization.
7006	Batch Number	Retire	If a batch number is reported, then both the organization and facility identifiers where the fuel was produced must also be reported.
7007	Generate Facility	Retire	If a generate facility is reported, then the organization where the fuel was produced must also be reported.
7011	Assignment Code of "1"	Retire	If the assignment is "1," then batch volume must be specified.
7012	Organization Permissions	Retire	The transactions that can be reported by an organization are dependent on their active business activities as registered with EPA.
7016	Compliance Year	Retire	Compliance year is required if the reason code "Demonstrate Annual Compliance" is reported.
7017	Compliance Year Consistent with Current Year	Retire	If the submittal date is March 1 or later, then the compliance year must be the current year.
7018	Compliance Year Consistent with Current of Previous Year	Retire	If the submittal date is before March 1, then the compliance year must be either the current year or the previous year.
7021	Reporting Compliance at the Facility Level	Retire	If the compliance level code reported is "Facility Level," the facility identifier must be reported.

(cont.)

EMTS QA Checks (cont.)

Number	Name	Check Group	Description
7022	Facility Level Compliance	Retire	If a facility identifier is reported for compliance, then the compliance level code must be "Facility Level."
7023	Compliance Facility Registered at EPA and Active	Retire	If a compliance facility identifier is reported, then the facility identifier must be registered at EPA and be active.
7024	Fuel Code must be valid	Retire	The fuel code reported must be a valid code that is recognized by EPA.
7025	Assignment Code must be valid	Retire	The assignment code reported must be a valid code that is recognized by EPA.
7032	RIN Quantity Ratio to Batch Volume	Retire	If Batch Volume is provided, then the ratio of RINs to fuel must be greater than "0" but less than "2.5."
7034	Allowable Compliance Level Code	Retire	The allowable compliance level code reported by an organization when retiring RINs are dependent on their business activities registered with EPA.
7035	Allowable Reason Code	Retire	The allowable reason code reported by an organization when retiring RINs are dependent on their business activities registered with EPA.
7037	Reason Code Comment	Retire	If reason code "Reportable Spill," "Contaminated or Spoiled Fuel," "Import Volume Correction," "Invalid RINs," "Volume error correction," or "Enforcement Obligation" is provided for a retire transaction, then a comment must be provided.
7038	Sufficient RINs	Retire	The organization must have enough available RINs in its holding account for the specified Fuel, RIN Year, and Assignment Code to complete the transaction.
7039	Reason Code must be valid	Retire	The reason code reported must be a valid code that is recognized by EPA.
7040	Reason Code Batch Volume	Retire	If reason code "Reportable Spill," "Contaminated or Spoiled Fuel," "Import Volume Correction," "Renewable Fuel Used in a Boiler or an Ocean-Going Vessel," or "Volume error correction" is provided for a retire transaction then Batch Volume must also be provided.

(cont.)

EMTS QA Checks (cont.)

Number	Name	Check Group	Description
7041	Compliance RIN Year	Retire	RIN Year may only equal the Compliance Year or one year prior to the Compliance Year. This check should only be executed if reason code equals "Demonstrate Annual Compliance."
7042	Compliance Level Code must be valid	Retire	The compliance level code reported must be a valid code that is recognized by EPA.
7900	Sufficient RINs (FIFO)	Retire	The organization must have enough available RINs in its holding account to complete the transaction.
7901	Sufficient RINs (Organization)	Retire	The organization must have enough available RINs from the specified organization in its holding account to complete the transaction.
7902	Sufficient RINs (Facility)	Retire	The organization must have enough available RINs from the specified facility in its holding account to complete the transaction.
7903	Sufficient RINs (Batch)	Retire	The organization must have enough available RINs from the specified batch in its holding account to complete the transaction.

Appendix E: Business Activities by Transaction Type

The following chart shows the types of transactions allowed based on an organization's business activities. One organization may register for multiple business activities.

Transaction Types	Domestic Renewable Fuel Producer	Renewable Fuel Importer	Non-Renewable Fuel Importer	Foreign Renewable Fuel Producer	Renewable Fuel Exporter	Refiner	Small Refiner (less than 155,000 gals/yr) & has a small refiner exemption	RIN Owner	Small Blender*
Generate	☑	☑		☑					
Separate (Receipt of renewable fuel)			☑			☑			
Separate (Blending)	☑	☑	☑		☑	☑	☑	☑	
Separate (Designation as Transportation Fuel)	☑	☑	☑		☑	☑	☑	☑	
Separate (Upstream Delegation for Blending)	☑	☑	☑		☑	☑	☑	☑	
Separate (Export)					☑				
Separate (Use as Home Heating Oil or Jet Fuel)	☑	☑	☑		☑	☑	☑	☑	
Separate (Use in Non-road Engine or Vehicle)	☑	☑	☑		☑	☑	☑	☑	
Separate (Designation as Home Heating Oil or Jet Fuel)	☑	☑	☑		☑	☑	☑	☑	
Trade assigned RINs	☑	☑	☑	☑	☑	☑	☑	☑	
Trade separated RINs	☑	☑	☑		☑	☑	☑	☑	
Retire (Reported Spill)	☑	☑	☑	☑	☑	☑	☑	☑	
Retire (Contaminated or Spoiled Fuel)	☑	☑	☑	☑	☑	☑	☑	☑	
Retire (Import Volume Correction)		☑		☑					
Retire (Demonstrate Annual Compliance)			☑		☑	☑			
Retire (Invalid RIN)	☑	☑	☑	☑	☑	☑	☑	☑	
Retire (Volume Error Correction)	☑			☑					
Retire (Enforcement Obligation)	☑	☑	☑	☑	☑	☑	☑	☑	
Retire (Fuel Used in a Boiler or Ocean-Going Vessel)	☑	☑	☑	☑	☑	☑	☑	☑	

*Small Blenders may view all transactions performed on their behalf.

☑ Yes
No

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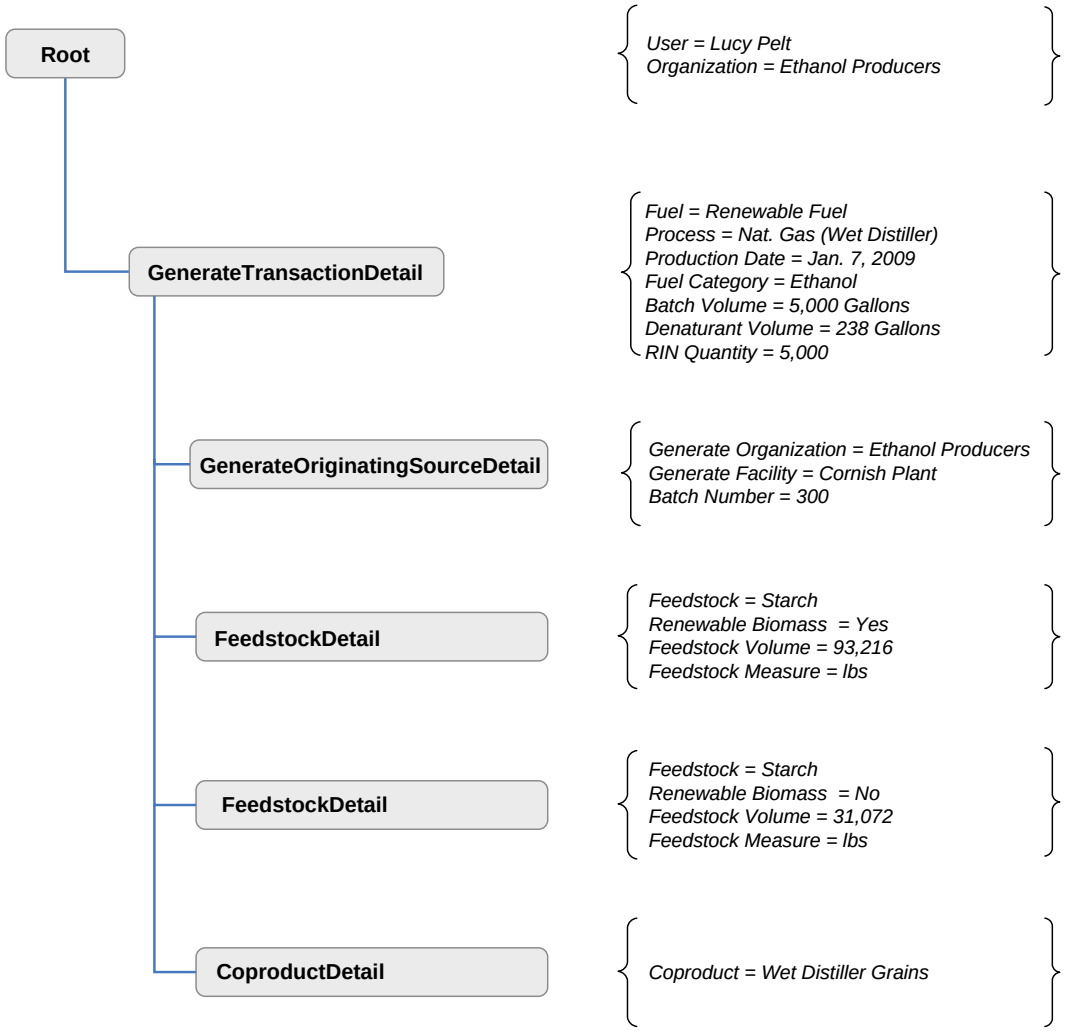
Appendix F: Sample Transactions

F-1 Generate Transaction

Generate transactions allow renewable fuel producers to generate RINs for a newly produced batch of fuel. The characteristics of this new batch of fuel are used to identify the RINs for future transactions. Once the EMTS has successfully processed a generate transaction, the submitter can see the new RINs in the organization's RIN Holding Account.

Figure F-1 shows the basic structure of a generate transaction. In this example, an ethanol Producer is sending information about a batch of RINs and identifies the feedstock used to produce the fuel.

Figure F-1: General Structure of a Generate Submission



Objective: **Ethanol Producer** generates 5,000 RINs.

Information to deliver:

- Fuel Code – Indicates the category of fuel to which the renewable fuel belongs: Cellulosic Biofuel (D = 3), Biomass-based Diesel (D = 4), Advanced Biofuel (D = 5), Renewable Fuel (D = 6), or Cellulosic Diesel (D = 7).
- Process Code – The process code which describes how the renewable fuel was made.
- Production Date – The year of production is the RIN year which can be used by buyers and sellers to specify RINs for a trade.
- Fuel Category – Indicates the type of renewable fuel produced.
- Batch Volume – The total volume in gallons of renewable fuel. For ethanol, batch volume includes both the volume in gallons of un-denatured fuel and the volume in gallons of denaturant.
- Denaturant Volume (for ethanol and cellulosic ethanol fuel only) – The total volume in gallons of denaturant added to the fuel.
- Equivalence Value – A multiplier directly related to the fuel code.
- RIN Quantity – The total number of RINs being generated in this transaction calculated by multiplying the Batch Volume by the Equivalence Value.

Figure F-2 shows how these data would appear in a generate transaction data block.

Figure F-2: Generate Transaction Data Elements

Data Element	Value	Reference	Required	Instructions
FuelCode	6	Renewable Fuel	Yes	Enter a valid fuel code found in Appendix D of this document.
ProcessCode	10	Grandfathered (Dry Mill, Natural Gas Fired)	Yes	Enter a valid process code found in Appendix D of this document.
ProductionDate	2009-01-07		Yes	Enter the date in YYYY-MM-DD format.

(cont.)

Figure F-2: Generate Transaction Data Elements (cont.)

Data Element	Value	Reference	Required	Instructions
FuelCategory	10	Ethanol	Yes	Enter a valid fuel type found in Appendix D of this document.
BatchVolume	5000		Yes	Enter the volume of fuel in gallons of fuel in the batch. It must be a whole number less than 99,999,999.
DenaturantVolume	238		No	Enter the volume in gallons of denaturant added to the renewable fuel.
EquivalenceValue	1.0		Yes	Enter a valid equivalence value from Appendix D of this document. This is a multiplier directly related to fuel code.
RINQuantity	5000		Yes	Enter the total number of RINs. This must be a whole number.
TransactionDetailComment			No	Provide any additional information regarding this transaction.

F-1.1 Reporting the Originating Source

Every generate transaction requires information regarding the source of the fuel. For each generate transaction, the following are required:

- Generate Organization Identifier – The public identifier of the organization that produced the fuel associated with the RINs being generated.
- Generate Facility Identifier – The public facility identifier for the plant that produced the renewable fuel associated with the RINs being generated.
- Batch Number Text – An internal tracking number assigned by the organization responsible for producing the fuel associated with the RINs being generated.

Figure F-3 shows how the originating source data would appear in a generate transaction.

Figure F-3: Generate Originating Source Data Elements

Data Element	Value	Reference	Required	Instructions
GenerateOrganizationIdentifier	1111	Ethanol Producers	Yes	Provide the public organization identifier for the producer of the fuel as registered with EPA.
GenerateFacilityIdentifier	77777	Cornish Plant	Yes	Provide the public facility identifier for the plant that produced the renewable fuel.
BatchNumberText	300		Yes	Enter the batch number associated with the batch at fuel production.

F-1.2 Feedstocks

The generate transaction requires that additional information be provided regarding the kind of feedstocks used to produce the fuel, the volume of each feedstock, and whether those feedstocks are renewable biomass. In this example, two different feedstocks were used and information must be provided for both. For each feedstock, the following are required:

- Feedstock Code – The Feedstock Code categorizes the type of material used to produce the renewable fuel.
- Renewable Biomass Indicator – Enter a "1" if the feedstock meets the definition of renewable biomass as per §80.1401. Enter a "2" if it does not.
- Feedstock Volume – The total volume of the feedstock.
- Feedstock Measure Code – The unit of measure for the feedstock volume.

Figure F-4 shows how these data would appear for two feedstocks for a batch of RINs.

Figure F-4: Feedstock Data Elements

Data Element	Value	Reference	Required	Instructions
FeedstockCode	10	Starch -- Corn	Yes	Enter a valid feedstock code found in Appendix D of this document. Enter as many feedstocks as applicable.
RenewableBiomassIndicator	1	Yes	Yes	Enter "1" if the feedstock qualifies as renewable biomass and "2" if it does not.
FeedstockVolume	46.6		Yes	Enter the total volume of the feedstock used in production of the fuel.
FeedstockMeasureCode	60	Ton	Yes	Enter a valid unit of measure code found in Appendix D of this document.
FeedstockCode	10	Starch -- Corn	Yes	Enter a valid feedstock code found in Appendix D of this document. Enter as many feedstocks as applicable.
RenewableBiomassIndicator	1	Yes	Yes	Enter "1" if the feedstock qualifies as renewable biomass and "2" if it does not.
FeedstockVolume	15.5		Yes	Enter the total volume of the feedstock used in production of the fuel.
FeedstockMeasureCode	60	Ton	Yes	Enter a valid unit of measure code found in Appendix D of this document.

F-1.3 Reporting Co-product

If fuel production results in the creation of a co-product, this information must be reported in the generate transaction. For each co-product, provide:

- Co-product Code – Code that categorizes the type of co-product.

Figure F-5 shows how co-product data would appear in a generate transaction.

Figure F-5: Co-product Data Elements

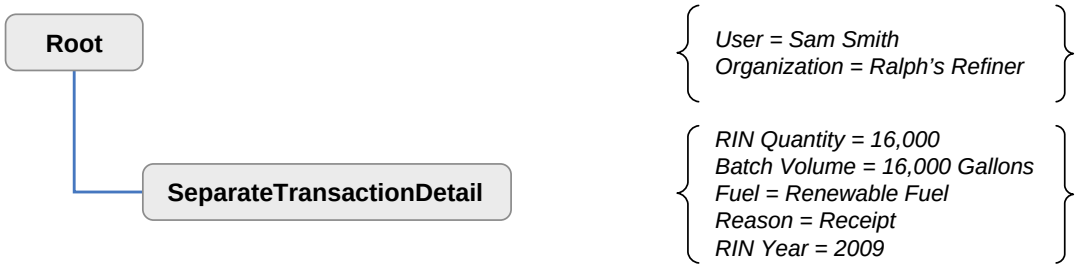
Data Element	Value	Reference	Required	Instructions
CoProductCode	10	Wet Distiller Grains	No	Enter a valid co-product code found in Appendix D of this document. Enter as many co-products as applicable.

F-2 Separate Transaction

RINs are separated on a first-in-first-out basis in the EMTS, unless additional information on the RIN batch is provided. The EMTS searches the organization's RIN holdings for RINs that match the fuel type and assignment code specified and selects the quantity of RINs from the earliest acquired dates available. After the EMTS has processed the separate transaction, the organization's RIN holdings will display an assignment code of "2" or "separated" for these RINs.

Figure F-6 shows the basic structure of a separate transaction. In this example, a Refiner is separating 16,000 RINs from 16,000 gallons of fuel.

Figure F-6: General Structure of Separate Transaction



Objective: **Petroleum Refiner** separates 16,000 assigned RINs.

Required Information:

- RIN Quantity – The total number of RINs being separated in this transaction.
- Batch Volume – The total volume of renewable fuel.
- Fuel Code – Indicates the category of fuel to which the renewable fuel belongs: Cellulosic Biofuel (D = 3), Biomass-based Diesel (D = 4), Advanced Biofuel (D = 5), Renewable Fuel (D = 6), or Cellulosic Diesel (D = 7).

- Separate Reason Code – Code that explains why the fuel is being separated.
- RIN Year – The year in which the RIN was generated reflecting the year of the production date.

Figure F-7 shows how these data would appear in the separate transaction data block.

Figure F-7: Separate Transaction Data Elements

Data Element	Value	Reference	Required	Instructions
RINQuantity	16000		Yes	Enter the total number of RINs. This must be a whole number.
BatchVolume	16000		Yes	Enter the volume of fuel in gallons of fuel in the batch. It must be a whole number less than 99,999,999.
FuelCode	6	Renewable Fuel	Yes	Enter a valid fuel code found in Appendix D of this document.
SeparateReasonCode	10	Receipt of renewable fuel by obligated party	Yes	Enter a valid separate reason code found in Appendix D of this document.
RINYear	2009		Yes	Enter the year in YYYY format. This is the year in which the RIN was generated and can be derived from the production date.
TransactionDetailComment			No	Provide any additional information regarding this transaction.

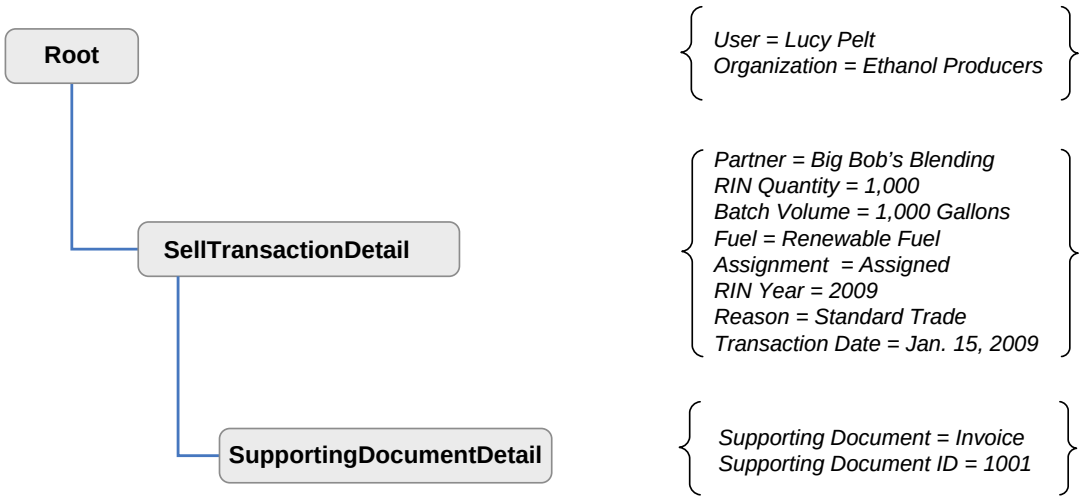
* Instructions for users who wish to specify a batch for a transaction can be found in the "Advanced Options" section of this document.

