

# Submitting Fuels Averaging, Banking, and Trading Credit Transactions Using XML

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

## *IMPORTANT REMINDER:*

*Regulated parties are urged to conduct due diligence investigations and exercise caution when conducting gasoline sulfur and benzene credit transactions. Neither EPA nor its systems, including the EPA Moderated Transaction System (EMTS), certify or validate gasoline sulfur or benzene credits. As specified in the regulations at 40 CFR 80.315(b)(2) and 40 CFR 80.1295(b)(2), invalid gasoline sulfur and benzene credits cannot be used for compliance, regardless of the party's good faith belief that the credits were valid at the time they were acquired.*

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## 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 EMTS. This includes:

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

### Who should read these instructions:

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

### What you will find in this document:

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

### 1.0 What Are the Steps to Submitting My File?

The following are basic steps to submitting your file to 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 Network Header v2.0 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. EMTS will receive the submit request, decompress the XML file, and process its contents.

### Exchange Network Node v2.0

The EMTS node is v2.0 compliant. This section includes specifications for v2.0 exchanges.

**NOTE:** You may not submit multiple files with the same name in a given calendar year.

## 2.0 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:

- Elements and attributes that are expected;
- Allowable data types for each element;
- Hierarchy and order in which elements must appear;
- If elements are optional or required; and
- 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 EMTS are accepted or not accepted based on their conformity to the EMTS XML schema.

## 2.1 General Principles Used in Developing 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/](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 4.2 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 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 B, "QA Checks."

- Conforms to EPA Guidelines.

### **3.0 Codes, Identifiers, and Data Types**

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

#### **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 on EPA's EMTS website at <http://www.epa.gov/otaq/fuels/renewablefuels/emtshhtml/emtsdocuments.htm>. 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.

#### **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.

#### **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 gasoline. You must always identify your organization as the source of the submission.

##### **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.

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.

### 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.

#### 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.

#### 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 EMTS.

**Figure 1: Reporting Formats for Numbers**

Content Type	Reporting Format	Example
Integer (width)	Whole number (no decimal places, preceding zeroes not retained).  <i>Width</i> = 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.  <i>Width</i> = Maximum number of digits including those on both sides of the decimal point, and includes the decimal point.  <i>Scale</i> = 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.

## **4.0 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.

### **4.1 Constructing a Valid XML File from an Excel Template**

For users that do not have the technical capabilities to modify their systems to produce valid XML, EMTS will convert XLS, CSV, or TXT files. EPA provides 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. EMTS will output valid EMTS XML files; however EMTS will not check for business content or valid code numbers until the XML has been submitted.

### **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 EMTS's response time. These files will be placed in the system's queue and processed in a first-come, first-serve order.

If your file contains one or more critical errors, the 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.

### **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 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.

#### **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\_XML\_Schema\_v3.1 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/>.



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.

#### **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](http://www.epa.gov/cdx).

#### **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 in 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 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.

### **5.0 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, retire, lock and unlock. 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 B, "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/>. The flow configuration document (FCD), data exchange template (DET), and sample XML documents are available for download on the Exchange Network site.

#### **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.

**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 2: 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 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 2: 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 in the submission file must be registered with EPA and be active.	2005
				The organization's account must be active.	2006
xsd:string	SubmittalCommentText	No	Comment provided by the user on submission file.		
complex	<b><i>CreditGenerateTransactionDetail</i></b>	<b>No</b>	Information on the credits being generated.		
complex	<b><i>CreditSellTransactionDetail</i></b>	<b>No</b>	Information on credits being sold.		
complex	<b><i>CreditBuyTransactionDetail</i></b>	<b>No</b>	Information on credits being bought.		
complex	<b><i>CreditRetireTransactionDetail</i></b>	<b>No</b>	Information on credits being retired.		

## 5.2 Generating Fuels ABT Credits

The complex type ***CreditGenerateTransactionDetail*** is used to report Fuels ABT credits that have been generated as a result of gasoline refinement or importation. This transaction type requires basic information regarding the production of the fuel.

**How these data elements are processed:** All data elements that are identified as required must be reported. If you report an unregistered code, your submission file will not pass critical QA checks and your file will fail to be processed.

If you are generating refined Fuels ABT Credits, you need to report the number of the facility where the fuel was refined. If, however, you are an importer, you will not need to report a facility identifier.

Generating credits also requires that you provide the credit standard code against which the credits were generated, the calculated annual average concentration of whichever credit type you are generating, and the total volume in gallons of fuel associated with the credits being generated.

If you need to provide supporting information regarding the generation, such as document identifiers or notes, use the ***CreditGenerateSupportingDocumentDetail*** 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.

Figure 3 shows the data elements for ***CreditGenerateTransactionDetail***.

**Figure 3: Data Elements for *CreditGenerateTransactionDetail***

Data Elements				QA Checks	
Data Type	Name	Required	Description	Description	Number
xsd:string	CreditTypeCode	Yes	The code that identifies the type of credit.	The credit type code must be a valid code that is recognized by EPA.	11100
xsd:gYear	CreditYear	Yes	The year in which the fuel was produced.	The credit year specified for a Fuels ABT generate transaction must be a valid.	11101
				The credit year specified for a Fuels ABT generate transaction must be a valid.	11062
				The credit year specified for a Fuels ABT generate transaction must be a valid.	11063
xsd:string	GenerateReasonCode	Yes	This code identifies the reason for a generate transaction.	The reason code reported for the Fuels ABT generate transaction must be a valid code that is recognized by EPA.	11034
				The allowable reason codes reported by an organization when generating Fuels ABT credits are dependent on its business activities as registered with EPA.	11035
				If a generate reason code is configured as 'Comment Required', then a comment must be specified whenever that reason code is used.	11037
xsd:string	CreditStandardCode	Yes	The code associated with the standard used for calculating the credits generated.	The credit standard code reported in the production of Fuels ABT credits must be a valid code that is recognized by EPA.	11103
				The credit standard code reported must be compatible with the credit type.	11104
xsd:decimal	CalculatedAnnualAverage	Yes	The calculated annual average concentration of whichever credits are being generated.	The sulfur concentration (annual average) reported must be greater than zero and less than the referenced benzene concentration standard.	11122
				The benzene concentration (annual average) reported must be greater than zero and less than the referenced benzene concentration standard.	11123

(cont.)

**Figure 3: Data Elements for *CreditGenerateTransactionDetail* (cont.)**

Data Elements				QA Checks	
Data Type	Name	Required	Description	Description	Number
				The sulfur concentration (annual average) must be reported as a decimal with two digits to the right of the decimal.	11173
				The benzene concentration (annual average) must be reported as a decimal with two digits to the right of the decimal.	11174
xsd:nonNegativeInteger	TotalVolume	Yes	The volume in gallons, of gasoline that is associated with the credits specified in the transaction. See Title 40 CFR Section 80.1235, 80.1601, and 80.1603.		
xsd:nonNegativeInteger	CreditQuantity	Yes	The total number of credits specified in the transaction.	Benzene Credit Quantity must equal the product of $[(0.62 - \text{CONCENTRATION}) / 100]$ and Total Volume.	11107
				Sulfur Credit Quantity must equal the product of $(30.00 \text{ ppm} - \text{Sulfur Concentration})$ and Total Volume.	11108
				The number of Fuels ABT credits generated must be greater than zero.	11172
xsd:string	TransactionDetailCommentText	No	Comment provided by the user on the transaction.		
xsd:string	GenerateFacilityIdentifier	No	The facility identifier, as registered in OTAQReg, for the facility that produced the fuel.	The generate facility must be specified when generating Fuels ABT credits as a refiner.	11002
				The identifier (public facility number) specified for the generate facility must be unique among all facilities registered to the submitting organization.	11052
				The generate facility must not be specified when generating Fuels ABT credits as an importer.	11071

(cont.)

**Figure 3: Data Elements for *CreditGenerateTransactionDetail* (cont.)**

Data Elements	QA Checks
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Data Type	Name	Required	Description	Description	Number
complex	CreditGenerateSupportingDocumentDetail	No	Information for the industry user to create user defined data to report supporting document identifiers.		

## 5.4 Selling Fuels ABT Credits

The complex type ***CreditSellTransactionDetail*** is used to report Fuels ABT credits that are being traded to another organization as a result of a sell transaction. This transaction type requires basic information regarding the quantity of credits, type of credits, number of times those credits have been traded (not including this transaction), and year in which the fuel was produced.

**How these data elements are processed:** Selling credits requires that you identify the number of credits being sold and the trading partner (or buyer) to whom you are selling the credits. The preferred method to sell a quantity of credits is to specify the credit quantity, credit type code, number of times traded, and the year in which the fuel was produced. EMTS will find the oldest credits you acquired that matches these characteristics in your inventory. This ensures that you are selling on a first-in, first-out (FIFO) basis. You must provide a reason for why you are selling the credits. Some reasons require that you provide a comment.

If you need to provide supporting information regarding the sell of credits, such as document identifiers or notes, use the ***CreditSellSupportingDocumentDetail*** 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 make this information available to your trading partner, use the ***PublicSupportingDocumentDetail*** complex type.

If you wish to identify fuel generated by a specific organization or facility to be sold, you can do so by using the ***SellOriginatingSourceDetail*** complex type to identify the organization and facility. EMTS will try to match the specific criteria in your Credit Holding Account; however, if you no longer own these credits or the specific profile cannot be found, the transaction will fail.

Figure 4 shows the data elements for ***CreditSellTransactionDetail***.

**Figure 4: Data Elements for *CreditSellTransactionDetail***

Data Elements				QA Checks	
Data Type	Name	Required	Description	Description	Number



xsd:string	TransactionPartner OrganizationIdentifier	Yes	This identifies the selling organization for the buy transaction using the Organization Identifier designated by OTAQReg.	The transaction partner organization must be registered at EPA and be active.	14018
				The selling organization cannot be the same as the buying organization.	14042
xsd:string	TransactionPartner OrganizationName	Yes	The name of the organization trading partner.		
xsd:nonNegativeInteger	CreditQuantity	Yes	The total number of credits specified in the transaction.	The organization must have enough available Fuels ABT credits in its holding account to complete the transaction.	14038
				The organization must have enough available Fuels ABT credits in its holding account to complete the transaction.	14900
				The organization must have enough available Fuels ABT credits from the specified organization in its holding account to complete the transaction.	14901
				The facility must have enough available Fuels ABT credits from the specified generate organization and facility in its holding account to complete the transaction.	14902
xsd:simpleType	CreditTypeCode	Yes	The code that identifies the type of credit.	The credit type code reported for the sell of Fuels ABT credits must be a valid code that is recognized by EPA.	14086

(cont.)

**Figure 4: Data Elements for *CreditSellTransactionDetail* (cont.)**

Data Elements				QA Checks	
Data Type	Name	Required	Description	Description	Number
xsd:nonNegativeInteger	TimesTraded	Yes	The number of times in which the credits have been traded, not including this transaction.	The number of Times Traded reported must be within the allowed range.	14087
xsd:gYear	CreditYear	Yes	The year in which the fuel is produced.	Credit Year may not be greater than the year associated with the specified Transfer Date.	14019

				The requested Credit Year must fall within the sulfur credit year range defined for the Current Year, Credit Type, Transaction Type, and Small Refiner Status.	14028
				The requested Credit Year must fall within the benzene credit year range defined for the Current Year, Credit Type, Transaction Type, and Small Refiner Status.	14062
				The requested Credit Year must fall within the benzene credit year range defined for the Current Year, Credit Type, Transaction Type, and Small Refiner Status.	14063

(cont.)

**Figure 4: Data Elements for *CreditSellTransactionDetail* (cont.)**

Data Elements				QA Checks	
Data Type	Name	Required	Description	Description	Number
xsd:string	SellReasonCode	Yes	This code identifies the reason for a buy transaction.	The reason code reported for the sell of Fuels ABT credits must be a valid code that is recognized by EPA.	14034
				The allowable reason codes reported by a facility when selling Fuels ABT credits are dependent on its business activities as registered with EPA.	14035
				If reason 'Standard Trade' or 'Cancel' is not specified for a sell transaction, then a comment must be provided.	14037
				A canceled Fuels ABT credit trade must match a pending trade.	14041
				If a Fuels ABT sell cancel transaction is then no other sell transaction may be reported in the submission.	14043
xsd:date	TransferDate	Yes	The date the credits change	The transfer date specified may not occur in the future.	14020

			hands. This is normally the date they are received by the purchaser.	The Transfer Date must be within the last n days based on CREDIT_TRANSFER_DATE_DAYS_BACK parameter.	14055
xsd:string	PTDNumber	No	The PTD number associated with the transaction.		