F-3 Sell Transaction

When a user submits a sell transaction, information on the buying organization must be identified. The EMTS will check to make sure that the selling organization has the necessary RINs to complete the requested transaction and will then place these RINs in a "pending" status until it receives the buyer's matching transaction.

Figure F-8 shows the basic structure of a sell transaction. In this example, an Ethanol Producer is selling 1,000 gallons of fuel with 1,000 assigned RINs to a Blender.

Figure F-8: General Structure of a Sell Transaction



Objective: **Renewable Fuel Producer** sells 1,000 gallons of fuel and 1,000 RINs.

Required Information:

- Trading Partner Organization Identifier – The public identification number for the buying organization obtained through EPA.
- Trading Partner Organization Name – The name of the buying organization.
- RIN Quantity – The total number of RINs being sold in this transaction.
- Batch Volume – The volume of renewable fuel associated with the RINs.
- Fuel Code – Indicates the category of fuel to which the renewable fuel belongs: Cellulosic Biofuel (D = 3), Biomass-based Diesel (D = 4), Advanced Biofuel (D = 5), Renewable Fuel (D = 6), or Cellulosic Diesel (D = 7).
- Assignment Code – Identifies if the RINs are assigned or separated.
- RIN Year – The year in which the RIN was generated reflecting the year of the production date.
- Sell Reason Code – Code that explains why these RINs are being sold.
- Gallon Price Amount – The price at which the RINs and fuel were sold.
- Transaction Date – The date on which the sell transaction occurred outside of the EMTS.

Figure F-9 shows how these data would appear in the sell transaction data block.

Figure F-9: Sell Transaction Data Elements

Data Element	Value	Reference	Required	Instructions
TransactionPartnerOrganization Identifier	2222	Big Bob's Blending	Yes	Enter the organization identifier of the buying party. This is the organization number obtained through EPA.
TransactionPartnerOrganization Name	Big Bob's		Yes	Enter the name of the buying party.
RINQuantity	1000		Yes	Enter the total number of RINs. This must be a whole number.
BatchVolume	1000		Yes	Enter volume of fuel in gallons of fuel in the batch. It must be a whole number less than 99,999,999.
FuelCode	6	Renewable Fuel	Yes	Enter a valid fuel code found in Appendix D of this document.
AssignmentCode	1	Assigned to Fuel	Yes	Enter "1" if the RINs are assigned and "2" if they are separated.
RINYear	2009		Yes	Enter the year in YYYY format. This is the year in which the RIN was generated and can be derived from the production date.
Sell Reason Code	10	Standard Trade	Yes	Enter a valid sell reason code found in Appendix D of this document.
GallonPriceAmount	2.50		Yes	Enter the price per gallon of renewable fuel in USD.
TransactionDate	2009-01-15		Yes	Enter the date in YYYY-MM-DD format. This is the date on which the transaction occurred.

(cont.)

Figure F-9: Sell Transaction Data Elements (cont.)

Data Element	Value	Reference	Required	Instructions
PTDNumber	8960		No	Enter the PTD number associated with the transaction.
TransactionDetailComment			No	Provide any additional information regarding this transaction.

* Instructions for users who wish to specify a batch for a transaction can be found in the "Advanced Options" section of this document.

F-3.1 Supporting Document Information

The user may wish to provide additional documentation numbers associated with the buy or sell transaction. The supporting document data block allows the user to create user-defined document names to report these numbers. In the example below, the user reported an invoice number for the sell.

Figure F-10 shows how data would appear in the supporting document information.

Figure F-10: Supporting Document Detail

Data Element	Value	Reference	Required	Instructions
SupportingDocumentText	Invoice		No	Enter the type of document to which the document number applies.
SupportingDocumentNumber	1001		No	Enter the identification number for the supporting document.

F-4 Buy Transaction

When a user submits a basic buy transaction, the EMTS will match key data elements to the corresponding sell transaction. The EMTS will match on trading partner information, assignment code, RIN quantity, and fuel type. If these fields do not match, the trade will fail.

Figure F-11 shows the basic structure of a buy transaction. In this example, a Blender is buying 1,000 gallons of fuel with 1,000 assigned RINs from a Producer.

Figure F-11: General Structure of a Buy Transaction

Objective: **Renewable Fuel Blender** buys 1,000 gallons of fuel and 1,000 RINs.

Required Information:

- Trading Partner Organization Identifier – The public identification number for the selling organization obtained through EPA.
- Trading Partner Organization Name – The name of the selling organization.
- RIN Quantity – The total number of RINs being sold in this transaction.
- Batch Volume – The total volume of renewable fuel associated with the RINs.
- Fuel Code – Indicates the category of fuel to which the renewable fuel belongs: Cellulosic Biofuel (D = 3), Biomass-based Diesel (D = 4), Advanced Biofuel (D = 5), Renewable Fuel (D = 6), or Cellulosic Diesel (D = 7).
- Assignment Code – Identifies if the RINs are assigned or separated.
- RIN Year – The year in which the RIN was generated reflecting the year of the production date.
- Buy Reason Code – Code that explains why these RINs are being bought.
- Gallon Price Amount – The price at which the RINs and fuel were bought.
- Transaction Date – The date on which the buy transaction occurred outside of the EMTS.

Figure F-12 shows how these data would appear in the buy transaction data block.

Figure F-12: Buy Transaction Data Elements

Data Element	Value	Reference	Required	Instructions
TransactionPartnerOrganization Identifier	1111	Ethanol Producers	Yes	Enter the organization identifier of the selling party. This is the organization number obtained through EPA.
TransactionPartnerOrganization Name	Ethanol Producers		Yes	Enter the name of the selling party.
RINQuantity	1000		Yes	Enter the total number of RINs. This must be a whole number.
BatchVolume	1000		Yes	Enter the volume in gallons of fuel in the batch. It must be a whole number less than 99,999,999.
FuelCode	6	Renewable Fuel	Yes	Enter a valid fuel code found in Appendix D of this document.
AssignmentCode	1	Assigned to Fuel	Yes	Enter "1" if the RINs are assigned and "2" if they are separated.
RINYear	2009		Yes	Enter the year in YYYY format. This is the year in which the RIN was generated and can be derived from the production date.
BuyReasonCode	10	Standard Trade	Yes	Enter a valid buy reason code found in Appendix D of this document.
GallonPriceAmount	2.50		Yes	Enter the price per gallon of renewable fuel in USD.
TransactionDate	2009-01-15		Yes	Enter the date in YYYY-MM-DD format. This is the date on which the transaction occurred.
PTDNumber	8960		No	Enter the PTD number associated with the transaction.
TransactionDetailComment			No	Provide any additional information regarding this transaction.

* Instructions for users who wish to specify a batch for a transaction can be found in the "Advanced Options" section of this document.

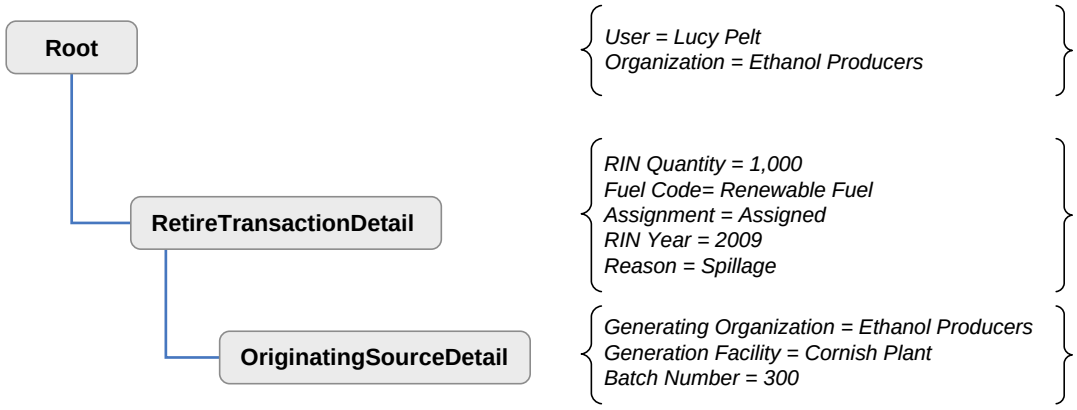
F-5 Retire Transaction

F-5.1 Retire for Spillage

Retire transactions must include a reason for the retirement of a RIN batch.

Figure F-13 shows the basic structure of a retire transaction. In this example, a Producer is retiring 1,000 RINs because of spillage.

Figure F-13: General Structure of a Retire for Spillage Transaction



Objective: **Renewable Fuel Producer** retires 1,000 gallons of fuel for spillage.

Required Information:

- RIN Quantity – The total number of RINs being retired in this transaction.
- Batch Volume – The total volume of renewable fuel.
- Fuel Code – Indicates the category of fuel to which the renewable fuel belongs: Cellulosic Biofuel (D = 3), Biomass-based Diesel (D = 4), Advanced Biofuel (D = 5), Renewable Fuel (D = 6), or Cellulosic Diesel (D = 7).
- Assignment Code – Identifies if the RINs are assigned or separated.
- Transaction Date – The date on which the spill occurred.
- RIN Year – The year in which the RIN was generated reflecting the year of the production date.
- Retire Reason Code – Code that explains why the fuel is being retired.

Figure F-14 shows how these data would appear in the retire transaction data block.

Figure F-14: Retire Transaction Data Elements

Data Element	Value	Reference	Required	Instructions
RINQuantity	1000		Yes	Enter the total number of RINs. This must be a whole number.
Batch Volume	1000		Yes	Enter the volume in gallons of fuel in the batch. It must be a whole number less than 99,999,999.
FuelCode	6	Renewable Fuel	Yes	Enter a valid fuel code found in Appendix D of this document.
AssignmentCode	1	Assigned to Fuel	Yes	Enter "1" if the RINs are assigned and "2" if they are separated.
RINYear	2009		Yes	Enter the year in YYYY format. This is the year in which the RIN was generated and can be derived from the production date.
RetireReasonCode	10	Spillage	Yes	Enter a valid retire reason code found in Appendix D of this document.
TransactionDetailComment			No	Provide any additional information regarding this transaction.

A retire for spillage transaction requires additional information about the originating source of the RINs. To specify the batch, indicate:

- Generate Organization Identifier – The public identifier of the organization that produced the fuel associated with the RINs being sold.
- Generate Facility Identifier – The public facility identifier for the plant that produced the renewable fuel associated with the RINs being sold.
- Batch Number Text – An internal tracking number assigned by the organization responsible for producing the fuel associated with the RINs being sold.

Figure F-15 shows how these data would appear in the originating source information for a batch of RINs.

Figure F-15: Retire Originating Source Data Elements

Data Element	Value	Reference	Required	Instructions
GenerateOrganizationIdentifier	1111	Ethanol Producers	Yes	Provide the public organization identifier for the producer of the fuel as registered with EPA.
GenerateFacilityIdentifier	77777	Cornish Plant	No	Provide the public facility identifier for the plant that produced the renewable fuel.
BatchNumber	300		No	Enter the batch number associated with the batch at fuel production.

F-5.2 Retire for Compliance, Aggregated Refiner

To fulfill its Renewable Volume Obligation (RVO) for a particular year, an organization must retire RINs to EPA's RIN Holding Account. The submitter for the organization must indicate the compliance year, the compliance level code, and the reason code for the retire transaction. Upon completion of this transaction, EPA will be the holder of the RINs.

Figure F-16 shows the basic structure of a retire transaction. In this example, a Refiner is retiring 1,000 RINs for compliance.

Figure F-16: General Structure of Retire Transaction for Compliance, Aggregated Refiner

Objective: **Aggregated Refiner** retires 1,000 RINs for compliance.

Required Information:

- RIN Quantity – The total number of RINs being retired in this transaction.
- Batch Volume – The total volume of renewable fuel.

- Fuel Code – Indicates the category of fuel to which the renewable fuel belongs: Cellulosic Biofuel (D = 3), Biomass-based Diesel (D = 4), Advanced Biofuel (D = 5), Renewable Fuel (D = 6), or Cellulosic Diesel (D = 7).
- Assignment Code – Identifies if the RINs are assigned or separated.
- RIN Year – The year in which the RIN was generated reflecting the year of the production date.
- Retire Reason Code – Code that indicates the RINs are retired for compliance.
- Compliance Year – The year in which the RINs are being used for compliance.
- Compliance Level Code – The compliance basis for the submitting organization.

Figure F-17 shows how these data would appear in the retire transaction data block.

Figure F-17: Retire Transaction Data Elements

Data Element	Value	Reference	Required	Instructions
RINQuantity	1000		Yes	Enter the total number of RINs. This must be a whole number.
BatchVolume			No	Enter the volume gallons of fuel in the batch. It must be a whole number less than 99,999,999.
FuelCode	6	Renewable Fuel	Yes	Enter a valid fuel code found in Appendix D of this document.
AssignmentCode	2	Separated	Yes	Enter "1" if the RINs are assigned and "2" if they are separated.
RINYear	2009		Yes	Enter the year in YYYY format. This is the year in which the RIN was generated and can be derived from the production date.
RetireReasonCode	90	Demonstrate annual compliance	Yes	Enter a valid retire reason code found in Appendix D of this document.
ComplianceYear	2009		Yes	Enter the year in YYYY format. This is the year in which the RINs are being used for compliance.

(cont.)

Figure F-17: Retire Transaction Data Elements (cont.)

Data Element	Value	Reference	Required	Instructions
ComplianceLevelCode	20	Aggregated refiner	Yes	Enter a valid compliance level code found in Appendix D of this document.
ComplianceFacilityIdentifier			No	Provide the public facility identifier of the facility that is retiring RINs for compliance.
TransactionDetailComment			No	Provide any additional information regarding this transaction.

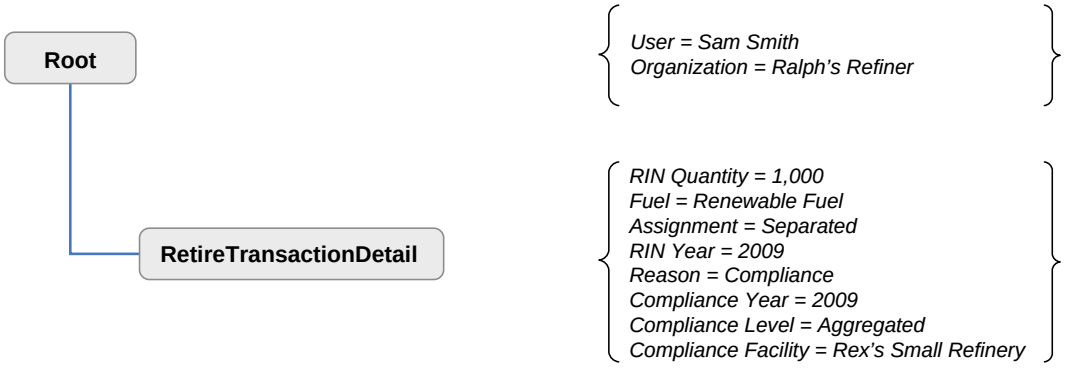
* Instructions for users who wish to specify a batch for a transaction can be found in the "Advanced Options" section of this document.

F-5.3 Retire for Compliance, Facility Level

When an organization wants to report compliance at the facility level, the user must submit a retire transaction indicating a facility level reason code and the facility for which RINs are being retired.

Figure F-18 shows the basic structure of a retire transaction. In this example, a Refiner is retiring 1,000 RINs for compliance at the facility level.

Figure F-18: General Structure of a Retire Transaction for Compliance, Facility Level



Objective: **Petroleum Refiner** retires 1,000 RINs for compliance at the facility level.

Required Information:

- RIN Quantity – The total number of RINs being retired in this transaction.
- Batch Volume – The total volume of renewable fuel.
- Fuel Code – Indicates the category of fuel to which the renewable fuel belongs: Cellulosic Biofuel (D = 3), Biomass-based Diesel (D = 4), Advanced Biofuel (D = 5), Renewable Fuel (D = 6), or Cellulosic Diesel (D = 7).
- Assignment Code – Identifies if the RINs are assigned or separated.
- RIN Year – The year in which the RIN was generated reflecting the year of the production date.
- Retire Reason Code – Code that indicates the RINs are being used for compliance.
- Compliance Year – The year in which the RINs are being used for compliance.
- Compliance Level Code – The compliance basis for the submitting organization.
- Compliance Facility Identifier – The public facility identifier of the facility that is retiring RINs for compliance.

Figure F-19 shows how these data would appear in the retire transaction data block.

Figure F-19: Retire Transaction Data Elements

Data Element	Value	Reference	Required	Instructions
RINQuantity	1000		Yes	Enter the total number of RINs. This must be a whole number.
BatchVolume			No	Enter the volume in gallons of fuel in the batch. It must be a whole number less than 99,999,999.
FuelCode	6	Renewable Fuel	Yes	Enter a valid fuel code found in Appendix D of this document.
AssignmentCode	2	Separated	Yes	Enter "1" if the RINs are assigned and "2" if they are separated.
RINYear	2009		Yes	Enter the year in YYYY format. This is the year in which the RIN was generated and can be derived from the production date.
RetireReasonCode	90	Demonstrate annual compliance	Yes	Enter a valid retire reason code found in Appendix D of this document.
ComplianceYear	2009		Yes	Enter the year in YYYY format. This is the year in which the RINs are being used for compliance.
ComplianceLevelCode	50	Facility Level	Yes	Enter a valid compliance level code found in Appendix D of this document.
ComplianceFacilityIdentifier	22222	Rex's Small Refinery	Yes	Provide the public facility identifier of the facility that is retiring RINs for compliance.
TransactionDetailComment			No	Provide any additional information regarding this transaction.

* Instructions for users who wish to specify a batch for a transaction can be found in the "Advanced Options" section of this document.

F-6 Advanced Options

F-6.1 Batch Specific Transactions

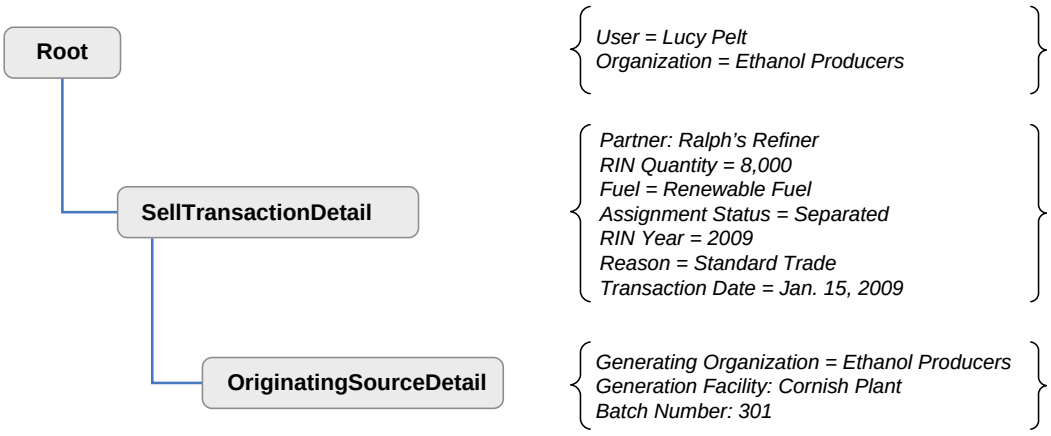
"Advanced Options" will be available to users who wish to submit separate, buy, sell, or retire transactions for a specific batch of RINs. These transactions require the user to provide a greater level of detail than the basic transaction as shown in this document. RINs can be specified by organization only, organization and facility, or by organization, facility, and batch.