(cont.)

**Figure 4: Data Elements for *CreditSellTransactionDetail* (cont.)**

Data Elements				QA Checks	
Data Type	Name	Required	Description	Description	Number
xsd:string	MatchingTransactionIdentifier	No	The EMTS transaction identification number that matches the submitted buy or sell transaction.	If the Buy Transaction has a matching Buy transaction ID, the transaction must be in a pending state.	14016
				If the Credit Sell Transaction has a matched Credit Buy transaction ID, the transaction must match on trade matching criteria.	14017
				The user-provided matching trade must have the correct quantity of pending Fuels ABT credits.	14021
				The transaction specified by the matching transaction identifier must be available to be reserved.	14800
complex	PublicSupportingDocumentDetail	No	Industry user defined data to report supporting document identifiers which are visible to the organization's trading partner.		
xsd:string	TransactionDetailCommentText	No	Comment provided by the user on the transaction.		
complex	CreditSellSupportingDocumentDetail	No	Information for the industry user to create user defined data to report supporting document identifiers.		

complex	SellOriginatingSourceDetail	No	Information on the original fuel production.	If the generate organization is specified, then it must be registered with EPA.	14001
				If the generate facility is specified in the submission file then it must be registered with EPA.	14003

(cont.)

**Figure 4: Data Elements for *CreditSellTransactionDetail* (cont.)**

Data Elements				QA Checks	
Data Type	Name	Required	Description	Description	Number
				If the generate organization is specified, then generate facility must be actively associated with the generate organization.	14004
				If a generate facility is specified, then the organization where the fuel was produced must also be reported.	14007
				The facility number specified must be unique for the organization.	14052

## 5.5 Buying Fuels ABT Credits

The complex type ***CreditBuyTransactionDetail*** is used to acquire credits that are being traded from another organization as a result of a sell transaction. This transaction type requires basic information regarding the quantity of credits, type of credits, number of times those credits have been traded (not including this transaction), and year in which the fuel was produced.

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

One method is to wait for a sell transaction to be sent to you with the specifications for the credit quantity, credit type code, number of times traded, and the year in which the fuel was produced. You should use these exact specifications when responding to the sell transaction. 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 EMTS before the seller has initiated a sell transaction, your request will be queued until a matching sell has been submitted to EMTS by the seller. If the seller does not respond to your buy request within ten business days, the trade will expire. In both cases, a record of this incomplete submission is recorded in EMTS.

You must provide a reason for why you are buying credits. Some reasons require that you provide a comment.

If you need to provide supporting information regarding the trade, such as document identifiers or notes, use the ***CreditBuySupportingDocumentDetail*** 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 make this information available to your trading partner, use the ***PublicSupportingDocumentDetail*** complex type.

If you wish to identify fuel generated by a specific organization or facility to be sold, you can do so by using the ***BuyOriginatingSourceDetail*** complex type to identify the organization and facility. EMTS will try to match the specific criteria in the seller's Credit Holding Account; however, if the specific profile cannot be found, the transaction will fail.

Figure 5 shows the data elements for ***CreditBuyTransactionDetail***.

**Figure 5: Data Elements for *CreditBuyTransactionDetail***

Data Elements				QA Checks	
Data Type	Name	Required	Description	Description	Number
xsd:string	TransactionPartnerOrganizationIdentifier	Yes	This identifies the selling organization for the buy transaction using the OrganizationIdentifier designated by OTAQReg.	The transaction partner organization must be registered with EPA.	13018
				The buying organization cannot be the same as the selling organization.	13042
xsd:string	TransactionPartnerOrganizationName	Yes	The name of the organization trading partner.		
xsd:nonNegativeInteger	CreditQuantity	Yes	The total number of credits specified in the transaction.		
xsd:simpleType	CreditTypeCode	Yes	The code that identifies the type of credit.	The credit type code specified for the Fuels ABT buy transaction must be a valid code that is recognized by EPA.	13086
xsd:nonNegativeInteger	TimesTraded	Yes	The number of times in which the credits have been traded, not including this transaction.	The number of Times Traded reported must be within the allowable range.	13087

xsd:gYear	CreditYear	Yes	The year in which the fuel is produced.	The credit year cannot be greater than the year associated with the specified transfer date.	13019
				The credit year must fall within the allowable date range defined for the Current Year, Credit Type, Transaction Type, and Small Refiner Status.	13028

(cont.)

**Figure 5: Data Elements for *CreditBuyTransactionDetail* (cont.)**

Data Elements				QA Checks	
Data Type	Name	Required	Description	Description	Number
				The requested Credit Year must fall within the benzene credit year range defined for the Current Year, Credit Type, Transaction Type, and Small Refiner Status.	13062
				The requested Credit Year must fall within the benzene credit year range defined for the Current Year, Credit Type, Transaction Type, and Small Refiner Status.	13063
xsd:string	BuyReasonCode	Yes	This code identifies the reason for a buy transaction.	The reason code reported for Fuels ABT generate transaction must be a valid code that is recognized by EPA.	13034
				The allowable reason codes for a Fuels ABT buy transactions are dependent on the organization's active business activities, as registered with EPA.	13035
				If reason 'Standard Trade' or 'Cancel' is not specified for a buy transaction then a comment must be provided.	13037
				A Cancel trade must match a pending trade.	13041
				If a Fuels ABT buy cancel transaction is reported, then no other buy transaction may be reported in the submission.	13043
xsd:date	TransferDate	Yes	The date the credits change hands. This	The transfer date cannot be a date in the future.	13020

			is normally the date they are received by the purchaser.	The Transfer Date must be within the last n days based on CREDIT_TRANSFER_DATE_DAYS_BACK parameter.	13055
xsd:string	PTDNumber	No	The PTD number associated with the transaction.		

(cont.)