F-6.1.1 Batch Specific Sell Transaction

When a trade occurs involving a specific batch of RINs, the buying and selling organizations report the additional information in the Originating Source data block, providing specifics on the organization and facility that produced the fuel and the batch number.

Figure F-20 shows the basic structure of a batch specific sell transaction. In this example, a Producer is selling 8,000 RINs from a specific batch to a Refiner.

Figure F-20: General Structure of a Batch Specific Sell Transaction



Objective: **Renewable Fuel Producer** sells 8,000 separated RINs from a specific generating facility.

Required Information:

- Trading Partner Organization Identifier – The identification number for the buying organization obtained through EPA.
- Trading Partner Organization Name – The name of the buying organization.
- RIN Quantity – The total number of RINs being retired in this transaction.

- Fuel Code – Indicates the category of fuel to which the renewable fuel belongs: Cellulosic Biofuel (D = 3), Biomass-based Diesel (D = 4), Advanced Biofuel (D = 5), Renewable Fuel (D = 6), or Cellulosic Diesel (D = 7).
- Assignment Code – Identifies if the RINs are assigned or separated.
- RIN Year – The year in which the RIN was generated reflecting the year of the production date.
- Sell Reason Code – Code that explains why these RINs are being sold.
- RIN Price Amount – The price at which the RINs were sold.
- Transaction Date – The date on which the sell transaction occurred outside of the EMTS.

Figure F-21 shows how these data would appear in the sell transaction data block for a specified batch of RINs.

Figure F-21: Batch Specific Sell Transaction Data Elements

Data Element	Value	Reference	Required	Instructions
TransactionPartnerOrganization Identifier	3333	Ralph's Refiner	Yes	Enter the organization identifier of the buying party. This is the organization number obtained through EPA.
TransactionPartnerOrganization Name	Ralph's		Yes	Enter the name of the buying party.
RINQuantity	8000		Yes	Enter the total number of RINs. This must be a whole number.
BatchVolume			No	Enter the volume in gallons of fuel in the batch. It must be a whole number less than 99,999,999.
FuelCode	6	Renewable Fuel	Yes	Enter a valid fuel code found in Appendix D of this document.
AssignmentCode	2	Separated	Yes	Enter "1" if the RINs are assigned and "2" if they are separated.

(cont.)

Figure F-21: Batch Specific Sell Transaction Data Elements (cont.)

Data Element	Value	Reference	Required	Instructions
RINYear	2009		Yes	Enter the year in YYYY format. This is the year in which the RIN was generated and can be derived from the production date.
SellReasonCode	10	Standard Trade	Yes	Enter a valid sell reason code found in Appendix D of this document.
RINPriceAmount	0.18		Yes	Enter the price per RIN in USD.
TransactionDate	2009-01-15		Yes	Enter the date in YYYY-MM-DD format. This is the date on which the transaction occurred.
PTDNumber	2495		No	Enter the PTD number associated with the transaction.
TransactionDetailComment			No	Provide any additional information regarding this transaction.

A batch specific transaction requires additional information about the originating source of the RINs. To specify the batch, include:

- Generate Organization Identifier – The public identifier of the organization that produced the fuel associated with the RINs being sold.
- Generate Facility Identifier – The public facility identifier for the plant that produced the renewable fuel associated with the RINs being sold.
- Batch Number Text – An internal tracking number assigned by the organization responsible for producing the fuel associated with the RINs being sold.

Figure F-22 shows how these data would appear in the originating source information for a batch of RINs.

Figure F-22: Sell Originating Source Detail

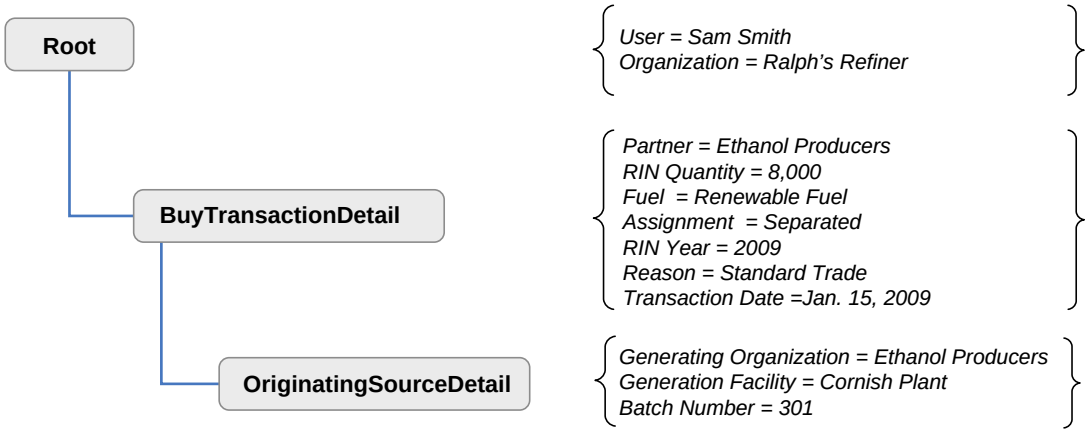
Data Element	Value	Reference	Required	Instructions
GenerateOrganizationIdentifier	1111	Ethanol Producer	Yes	Provide the public organization identifier for the producer of the fuel as registered with EPA.
GenerateFacilityIdentifier	77777	Cornish Plant	No	Provide the public facility identifier for the plant that produced the renewable fuel.
BatchNumberText	301		No	Enter the batch number associated with the batch at fuel production.

F-6.1.2 Batch Specific Buy Transaction

Users submitting a buy transaction for specific RINs must identify the same information as the selling organization as these fields will be used by the EMTS to match the transactions. If any of these fields identifying the RINs are incorrect, then the transaction will not be matched with its corresponding sell transaction and the trade will not be processed.

Figure F-23 shows the basic structure of a batch specific buy transaction. In this example, a Refiner is buying 8,000 RINs from a specific batch from a Producer.

Figure F-23: General Structure of a Batch Specific Buy Transaction



Objective: **Petroleum Refiner** buys 8,000 separated RINs from a specific generating facility.

Required Information:

- Trading Partner Organization Identifier – The identification number for the selling organization obtained through EPA.
- Trading Partner Organization Name – The name of the selling organization.
- RIN Quantity – The total number of RINs being retired in this transaction.
- Fuel Code – Indicates the category of fuel to which the renewable fuel belongs: Cellulosic Biofuel (D = 3), Biomass-based Diesel (D = 4), Advanced Biofuel (D = 5), Renewable Fuel (D = 6), or Cellulosic Diesel (D = 7).
- Assignment Code – Identifies if the RINs are assigned or separated.
- RIN Year – The year in which the RIN was generated reflecting the year of the production date.
- Buy Reason Code – Code that explains why these RINs are being bought.
- RIN Price Amount – The price at which the RINs were bought.
- Transaction Date – The date on which the buy transaction occurred outside of the EMTS.

Figure F-24 shows how these data would appear in the buy transaction data block for a specified batch of RINs.

Figure F-24: Batch Specific Buy Transaction Data Elements

Data Element	Value	Reference	Required	Instructions
TransactionPartnerOrganization Identifier	1111	Ethanol Producers	Yes	Enter the organization identifier of the selling party. This is the organization number obtained through EPA.
TransactionPartnerOrganization Name	Ethanol Producers		Yes	Enter the name of the selling party.
RINQuantity	8000		Yes	Enter the total number of RINs. This must be a whole number.
BatchVolume			No	Enter the volume of fuel in gallons of fuel in the batch. It must be a whole number less than 99,999,999.

(cont.)

Figure F-24: Batch Specific Buy Transaction Data Elements (cont.)

Data Element	Value	Reference	Required	Instructions
FuelCode	6	Renewable Fuel	Yes	Enter a valid fuel code found in Appendix D of this document.
AssignmentCode	2	Separated	Yes	Enter "1" if the RINs are assigned and "2" if they are separated.
RINYear	2009		Yes	Enter the year in YYYY format. This is the year in which the RIN was generated and can be derived from the production date.
BuyReasonCode	10	Standard Trade	Yes	Enter a valid buy reason code found in Appendix D of this document.
RINPriceAmount	0.18		Yes	Enter the price per RIN in USD.
TransactionDate	2009-01-15		Yes	Enter the date in YYYY-MM-DD format. This is the date on which the transaction occurred.
PTDNumber	2495		No	Enter the PTD number associated with the transaction.
TransactionDetailComment			No	Provide any additional information regarding this transaction.

Batch specific transactions require additional information about the originating source of the RINs. To specify the batch, include:

- Generate Organization Identifier – The public identifier of the organization that produced the fuel associated with the RINs being sold.
- Generate Facility Identifier – The public facility identifier for the plant that produced the renewable fuel associated with the RINs being sold.
- Batch Number Text – An internal tracking number assigned by the organization responsible for producing the fuel associated with the RINs being sold.

Figure F-25 shows how these data would appear in the originating source information for a batch of RINs.

Figure F-25: Originating Source Detail

Data Element	Value	Reference	Required	Instructions
GenerateOrganizationIdentifier	1111	Ethanol Producers	Yes	Provide the public organization identifier for the producer of the fuel as registered with EPA.
GenerateFacilityIdentifier	77777	Cornish Plant	No	Provide the public facility identifier for the plant that produced the renewable fuel.
BatchNumberText	301		No	Enter the batch number associated with the batch at fuel production.

F-6.2 Non-One-to-One Ratio

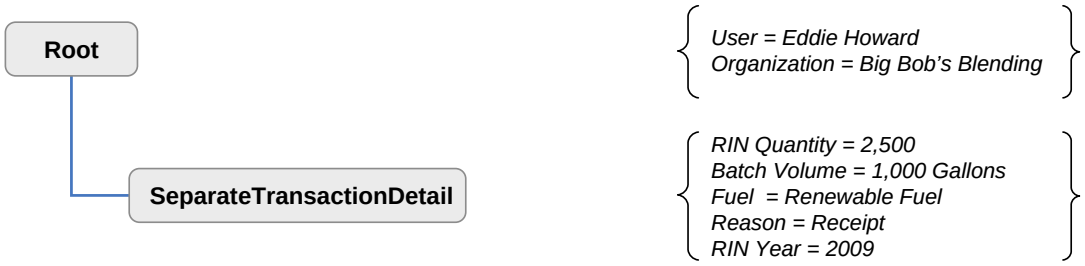
Within the advanced options, it is also possible for organizations to separate, buy, and sell fuel and RINs at a non-one-to-one ratio. Organizations may separate or sell up to two-and-a-half times as many RINs as the associated fuel volume in a single transaction.

F-6.2.1 Separate Fuel and RINs in a Non-One-to-One Ratio

As an advanced option, users may choose to separate a quantity of RINs that exceeds the volume of renewable fuel. The quantity of RINs may not be more than two-and-a-half times the volume of fuel. The user will need to specify an assignment code of "1" to indicate that these RINs are assigned to fuel at the time of the transaction.

Figure F-26 shows the basic structure of a non-one-to-one separate transaction. In this example, a Blender is separating 2,500 RINs from 1,000 gallons of renewable fuel.

Figure F-26: General Structure of a Non-One-to-One Separate Transaction



Objective: **Renewable Fuel Blender** separates 2,500 RINs from 1,000 gallons of fuel.

Required Information:

- RIN Quantity – The total number of RINs being retired in this transaction.
- Batch Volume – The total volume of renewable fuel.
- Fuel Code – Indicates the category of fuel to which the renewable fuel belongs: Cellulosic Biofuel (D = 3), Biomass-based Diesel (D = 4), Advanced Biofuel (D = 5), Renewable Fuel (D = 6), or Cellulosic Diesel (D = 7).
- Separate Reason Code – Code that explains why the fuel is being separated.
- RIN Year – The year in which the RIN was generated reflecting the year of the production date.

Figure F-27 shows how these data would appear in the separate transaction data block.

Figure F-27: Non-One-to-One Separate Transaction Data Elements

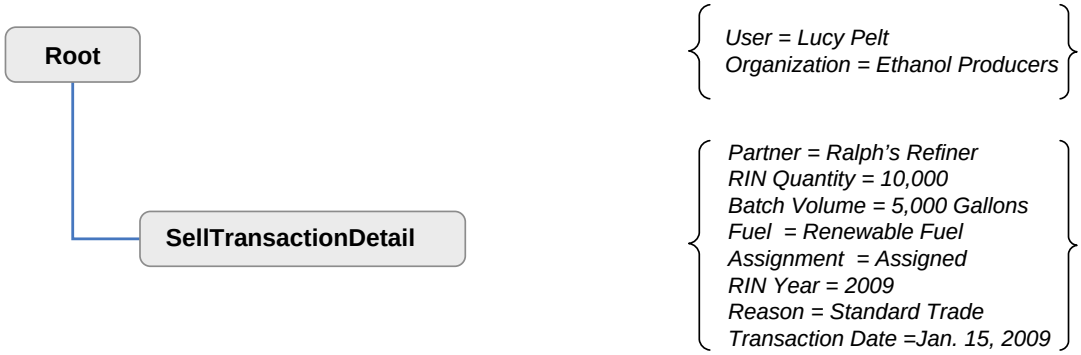
Data Element	Value	Reference	Required	Instructions
RINQuantity	2500		Yes	Enter the total number of RINs. This must be a whole number.
BatchVolume	1000		Yes	Enter the volume in gallons of fuel in the batch. It must be a whole number less than 99,999,999.
FuelCode	6	Renewable Fuel	Yes	Enter a valid fuel code found in Appendix D of this document.
SeparateReasonCode	10	Receipt of renewable fuel by obligated party	Yes	Enter a valid separate reason code found in Appendix A of this document.
RINYear	2009		Yes	Enter the year in YYYY format. This is the year in which the RIN was generated and can be derived from the production date.
TransactionDetailComment			No	Provide any additional information regarding this transaction.

F-6.2.2 Sell Fuel and RINs in a Non-One-to-One Ratio

Users may submit a sell transaction in a non-one-to-one ratio of fuel to RINs. The ratio will be indicated by entering the appropriate Batch Volume and RIN Quantity. If the organization intends to sell RINs of multiple fuel types, then the user will need to submit one transaction for each fuel type.

Figure F-28 shows the basic structure of a non-one-to-one sell transaction. In this example, a producer is selling 10,000 RINs and 5,000 gallons of renewable fuel to a Refiner.

Figure F-28: General Structure of a Non-One-to-One Sell Transaction



Objective: **Producer** sells 5,000 gallons of fuel and 10,000 RINs.

Required Information:

- Trading Partner Organization Identifier – The identification number for the buying organization obtained through EPA.
- Trading Partner Organization Name – The name of the buying organization.
- RIN Quantity – The total number of RINs being retired in this transaction.
- Batch Volume – The total volume of renewable fuel.
- Fuel Code – Indicates the category of fuel to which the renewable fuel belongs: Cellulosic Biofuel (D = 3), Biomass-based Diesel (D = 4), Advanced Biofuel (D = 5), Renewable Fuel (D = 6), or Cellulosic Diesel (D = 7).
- Assignment Code – Identifies if the RINs are assigned or separated.
- RIN Year – The year in which the RIN was generated reflecting the year of the production date.
- Sell Reason Code – Code that explains why these RINs are being sold.

- RIN Gallon Amount – The price at which the RINs and fuel were sold.
- Transaction Date – The date on which the sell transaction occurred outside of the EMTS.

Figure F-29 shows these data would appear in the sell transaction data block.

Figure F-29: Non-One-to-One Sell Transaction Data Elements

Data Element	Value	Reference	Required	Instructions
TransactionPartnerOrganization Identifier	3333	Ralph's Refiner	Yes	Enter the organization identifier of the buying party. This is the organization number obtained through EPA.
TransactionPartnerOrganization Name	Ralph's		Yes	Enter the name of the buying organization.
RINQuantity	10000		Yes	Enter the total number of RINs. This must be a whole number.
BatchVolume	5000		Yes	Enter the volume in gallons of fuel in the batch. It must be a whole number less than 99,999,999.
FuelCode	6	Renewable Fuel	Yes	Enter a valid fuel code found in Appendix D of this document.
AssignmentCode	1	Assigned to Fuel	Yes	Enter "1" if the RINs are assigned and "2" if they are separated.
RINYear	2009		Yes	Enter the year in YYYY format. This is the year in which the RIN was generated and can be derived from the production date.
SellReasonCode	10	Standard Trade	Yes	Enter a valid sell reason code found in Appendix D of this document.
GallonPriceAmount	2.75		Yes	Enter the price per gallon of renewable fuel in USD.
TransactionDate	2009-01-15		Yes	Enter the date in YYYY-MM-DD format. This is the date on which the transaction occurred.

(cont.)

Figure F-29: Non-One-to-One Sell Transaction Data Elements (cont.)

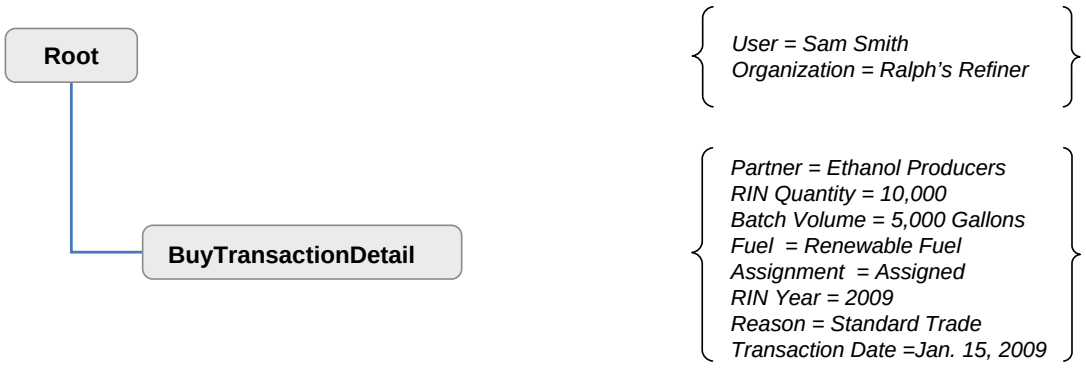
Data Element	Value	Reference	Required	Instructions
PTDNumber	3462		No	Enter the PTD number associated with the transaction.
TransactionDetailComment			No	Provide any additional information regarding this transaction.

F-6.2.3 Buy Fuel and RINs in a Non-One-to-One Ratio

Users may submit a buy transaction in a non-one-to-one ratio of fuel to RINs. The ratio will be indicated by entering the appropriate Batch Volume and RIN Quantity. These values must match the values in the corresponding sell transaction in order to be processed. If the organization intends to buy RINs of multiple fuel types, then the user will need to submit one transaction for each fuel type.

Figure F-30 shows the basic structure of a non-one-to-one buy transaction. In this example, a Refiner is buying 10,000 RINs and 5,000 gallons of renewable fuel from a Producer.