**Figure 5: Data Elements for *CreditBuyTransactionDetail* (cont.)**

Data Elements				QA Checks	
Data Type	Name	Required	Description	Description	Number
xsd:string	MatchingTransactionIdentifier	No	The EMTS transaction identification number that matches the submitted buy or sell transaction.	If the Fuels ABT buy transaction has a matching sell transaction ID, then the transaction must be in a pending state.	13016
				If the Fuels ABT buy transaction has a matched sell transaction ID, then the transaction must match on trade matching criteria.	13017
				The user specified matching trade must have the correct number of pending Fuels ABT credits.	13021
				The transaction specified by the matching transaction identifier must be available to be reserved.	13800
complex	PublicSupportingDocumentDetail	No	Industry user defined data to report supporting document identifiers which are visible to the organization's trading partner.		
xsd:string	TransactionDetailCommentText	No	Comment provided by the user on the transaction.		

complex	CreditBuySupportingDocumentDetail	No	Information for the industry user to create user defined data to report supporting document identifiers.		
complex	BuyOriginatingSourceDetail	No	Information on the original fuel production.	If the generate organization is specified, then it must be registered with EPA.	13001
				If the generate facility is specified in the submission file, then it must be registered with EPA.	13003

(cont.)

**Figure 5: Data Elements for *CreditBuyTransactionDetail* (cont.)**

Data Elements				QA Checks	
Data Type	Name	Required	Description	Description	Number
				If the generate organization is specified, then the generate facility must be actively associated with the generate organization.	13004
				If the generate facility is reported, then the generate organization must also be reported.	13007
				The facility number specified must be unique for the organization.	13052

## 5.6 Retiring Fuels ABT Credits

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

**How these data elements are processed:** Retiring credits requires that you identify the number of credits being retired, the type of credits, and the year in which the fuel was produced. You have the option of providing the number of times the credits have been traded. If you do not, EMTS will find the credits that have been traded the most times in your Credit Holding Account and transfer ownership of the credits to an EPA Credit Holding Account. In addition to the credits that you identify to retire, you must provide a reason for retirement.

If you are retiring credits to meet an obligation, you must also provide the compliance year which the credits are being retired and the level of compliance being met. You may retire credits to meet an



organization's overall obligation, or a specific facility level obligation (refiners only). If you are retiring credits for a specific facility site, report the public facility identifier for the site.

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

If you need to provide supporting information regarding the retire transaction, such as document identifiers or notes, use the ***CreditRetireSupportingDocumentDetail*** 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 fuel generated by a specific organization or facility to be retired, you can do so by using the ***RetireOriginatingSourceDetail*** complex type to identify the facility and/or organization. EMTS will try to match the specific profile in your Credit Holding Account; however, if you no longer own these credits, or the specific profile cannot be found, the transaction will fail.

Figure 6 shows the data elements for ***CreditRetireTransactionDetail***.

**Figure 6: Data Elements for *CreditRetireTransactionDetail***

Data Elements				QA Checks	
Data Type	Name	Required	Description	Description	Number
xsd:nonNegativeInteger	CreditQuantity	Yes	The total number of credits specified in the transaction.	The organization must have enough available Fuels ABT credits in its holding account to complete the transaction.	15038
				The organization must have enough available Fuels ABT credits in its holding account to complete the transaction.	15900
				The organization must have enough available Fuels ABT credits from the specified organization in its holding account to complete the transaction.	15901
				The facility must have enough available Fuels ABT credits from the specified generate organization and facility in its holding account to complete the transaction.	15902
xsd:string	CreditTypeCode	Yes	The code that identifies the type of credit.	The credit type code reported for the retirement of Fuels ABT credits must be a valid code that is recognized by EPA.	15086

xsd:nonNegativeInteger	TimesTraded	No	The number of times in which the credits have been traded, not including this transaction.		
xsd:gYear	CreditYear	Yes	The year in which the fuel is produced.	Credit Year may not be greater than the year associated with the specified Transaction Date.	15019

(cont.)

**Figure 6: Data Elements for *CreditRetireTransactionDetail* (cont.)**

Data Elements				QA Checks	
Data Type	Name	Required	Description	Description	Number
				The requested Credit Year must fall within the sulfur credit year range defined for the Current Year, Credit Type, Transaction Type, and Small Refiner Status.	15028
				The Credit Year must fall within the benzene credit year range defined for the Current Year, Credit Type, Transaction Type, and Small Refiner Status.	15062
				The requested Credit Year must fall within the benzene credit year range defined for the Current Year, Credit Type, Transaction Type, and Small Refiner Status.	15063
xsd:string	RetireReasonCode	Yes	This code identifies the reason for the retire transaction.	The reason code reported must be a valid code that is recognized by EPA.	15034
				The allowable reason codes reported by an organization when retiring Fuels ABT credits are dependent on their business activities registered with EPA.	15035
				If reason 'Standard Trade' or 'Cancel' is not provided for a retire transaction then a comment must be provided.	15037
xsd:date	TransactionDate	Yes	The date of the credit retire transaction.	The transaction date specified may not occur in the future.	15020
				The Transaction Date must be within the last n days based on TRANSACTION_DATE_DAYS_BACK_RETIRED_Fuels ABT credits parameter.	15055

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.	15016
				The Compliance Year must be active.	15017
				A compliance year can only be specified when retiring Fuels ABT credits with a reason code of 'Demonstrate Annual Compliance'.	15091

(cont.)

**Figure 6: Data Elements for *CreditRetireTransactionDetail* (cont.)**

Data Elements				QA Checks	
Data Type	Name	Required	Description	Description	Number
xsd:string	ComplianceLevelCode	No	The compliance basis for the submitting organization: Aggregated Importer, Aggregated Refiner, Aggregated Exporter, or Non-Obligated Party.	If a compliance facility identifier is reported, then the compliance level code must be 'Refinery by Refinery'.	15022
				The allowable compliance level codes reported by an organization when retiring Fuels ABT credits are dependent on their business activities registered with EPA.	15039
				The compliance level code reported must be a valid code that is recognized by EPA.	15042
				A compliance level code can only be specified when retiring fuel ABT Fuels ABT credits with a reason code of 'Demonstrate Annual Compliance'.	15090
xsd:string	ComplianceFacilityIdentifier	No	The facility site identifier, as registered as OTAQReg, for the facility site that has a compliance obligation.	The facility identifier must be reported when retiring for compliance as a refiner.	15021
				The compliance facility must be actively affiliated with the submitting organization.	15023
				The facility number specified must be unique for the organization.	15071
				A compliance facility identifier can only be specified when retiring Fuels ABT credits with a reason code of 'Demonstrate Annual Compliance'.	15092
xsd:string	TransactionDetailCommentText	No	Comment provided by the user on the transaction.		

complex	CreditRetireSupportingDocumentDetail	No	Information for the industry user to create user defined data to report supporting document identifiers.		
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(cont.)