Figure F-30: Sample Structure of a Non-One-to-One Buy Transaction



Objective: **Petroleum Refiner** buys 5,000 gallons and 10,000 RINs.

Required Information:

- Trading Partner Organization Identifier – The identification number for the selling organization obtained through EPA.
- Trading Partner Organization Name – The name of the selling organization.
- RIN Quantity – The total number of RINs being retired in this transaction.

- Batch Volume – The total volume of renewable fuel.
- Fuel Code – Indicates the category of fuel to which the renewable fuel belongs: Cellulosic Biofuel (D = 3), Biomass-based Diesel (D = 4), Advanced Biofuel (D = 5), Renewable Fuel (D = 6), or Cellulosic Diesel (D = 7).
- Assignment Code – Identifies if the RINs are assigned or separated.
- RIN Year – The year in which the RIN was generated reflecting the year of the production date.
- Buy Reason Code – Code that explains why these RINs are being bought.
- RIN Gallon Amount – The price at which the RINs and fuel were bought.
- Transaction Date – The date on which the buy transaction occurred outside of the EMTS.

Figure F-31 shows how these data would appear in the submission file.

Figure F-31: Non-One-to-One Buy Transaction Data Elements

Data Element	Value	Reference	Required	Instructions
TransactionPartnerOrganization Identifier	1111	Ethanol Producers	Yes	Enter the organization identifier of the selling party. This is the organization number obtained through EPA.
TransactionPartnerOrganization Name	Ethanol Producers		Yes	Enter the name of the selling party.
RINQuantity	10000		Yes	Enter the total number of RINs. This must be a whole number.
BatchVolume	5000		Yes	Enter the volume in gallons of fuel in the batch. It must be a whole number less than 99,999,999.
FuelCode	6	Renewable Fuel	Yes	Enter a valid fuel code found in Appendix D of this document.
AssignmentCode	1	Assigned to Fuel	Yes	Enter "1" if the RINs are assigned and "2" if they are separated.

(cont.)

Figure F-31: Non-One-to-One Buy Transaction Data Elements (cont.)

Data Element	Value	Reference	Required	Instructions
RINYear	2009		Yes	Enter the year in YYYY format. This is the year in which the RIN was generated and can be derived from the production date.
BuyReasonCode	10	Standard Trade	Yes	Enter a valid buy reason code found in Appendix D of this document.
GallonPriceAmount	2.75		Yes	Enter the price per gallon of renewable fuel in USD.
TransactionDate	2009-01-15		Yes	Enter the date in YYYY-MM-DD format. This is the date on which the transaction occurred.
PTDNumber	3462		No	Enter the PTD number associated with the transaction.
TransactionDetailComment			No	Provide any additional information regarding this transaction.

Appendix G: User Roles and Permissions

Just as your organization's business activities dictate the transactions that it can perform in the EMTS, your User Role defines your permissions. Your user role is determined when you register your login ID with EPA through the OTAQReg Fuels Programs Registration system. The following is a list of all the user roles in the EMTS, accompanied by a brief description of the actions each user can take.

Viewer – A viewer has limited permissions in the EMTS and is restricted to read-only access. As a viewer, you may view information about your organization but you may not change any information. You may view your profile, organization information, RIN holdings, reports, transactions, submission log, announcements, and any of the help features.

Submitter – A submitter has the ability to create transactions either through the EMTS website or via batch file submissions. Any data you enter in a transaction will be stored in your organization's Transaction Bin. A submitter has the same rights as a viewer in EMTS.

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Appendix H: Cross-reference Tables

The following tables show cross-reference codes for reporting transactions to the EMTS.

The Business Activity by Separate Reason Code table shows which reasons can be reported for a separate transaction for a specific organization's business activity.

Figure H-1: Business Activity by Separate Reason Code

Business Activity Code	Description	Separate Reason Code	Description
10	Domestic Renewable Fuel Producer	20	Blending to produce a transportation fuel
10	Domestic Renewable Fuel Producer	30	Designation of renewable fuel as transportation fuel
10	Domestic Renewable Fuel Producer	40	Upstream Delegation for Blending
10	Domestic Renewable Fuel Producer	60	Use as Home Heating Oil or Jet Fuel
10	Domestic Renewable Fuel Producer	70	Use in a non-road engine or vehicle
10	Domestic Renewable Fuel Producer	80	Designation of Renewable Fuel as Home Heating Oil or Jet Fuel
30	Renewable Fuel Importer	20	Blending to produce a transportation fuel
30	Renewable Fuel Importer	30	Designation of renewable fuel as transportation fuel
30	Renewable Fuel Importer	40	Upstream Delegation for Blending
30	Renewable Fuel Importer	60	Use as Home Heating Oil or Jet Fuel
30	Renewable Fuel Importer	70	Use in a non-road engine or vehicle

(cont.)

Figure H-1: Business Activity by Separate Reason Code (cont.)

Business Activity Code	Description	Separate Reason Code	Description
30	Renewable Fuel Importer	80	Designation of Renewable Fuel as Heating Oil or Jet Fuel
40	Non-renewable Fuel Importer	10	Receipt of renewable fuel by obligated party
40	Non-renewable Fuel Importer	20	Blending to produce a transportation fuel
40	Non-renewable Fuel Importer	30	Designation of renewable fuel as transportation fuel
40	Non-renewable Fuel Importer	40	Upstream Delegation for Blending
40	Non-renewable Fuel Importer	60	Use as Heating Oil or Jet Fuel
40	Non-renewable Fuel Importer	70	Use in a non-road engine or vehicle
40	Non-renewable Fuel Importer	80	Designation of Renewable Fuel as Heating Oil or Jet Fuel
50	Renewable Fuel Exporter	20	Blending to produce a transportation fuel
50	Renewable Fuel Exporter	30	Designation of renewable fuel as transportation fuel
50	Renewable Fuel Exporter	40	Upstream Delegation for Blending
50	Renewable Fuel Exporter	50	Export of Renewable Fuel
50	Renewable Fuel Exporter	60	Use as Heating Oil or Jet Fuel
50	Renewable Fuel Exporter	70	Use in a non-road engine or vehicle
50	Renewable Fuel Exporter	80	Designation of Renewable Fuel as Heating Oil or Jet Fuel
60	Refiner	10	Receipt of renewable fuel by obligated party
60	Refiner	20	Blending to produce a transportation fuel
60	Refiner	30	Designation of renewable fuel as transportation fuel

(cont.)

Figure H-1: Business Activity by Separate Reason Code (cont.)

Business Activity Code	Description	Separate Reason Code	Description
60	Refiner	40	Upstream Delegation for Blending
60	Refiner	60	Use as Heating Oil or Jet Fuel
60	Refiner	70	Use in a non-road engine or vehicle
60	Refiner	80	Designation of Renewable Fuel as Heating Oil or Jet Fuel
70	Small Refiner	20	Blending to produce a transportation fuel
70	Small Refiner	30	Designation of renewable fuel as transportation fuel
70	Small Refiner	40	Upstream Delegation for Blending
70	Small Refiner	60	Use as Heating Oil or Jet Fuel
70	Small Refiner	70	Use in a non-road engine or vehicle
70	Small Refiner	80	Designation of Renewable Fuel as Heating Oil or Jet Fuel
80	RIN Owner	20	Blending to produce a transportation fuel
80	RIN Owner	30	Designation of renewable fuel as transportation fuel
80	RIN Owner	40	Upstream Delegation for Blending
80	RIN Owner	60	Use as Heating Oil or Jet Fuel
80	RIN Owner	70	Use in a non-road engine or vehicle
80	RIN Owner	80	Designation of Renewable Fuel as Heating Oil or Jet Fuel

The Business Activity by Buy Reason Code table shows which reasons can be reported for a buy transaction for a specific organization's business activity.

Figure H-2: Business Activity by Buy Reason Code

Business Activity Code	Description	Buy Reason Code	Description
10	Domestic Renewable Fuel Producer	10	Standard Trade
10	Domestic Renewable Fuel Producer	30	Incorrect Trading Partner
10	Domestic Renewable Fuel Producer	40	Remedial Action Specified by EPA
10	Domestic Renewable Fuel Producer	50	Deny
10	Domestic Renewable Fuel Producer	60	Cancel
20	Foreign Renewable Fuel Producer	10	Standard Trade
20	Foreign Renewable Fuel Producer	30	Incorrect Trading Partner
20	Foreign Renewable Fuel Producer	40	Remedial Action Specified by EPA
20	Foreign Renewable Fuel Producer	50	Deny
20	Foreign Renewable Fuel Producer	60	Cancel
30	Renewable Fuel Importer	10	Standard Trade
30	Renewable Fuel Importer	30	Incorrect Trading Partner
30	Renewable Fuel Importer	40	Remedial Action Specified by EPA
30	Renewable Fuel Importer	50	Deny
30	Renewable Fuel Importer	60	Cancel
40	Non-renewable Fuel Importer	10	Standard Trade
40	Non-renewable Fuel Importer	30	Incorrect Trading Partner
40	Non-renewable Fuel Importer	40	Remedial Action Specified by EPA

(cont.)

Figure H-2: Business Activity by Buy Reason Code (cont.)

Business Activity Code	Description	Buy Reason Code	Description
40	Non-renewable Fuel Importer	50	Deny
40	Non-renewable Fuel Importer	50	Deny
50	Renewable Fuel Exporter	10	Standard Trade
50	Renewable Fuel Exporter	30	Incorrect Trading Partner
50	Renewable Fuel Exporter	40	Remedial Action Specified by EPA
50	Renewable Fuel Exporter	50	Deny
60	Refiner	10	Standard Trade
50	Renewable Fuel Exporter	50	Deny
60	Refiner	30	Incorrect Trading Partner
60	Refiner	40	Remedial Action Specified by EPA
60	Refiner	50	Deny
60	Refiner	30	Incorrect Trading Partner
70	Small Refiner	10	Standard Trade
70	Small Refiner	30	Incorrect Trading Partner
70	Small Refiner	40	Remedial Action Specified by EPA
70	Small Refiner	50	Deny
70	Small Refiner	60	Cancel
80	RIN Owner	10	Standard Trade

(cont.)

Figure H-2: Business Activity by Buy Reason Code (cont.)

Business Activity Code	Description	Buy Reason Code	Description
80	RIN Owner	30	Incorrect Trading Partner
80	RIN Owner	50	Deny
80	RIN Owner	60	Cancel
80	RIN Owner	30	Incorrect Trading Partner

The Business Activity by Sell Reason Code table shows which reasons can be reported for a sell transaction for a specific organization's business activity.

Figure H-3: Business Activity by Sell Reason Code

Business Activity Code	Description	Sell Reason Code	Description
10	Domestic Renewable Fuel Producer	10	Standard Trade
10	Domestic Renewable Fuel Producer	30	Incorrect Trading Partner
10	Domestic Renewable Fuel Producer	40	Remedial Action Specified by EPA
10	Domestic Renewable Fuel Producer	50	Deny
10	Domestic Renewable Fuel Producer	60	Cancel
20	Foreign Renewable Fuel Producer	10	Standard Trade
20	Foreign Renewable Fuel Producer	30	Incorrect Trading Partner
20	Foreign Renewable Fuel Producer	40	Remedial Action Specified by EPA

(cont.)

Figure H-3: Business Activity by Sell Reason Code (cont.)

Business Activity Code	Description	Sell Reason Code	Description
20	Foreign Renewable Fuel Producer	50	Deny
20	Foreign Renewable Fuel Producer	60	Cancel
30	Renewable Fuel Importer	10	Standard Trade
30	Renewable Fuel Importer	30	Incorrect Trading Partner
30	Renewable Fuel Importer	40	Remedial Action Specified by EPA
30	Renewable Fuel Importer	50	Deny
30	Renewable Fuel Importer	60	Cancel
40	Non-renewable Fuel Importer	10	Standard Trade
40	Non-renewable Fuel Importer	30	Incorrect Trading Partner
40	Non-renewable Fuel Importer	40	Remedial Action Specified by EPA
40	Non-renewable Fuel Importer	50	Deny
40	Non-renewable Fuel Importer	60	Cancel
50	Renewable Fuel Exporter	10	Standard Trade
50	Renewable Fuel Exporter	30	Incorrect Trading Partner
50	Renewable Fuel Exporter	40	Remedial Action Specified by EPA
50	Renewable Fuel Exporter	50	Deny
50	Renewable Fuel Exporter	60	Cancel
60	Refiner	10	Standard Trade

(cont.)

Figure H-3: Business Activity by Sell Reason Code (cont.)

Business Activity Code	Description	Sell Reason Code	Description
60	Refiner	30	Incorrect Trading Partner
60	Refiner	40	Remedial Action Specified by EPA
60	Refiner	50	Deny
60	Refiner	60	Cancel
70	Small Refiner	10	Standard Trade
70	Small Refiner	30	Incorrect Trading Partner
70	Small Refiner	40	Remedial Action Specified by EPA
70	Small Refiner	50	Deny
70	Small Refiner	60	Cancel
80	RIN Owner	10	Standard Trade
80	RIN Owner	30	Incorrect Trading Partner
80	RIN Owner	40	Remedial Action Specified by EPA
80	RIN Owner	50	Deny
80	RIN Owner	60	Cancel

The Business Activity by Retire Reason Code table shows which reasons can be reported for a retire transaction for a specific organization's business activity.

Figure H-4: Business Activity by Retire Reason Code

Business Activity Code	Description	Retire Reason Code	Description
10	Domestic Renewable Fuel Producer	10	Reportable spill
10	Domestic Renewable Fuel Producer	20	Contaminated or spoiled fuel
10	Domestic Renewable Fuel Producer	40	Renewable Fuel Used in a Boiler or an Ocean-going Vessel
10	Domestic Renewable Fuel Producer	50	Invalid RIN
10	Domestic Renewable Fuel Producer	60	Volume error correction
10	Domestic Renewable Fuel Producer	70	Enforcement Obligation
20	Foreign Renewable Fuel Producer	10	Reportable spill
20	Foreign Renewable Fuel Producer	20	Contaminated or spoiled fuel
20	Foreign Renewable Fuel Producer	30	Import volume correction
20	Foreign Renewable Fuel Producer	40	Renewable Fuel Used in a Boiler or an Ocean-going Vessel
20	Foreign Renewable Fuel Producer	50	Invalid RIN
20	Foreign Renewable Fuel Producer	60	Volume error correction
20	Foreign Renewable Fuel Producer	70	Enforcement Obligation
30	Renewable Fuel Importer	10	Reportable spill
30	Renewable Fuel Importer	20	Contaminated or spoiled fuel
30	Renewable Fuel Importer	30	Import volume correction
30	Renewable Fuel Importer	40	Renewable Fuel Used in a Boiler or an Ocean-going Vessel
30	Renewable Fuel Importer	50	Invalid RIN

(cont.)

Figure H-4: Business Activity by Retire Reason Code (cont.)

Business Activity Code	Description	Retire Reason Code	Description
30	Renewable Fuel Importer	70	Enforcement Obligation
40	Non-renewable Fuel Importer	10	Reportable spill
40	Non-renewable Fuel Importer	20	Contaminated or spoiled fuel
40	Non-renewable Fuel Importer	40	Renewable Fuel Used in a Boiler or an Ocean-going Vessel
40	Non-renewable Fuel Importer	50	Invalid RIN
40	Non-renewable Fuel Importer	70	Enforcement Obligation
40	Non-renewable Fuel Importer	80	Demonstrate annual compliance
50	Renewable Fuel Exporter	10	Reportable spill
50	Renewable Fuel Exporter	20	Contaminated or spoiled fuel
50	Renewable Fuel Exporter	40	Renewable Fuel Used in a Boiler or an Ocean-going Vessel
50	Renewable Fuel Exporter	50	Invalid RIN
50	Renewable Fuel Exporter	70	Enforcement Obligation
50	Renewable Fuel Exporter	80	Demonstrate annual compliance
60	Refiner	10	Reportable spill
60	Refiner	20	Contaminated or spoiled fuel
60	Refiner	40	Renewable Fuel Used in a Boiler or an Ocean-going Vessel
60	Refiner	50	Invalid RIN

(cont.)

Figure H-4: Business Activity by Retire Reason Code (cont.)

Business Activity Code	Description	Retire Reason Code	Description
60	Refiner	70	Enforcement Obligation
60	Refiner	80	Demonstrate annual compliance
70	Small Refiner	10	Reportable spill
70	Small Refiner	20	Contaminated or spoiled fuel
70	Small Refiner	40	Renewable Fuel Used in a Boiler or an Ocean-going Vessel
70	Small Refiner	50	Invalid RIN
70	Small Refiner	70	Enforcement Obligation
80	RIN Owner	10	Reportable spill
80	RIN Owner	20	Contaminated or spoiled fuel
80	RIN Owner	40	Renewable Fuel Used in a Boiler or an Ocean-going Vessel
80	RIN Owner	50	Invalid RIN
80	RIN Owner	70	Enforcement Obligation

The Business Activity by Compliance Level Code table shows which compliance levels can be reported for a retire transaction for a specific organization's business activity.

Figure H-5: Business Activity by Compliance Level Code

Business Activity Code	Description	Compliance Level Code	Description
10	Domestic Renewable Fuel Producer	40	Non-Obligated Party
20	Foreign Renewable Fuel Producer	40	Non-Obligated Party
30	Renewable Fuel Importer	40	Non-Obligated Party
40	Non-renewable Fuel Importer	10	Aggregated Importer
50	Renewable Fuel Exporter	30	Exporter
60	Refiner	20	Aggregated Refiner
60	Refiner	50	Facility Level
70	Small Refiner	40	Non-Obligated Party
80	RIN Owner	40	Non-Obligated Party

The following table shows the valid combination of fuel category, process, and feedstock that can be reported for a fuel code (D code).

Figure H-6: Fuel Code by Process and Feedstock

Fuel Code	Description	Fuel Category Code	Description	Process Code	Description	Feedstock Code	Description
3	Cellulosic Biofuel	60	Cellulosic Ethanol	280	Cellulosic Production Process	260	Cellulosic Biomass – Forest Product Residues
3	Cellulosic Biofuel	60	Cellulosic Ethanol	280	Cellulosic Production Process	270	Cellulosic Biomass – Forest Thinnings
3	Cellulosic Biofuel	60	Cellulosic Ethanol	280	Cellulosic Production Process	280	Cellulosic Biomass – Separated Food Wastes
3	Cellulosic Biofuel	60	Cellulosic Ethanol	280	Cellulosic Production Process	290	Cellulosic Biomass – Slash
3	Cellulosic Biofuel	60	Cellulosic Ethanol	280	Cellulosic Production Process	250	Cellulosic Biomass – Annual Cover Crops
3	Cellulosic Biofuel	60	Cellulosic Ethanol	280	Cellulosic Production Process	220	Cellulosic Biomass – Separated Municipal Solid Waste
3	Cellulosic Biofuel	60	Cellulosic Ethanol	280	Cellulosic Production Process	140	Cellulosic Biomass – Separated Yard Wastes
3	Cellulosic Biofuel	60	Cellulosic Ethanol	280	Cellulosic Production Process	90	Cellulosic Biomass – Miscanthus
3	Cellulosic Biofuel	60	Cellulosic Ethanol	280	Cellulosic Production Process	70	Cellulosic Biomass – Agricultural Residues
3	Cellulosic Biofuel	60	Cellulosic Ethanol	280	Cellulosic Production Process	80	Cellulosic Biomass – Switchgrass

(cont.)

Figure H-6: Fuel Code by Process and Feedstock (cont.)

Fuel Code	Description	Fuel Category Code	Description	Process Code	Description	Feedstock Code	Description
3	Cellulosic Biofuel	110	Cellulosic Naphtha	290	Fischer-Tropsch Process	70	Cellulosic Biomass – Agricultural Residues
3	Cellulosic Biofuel	110	Cellulosic Naphtha	290	Fischer-Tropsch Process	80	Cellulosic Biomass – Switchgrass
3	Cellulosic Biofuel	110	Cellulosic Naphtha	290	Fischer-Tropsch Process	90	Cellulosic Biomass – Miscanthus
3	Cellulosic Biofuel	110	Cellulosic Naphtha	290	Fischer-Tropsch Process	140	Cellulosic Biomass – Separated Yard Wastes
3	Cellulosic Biofuel	110	Cellulosic Naphtha	290	Fischer-Tropsch Process	260	Cellulosic Biomass – Forest Product Residues
3	Cellulosic Biofuel	110	Cellulosic Naphtha	290	Fischer-Tropsch Process	250	Cellulosic Biomass – Annual Cover Crops
3	Cellulosic Biofuel	110	Cellulosic Naphtha	290	Fischer-Tropsch Process	290	Cellulosic Biomass – Slash
3	Cellulosic Biofuel	110	Cellulosic Naphtha	290	Fischer-Tropsch Process	280	Cellulosic Biomass – Separated Food Wastes
3	Cellulosic Biofuel	110	Cellulosic Naphtha	290	Fischer-Tropsch Process	270	Cellulosic Biomass – Forest Thinnings
3	Cellulosic Biofuel	110	Cellulosic Naphtha	290	Fischer-Tropsch Process	220	Cellulosic Biomass – Separated Municipal Solid Waste
4	Biomass-based Diesel	20	Biodiesel	180	Transesterification, Dedicated Renewable Biomass Facility	240	Oil from Annual Covercrops

(cont.)

Figure H-6: Fuel Code by Process and Feedstock (cont.)

Fuel Code	Description	Fuel Category Code	Description	Process Code	Description	Feedstock Code	Description
4	Biomass-based Diesel	20	Biodiesel	180	Transesterification, Dedicated Renewable Biomass Facility	230	Algal Oil
4	Biomass-based Diesel	20	Biodiesel	180	Transesterification, Dedicated Renewable Biomass Facility	210	Soybean Oil
4	Biomass-based Diesel	20	Biodiesel	180	Transesterification, Dedicated Renewable Biomass Facility	160	Waste Oils/Fats/Grease
4	Biomass-based Diesel	20	Biodiesel	180	Transesterification, Dedicated Renewable Biomass Facility	200	Non-food Grade Corn Oil
4	Biomass-based Diesel	40	Non-ester renewable diesel	200	Hydrotreating, Dedicated Renewable Biomass Facility	160	Waste Oils/Fats/Grease
4	Biomass-based Diesel	40	Non-ester renewable diesel	200	Hydrotreating, Dedicated Renewable Biomass Facility	200	Non-food Grade Corn Oil
4	Biomass-based Diesel	40	Non-ester renewable diesel	200	Hydrotreating, Dedicated Renewable Biomass Facility	210	Soybean Oil
4	Biomass-based Diesel	40	Non-ester renewable diesel	200	Hydrotreating, Dedicated Renewable Biomass Facility	230	Algal Oil
4	Biomass-based Diesel	40	Non-ester renewable diesel	200	Hydrotreating, Dedicated Renewable Biomass Facility	240	Oil from Annual Covercrops

(cont.)

Figure H-6: Fuel Code by Process and Feedstock (cont.)

Fuel Code	Description	Fuel Category Code	Description	Process Code	Description	Feedstock Code	Description
4	Biomass-based Diesel	120	Renewable Bio-Oil-Diesel (Petition Required)	180	Transesterification, Dedicated Renewable Biomass Facility	160	Waste Oils/Fats/Grease
4	Biomass-based Diesel	120	Renewable Bio-Oil-Diesel (Petition Required)	180	Transesterification, Dedicated Renewable Biomass Facility	200	Non-food Grade Corn Oil
4	Biomass-based Diesel	120	Renewable Bio-Oil-Diesel (Petition Required)	180	Transesterification, Dedicated Renewable Biomass Facility	210	Soybean Oil
4	Biomass-based Diesel	120	Renewable Bio-Oil-Diesel (Petition Required)	180	Transesterification, Dedicated Renewable Biomass Facility	230	Algal Oil
4	Biomass-based Diesel	120	Renewable Bio-Oil-Diesel (Petition Required)	180	Transesterification, Dedicated Renewable Biomass Facility	240	Oil from Annual Covercrops
5	Advanced Biofuel	10	Ethanol	790	Fermentation (Sugarcane only)	120	Sugarcane
5	Advanced Biofuel	10	Ethanol	860	Eligible Renewable Fuels From Non-cellulosic Portions of Separated Food Wastes Process	350	Non-cellulosic Portions of Separated Food Wastes
5	Advanced Biofuel	20	Biodiesel	870	Transesterification, Co-Processing Facility	240	Oil from Annual Covercrops

(cont.)

Figure H-6: Fuel Code by Process and Feedstock (cont.)

Fuel Code	Description	Fuel Category Code	Description	Process Code	Description	Feedstock Code	Description
5	Advanced Biofuel	20	Biodiesel	870	Transesterification, Co-Processing Facility	230	Algal Oil
5	Advanced Biofuel	20	Biodiesel	870	Transesterification, Co-Processing Facility	210	Soybean Oil
5	Advanced Biofuel	20	Biodiesel	870	Transesterification, Co-Processing Facility	200	Non-food Grade Corn Oil
5	Advanced Biofuel	20	Biodiesel	870	Transesterification, Co-Processing Facility	160	Waste Oils/Fats/Grease
5	Advanced Biofuel	40	Non-ester renewable diesel	190	Hydrotreating, Co-processing Facility	230	Algal Oil
5	Advanced Biofuel	40	Non-ester renewable diesel	190	Hydrotreating, Co-processing Facility	210	Soybean Oil
5	Advanced Biofuel	40	Non-ester renewable diesel	190	Hydrotreating, Co-processing Facility	200	Non-food Grade Corn Oil
5	Advanced Biofuel	40	Non-ester renewable diesel	190	Hydrotreating, Co-processing Facility	160	Waste Oils/Fats/Grease
5	Advanced Biofuel	40	Non-ester renewable diesel	190	Hydrotreating, Co-processing Facility	240	Oil from Annual Covercrops
5	Advanced Biofuel	40	Non-ester renewable diesel	860	Eligible Renewable Fuels From Non-cellulosic Portions of Separated Food Wastes Process	350	Non-cellulosic Portions of Separated Food Wastes

(cont.)

Figure H-6: Fuel Code by Process and Feedstock (cont.)

Fuel Code	Description	Fuel Category Code	Description	Process Code	Description	Feedstock Code	Description
5	Advanced Biofuel	80	Biogas	850	Biogas Production	340	Sewage and Waste Treatment Plants
5	Advanced Biofuel	80	Biogas	850	Biogas Production	330	Landfills
5	Advanced Biofuel	80	Biogas	850	Biogas Production	320	Manure Digesters
5	Advanced Biofuel	120	Renewable Bio-Oil-Diesel (Petition Required)	870	Transesterification, Co-Processing Facility	240	Oil from Annual Covercrops
5	Advanced Biofuel	120	Renewable Bio-Oil-Diesel (Petition Required)	870	Transesterification, Co-Processing Facility	230	Algal Oil
5	Advanced Biofuel	120	Renewable Bio-Oil-Diesel (Petition Required)	870	Transesterification, Co-Processing Facility	210	Soybean Oil
5	Advanced Biofuel	120	Renewable Bio-Oil-Diesel (Petition Required)	870	Transesterification, Co-Processing Facility	200	Non-food Grade Corn Oil
5	Advanced Biofuel	120	Renewable Bio-Oil-Diesel (Petition Required)	870	Transesterification, Co-Processing Facility	160	Waste Oils/Fats/Grease
5	Advanced Biofuel	130	Renewable Naphtha	860	Eligible Renewable Fuels From Non-cellulosic Portions of Separated Food Wastes Process	350	Non-cellulosic Portions of Separated Food Wastes

(cont.)

Figure H-6: Fuel Code by Process and Feedstock (cont.)

Fuel Code	Description	Fuel Category Code	Description	Process Code	Description	Feedstock Code	Description
5	Advanced Biofuel	140	Renewable Jet Fuel	860	Eligible Renewable Fuels From Non-cellulosic Portions of Separated Food Wastes Process	350	Non-cellulosic Portions of Separated Food Wastes
5	Advanced Biofuel	150	Renewable Heating Oil	860	Eligible Renewable Fuels From Non-cellulosic Portions of Separated Food Wastes Process	350	Non-cellulosic Portions of Separated Food Wastes
6	Renewable Fuel	10	Ethanol	10	Grandfathered (Dry Mill, Natural Gas Fired)	10	Starch – Corn
6	Renewable Fuel	10	Ethanol	10	Grandfathered (Dry Mill, Natural Gas Fired)	888	Feedstock (Not Listed) – Used at a Grandfathered Facility
6	Renewable Fuel	10	Ethanol	110	Grandfathered (Dry Mill, Biomass Fired)	10	Starch – Corn
6	Renewable Fuel	10	Ethanol	110	Grandfathered (Dry Mill, Biomass Fired)	888	Feedstock (Not Listed) – Used at a Grandfathered Facility
6	Renewable Fuel	10	Ethanol	120	Grandfathered (Wet Mill, Natural Gas Fired)	10	Starch – Corn
6	Renewable Fuel	10	Ethanol	120	Grandfathered (Wet Mill, Natural Gas Fired)	888	Feedstock (Not Listed) – Used at a Grandfathered Facility
6	Renewable Fuel	10	Ethanol	130	Grandfathered (Wet Mill, Coal Fired)	10	Starch – Corn

(cont.)

Figure H-6: Fuel Code by Process and Feedstock (cont.)

Fuel Code	Description	Fuel Category Code	Description	Process Code	Description	Feedstock Code	Description
6	Renewable Fuel	10	Ethanol	130	Grandfathered (Wet Mill, Coal Fired)	888	Feedstock (Not Listed) – Used at a Grandfathered Facility
6	Renewable Fuel	10	Ethanol	140	Grandfathered (Wet Mill, Biomass Fired)	10	Starch – Corn
6	Renewable Fuel	10	Ethanol	140	Grandfathered (Wet Mill, Biomass Fired)	888	Feedstock (Not Listed) – Used at a Grandfathered Facility
6	Renewable Fuel	10	Ethanol	20	Dry Mill, Natural Gas Fired (CHP, 65% or less of DGS dried annually)	10	Starch – Corn
6	Renewable Fuel	10	Ethanol	300	Dry Mill, Biogas Fired (50% or less of DGS dried annually)	10	Starch – Corn
6	Renewable Fuel	10	Ethanol	310	Dry Mill, Biogas Fired (CHP, 65% or less of DGS dried annually)	10	Starch – Corn
6	Renewable Fuel	10	Ethanol	320	Dry Mill, Biogas Fired (CHP, Corn Oil Fractionation)	10	Starch – Corn
6	Renewable Fuel	10	Ethanol	330	Dry Mill, Biogas Fired (CHP, Corn Oil Fractionation, Corn Oil Extraction)	10	Starch – Corn

(cont.)

Figure H-6: Fuel Code by Process and Feedstock (cont.)

Fuel Code	Description	Fuel Category Code	Description	Process Code	Description	Feedstock Code	Description
6	Renewable Fuel	10	Ethanol	340	Dry Mill, Biogas Fired (CHP, Corn Oil Fractionation, Corn Oil Extraction, Membrane Separation)	10	Starch – Corn
6	Renewable Fuel	10	Ethanol	350	Dry Mill, Biogas Fired (CHP, Corn Oil Fractionation, Corn Oil Extraction, Membrane Separation, Raw Starch Hydrolysis)	10	Starch – Corn
6	Renewable Fuel	10	Ethanol	360	Dry Mill, Biogas Fired (Corn Oil Extraction, 65% or less of DGS dried annually)	10	Starch – Corn
6	Renewable Fuel	10	Ethanol	370	Dry Mill, Biogas Fired (Corn Oil Extraction, Membrane Separation)	10	Starch – Corn
6	Renewable Fuel	10	Ethanol	380	Dry Mill, Biogas Fired (Corn Oil Extraction, Membrane Separation, Raw Starch Hydrolysis)	10	Starch – Corn
6	Renewable Fuel	10	Ethanol	390	Dry Mill, Biogas Fired (Corn Oil Fractionation, 65% or less of DGS dried annually)	10	Starch – Corn

(cont.)

Figure H-6: Fuel Code by Process and Feedstock (cont.)

Fuel Code	Description	Fuel Category Code	Description	Process Code	Description	Feedstock Code	Description
6	Renewable Fuel	10	Ethanol	400	Dry Mill, Biogas Fired (Corn Oil Fractionation, Corn Oil Extraction)	10	Starch – Corn
6	Renewable Fuel	10	Ethanol	410	Dry Mill, Biogas Fired (Corn Oil Fractionation, Corn Oil Extraction, Membrane Separation)	10	Starch – Corn
6	Renewable Fuel	10	Ethanol	420	Dry Mill, Biogas Fired (Corn Oil Fractionation, Corn Oil Extraction, Membrane Separation, Raw Starch)	10	Starch – Corn
6	Renewable Fuel	10	Ethanol	430	Dry Mill, Biogas Fired (Membrane Separation, 65% or less of DGS dried annually)	10	Starch – Corn
6	Renewable Fuel	10	Ethanol	440	Dry Mill, Biogas Fired (Membrane Separation, Raw Starch Hydrolysis)	10	Starch – Corn
6	Renewable Fuel	10	Ethanol	450	Dry Mill, Biogas Fired (Raw Starch Hydrolysis, 65% or less of DGS dried annually)	10	Starch – Corn
6	Renewable Fuel	10	Ethanol	460	Dry Mill, Biomass Fired (50% or less of DGS dried annually)	10	Starch – Corn

(cont.)

Figure H-6: Fuel Code by Process and Feedstock (cont.)

Fuel Code	Description	Fuel Category Code	Description	Process Code	Description	Feedstock Code	Description
6	Renewable Fuel	10	Ethanol	470	Dry Mill, Biomass Fired (CHP, 65% or less of DGS dried annually)	10	Starch – Corn
6	Renewable Fuel	10	Ethanol	480	Dry Mill, Biomass Fired (CHP, Corn Oil Fractionation)	10	Starch – Corn
6	Renewable Fuel	10	Ethanol	490	Dry Mill, Biomass Fired (CHP, Corn Oil Fractionation, Corn Oil Extraction)	10	Starch – Corn
6	Renewable Fuel	10	Ethanol	500	Dry Mill, Biomass Fired (CHP, Corn Oil Fractionation, Corn Oil Extraction, Membrane Separation)	10	Starch – Corn
6	Renewable Fuel	10	Ethanol	510	Dry Mill, Biomass Fired (CHP, Corn Oil Fractionation, Corn Oil Extraction, Membrane Separation, Raw Starch Hydrolysis)	10	Starch – Corn
6	Renewable Fuel	10	Ethanol	520	Dry Mill, Biomass Fired (Corn Oil Extraction, 65% or less of DGS dried annually)	10	Starch – Corn
6	Renewable Fuel	10	Ethanol	530	Dry Mill, Biomass Fired (Corn Oil Extraction, Membrane Separation)	10	Starch – Corn

(cont.)

Figure H-6: Fuel Code by Process and Feedstock (cont.)

Fuel Code	Description	Fuel Category Code	Description	Process Code	Description	Feedstock Code	Description
6	Renewable Fuel	10	Ethanol	540	Dry Mill, Biomass Fired (Corn Oil Extraction, Membrane Separation, Raw Starch Hydrolysis)	10	Starch – Corn
6	Renewable Fuel	10	Ethanol	550	Dry Mill, Biomass Fired (Corn Oil Fractionation, 65% or less of DGS dried annually)	10	Starch – Corn
6	Renewable Fuel	10	Ethanol	560	Dry Mill, Biomass Fired (Corn Oil Fractionation, Corn Oil Extraction)	10	Starch – Corn
6	Renewable Fuel	10	Ethanol	570	Dry Mill, Biomass Fired (Corn Oil Fractionation, Corn Oil Extraction, Membrane Separation)	10	Starch – Corn
6	Renewable Fuel	10	Ethanol	580	Dry Mill, Biomass Fired (Corn Oil Fractionation, Corn Oil Extraction, Membrane Separation, Raw Starch Hydrolosis)	10	Starch – Corn
6	Renewable Fuel	10	Ethanol	590	Dry Mill, Biomass Fired (Membrane Separation, 65% or less of DGS dried annually)	10	Starch – Corn

(cont.)

Figure H-6: Fuel Code by Process and Feedstock (cont.)

Fuel Code	Description	Fuel Category Code	Description	Process Code	Description	Feedstock Code	Description
6	Renewable Fuel	10	Ethanol	60	Grandfathered (Dry Mill, Coal Fired)	10	Starch – Corn
6	Renewable Fuel	10	Ethanol	60	Grandfathered (Dry Mill, Coal Fired)	888	Feedstock (Not Listed) – Used at a Grandfathered Facility
6	Renewable Fuel	10	Ethanol	600	Dry Mill, Biomass Fired (Membrane Separation, Raw Starch Hydrolysis)	10	Starch – Corn
6	Renewable Fuel	10	Ethanol	610	Dry Mill, Biomass Fired (Raw Starch Hydrolysis, 65% or less of DGS dried annually)	10	Starch – Corn
6	Renewable Fuel	10	Ethanol	620	Dry Mill, Natural Gas Fired (50% or less of DGS dried annually)	10	Starch – Corn
6	Renewable Fuel	10	Ethanol	630	Dry Mill, Natural Gas Fired (CHP, Corn Oil Fractionation)	10	Starch – Corn
6	Renewable Fuel	10	Ethanol	640	Dry Mill, Natural Gas Fired (CHP, Corn Oil Fractionation, Corn Oil Extraction)	10	Starch – Corn
6	Renewable Fuel	10	Ethanol	650	Dry Mill, Natural Gas Fired (CHP, Corn Oil Fractionation, Corn Oil Extraction, Membrane Separation)	10	Starch – Corn

(cont.)

Figure H-6: Fuel Code by Process and Feedstock (cont.)

Fuel Code	Description	Fuel Category Code	Description	Process Code	Description	Feedstock Code	Description
6	Renewable Fuel	10	Ethanol	660	Dry Mill, Natural Gas Fired (CHP, Corn Oil Fractionation, Corn Oil Extraction, Membrane Separation)	10	Starch – Corn
6	Renewable Fuel	10	Ethanol	670	Dry Mill, Natural Gas Fired (Corn Oil Extraction, 65% or less of DGS dried annually)	10	Starch – Corn
6	Renewable Fuel	10	Ethanol	680	Dry Mill, Natural Gas Fired (Corn Oil Extraction, Membrane Separation)	10	Starch – Corn
6	Renewable Fuel	10	Ethanol	690	Dry Mill, Natural Gas Fired (Corn Oil Extraction, Membrane Separation, Raw Starch Hydrolysis)	10	Starch – Corn
6	Renewable Fuel	10	Ethanol	700	Dry Mill, Natural Gas Fired (Corn Oil Fractionation, 65% or less of DGS dried annually)	10	Starch – Corn
6	Renewable Fuel	10	Ethanol	710	Dry Mill, Natural Gas Fired (Corn Oil Fractionation, Corn Oil Extraction)	10	Starch – Corn

(cont.)