**Figure 6: Data Elements for *CreditRetireTransactionDetail* (cont.)**

Data Elements				QA Checks	
Data Type	Name	Required	Description	Description	Number
complex	RetireOriginatingSourceDetail	No	Information on the original fuel production.	If the generate organization is specified, then it must be registered with EPA.	15001
				If the generate facility is provided in the submission file, then it must be registered with EPA.	15003
				If the generate organization is specified, then the generate facility must be actively associated with the generate organization.	15004
				If a generate facility is reported then the organization where the fuel was produced must also be reported.	15007
				The facility number specified must be unique among all facilities registered to the organization.	15052

## **7.0 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.

## Appendix A: Glossary

### EMTS 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.
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 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.
Business Activities	The characteristics of a company that determine the type of transactions it can do in 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 EMTS.
Credit Generate Transaction	A transaction that creates a Fuels ABT credit. Credits may only be generated when gasoline is refined or imported.
Credit Retire Transaction	A transaction where a regulated party removes a credit from trading in EMTS.
Credit Standard	The maximum average concentration level of the corresponding credit type allowed for gasoline produced at a refinery or imported by an importer during each calendar year.

(cont.)

## EMTS Glossary (cont.)

Title	Definition
Credit Type	The Fuels ABT emission standard which the credit represents.
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 Carry-forward	A refinery or importer creates a deficit for a given averaging period when its compliance value is greater than the credit standard.
EPA Moderated Transaction System (EMTS)	EPA's centralized messaging, screening, and transaction system that moderates Fuels ABT credit transactions.
Facility	An actual or virtual location where fuel is produced, refined, or imported.
Fuels ABT Credit	Credits that are transacted between refiners and non-renewable fuel importers.
Importer	An entity that imports transportation fuel.
Industry User	An EMTS user represents a regulated party.
Logging	Functionality of a software system that stores information on the system for auditing and tracking.
Message	A communication between a registered party and 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 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 EMTS to the sender or receiver of a transaction. Notifications may occur before the message is evaluated in any way other than format checks.
Permissions	The ability to perform certain actions within EMTS.
Refiner	A company who refines gasoline or diesel fuel.
Registered Party	Any user of EMTS who has gained access through the registration process with EPA.
Role	A set of permissions for functions that a person is allowed to perform. A role is assigned to a user (person).
Small Refiner	A refiner that processes <75,000 bpd crude, or who has <1500 employees and processes <155,000 bpd crude.
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 EMTS, for the purposes of completing a transaction. "Sending" can potentially occur via a node, a node client, or a web form that takes inputted data and creates an XML file.
Submission Date	The date an XML file is sent to EMTS, for the purpose of completing a transaction.
Trade	A two-part transaction, consisting of a sell transaction initiated by one party and a buy transaction initiated by another party.

(cont.)



## EMTS Glossary (cont.)

Title	Definition
Transaction	A transaction describes an operation on a credit. 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 EMTS. This is the date recorded on the Product Transfer Document (PTD).
Transaction Log	The history of all of transactions which have been processed by EMTS.
User	A person who interacts with EMTS. A person authorized to use 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.

## Appendix B: QA Checks

The following table shows the checks that 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
11000 – 11999	Generate Credits
13000 – 13999	Buy Credits
14000 – 14999	Sell Credits
15000 – 15999	Retire Credits

### EMTS QA Checks

Number	Name	Check Group	Description
1000	XML Validation	XML Validation	The XML document must adhere to EMTS xsd and be well-formed and valid.
1010	Invalid Code	XML Validation	The XML document must contain valid codes.
1020	No XML File Found	XML Validation	XML document must be in the SUBMISSION_FILE table.
2000	User must be Registered with EPA and Active	Submission	The user specified in the submission file must be actively registered with EPA and have permission to participate in 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.

(cont.)

### EMTS QA Checks (cont.)

Number	Name	Check Group	Description
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.
2006	Organization Account is Enabled	Submission	The organization's 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.
2013	Organization may not submit multiple files with the same name.	Submission	A given organization may not submit multiple files with the same name in a given calendar year.
2015	Organization must specify a single valid credit year for submission.	Submission	An organization must specify a single valid Fuels ABT credit year for a submission.

(cont.)

### EMTS QA Checks (cont.)

Number	Name	Check Group	Description
2016	Organization Must Specify Transactions for the Same Program: RFS2 or Fuels ABT	Submission	An organization must specify transactions for either RFS2 or Fuels ABT.
11002	Generate Facility must be provided for domestic production	Credit Generate	The generate facility must be specified when generating Fuels ABT credits as a refiner.
11004	Generate Facility Association with Generate Organization	Credit Generate	If a generate organization is specified, then the generate facility must be actively associated with the generate organization.
11005	Generate Facility Association with Organization	Credit Generate	If a generate organization is not specified, then the generate facility must be actively associated with the submitting organization.
11012	Organization Permissions	Credit Generate	The transactions that an organization can report are dependent on its active business activities, as registered with EPA.
11034	Reason Code must be valid	Credit Generate	The reason code reported for the Fuels ABT generate transaction must be a valid code that is recognized by EPA.
11035	Allowable Reason Code	Credit Generate	The allowable reason codes reported by an organization when generating Fuels ABT credits are dependent on its business activities as registered with EPA.
11037	Reason Comment	Credit Generate	If a generate reason code is configured as 'Comment Required', then a comment must be specified whenever that reason code is used.

(cont.)

### EMTS QA Checks (cont.)

Number	Name	Check Group	Description
11052	Generate Public Facility Number must be unique	Credit Generate	The identifier (public facility number) specified for the generate facility must be unique among all facilities registered to the submitting organization.
11062	Credit Year must be valid (Standard Benzene)	Credit Generate	The requested Credit Year must fall within the benzene credit year range defined for the Current Year, Credit Type, Transaction Type, and Standard Refiner Status.
11063	Credit Year must be valid (Small Refiner Benzene)	Credit Generate	The requested Credit Year must fall within the benzene credit year range defined for the Current Year, Credit Type, Transaction Type, and Small Refiner Status.
11071	Generate Facility Should Not Be Reported for Importers	Credit Generate	The generate facility must not be specified when generating Fuels ABT credits as an importer.
11100	Credit Type must be valid	Credit Generate	The credit type code must be a valid code that is recognized by EPA.
11101	Credit Year Must Be Valid	Credit Generate	The credit year specified for a Fuels ABT generate transaction must be a valid.
11103	Credit Standard Code must be valid	Credit Generate	The credit standard code reported in the production of Fuels ABT credits must be a valid code that is recognized by EPA.
11104	Credit Standard Code compatible with Credit Type	Credit Generate	The credit standard code reported must be compatible with the credit type.