Figure H-6: Fuel Code by Process and Feedstock (cont.)

Fuel Code	Description	Fuel Category Code	Description	Process Code	Description	Feedstock Code	Description
6	Renewable Fuel	10	Ethanol	720	Dry Mill, Natural Gas Fired (Corn Oil Fractionation, Corn Oil Extraction, Membrane Separation)	10	Starch – Corn
6	Renewable Fuel	10	Ethanol	730	Dry Mill, Natural Gas Fired (Corn Oil Fractionation, Corn Oil Extraction, Membrane Separation, Raw Starch Hydrolysis)	10	Starch – Corn
6	Renewable Fuel	10	Ethanol	740	Dry Mill, Natural Gas Fired (Membrane Separation, 65% or less of DGS dried annually)	10	Starch – Corn
6	Renewable Fuel	10	Ethanol	750	Dry Mill, Natural Gas Fired (Membrane Separation, Raw Starch Hydrolysis)	10	Starch – Corn
6	Renewable Fuel	10	Ethanol	760	Dry Mill, Natural Gas Fired (Raw Starch Hydrolysis, 65% or less of DGS dried annually)	10	Starch – Corn
6	Renewable Fuel	10	Ethanol	770	Wet Mill, Biomass Fired	10	Starch – Corn
6	Renewable Fuel	10	Ethanol	780	Wet Mill, Biogas Fired	10	Starch – Corn
6	Renewable Fuel	10	Ethanol	800	Fermentation using biomass for process energy	310	Starch – Annual Covercrops

(cont.)

Figure H-6: Fuel Code by Process and Feedstock (cont.)

Fuel Code	Description	Fuel Category Code	Description	Process Code	Description	Feedstock Code	Description
6	Renewable Fuel	10	Ethanol	800	Fermentation using biomass for process energy	300	Starch – Agricultural Residues
6	Renewable Fuel	10	Ethanol	810	Fermentation using natural gas for process energy	310	Starch – Annual Covercrops
6	Renewable Fuel	10	Ethanol	810	Fermentation using natural gas for process energy	300	Starch – Agricultural Residues
6	Renewable Fuel	10	Ethanol	820	Fermentation using biogas for process energy	310	Starch – Annual Covercrops
6	Renewable Fuel	10	Ethanol	820	Fermentation using biogas for process energy	300	Starch – Agricultural Residues
6	Renewable Fuel	10	Ethanol	830	Grandfathered (Dry Mill, Biogas Fired)	10	Starch – Corn
6	Renewable Fuel	10	Ethanol	830	Grandfathered (Dry Mill, Biogas Fired)	888	Feedstock (Not Listed) – Used at a Grandfathered Facility
6	Renewable Fuel	10	Ethanol	840	Grandfathered (Wet Mill, Biogas Fired)	10	Starch – Corn
6	Renewable Fuel	10	Ethanol	840	Grandfathered (Wet Mill, Biogas Fired)	888	Feedstock (Not Listed) – Used at a Grandfathered Facility
6	Renewable Fuel	20	Biodiesel	180	Transesterification, Dedicated Renewable Biomass Facility	210	Soybean Oil

(cont.)

Figure H-6: Fuel Code by Process and Feedstock (cont.)

Fuel Code	Description	Fuel Category Code	Description	Process Code	Description	Feedstock Code	Description
6	Renewable Fuel	70	Butanol	800	Fermentation using biomass for process energy	10	Starch – Corn
6	Renewable Fuel	70	Butanol	810	Fermentation using natural gas for process energy	10	Starch – Corn
6	Renewable Fuel	70	Butanol	820	Fermentation using biogas for process energy	10	Starch – Corn
6	Renewable Fuel	10	Ethanol	888	Grandfathered (Other)	10	Starch – Corn
6	Renewable Fuel	10	Ethanol	888	Grandfathered (Other)	70	Cellulosic Biomass – Agricultural Residues
6	Renewable Fuel	10	Ethanol	888	Grandfathered (Other)	80	Cellulosic Biomass – Switchgrass
6	Renewable Fuel	10	Ethanol	888	Grandfathered (Other)	90	Cellulosic Biomass – Miscanthus
6	Renewable Fuel	10	Ethanol	888	Grandfathered (Other)	120	Sugarcane
6	Renewable Fuel	10	Ethanol	888	Grandfathered (Other)	140	Cellulosic Biomass – Separated Yard Wastes
6	Renewable Fuel	10	Ethanol	888	Grandfathered (Other)	160	Waste Oils/Fats/Grease
6	Renewable Fuel	10	Ethanol	888	Grandfathered (Other)	200	Non-food Grade Corn Oil
6	Renewable Fuel	10	Ethanol	888	Grandfathered (Other)	210	Soybean Oil
6	Renewable Fuel	10	Ethanol	888	Grandfathered (Other)	220	Cellulosic Biomass – Separated Municipal Solid Waste
6	Renewable Fuel	10	Ethanol	888	Grandfathered (Other)	230	Algal Oil

(cont.)

Figure H-6: Fuel Code by Process and Feedstock (cont.)

Fuel Code	Description	Fuel Category Code	Description	Process Code	Description	Feedstock Code	Description
6	Renewable Fuel	10	Ethanol	888	Grandfathered (Other)	240	Oil from Annual Covercrops
6	Renewable Fuel	10	Ethanol	888	Grandfathered (Other)	250	Cellulosic Biomass – Annual Cover Crops
6	Renewable Fuel	10	Ethanol	888	Grandfathered (Other)	260	Cellulosic Biomass – Forest Product Residues
6	Renewable Fuel	10	Ethanol	888	Grandfathered (Other)	270	Cellulosic Biomass – Forest Thinnings
6	Renewable Fuel	10	Ethanol	888	Grandfathered (Other)	280	Cellulosic Biomass – Separated Food Wastes
6	Renewable Fuel	10	Ethanol	888	Grandfathered (Other)	290	Cellulosic Biomass – Slash
6	Renewable Fuel	10	Ethanol	888	Grandfathered (Other)	300	Starch – Agricultural Residues
6	Renewable Fuel	10	Ethanol	888	Grandfathered (Other)	310	Starch – Annual Covercrops
6	Renewable Fuel	10	Ethanol	888	Grandfathered (Other)	320	Manure Digesters
6	Renewable Fuel	10	Ethanol	888	Grandfathered (Other)	330	Landfills
6	Renewable Fuel	10	Ethanol	888	Grandfathered (Other)	340	Sewage and Waste Treatment Plants
6	Renewable Fuel	10	Ethanol	888	Grandfathered (Other)	350	Non-cellulosic Portions of Separated Food Wastes
6	Renewable Fuel	10	Ethanol	888	Grandfathered (Other)	888	Feedstock (Not Listed) – Used at a Grandfathered Facility

(cont.)

Figure H-6: Fuel Code by Process and Feedstock (cont.)

Fuel Code	Description	Fuel Category Code	Description	Process Code	Description	Feedstock Code	Description
6	Renewable Fuel	20	Biodiesel	888	Grandfathered (Other)	10	Starch – Corn
6	Renewable Fuel	20	Biodiesel	888	Grandfathered (Other)	70	Cellulosic Biomass – Agricultural Residues
6	Renewable Fuel	20	Biodiesel	888	Grandfathered (Other)	80	Cellulosic Biomass – Switchgrass
6	Renewable Fuel	20	Biodiesel	888	Grandfathered (Other)	90	Cellulosic Biomass – Miscanthus
6	Renewable Fuel	20	Biodiesel	888	Grandfathered (Other)	120	Sugarcane
6	Renewable Fuel	20	Biodiesel	888	Grandfathered (Other)	140	Cellulosic Biomass – Separated Yard Wastes
6	Renewable Fuel	20	Biodiesel	888	Grandfathered (Other)	160	Waste Oils/Fats/Grease
6	Renewable Fuel	20	Biodiesel	888	Grandfathered (Other)	200	Non-food Grade Corn Oil
6	Renewable Fuel	20	Biodiesel	888	Grandfathered (Other)	210	Soybean Oil
6	Renewable Fuel	20	Biodiesel	888	Grandfathered (Other)	220	Cellulosic Biomass – Separated Municipal Solid Waste
6	Renewable Fuel	20	Biodiesel	888	Grandfathered (Other)	230	Algal Oil
6	Renewable Fuel	20	Biodiesel	888	Grandfathered (Other)	240	Oil from Annual Covercrops
6	Renewable Fuel	20	Biodiesel	888	Grandfathered (Other)	250	Cellulosic Biomass – Annual Cover Crops
6	Renewable Fuel	20	Biodiesel	888	Grandfathered (Other)	260	Cellulosic Biomass – Forest Product Residues

(cont.)

Figure H-6: Fuel Code by Process and Feedstock (cont.)

Fuel Code	Description	Fuel Category Code	Description	Process Code	Description	Feedstock Code	Description
6	Renewable Fuel	20	Biodiesel	888	Grandfathered (Other)	270	Cellulosic Biomass – Forest Thinnings
6	Renewable Fuel	20	Biodiesel	888	Grandfathered (Other)	280	Cellulosic Biomass – Separated Food Wastes
6	Renewable Fuel	20	Biodiesel	888	Grandfathered (Other)	290	Cellulosic Biomass – Slash
6	Renewable Fuel	20	Biodiesel	888	Grandfathered (Other)	300	Starch – Agricultural Residues
6	Renewable Fuel	20	Biodiesel	888	Grandfathered (Other)	310	Starch – Annual Covercrops
6	Renewable Fuel	20	Biodiesel	888	Grandfathered (Other)	320	Manure Digesters
6	Renewable Fuel	20	Biodiesel	888	Grandfathered (Other)	330	Landfills
6	Renewable Fuel	20	Biodiesel	888	Grandfathered (Other)	340	Sewage and Waste Treatment Plants
6	Renewable Fuel	20	Biodiesel	888	Grandfathered (Other)	350	Non-cellulosic Portions of Separated Food Wastes
6	Renewable Fuel	20	Biodiesel	888	Grandfathered (Other)	888	Feedstock (Not Listed) – Used at a Grandfathered Facility
6	Renewable Fuel	30	Cellulosic Diesel	888	Grandfathered (Other)	10	Starch – Corn
6	Renewable Fuel	30	Cellulosic Diesel	888	Grandfathered (Other)	70	Cellulosic Biomass – Agricultural Residues
6	Renewable Fuel	30	Cellulosic Diesel	888	Grandfathered (Other)	80	Cellulosic Biomass – Switchgrass
6	Renewable Fuel	30	Cellulosic Diesel	888	Grandfathered (Other)	90	Cellulosic Biomass – Miscanthus

(cont.)

Figure H-6: Fuel Code by Process and Feedstock (cont.)

Fuel Code	Description	Fuel Category Code	Description	Process Code	Description	Feedstock Code	Description
6	Renewable Fuel	30	Cellulosic Diesel	888	Grandfathered (Other)	120	Sugarcane
6	Renewable Fuel	30	Cellulosic Diesel	888	Grandfathered (Other)	140	Cellulosic Biomass – Separated Yard Wastes
6	Renewable Fuel	30	Cellulosic Diesel	888	Grandfathered (Other)	160	Waste Oils/Fats/Grease
6	Renewable Fuel	30	Cellulosic Diesel	888	Grandfathered (Other)	200	Non-food Grade Corn Oil
6	Renewable Fuel	30	Cellulosic Diesel	888	Grandfathered (Other)	210	Soybean Oil
6	Renewable Fuel	30	Cellulosic Diesel	888	Grandfathered (Other)	220	Cellulosic Biomass – Separated Municipal Solid Waste
6	Renewable Fuel	30	Cellulosic Diesel	888	Grandfathered (Other)	230	Algal Oil
6	Renewable Fuel	30	Cellulosic Diesel	888	Grandfathered (Other)	240	Oil from Annual Covercrops
6	Renewable Fuel	30	Cellulosic Diesel	888	Grandfathered (Other)	250	Cellulosic Biomass – Annual Cover Crops
6	Renewable Fuel	30	Cellulosic Diesel	888	Grandfathered (Other)	260	Cellulosic Biomass – Forest Product Residues
6	Renewable Fuel	30	Cellulosic Diesel	888	Grandfathered (Other)	270	Cellulosic Biomass – Forest Thinnings
6	Renewable Fuel	30	Cellulosic Diesel	888	Grandfathered (Other)	280	Cellulosic Biomass – Separated Food Wastes
6	Renewable Fuel	30	Cellulosic Diesel	888	Grandfathered (Other)	290	Cellulosic Biomass – Slash
6	Renewable Fuel	30	Cellulosic Diesel	888	Grandfathered (Other)	300	Starch – Agricultural Residues

(cont.)

Figure H-6: Fuel Code by Process and Feedstock (cont.)

Fuel Code	Description	Fuel Category Code	Description	Process Code	Description	Feedstock Code	Description
6	Renewable Fuel	30	Cellulosic Diesel	888	Grandfathered (Other)	310	Starch – Annual Covercrops
6	Renewable Fuel	30	Cellulosic Diesel	888	Grandfathered (Other)	320	Manure Digesters
6	Renewable Fuel	30	Cellulosic Diesel	888	Grandfathered (Other)	330	Landfills
6	Renewable Fuel	30	Cellulosic Diesel	888	Grandfathered (Other)	340	Sewage and Waste Treatment Plants
6	Renewable Fuel	30	Cellulosic Diesel	888	Grandfathered (Other)	350	Non-cellulosic Portions of Separated Food Wastes
6	Renewable Fuel	30	Cellulosic Diesel	888	Grandfathered (Other)	888	Feedstock (Not Listed) – Used at a Grandfathered Facility
6	Renewable Fuel	40	Non-ester renewable diesel	888	Grandfathered (Other)	10	Starch – Corn
6	Renewable Fuel	40	Non-ester renewable diesel	888	Grandfathered (Other)	70	Cellulosic Biomass – Agricultural Residues
6	Renewable Fuel	40	Non-ester renewable diesel	888	Grandfathered (Other)	80	Cellulosic Biomass – Switchgrass
6	Renewable Fuel	40	Non-ester renewable diesel	888	Grandfathered (Other)	90	Cellulosic Biomass – Miscanthus
6	Renewable Fuel	40	Non-ester renewable diesel	888	Grandfathered (Other)	120	Sugarcane
6	Renewable Fuel	40	Non-ester renewable diesel	888	Grandfathered (Other)	140	Cellulosic Biomass – Separated Yard Wastes

(cont.)

Figure H-6: Fuel Code by Process and Feedstock (cont.)

Fuel Code	Description	Fuel Category Code	Description	Process Code	Description	Feedstock Code	Description
6	Renewable Fuel	40	Non-ester renewable diesel	888	Grandfathered (Other)	160	Waste Oils/Fats/Grease
6	Renewable Fuel	40	Non-ester renewable diesel	888	Grandfathered (Other)	200	Non-food Grade Corn Oil
6	Renewable Fuel	40	Non-ester renewable diesel	888	Grandfathered (Other)	210	Soybean Oil
6	Renewable Fuel	40	Non-ester renewable diesel	888	Grandfathered (Other)	220	Cellulosic Biomass – Separated Municipal Solid Waste
6	Renewable Fuel	40	Non-ester renewable diesel	888	Grandfathered (Other)	230	Algal Oil
6	Renewable Fuel	40	Non-ester renewable diesel	888	Grandfathered (Other)	240	Oil from Annual Covercrops
6	Renewable Fuel	40	Non-ester renewable diesel	888	Grandfathered (Other)	250	Cellulosic Biomass – Annual Cover Crops
6	Renewable Fuel	40	Non-ester renewable diesel	888	Grandfathered (Other)	260	Cellulosic Biomass – Forest Product Residues
6	Renewable Fuel	40	Non-ester renewable diesel	888	Grandfathered (Other)	270	Cellulosic Biomass – Forest Thinnings
6	Renewable Fuel	40	Non-ester renewable diesel	888	Grandfathered (Other)	280	Cellulosic Biomass – Separated Food Wastes
6	Renewable Fuel	40	Non-ester renewable diesel	888	Grandfathered (Other)	290	Cellulosic Biomass – Slash

(cont.)

Figure H-6: Fuel Code by Process and Feedstock (cont.)

Fuel Code	Description	Fuel Category Code	Description	Process Code	Description	Feedstock Code	Description
6	Renewable Fuel	40	Non-ester renewable diesel	888	Grandfathered (Other)	300	Starch – Agricultural Residues
6	Renewable Fuel	40	Non-ester renewable diesel	888	Grandfathered (Other)	310	Starch – Annual Covercrops
6	Renewable Fuel	40	Non-ester renewable diesel	888	Grandfathered (Other)	320	Manure Digesters
6	Renewable Fuel	40	Non-ester renewable diesel	888	Grandfathered (Other)	330	Landfills
6	Renewable Fuel	40	Non-ester renewable diesel	888	Grandfathered (Other)	340	Sewage and Waste Treatment Plants
6	Renewable Fuel	40	Non-ester renewable diesel	888	Grandfathered (Other)	350	Non-cellulosic Portions of Separated Food Wastes
6	Renewable Fuel	40	Non-ester renewable diesel	888	Grandfathered (Other)	888	Feedstock (Not Listed) – Used at a Grandfathered Facility
6	Renewable Fuel	60	Cellulosic Ethanol	888	Grandfathered (Other)	10	Starch – Corn
6	Renewable Fuel	60	Cellulosic Ethanol	888	Grandfathered (Other)	70	Cellulosic Biomass – Agricultural Residues
6	Renewable Fuel	60	Cellulosic Ethanol	888	Grandfathered (Other)	80	Cellulosic Biomass – Switchgrass
6	Renewable Fuel	60	Cellulosic Ethanol	888	Grandfathered (Other)	90	Cellulosic Biomass – Miscanthus
6	Renewable Fuel	60	Cellulosic Ethanol	888	Grandfathered (Other)	120	Sugarcane

(cont.)

Figure H-6: Fuel Code by Process and Feedstock (cont.)

Fuel Code	Description	Fuel Category Code	Description	Process Code	Description	Feedstock Code	Description
6	Renewable Fuel	60	Cellulosic Ethanol	888	Grandfathered (Other)	140	Cellulosic Biomass – Separated Yard Wastes
6	Renewable Fuel	60	Cellulosic Ethanol	888	Grandfathered (Other)	160	Waste Oils/Fats/Grease
6	Renewable Fuel	60	Cellulosic Ethanol	888	Grandfathered (Other)	200	Non-food Grade Corn Oil
6	Renewable Fuel	60	Cellulosic Ethanol	888	Grandfathered (Other)	210	Soybean Oil
6	Renewable Fuel	60	Cellulosic Ethanol	888	Grandfathered (Other)	220	Cellulosic Biomass – Separated Municipal Solid Waste
6	Renewable Fuel	60	Cellulosic Ethanol	888	Grandfathered (Other)	230	Algal Oil
6	Renewable Fuel	60	Cellulosic Ethanol	888	Grandfathered (Other)	240	Oil from Annual Covercrops
6	Renewable Fuel	60	Cellulosic Ethanol	888	Grandfathered (Other)	250	Cellulosic Biomass – Annual Cover Crops
6	Renewable Fuel	60	Cellulosic Ethanol	888	Grandfathered (Other)	260	Cellulosic Biomass – Forest Product Residues
6	Renewable Fuel	60	Cellulosic Ethanol	888	Grandfathered (Other)	270	Cellulosic Biomass – Forest Thinnings
6	Renewable Fuel	60	Cellulosic Ethanol	888	Grandfathered (Other)	280	Cellulosic Biomass – Separated Food Wastes
6	Renewable Fuel	60	Cellulosic Ethanol	888	Grandfathered (Other)	290	Cellulosic Biomass – Slash
6	Renewable Fuel	60	Cellulosic Ethanol	888	Grandfathered (Other)	300	Starch – Agricultural Residues
6	Renewable Fuel	60	Cellulosic Ethanol	888	Grandfathered (Other)	310	Starch – Annual Covercrops

(cont.)

Figure H-6: Fuel Code by Process and Feedstock (cont.)

Fuel Code	Description	Fuel Category Code	Description	Process Code	Description	Feedstock Code	Description
6	Renewable Fuel	60	Cellulosic Ethanol	888	Grandfathered (Other)	320	Manure Digesters
6	Renewable Fuel	60	Cellulosic Ethanol	888	Grandfathered (Other)	330	Landfills
6	Renewable Fuel	60	Cellulosic Ethanol	888	Grandfathered (Other)	340	Sewage and Waste Treatment Plants
6	Renewable Fuel	60	Cellulosic Ethanol	888	Grandfathered (Other)	350	Non-cellulosic Portions of Separated Food Wastes
6	Renewable Fuel	60	Cellulosic Ethanol	888	Grandfathered (Other)	888	Feedstock (Not Listed) – Used at a Grandfathered Facility
6	Renewable Fuel	70	Butanol	888	Grandfathered (Other)	10	Starch – Corn
6	Renewable Fuel	70	Butanol	888	Grandfathered (Other)	70	Cellulosic Biomass – Agricultural Residues
6	Renewable Fuel	70	Butanol	888	Grandfathered (Other)	80	Cellulosic Biomass – Switchgrass
6	Renewable Fuel	70	Butanol	888	Grandfathered (Other)	90	Cellulosic Biomass – Miscanthus
6	Renewable Fuel	70	Butanol	888	Grandfathered (Other)	120	Sugarcane
6	Renewable Fuel	70	Butanol	888	Grandfathered (Other)	140	Cellulosic Biomass – Separated Yard Wastes
6	Renewable Fuel	70	Butanol	888	Grandfathered (Other)	160	Waste Oils/Fats/Grease
6	Renewable Fuel	70	Butanol	888	Grandfathered (Other)	200	Non-food Grade Corn Oil
6	Renewable Fuel	70	Butanol	888	Grandfathered (Other)	210	Soybean Oil

(cont.)

Figure H-6: Fuel Code by Process and Feedstock (cont.)

Fuel Code	Description	Fuel Category Code	Description	Process Code	Description	Feedstock Code	Description
6	Renewable Fuel	70	Butanol	888	Grandfathered (Other)	220	Cellulosic Biomass – Separated Municipal Solid Waste
6	Renewable Fuel	70	Butanol	888	Grandfathered (Other)	230	Algal Oil
6	Renewable Fuel	70	Butanol	888	Grandfathered (Other)	240	Oil from Annual Covercrops
6	Renewable Fuel	70	Butanol	888	Grandfathered (Other)	250	Cellulosic Biomass – Annual Cover Crops
6	Renewable Fuel	70	Butanol	888	Grandfathered (Other)	260	Cellulosic Biomass – Forest Product Residues
6	Renewable Fuel	70	Butanol	888	Grandfathered (Other)	270	Cellulosic Biomass – Forest Thinnings
6	Renewable Fuel	70	Butanol	888	Grandfathered (Other)	280	Cellulosic Biomass – Separated Food Wastes
6	Renewable Fuel	70	Butanol	888	Grandfathered (Other)	290	Cellulosic Biomass – Slash
6	Renewable Fuel	70	Butanol	888	Grandfathered (Other)	300	Starch – Agricultural Residues
6	Renewable Fuel	70	Butanol	888	Grandfathered (Other)	310	Starch – Annual Covercrops
6	Renewable Fuel	70	Butanol	888	Grandfathered (Other)	320	Manure Digesters
6	Renewable Fuel	70	Butanol	888	Grandfathered (Other)	330	Landfills
6	Renewable Fuel	70	Butanol	888	Grandfathered (Other)	340	Sewage and Waste Treatment Plants

(cont.)

Figure H-6: Fuel Code by Process and Feedstock (cont.)

Fuel Code	Description	Fuel Category Code	Description	Process Code	Description	Feedstock Code	Description
6	Renewable Fuel	70	Butanol	888	Grandfathered (Other)	350	Non-cellulosic Portions of Separated Food Wastes
6	Renewable Fuel	70	Butanol	888	Grandfathered (Other)	888	Feedstock (Not Listed) – Used at a Grandfathered Facility
6	Renewable Fuel	80	Biogas	888	Grandfathered (Other)	10	Starch – Corn
6	Renewable Fuel	80	Biogas	888	Grandfathered (Other)	70	Cellulosic Biomass – Agricultural Residues
6	Renewable Fuel	80	Biogas	888	Grandfathered (Other)	80	Cellulosic Biomass – Switchgrass
6	Renewable Fuel	80	Biogas	888	Grandfathered (Other)	90	Cellulosic Biomass – Miscanthus
6	Renewable Fuel	80	Biogas	888	Grandfathered (Other)	120	Sugarcane
6	Renewable Fuel	80	Biogas	888	Grandfathered (Other)	140	Cellulosic Biomass – Separated Yard Wastes
6	Renewable Fuel	80	Biogas	888	Grandfathered (Other)	160	Waste Oils/Fats/Grease
6	Renewable Fuel	80	Biogas	888	Grandfathered (Other)	200	Non-food Grade Corn Oil
6	Renewable Fuel	80	Biogas	888	Grandfathered (Other)	210	Soybean Oil
6	Renewable Fuel	80	Biogas	888	Grandfathered (Other)	220	Cellulosic Biomass – Separated Municipal Solid Waste
6	Renewable Fuel	80	Biogas	888	Grandfathered (Other)	230	Algal Oil
6	Renewable Fuel	80	Biogas	888	Grandfathered (Other)	240	Oil from Annual Covercrops

(cont.)

Figure H-6: Fuel Code by Process and Feedstock (cont.)

Fuel Code	Description	Fuel Category Code	Description	Process Code	Description	Feedstock Code	Description
6	Renewable Fuel	80	Biogas	888	Grandfathered (Other)	250	Cellulosic Biomass – Annual Cover Crops
6	Renewable Fuel	80	Biogas	888	Grandfathered (Other)	260	Cellulosic Biomass – Forest Product Residues
6	Renewable Fuel	80	Biogas	888	Grandfathered (Other)	270	Cellulosic Biomass – Forest Thinnings
6	Renewable Fuel	80	Biogas	888	Grandfathered (Other)	280	Cellulosic Biomass – Separated Food Wastes
6	Renewable Fuel	80	Biogas	888	Grandfathered (Other)	290	Cellulosic Biomass – Slash
6	Renewable Fuel	80	Biogas	888	Grandfathered (Other)	300	Starch – Agricultural Residues
6	Renewable Fuel	80	Biogas	888	Grandfathered (Other)	310	Starch – Annual Covercrops
6	Renewable Fuel	80	Biogas	888	Grandfathered (Other)	320	Manure Digesters
6	Renewable Fuel	80	Biogas	888	Grandfathered (Other)	330	Landfills
6	Renewable Fuel	80	Biogas	888	Grandfathered (Other)	340	Sewage and Waste Treatment Plants
6	Renewable Fuel	80	Biogas	888	Grandfathered (Other)	350	Non-cellulosic Portions of Separated Food Wastes
6	Renewable Fuel	80	Biogas	888	Grandfathered (Other)	888	Feedstock (Not Listed) – Used at a Grandfathered Facility
6	Renewable Fuel	90	Cellulosic Jet Fuel	888	Grandfathered (Other)	10	Starch – Corn

(cont.)

Figure H-6: Fuel Code by Process and Feedstock (cont.)

Fuel Code	Description	Fuel Category Code	Description	Process Code	Description	Feedstock Code	Description
6	Renewable Fuel	90	Cellulosic Jet Fuel	888	Grandfathered (Other)	70	Cellulosic Biomass – Agricultural Residues
6	Renewable Fuel	90	Cellulosic Jet Fuel	888	Grandfathered (Other)	80	Cellulosic Biomass – Switchgrass
6	Renewable Fuel	90	Cellulosic Jet Fuel	888	Grandfathered (Other)	90	Cellulosic Biomass – Miscanthus
6	Renewable Fuel	90	Cellulosic Jet Fuel	888	Grandfathered (Other)	120	Sugarcane
6	Renewable Fuel	90	Cellulosic Jet Fuel	888	Grandfathered (Other)	140	Cellulosic Biomass – Separated Yard Wastes
6	Renewable Fuel	90	Cellulosic Jet Fuel	888	Grandfathered (Other)	160	Waste Oils/Fats/Grease
6	Renewable Fuel	90	Cellulosic Jet Fuel	888	Grandfathered (Other)	200	Non-food Grade Corn Oil
6	Renewable Fuel	90	Cellulosic Jet Fuel	888	Grandfathered (Other)	210	Soybean Oil
6	Renewable Fuel	90	Cellulosic Jet Fuel	888	Grandfathered (Other)	220	Cellulosic Biomass – Separated Municipal Solid Waste
6	Renewable Fuel	90	Cellulosic Jet Fuel	888	Grandfathered (Other)	230	Algal Oil
6	Renewable Fuel	90	Cellulosic Jet Fuel	888	Grandfathered (Other)	240	Oil from Annual Covercrops
6	Renewable Fuel	90	Cellulosic Jet Fuel	888	Grandfathered (Other)	250	Cellulosic Biomass – Annual Cover Crops
6	Renewable Fuel	90	Cellulosic Jet Fuel	888	Grandfathered (Other)	260	Cellulosic Biomass – Forest Product Residues
6	Renewable Fuel	90	Cellulosic Jet Fuel	888	Grandfathered (Other)	270	Cellulosic Biomass – Forest Thinnings

(cont.)

Figure H-6: Fuel Code by Process and Feedstock (cont.)

Fuel Code	Description	Fuel Category Code	Description	Process Code	Description	Feedstock Code	Description
6	Renewable Fuel	90	Cellulosic Jet Fuel	888	Grandfathered (Other)	280	Cellulosic Biomass – Separated Food Wastes
6	Renewable Fuel	90	Cellulosic Jet Fuel	888	Grandfathered (Other)	290	Cellulosic Biomass – Slash
6	Renewable Fuel	90	Cellulosic Jet Fuel	888	Grandfathered (Other)	300	Starch – Agricultural Residues
6	Renewable Fuel	90	Cellulosic Jet Fuel	888	Grandfathered (Other)	310	Starch – Annual Covercrops
6	Renewable Fuel	90	Cellulosic Jet Fuel	888	Grandfathered (Other)	320	Manure Digesters
6	Renewable Fuel	90	Cellulosic Jet Fuel	888	Grandfathered (Other)	330	Landfills
6	Renewable Fuel	90	Cellulosic Jet Fuel	888	Grandfathered (Other)	340	Sewage and Waste Treatment Plants
6	Renewable Fuel	90	Cellulosic Jet Fuel	888	Grandfathered (Other)	350	Non-cellulosic Portions of Separated Food Wastes
6	Renewable Fuel	90	Cellulosic Jet Fuel	888	Grandfathered (Other)	888	Feedstock (Not Listed) – Used at a Grandfathered Facility
6	Renewable Fuel	100	Cellulosic Heating Oil	888	Grandfathered (Other)	10	Starch – Corn
6	Renewable Fuel	100	Cellulosic Heating Oil	888	Grandfathered (Other)	70	Cellulosic Biomass – Agricultural Residues
6	Renewable Fuel	100	Cellulosic Heating Oil	888	Grandfathered (Other)	80	Cellulosic Biomass – Switchgrass
6	Renewable Fuel	100	Cellulosic Heating Oil	888	Grandfathered (Other)	90	Cellulosic Biomass – Miscanthus
6	Renewable Fuel	100	Cellulosic Heating Oil	888	Grandfathered (Other)	120	Sugarcane

(cont.)

Figure H-6: Fuel Code by Process and Feedstock (cont.)

Fuel Code	Description	Fuel Category Code	Description	Process Code	Description	Feedstock Code	Description
6	Renewable Fuel	100	Cellulosic Heating Oil	888	Grandfathered (Other)	140	Cellulosic Biomass – Separated Yard Wastes
6	Renewable Fuel	100	Cellulosic Heating Oil	888	Grandfathered (Other)	160	Waste Oils/Fats/Grease
6	Renewable Fuel	100	Cellulosic Heating Oil	888	Grandfathered (Other)	200	Non-food Grade Corn Oil
6	Renewable Fuel	100	Cellulosic Heating Oil	888	Grandfathered (Other)	210	Soybean Oil
6	Renewable Fuel	100	Cellulosic Heating Oil	888	Grandfathered (Other)	220	Cellulosic Biomass – Separated Municipal Solid Waste
6	Renewable Fuel	100	Cellulosic Heating Oil	888	Grandfathered (Other)	230	Algal Oil
6	Renewable Fuel	100	Cellulosic Heating Oil	888	Grandfathered (Other)	240	Oil from Annual Covercrops
6	Renewable Fuel	100	Cellulosic Heating Oil	888	Grandfathered (Other)	250	Cellulosic Biomass – Annual Cover Crops
6	Renewable Fuel	100	Cellulosic Heating Oil	888	Grandfathered (Other)	260	Cellulosic Biomass – Forest Product Residues
6	Renewable Fuel	100	Cellulosic Heating Oil	888	Grandfathered (Other)	270	Cellulosic Biomass – Forest Thinnings
6	Renewable Fuel	100	Cellulosic Heating Oil	888	Grandfathered (Other)	280	Cellulosic Biomass – Separated Food Wastes
6	Renewable Fuel	100	Cellulosic Heating Oil	888	Grandfathered (Other)	290	Cellulosic Biomass – Slash
6	Renewable Fuel	100	Cellulosic Heating Oil	888	Grandfathered (Other)	300	Starch – Agricultural Residues
6	Renewable Fuel	100	Cellulosic Heating Oil	888	Grandfathered (Other)	310	Starch – Annual Covercrops

(cont.)

Figure H-6: Fuel Code by Process and Feedstock (cont.)

Fuel Code	Description	Fuel Category Code	Description	Process Code	Description	Feedstock Code	Description
6	Renewable Fuel	100	Cellulosic Heating Oil	888	Grandfathered (Other)	320	Manure Digesters
6	Renewable Fuel	100	Cellulosic Heating Oil	888	Grandfathered (Other)	330	Landfills
6	Renewable Fuel	100	Cellulosic Heating Oil	888	Grandfathered (Other)	340	Sewage and Waste Treatment Plants
6	Renewable Fuel	100	Cellulosic Heating Oil	888	Grandfathered (Other)	350	Non-cellulosic Portions of Separated Food Wastes
6	Renewable Fuel	100	Cellulosic Heating Oil	888	Grandfathered (Other)	888	Feedstock (Not Listed) – Used at a Grandfathered Facility
6	Renewable Fuel	110	Cellulosic Naphtha	888	Grandfathered (Other)	10	Starch – Corn
6	Renewable Fuel	110	Cellulosic Naphtha	888	Grandfathered (Other)	70	Cellulosic Biomass – Agricultural Residues
6	Renewable Fuel	110	Cellulosic Naphtha	888	Grandfathered (Other)	80	Cellulosic Biomass – Switchgrass
6	Renewable Fuel	110	Cellulosic Naphtha	888	Grandfathered (Other)	90	Cellulosic Biomass – Miscanthus
6	Renewable Fuel	110	Cellulosic Naphtha	888	Grandfathered (Other)	120	Sugarcane
6	Renewable Fuel	110	Cellulosic Naphtha	888	Grandfathered (Other)	140	Cellulosic Biomass – Separated Yard Wastes
6	Renewable Fuel	110	Cellulosic Naphtha	888	Grandfathered (Other)	160	Waste Oils/Fats/Grease
6	Renewable Fuel	110	Cellulosic Naphtha	888	Grandfathered (Other)	200	Non-food Grade Corn Oil
6	Renewable Fuel	110	Cellulosic Naphtha	888	Grandfathered (Other)	210	Soybean Oil

(cont.)

Figure H-6: Fuel Code by Process and Feedstock (cont.)

Fuel Code	Description	Fuel Category Code	Description	Process Code	Description	Feedstock Code	Description
6	Renewable Fuel	110	Cellulosic Naphtha	888	Grandfathered (Other)	220	Cellulosic Biomass – Separated Municipal Solid Waste
6	Renewable Fuel	110	Cellulosic Naphtha	888	Grandfathered (Other)	230	Algal Oil
6	Renewable Fuel	110	Cellulosic Naphtha	888	Grandfathered (Other)	240	Oil from Annual Covercrops
6	Renewable Fuel	110	Cellulosic Naphtha	888	Grandfathered (Other)	250	Cellulosic Biomass – Annual Cover Crops
6	Renewable Fuel	110	Cellulosic Naphtha	888	Grandfathered (Other)	260	Cellulosic Biomass – Forest Product Residues
6	Renewable Fuel	110	Cellulosic Naphtha	888	Grandfathered (Other)	270	Cellulosic Biomass – Forest Thinnings
6	Renewable Fuel	110	Cellulosic Naphtha	888	Grandfathered (Other)	280	Cellulosic Biomass – Separated Food Wastes
6	Renewable Fuel	110	Cellulosic Naphtha	888	Grandfathered (Other)	290	Cellulosic Biomass – Slash
6	Renewable Fuel	110	Cellulosic Naphtha	888	Grandfathered (Other)	300	Starch – Agricultural Residues
6	Renewable Fuel	110	Cellulosic Naphtha	888	Grandfathered (Other)	310	Starch – Annual Covercrops
6	Renewable Fuel	110	Cellulosic Naphtha	888	Grandfathered (Other)	320	Manure Digesters
6	Renewable Fuel	110	Cellulosic Naphtha	888	Grandfathered (Other)	330	Landfills
6	Renewable Fuel	110	Cellulosic Naphtha	888	Grandfathered (Other)	340	Sewage and Waste Treatment Plants

(cont.)

Figure H-6: Fuel Code by Process and Feedstock (cont.)

Fuel Code	Description	Fuel Category Code	Description	Process Code	Description	Feedstock Code	Description
6	Renewable Fuel	110	Cellulosic Naphtha	888	Grandfathered (Other)	350	Non-cellulosic Portions of Separated Food Wastes
6	Renewable Fuel	110	Cellulosic Naphtha	888	Grandfathered (Other)	888	Feedstock (Not Listed) – Used at a Grandfathered Facility
6	Renewable Fuel	120	Renewable Bio-Oil-Diesel (Petition Required)	888	Grandfathered (Other)	10	Starch – Corn
6	Renewable Fuel	120	Renewable Bio-Oil-Diesel (Petition Required)	888	Grandfathered (Other)	70	Cellulosic Biomass – Agricultural Residues
6	Renewable Fuel	120	Renewable Bio-Oil-Diesel (Petition Required)	888	Grandfathered (Other)	80	Cellulosic Biomass – Switchgrass
6	Renewable Fuel	120	Renewable Bio-Oil-Diesel (Petition Required)	888	Grandfathered (Other)	90	Cellulosic Biomass – Miscanthus
6	Renewable Fuel	120	Renewable Bio-Oil-Diesel (Petition Required)	888	Grandfathered (Other)	120	Sugarcane
6	Renewable Fuel	120	Renewable Bio-Oil-Diesel (Petition Required)	888	Grandfathered (Other)	140	Cellulosic Biomass – Separated Yard Wastes

(cont.)