(cont.)

### EMTS QA Checks (cont.)

Number	Name	Check Group	Description
11107	Benzene Credit Quantity does not match the system calculated value.	Credit Generate	Benzene Credit Quantity must equal the product of $[(0.62 - \text{CONCENTRATION}) / 100]$ and Total Volume.
11108	Sulfur Credit Quantity does not match the system calculated value.	Credit Generate	Sulfur Credit Quantity must equal the product of $(30.00 \text{ ppm} - \text{Sulfur Concentration})$ and Total Volume.
11122	Sulfur concentration Must Be within Allowed Range.	Credit Generate	The sulfur concentration (annual average) reported must be greater than zero and less than the referenced benzene concentration standard.
11123	Benzene concentration Must Be within Allowed Range.	Credit Generate	The benzene concentration (annual average) reported must be greater than zero and less than the referenced benzene concentration standard.
11172	Quantity of Fuels ABT Credits Must Be Greater than Zero.	Credit Generate	The number of Fuels ABT credits generated must be greater than zero.
11900	Sufficient Credits	Credit Generate	Runs reservation step for generate transaction. Needed for Transaction_Status_Log entry.
13001	Generate Organization must be Registered with EPA	Credit Buy	If the generate organization is specified, then it must be registered with EPA.
13003	Generate Facility must be Registered with EPA	Credit Buy	If the generate facility is specified in the submission file, then it must be registered with EPA.

(cont.)

### EMTS QA Checks (cont.)

Number	Name	Check Group	Description
13004	Generate Facility Association with Generate Organization	Credit Buy	If the generate organization is specified, then the generate facility must be actively associated with the generate organization.
13007	Generate Facility	Credit Buy	If the generate facility is reported, then the generate organization must also be reported.
13012	Organization Permissions	Credit Buy	The transactions that can be reported by an organization are dependent on its active business activities, as registered with EPA.
13016	Matching Transaction Must Be a Pending Sell	Credit Buy	If the Fuels ABT buy transaction has a matching sell transaction ID, then the transaction must be in a pending state.
13017	Matched Transaction ID Must Belong to a Matching Credit Sell	Credit Buy	If the Fuels ABT buy transaction has a matched sell transaction ID, then the transaction must match on trade matching criteria.
13018	Transaction Partner Organization Registered with EPA	Credit Buy	If the transaction partner organization is specified, then it must be registered with EPA.
13019	Credit Year and Transfer Date	Credit Buy	The credit year cannot be greater than the year associated with the specified transfer date.
13020	Transfer Date Consistent	Credit Buy	The transfer date cannot be a date in the future.
13021	Matching Trade pending Credits count validation	Credit Buy	The user specified matching trade must have the correct number of pending Fuels ABT credits.

(cont.)

### EMTS QA Checks (cont.)

Number	Name	Check Group	Description
13022	Transaction Partner Organization Must Have Correct Business Activity	Credit Buy	The transaction partner organization must have the active business activities necessary to allow a Fuels ABT sell transaction.
13028	Credit Year must be valid	Credit Buy	The credit year must fall within the allowable date range defined for the Current Year, Credit Type, Transaction Type, and Small Refiner Status.
13034	Reason Code must be valid	Credit Buy	The reason code reported for Fuels ABT generate transaction must be a valid code that is recognized by EPA.
13035	Allowable Reason Code	Credit Buy	The allowable reason codes for a Fuels ABT buy transactions are dependent on the organization's active business activities, as registered with EPA.
13037	Reason Comment	Credit Buy	If reason 'Standard Trade' or 'Cancel' is not specified for a buy transaction then a comment must be provided.
13041	Cancel Trade	Credit Buy	A Cancel trade must match a pending trade.
13042	Same Buy and Sell Organization	Credit Buy	The buying organization cannot be the same as the selling organization.
13043	One Cancel per Submission	Credit Buy	If a Fuels ABT buy cancel transaction is reported, then no other buy transaction may be reported in the submission.
13052	Public Facility Number must be unique	Credit Buy	The facility number specified must be unique for the organization.

(cont.)



### EMTS QA Checks (cont.)

Number	Name	Check Group	Description
13055	Transfer Date must be within Allowed Range	Credit Buy	The Transfer Date must be within the last n days based on CREDIT_TRANSFER_DATE_DAYS_BACK parameter.
13062	Credit Year must be valid (Standard Benzene)	Credit Buy	The requested Credit Year must fall within the benzene credit year range defined for the Current Year, Credit Type, Transaction Type, and Small Refiner Status.
13063	Credit Year must be valid (Small Refiner Benzene)	Credit Buy	The requested Credit Year must fall within the benzene credit year range defined for the Current Year, Credit Type, Transaction Type, and Small Refiner Status.
13086	Credit Type must be valid	Credit Buy	The credit type code specified for the Fuels ABT buy transaction must be a valid code that is recognized by EPA.
13087	Times Traded must be within Allowed Range	Credit Buy	The number of Times Traded reported must be within the allowable range.
13800	Reserve Pending Trade	Credit Buy	The transaction specified by the matching transaction identifier must be available to be reserved.
13900	Sufficient Credits	Credit Buy	Runs reservation step for buy transaction. Needed for Transaction_Status_Log entry.
14001	Generate Organization must be Registered with EPA	Credit Sell	If the generate organization is specified, then it must be registered with EPA.

(cont.)