Figure H-6: Fuel Code by Process and Feedstock (cont.)

Fuel Code	Description	Fuel Category Code	Description	Process Code	Description	Feedstock Code	Description
6	Renewable Fuel	120	Renewable Bio-Oil-Diesel (Petition Required)	888	Grandfathered (Other)	160	Waste Oils/Fats/Grease
6	Renewable Fuel	120	Renewable Bio-Oil-Diesel (Petition Required)	888	Grandfathered (Other)	200	Non-food Grade Corn Oil
6	Renewable Fuel	120	Renewable Bio-Oil-Diesel (Petition Required)	888	Grandfathered (Other)	210	Soybean Oil
6	Renewable Fuel	120	Renewable Bio-Oil-Diesel (Petition Required)	888	Grandfathered (Other)	220	Cellulosic Biomass – Separated Municipal Solid Waste
6	Renewable Fuel	120	Renewable Bio-Oil-Diesel (Petition Required)	888	Grandfathered (Other)	230	Algal Oil
6	Renewable Fuel	120	Renewable Bio-Oil-Diesel (Petition Required)	888	Grandfathered (Other)	240	Oil from Annual Covercrops
6	Renewable Fuel	120	Renewable Bio-Oil-Diesel (Petition Required)	888	Grandfathered (Other)	250	Cellulosic Biomass – Annual Cover Crops

(cont.)

Figure H-6: Fuel Code by Process and Feedstock (cont.)

Fuel Code	Description	Fuel Category Code	Description	Process Code	Description	Feedstock Code	Description
6	Renewable Fuel	120	Renewable Bio-Oil-Diesel (Petition Required)	888	Grandfathered (Other)	260	Cellulosic Biomass – Forest Product Residues
6	Renewable Fuel	120	Renewable Bio-Oil-Diesel (Petition Required)	888	Grandfathered (Other)	270	Cellulosic Biomass – Forest Thinnings
6	Renewable Fuel	120	Renewable Bio-Oil-Diesel (Petition Required)	888	Grandfathered (Other)	280	Cellulosic Biomass – Separated Food Wastes
6	Renewable Fuel	120	Renewable Bio-Oil-Diesel (Petition Required)	888	Grandfathered (Other)	290	Cellulosic Biomass – Slash
6	Renewable Fuel	120	Renewable Bio-Oil-Diesel (Petition Required)	888	Grandfathered (Other)	300	Starch – Agricultural Residues
6	Renewable Fuel	120	Renewable Bio-Oil-Diesel (Petition Required)	888	Grandfathered (Other)	310	Starch – Annual Covercrops
6	Renewable Fuel	120	Renewable Bio-Oil-Diesel (Petition Required)	888	Grandfathered (Other)	320	Manure Digesters

(cont.)

Figure H-6: Fuel Code by Process and Feedstock (cont.)

Fuel Code	Description	Fuel Category Code	Description	Process Code	Description	Feedstock Code	Description
6	Renewable Fuel	120	Renewable Bio-Oil-Diesel (Petition Required)	888	Grandfathered (Other)	330	Landfills
6	Renewable Fuel	120	Renewable Bio-Oil-Diesel (Petition Required)	888	Grandfathered (Other)	340	Sewage and Waste Treatment Plants
6	Renewable Fuel	120	Renewable Bio-Oil-Diesel (Petition Required)	888	Grandfathered (Other)	350	Non-cellulosic Portions of Separated Food Wastes
6	Renewable Fuel	120	Renewable Bio-Oil-Diesel (Petition Required)	888	Grandfathered (Other)	888	Feedstock (Not Listed) – Used at a Grandfathered Facility
6	Renewable Fuel	130	Renewable Naphtha	888	Grandfathered (Other)	10	Starch – Corn
6	Renewable Fuel	130	Renewable Naphtha	888	Grandfathered (Other)	70	Cellulosic Biomass – Agricultural Residues
6	Renewable Fuel	130	Renewable Naphtha	888	Grandfathered (Other)	80	Cellulosic Biomass – Switchgrass
6	Renewable Fuel	130	Renewable Naphtha	888	Grandfathered (Other)	90	Cellulosic Biomass – Miscanthus
6	Renewable Fuel	130	Renewable Naphtha	888	Grandfathered (Other)	120	Sugarcane
6	Renewable Fuel	130	Renewable Naphtha	888	Grandfathered (Other)	140	Cellulosic Biomass – Separated Yard Wastes
6	Renewable Fuel	130	Renewable Naphtha	888	Grandfathered (Other)	160	Waste Oils/Fats/Grease

(cont.)

Figure H-6: Fuel Code by Process and Feedstock (cont.)

Fuel Code	Description	Fuel Category Code	Description	Process Code	Description	Feedstock Code	Description
6	Renewable Fuel	130	Renewable Naphtha	888	Grandfathered (Other)	200	Non-food Grade Corn Oil
6	Renewable Fuel	130	Renewable Naphtha	888	Grandfathered (Other)	210	Soybean Oil
6	Renewable Fuel	130	Renewable Naphtha	888	Grandfathered (Other)	220	Cellulosic Biomass – Separated Municipal Solid Waste
6	Renewable Fuel	130	Renewable Naphtha	888	Grandfathered (Other)	230	Algal Oil
6	Renewable Fuel	130	Renewable Naphtha	888	Grandfathered (Other)	240	Oil from Annual Covercrops
6	Renewable Fuel	130	Renewable Naphtha	888	Grandfathered (Other)	250	Cellulosic Biomass – Annual Cover Crops
6	Renewable Fuel	130	Renewable Naphtha	888	Grandfathered (Other)	260	Cellulosic Biomass – Forest Product Residues
6	Renewable Fuel	130	Renewable Naphtha	888	Grandfathered (Other)	270	Cellulosic Biomass – Forest Thinnings
6	Renewable Fuel	130	Renewable Naphtha	888	Grandfathered (Other)	280	Cellulosic Biomass – Separated Food Wastes
6	Renewable Fuel	130	Renewable Naphtha	888	Grandfathered (Other)	290	Cellulosic Biomass – Slash
6	Renewable Fuel	130	Renewable Naphtha	888	Grandfathered (Other)	300	Starch – Agricultural Residues
6	Renewable Fuel	130	Renewable Naphtha	888	Grandfathered (Other)	310	Starch – Annual Covercrops
6	Renewable Fuel	130	Renewable Naphtha	888	Grandfathered (Other)	320	Manure Digesters
6	Renewable Fuel	130	Renewable Naphtha	888	Grandfathered (Other)	330	Landfills

(cont.)

Figure H-6: Fuel Code by Process and Feedstock (cont.)

Fuel Code	Description	Fuel Category Code	Description	Process Code	Description	Feedstock Code	Description
6	Renewable Fuel	130	Renewable Naphtha	888	Grandfathered (Other)	340	Sewage and Waste Treatment Plants
6	Renewable Fuel	130	Renewable Naphtha	888	Grandfathered (Other)	350	Non-cellulosic Portions of Separated Food Wastes
6	Renewable Fuel	130	Renewable Naphtha	888	Grandfathered (Other)	888	Feedstock (Not Listed) – Used at a Grandfathered Facility
6	Renewable Fuel	140	Renewable Jet Fuel	888	Grandfathered (Other)	10	Starch – Corn
6	Renewable Fuel	140	Renewable Jet Fuel	888	Grandfathered (Other)	70	Cellulosic Biomass – Agricultural Residues
6	Renewable Fuel	140	Renewable Jet Fuel	888	Grandfathered (Other)	80	Cellulosic Biomass – Switchgrass
6	Renewable Fuel	140	Renewable Jet Fuel	888	Grandfathered (Other)	90	Cellulosic Biomass – Miscanthus
6	Renewable Fuel	140	Renewable Jet Fuel	888	Grandfathered (Other)	120	Sugarcane
6	Renewable Fuel	140	Renewable Jet Fuel	888	Grandfathered (Other)	140	Cellulosic Biomass – Separated Yard Wastes
6	Renewable Fuel	140	Renewable Jet Fuel	888	Grandfathered (Other)	160	Waste Oils/Fats/Grease
6	Renewable Fuel	140	Renewable Jet Fuel	888	Grandfathered (Other)	200	Non-food Grade Corn Oil
6	Renewable Fuel	140	Renewable Jet Fuel	888	Grandfathered (Other)	210	Soybean Oil
6	Renewable Fuel	140	Renewable Jet Fuel	888	Grandfathered (Other)	220	Cellulosic Biomass – Separated Municipal Solid Waste
6	Renewable Fuel	140	Renewable Jet Fuel	888	Grandfathered (Other)	230	Algal Oil

(cont.)

Figure H-6: Fuel Code by Process and Feedstock (cont.)

Fuel Code	Description	Fuel Category Code	Description	Process Code	Description	Feedstock Code	Description
6	Renewable Fuel	140	Renewable Jet Fuel	888	Grandfathered (Other)	240	Oil from Annual Covercrops
6	Renewable Fuel	140	Renewable Jet Fuel	888	Grandfathered (Other)	250	Cellulosic Biomass – Annual Cover Crops
6	Renewable Fuel	140	Renewable Jet Fuel	888	Grandfathered (Other)	260	Cellulosic Biomass – Forest Product Residues
6	Renewable Fuel	140	Renewable Jet Fuel	888	Grandfathered (Other)	270	Cellulosic Biomass – Forest Thinnings
6	Renewable Fuel	140	Renewable Jet Fuel	888	Grandfathered (Other)	280	Cellulosic Biomass – Separated Food Wastes
6	Renewable Fuel	140	Renewable Jet Fuel	888	Grandfathered (Other)	290	Cellulosic Biomass – Slash
6	Renewable Fuel	140	Renewable Jet Fuel	888	Grandfathered (Other)	300	Starch – Agricultural Residues
6	Renewable Fuel	140	Renewable Jet Fuel	888	Grandfathered (Other)	310	Starch – Annual Covercrops
6	Renewable Fuel	140	Renewable Jet Fuel	888	Grandfathered (Other)	320	Manure Digesters
6	Renewable Fuel	140	Renewable Jet Fuel	888	Grandfathered (Other)	330	Landfills
6	Renewable Fuel	140	Renewable Jet Fuel	888	Grandfathered (Other)	340	Sewage and Waste Treatment Plants
6	Renewable Fuel	140	Renewable Jet Fuel	888	Grandfathered (Other)	350	Non-cellulosic Portions of Separated Food Wastes
6	Renewable Fuel	140	Renewable Jet Fuel	888	Grandfathered (Other)	888	Feedstock (Not Listed) – Used at a Grandfathered Facility

(cont.)

Figure H-6: Fuel Code by Process and Feedstock (cont.)

Fuel Code	Description	Fuel Category Code	Description	Process Code	Description	Feedstock Code	Description
6	Renewable Fuel	150	Renewable Heating Oil	888	Grandfathered (Other)	10	Starch – Corn
6	Renewable Fuel	150	Renewable Heating Oil	888	Grandfathered (Other)	70	Cellulosic Biomass – Agricultural Residues
6	Renewable Fuel	150	Renewable Heating Oil	888	Grandfathered (Other)	80	Cellulosic Biomass – Switchgrass
6	Renewable Fuel	150	Renewable Heating Oil	888	Grandfathered (Other)	90	Cellulosic Biomass – Miscanthus
6	Renewable Fuel	150	Renewable Heating Oil	888	Grandfathered (Other)	120	Sugarcane
6	Renewable Fuel	150	Renewable Heating Oil	888	Grandfathered (Other)	140	Cellulosic Biomass – Separated Yard Wastes
6	Renewable Fuel	150	Renewable Heating Oil	888	Grandfathered (Other)	160	Waste Oils/Fats/Grease
6	Renewable Fuel	150	Renewable Heating Oil	888	Grandfathered (Other)	200	Non-food Grade Corn Oil
6	Renewable Fuel	150	Renewable Heating Oil	888	Grandfathered (Other)	210	Soybean Oil
6	Renewable Fuel	150	Renewable Heating Oil	888	Grandfathered (Other)	220	Cellulosic Biomass – Separated Municipal Solid Waste
6	Renewable Fuel	150	Renewable Heating Oil	888	Grandfathered (Other)	230	Algal Oil
6	Renewable Fuel	150	Renewable Heating Oil	888	Grandfathered (Other)	240	Oil from Annual Covercrops
6	Renewable Fuel	150	Renewable Heating Oil	888	Grandfathered (Other)	250	Cellulosic Biomass – Annual Cover Crops
6	Renewable Fuel	150	Renewable Heating Oil	888	Grandfathered (Other)	260	Cellulosic Biomass – Forest Product Residues

(cont.)

Figure H-6: Fuel Code by Process and Feedstock (cont.)

Fuel Code	Description	Fuel Category Code	Description	Process Code	Description	Feedstock Code	Description
6	Renewable Fuel	150	Renewable Heating Oil	888	Grandfathered (Other)	270	Cellulosic Biomass – Forest Thinnings
6	Renewable Fuel	150	Renewable Heating Oil	888	Grandfathered (Other)	280	Cellulosic Biomass – Separated Food Wastes
6	Renewable Fuel	150	Renewable Heating Oil	888	Grandfathered (Other)	290	Cellulosic Biomass – Slash
6	Renewable Fuel	150	Renewable Heating Oil	888	Grandfathered (Other)	300	Starch – Agricultural Residues
6	Renewable Fuel	150	Renewable Heating Oil	888	Grandfathered (Other)	310	Starch – Annual Covercrops
6	Renewable Fuel	150	Renewable Heating Oil	888	Grandfathered (Other)	320	Manure Digesters
6	Renewable Fuel	150	Renewable Heating Oil	888	Grandfathered (Other)	330	Landfills
6	Renewable Fuel	150	Renewable Heating Oil	888	Grandfathered (Other)	340	Sewage and Waste Treatment Plants
6	Renewable Fuel	150	Renewable Heating Oil	888	Grandfathered (Other)	350	Non-cellulosic Portions of Separated Food Wastes
6	Renewable Fuel	150	Renewable Heating Oil	888	Grandfathered (Other)	888	Feedstock (Not Listed) – Used at a Grandfathered Facility
7	Cellulosic Diesel	30	Cellulosic Diesel	280	Cellulosic Production Process	70	Cellulosic Biomass – Agricultural Residues
7	Cellulosic Diesel	30	Cellulosic Diesel	280	Cellulosic Production Process	80	Cellulosic Biomass – Switchgrass
7	Cellulosic Diesel	30	Cellulosic Diesel	280	Cellulosic Production Process	90	Cellulosic Biomass – Miscanthus

(cont.)

Figure H-6: Fuel Code by Process and Feedstock (cont.)

Fuel Code	Description	Fuel Category Code	Description	Process Code	Description	Feedstock Code	Description
7	Cellulosic Diesel	30	Cellulosic Diesel	280	Cellulosic Production Process	140	Cellulosic Biomass – Separated Yard Wastes
7	Cellulosic Diesel	30	Cellulosic Diesel	280	Cellulosic Production Process	220	Cellulosic Biomass – Separated Municipal Solid Waste
7	Cellulosic Diesel	30	Cellulosic Diesel	280	Cellulosic Production Process	250	Cellulosic Biomass – Annual Cover Crops
7	Cellulosic Diesel	30	Cellulosic Diesel	280	Cellulosic Production Process	260	Cellulosic Biomass – Forest Product Residues
7	Cellulosic Diesel	30	Cellulosic Diesel	280	Cellulosic Production Process	270	Cellulosic Biomass – Forest Thinnings
7	Cellulosic Diesel	30	Cellulosic Diesel	280	Cellulosic Production Process	280	Cellulosic Biomass – Separated Food Wastes
7	Cellulosic Diesel	30	Cellulosic Diesel	280	Cellulosic Production Process	290	Cellulosic Biomass – Slash
7	Cellulosic Diesel	90	Cellulosic Jet Fuel	280	Cellulosic Production Process	70	Cellulosic Biomass – Agricultural Residues
7	Cellulosic Diesel	90	Cellulosic Jet Fuel	280	Cellulosic Production Process	80	Cellulosic Biomass – Switchgrass
7	Cellulosic Diesel	90	Cellulosic Jet Fuel	280	Cellulosic Production Process	90	Cellulosic Biomass – Miscanthus

(cont.)

Figure H-6: Fuel Code by Process and Feedstock (cont.)

Fuel Code	Description	Fuel Category Code	Description	Process Code	Description	Feedstock Code	Description
7	Cellulosic Diesel	90	Cellulosic Jet Fuel	280	Cellulosic Production Process	140	Cellulosic Biomass – Separated Yard Wastes
7	Cellulosic Diesel	90	Cellulosic Jet Fuel	280	Cellulosic Production Process	220	Cellulosic Biomass – Separated Municipal Solid Waste
7	Cellulosic Diesel	90	Cellulosic Jet Fuel	280	Cellulosic Production Process	250	Cellulosic Biomass – Annual Cover Crops
7	Cellulosic Diesel	90	Cellulosic Jet Fuel	280	Cellulosic Production Process	260	Cellulosic Biomass – Forest Product Residues
7	Cellulosic Diesel	90	Cellulosic Jet Fuel	280	Cellulosic Production Process	270	Cellulosic Biomass – Forest Thinnings
7	Cellulosic Diesel	90	Cellulosic Jet Fuel	280	Cellulosic Production Process	280	Cellulosic Biomass – Separated Food Wastes
7	Cellulosic Diesel	90	Cellulosic Jet Fuel	280	Cellulosic Production Process	290	Cellulosic Biomass – Slash
7	Cellulosic Diesel	100	Cellulosic Heating Oil	280	Cellulosic Production Process	290	Cellulosic Biomass – Slash
7	Cellulosic Diesel	100	Cellulosic Heating Oil	280	Cellulosic Production Process	280	Cellulosic Biomass – Separated Food Wastes
7	Cellulosic Diesel	100	Cellulosic Heating Oil	280	Cellulosic Production Process	270	Cellulosic Biomass – Forest Thinnings
7	Cellulosic Diesel	100	Cellulosic Heating Oil	280	Cellulosic Production Process	260	Cellulosic Biomass – Forest Product Residues

(cont.)

Figure H-6: Fuel Code by Process and Feedstock (cont.)

Fuel Code	Description	Fuel Category Code	Description	Process Code	Description	Feedstock Code	Description
7	Cellulosic Diesel	100	Cellulosic Heating Oil	280	Cellulosic Production Process	250	Cellulosic Biomass – Annual Cover Crops
7	Cellulosic Diesel	100	Cellulosic Heating Oil	280	Cellulosic Production Process	220	Cellulosic Biomass – Separated Municipal Solid Waste
7	Cellulosic Diesel	100	Cellulosic Heating Oil	280	Cellulosic Production Process	140	Cellulosic Biomass – Separated Yard Wastes
7	Cellulosic Diesel	100	Cellulosic Heating Oil	280	Cellulosic Production Process	90	Cellulosic Biomass – Miscanthus
7	Cellulosic Diesel	100	Cellulosic Heating Oil	280	Cellulosic Production Process	80	Cellulosic Biomass – Switchgrass
7	Cellulosic Diesel	100	Cellulosic Heating Oil	280	Cellulosic Production Process	70	Cellulosic Biomass – Agricultural Residues