### EMTS QA Checks (cont.)

Number	Name	Check Group	Description
14003	Generate Facility must be Registered with EPA	Credit Sell	If the generate facility is specified in the submission file then it must be registered with EPA.
14004	Generate Facility Association with Generate Organization	Credit Sell	If the generate organization is specified, then generate facility must be actively associated with the generate organization.
14007	Generate Facility	Credit Sell	If a generate facility is specified, then the organization where the fuel was produced must also be reported.
14012	Organization Permissions	Credit Sell	The transactions that can be reported by an organization are dependent on its active business activities as registered with EPA.
14016	Matching Transaction Must Be a Pending Buy	Credit Sell	If the Buy Transaction has a matching Buy transaction ID, the transaction must be in a pending state.
14017	Matched Transaction ID Must Belong to a Matching Credit Buy	Credit Sell	If the Credit Sell Transaction has a matched Credit Buy transaction ID, the transaction must match on trade matching criteria.
14018	Transaction Partner Organization Registered at EPA and Active	Credit Sell	The transaction partner organization must be registered at EPA and be active.
14019	Credit Year and Transfer Date	Credit Sell	Credit Year may not be greater than the year associated with the specified Transfer Date.
14020	Transfer Date Consistent	Credit Sell	The transfer date specified may not occur in the future.

(cont.)

### EMTS QA Checks (cont.)

Number	Name	Check Group	Description
14021	Matching Trade pending Credits count validation	Credit Sell	The user-provided matching trade must have the correct quantity of pending Fuels ABT credits.
14022	Transaction Partner Organization Must Have Correct Business Activity	Credit Sell	The transaction partner organization must have enabled business activity that allows a Fuels ABT credit buy.
14028	Credit Year must be valid	Credit Sell	The requested Credit Year must fall within the sulfur credit year range defined for the Current Year, Credit Type, Transaction Type, and Small Refiner Status.
14034	Reason Code Must Be Valid	Credit Sell	The reason code reported for the sale of Fuels ABT credits must be a valid code that is recognized by EPA.
14035	Allowable Reason Code	Credit Sell	The allowable reason codes reported by a facility when selling Fuels ABT credits are dependent on its business activities as registered with EPA.
14037	Reason Comment	Credit Sell	If reason 'Standard Trade' or 'Cancel' is not specified for a sell transaction, then a comment must be provided.
14038	Sufficient Credits	Credit Sell	The organization must have enough available Fuels ABT credits in its holding account to complete the transaction.
14041	Cancel Trade	Credit Sell	A canceled Fuels ABT credit trade must match a pending trade.
14042	Same Buy and Sell Organization	Credit Sell	The selling organization cannot be the same as the buying organization.

(cont.)

### EMTS QA Checks (cont.)

Number	Name	Check Group	Description
14043	One Cancel per Submission	Credit Sell	If a Fuels ABT sell cancel transaction is then no other sell transaction may be reported in the submission.
14052	Public Facility Number must be unique	Credit Sell	The facility number specified must be unique for the organization.
14055	Transfer Date must be within Allowed Range	Credit Sell	The Transfer Date must be within the last n days based on CREDIT_TRANSFER_DATE_DAYS_BACK parameter.
14062	Credit Year must be valid (Standard Benzene)	Credit Sell	The requested Credit Year must fall within the benzene credit year range defined for the Current Year, Credit Type, Transaction Type, and Small Refiner Status.
14063	Credit Year must be valid (Small Refiner Benzene)	Credit Sell	The requested Credit Year must fall within the benzene credit year range defined for the Current Year, Credit Type, Transaction Type, and Small Refiner Status.
14086	Credit Type must be valid	Credit Sell	The credit type code reported for the sale of Fuels ABT credits must be a valid code that is recognized by EPA.
14087	Times Traded must be within Allowed Range	Credit Sell	The number of Times Traded reported must be within the allowed range.
14800	Reserve Pending Trade	Credit Sell	The transaction specified by the matching transaction identifier must be available to be reserved.

(cont.)

### EMTS QA Checks (cont.)

Number	Name	Check Group	Description
14900	Sufficient Credits (FIFO)	Credit Sell	The organization must have enough available Fuels ABT credits in its holding account to complete the transaction.
14901	Sufficient Credits (Organization)	Credit Sell	The organization must have enough available Fuels ABT credits from the specified organization in its holding account to complete the transaction.
14902	Sufficient Credits from Generate Facility	Credit Sell	The facility must have enough available Fuels ABT credits from the specified generate organization and facility in its holding account to complete the transaction.
15001	Generate Organization must be Registered with EPA	Credit Retire	If the generate organization is specified, then it must be registered with EPA.
15003	Generate Facility must be Registered with EPA	Credit Retire	If the generate facility is provided in the submission file, then it must be registered with EPA.
15004	Generate Facility Association with Generate Organization	Credit Retire	If the generate organization is specified, then the generate facility must be actively associated with the generate organization.
15007	Generate Facility	Credit Retire	If a generate facility is reported then the organization where the fuel was produced must also be reported.
15012	Organization Permissions	Credit Retire	The transactions that can be reported by an organization are dependent on its active business activities as registered with EPA.

(cont.)

### EMTS QA Checks (cont.)

Number	Name	Check Group	Description
15016	Compliance Year	Credit Retire	Compliance year is required if the reason code 'Demonstrate Annual Compliance' is reported.
15017	Compliance Year Must Be Active	Credit Retire	The Compliance Year must be active.
15019	Credit Year and Transaction Date	Credit Retire	Credit Year may not be greater than the year associated with the specified Transaction Date.
15020	Transaction Date Consistent	Credit Retire	The transaction date specified may not occur in the future.
15021	Reporting Compliance at the Refinery Level	Credit Retire	The facility identifier must be reported when retiring for compliance as a refiner.
15022	Refinery Level Compliance	Credit Retire	If a compliance facility identifier is reported, then the compliance level code must be 'Refinery by Refinery'.
15023	Compliance Facility Active Affiliation with Organization	Credit Retire	The compliance facility must be actively affiliated with the submitting organization.
15028	Credit Year must be valid	Credit Retire	The requested Credit Year must fall within the sulfur credit year range defined for the Current Year, Credit Type, Transaction Type, and Small Refiner Status.
15034	Reason Code Must Be Valid	Credit Retire	The reason code reported must be a valid code that is recognized by EPA.

(cont.)

### EMTS QA Checks (cont.)

Number	Name	Check Group	Description
15035	Allowable Reason Code	Credit Retire	The allowable reason codes reported by an organization when retiring Fuels ABT credits are dependent on their business activities registered with EPA.
15037	Reason Comment	Credit Retire	If reason 'Standard Trade' or 'Cancel' is not provided for a retire transaction then a comment must be provided.
15038	Sufficient Credits	Credit Retire	The organization must have enough available Fuels ABT credits in its holding account to complete the transaction.
15039	Allowable Compliance Level Code	Credit Retire	The allowable compliance level codes reported by an organization when retiring Fuels ABT credits are dependent on their business activities registered with EPA.
15042	Compliance Level Code Must Be Valid	Credit Retire	The compliance level code reported must be a valid code that is recognized by EPA.
15052	Public Facility Number must be unique	Credit Retire	The facility number specified must be unique among all facilities registered to the organization.
15055	Transaction Date must be within Allowed Range	Credit Retire	The Transaction Date must be within the last n days based on TRANSACTION_DATE_DAYS_BACK_RETIRED_Fuels ABT credits parameter.
15062	Credit Year must be valid (Standard Benzene)	Credit Retire	The requested Credit Year must fall within the benzene credit year range defined for the Current Year, Credit Type, Transaction Type, and Small Refiner Status.

(cont.)

### EMTS QA Checks (cont.)

Number	Name	Check Group	Description
15063	Credit Year must be valid (Small Refiner Benzene)	Credit Retire	The requested Credit Year must fall within the benzene credit year range defined for the Current Year, Credit Type, Transaction Type, and Small Refiner Status.
15071	Public Facility Number must be unique	Credit Retire	The facility number specified must be unique for the organization.
15086	Credit Type must be valid	Credit Retire	The credit type code reported for the retirement of Fuels ABT credits must be a valid code that is recognized by EPA.
15090	Compliance Level Code Not Allowed	Credit Retire	A compliance level code can only be specified when retiring Fuels ABT credits with a reason code of 'Demonstrate Annual Compliance'.
15091	Compliance Year Not Allowed	Credit Retire	A compliance year can only be specified when retiring Fuels ABT credits with a reason code of 'Demonstrate Annual Compliance'.
15092	Compliance Facility Identifier Not Allowed	Credit Retire	A compliance facility identifier can only be specified when retiring Fuels ABT credits with a reason code of 'Demonstrate Annual Compliance'.
15900	Sufficient Credits (FIFO)	Credit Retire	The organization must have enough available Fuels ABT credits in its holding account to complete the transaction.
15901	Sufficient Credits (Organization)	Credit Retire	The organization must have enough available Fuels ABT credits from the specified organization in its holding account to complete the transaction.
15902	Sufficient Credits From Generate Facility	Credit Retire	The facility must have enough available Fuels ABT credits from the specified generate organization and facility in its holding account to complete the



			transaction.
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## Appendix C: Cross-reference Tables

The following tables show cross-reference codes for reporting Fuels ABT transactions to EMTS. Only Non-Renewable Fuel Importers (40), Refiners (60), and Small Refiners (70) can perform Fuels ABT transactions, and thus all other business activities are not included in these tables.

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

**Figure C-1: Business Activity by Generate Reason Code**

Business Activity Code	Description	Generate Reason Code	Description
40	Non-Renewable Fuel Importer	20	Import non-renewable fuel
40	Non-Renewable Fuel Importer	40	Remedial Action - Importer Credits
60	Refiner	10	Refine non-renewable fuel
60	Refiner	30	Remedial Action - Refiner Credits
70	Small Refiner	10	Refine non-renewable fuel
70	Small Refiner	30	Remedial Action - Refiner Credits

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

**Figure C-2: Business Activity by Buy Reason Code**

Business Activity Code	Description	Buy Reason Code	Description
40	Non-renewable Fuel Importer	10	Standard Trade
40	Non-renewable Fuel Importer	30	Remedial Action - Incorrect Trading Partner
40	Non-renewable Fuel Importer	50	Deny Trade
40	Non-renewable Fuel Importer	60	Cancel Trade
40	Non-renewable Fuel Importer	80	Remedial Action - Incorrect Trade
60	Refiner	10	Standard Trade
60	Refiner	30	Remedial Action - Incorrect Trading Partner
60	Refiner	50	Deny Trade
60	Refiner	60	Cancel Trade
60	Refiner	80	Remedial Action - Incorrect Trade

(cont.)

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

Business Activity Code	Description	Buy Reason Code	Description
70	Small Refiner	10	Standard Trade
70	Small Refiner	30	Remedial Action - Incorrect Trading Partner
70	Small Refiner	50	Deny Trade
70	Small Refiner	60	Cancel Trade
70	Small Refiner	80	Remedial Action - Incorrect Trade

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

**Figure C-3: Business Activity by Sell Reason Code**

Business Activity Code	Description	Sell Reason Code	Description
40	Non-renewable Fuel Importer	10	Standard Trade
40	Non-renewable Fuel Importer	30	Remedial Action - Incorrect Trading Partner
40	Non-renewable Fuel Importer	50	Deny Trade
40	Non-renewable Fuel Importer	60	Cancel Trade
40	Non-renewable Fuel Importer	80	Remedial Action - Incorrect Trade
60	Refiner	60	Cancel Trade
60	Refiner	80	Remedial Action - Incorrect Trade
70	Small Refiner	10	Standard Trade
70	Small Refiner	30	Remedial Action - Incorrect Trading Partner
40	Non-renewable Fuel Importer	80	Remedial Action - Incorrect Trade
60	Refiner	10	Standard Trade
60	Refiner	30	Remedial Action - Incorrect Trading Partner
60	Refiner	50	Deny Trade
60	Refiner	60	Cancel Trade
60	Refiner	80	Remedial Action - Incorrect Trade
70	Small Refiner	10	Standard Trade
70	Small Refiner	30	Remedial Action - Incorrect Trading Partner
70	Small Refiner	50	Deny Trade
70	Small Refiner	60	Cancel Trade
70	Small Refiner	80	Remedial Action - Incorrect Trade

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 C-4: Business Activity by Retire Reason Code**

Business Activity Code	Description	Retire Reason Code	Description
40	Non-renewable Fuel Importer	80	Demonstrate annual compliance
40	Non-renewable Fuel Importer	140	Invalid Credit
40	Non-renewable Fuel Importer	150	Remediation of Invalid Credit Use for Compliance
60	Refiner	80	Demonstrate annual compliance
60	Refiner	140	Invalid Credit
60	Refiner	150	Remediation of Invalid Credit Use for Compliance
70	Small Refiner	140	Invalid Credit
70	Small Refiner	150	Remediation of Invalid Credit Use for Compliance

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

**Figure C-5: Business Activity by Compliance Level Code**

Business Activity Code	Description	Compliance Level Code	Description
40	Non-renewable Fuel Importer	10	Aggregated Importer
60	Refiner	50	Facility Level