

The EPA Must Improve Controls and Integrate Its Information System to Manage Fraud Potential in the Renewable Fuel Standard Program

September 19, 2023 | Report No. 23-P-0032



Report Contributors

Michael Davis
Gabby Fekete
Margaux Hoover
Richard Jones
Kristin Pope
Wendy Wierzbicki

Abbreviations

C.F.R.	Code of Federal Regulations
DART	Data Analysis and Reporting Tool
EMTS	EPA Moderated Transaction System
EPA	U.S. Environmental Protection Agency
OECA	Office of Enforcement and Compliance Assurance
OIG	Office of Inspector General
OTAQ	Office of Transportation and Air Quality
QAP	Quality Assurance Program
RIN	Renewable Identification Number
RFS	Renewable Fuel Standard
RFS2	Renewable Fuel Standard Rules and Regulations Promulgated Pursuant to the Energy Independence and Security Act of 2007

Key Definitions

Please see Appendix A for key definitions.

Cover Image

Fuel pump offering various percentages of ethanol fuel. (U.S. Department of Agriculture photo)

Are you aware of fraud, waste, or abuse in an EPA program?

EPA Inspector General Hotline

1200 Pennsylvania Avenue, NW (2431T)
Washington, D.C. 20460
(888) 546-8740
(202) 566-2599 (fax)
OIG.Hotline@epa.gov

Learn more about our [OIG Hotline](#).

EPA Office of Inspector General

1200 Pennsylvania Avenue, NW (2410T)
Washington, D.C. 20460
(202) 566-2391
www.epaoig.gov

Subscribe to our [Email Updates](#).
Follow us on X (formerly Twitter) [@EPAoig](#).
Send us your [Project Suggestions](#).



At a Glance

The EPA Must Improve Controls and Integrate Its Information System to Manage Fraud Potential in the Renewable Fuel Standard Program

Why We Did This Audit

To accomplish this objective:

The U.S. Environmental Protection Agency Office of Inspector General conducted this audit to determine whether the EPA's Moderated Transaction System and Quality Assurance Program include controls to identify and reduce the generation and trading of invalid Renewable Identification Numbers, which are used to demonstrate compliance with renewable fuel standards.

The Renewable Fuel Standard program requires that a certain volume of renewable fuel be used to replace or reduce petroleum-based transportation fuel, heating oil, or jet fuel. Refineries can purchase renewable fuel with Renewable Identification Numbers attached or acquire the numbers on the Renewable Identification Number market. Since the program began, the EPA has documented nearly 339 million fraudulent Renewable Identification Numbers and fraudulent sales of about \$87 million.

To support these EPA mission-related efforts:

- *Compliance with the law.*
- *Improving air quality.*
- *Operating efficiently and effectively.*

To address these top EPA management challenges:

- *Mitigating causes and adapting to impacts of climate change.*
- *Enforcing environmental laws and regulations.*

Address inquiries to our public affairs office at (202) 566-2391 or OIG.PublicAffairs@epa.gov.

[List of OIG reports.](#)

What We Found

The EPA has strengthened controls over the Renewable Fuel Standard, or RFS, program since its inception, primarily in response to several instances of companies generating and selling fraudulent Renewable Identification Numbers, or RINs. However, further controls are needed to ensure that only valid RINs are generated and sold on the RIN market. The EPA has not implemented controls to prevent a producer from entering more RINs than the producer is able to generate based on its registered capacity. The EPA also allows firms that provide RIN verification services to provide other services for producers, which may reduce the audit provider's independence. As a result, the EPA does not have reasonable assurance that the program is achieving its goals of reducing greenhouse gas emissions and expanding the nation's renewable fuels sector.

We also found that the EPA's system for tracking and overseeing RIN reporting has not been integrated with other RIN-related systems, including the system used to track RIN transactions. Integration has been slowed by limited program resources, security and confidentiality concerns, and ever-expanding RFS program data needs. This lack of integration places a significant burden on staff to address information requests and has caused data-quality problems, including missing or incomplete reports, that must be addressed to improve RFS program implementation.

The EPA can further strengthen program controls to better ensure the integrity of the RINs market and meet goals for increased use of renewable fuels.

Recommendations and Planned Agency Corrective Actions

We recommend that the assistant administrator for Air and Radiation upgrade the program's controls to ensure compliance with key regulatory requirements and develop a process to verify RIN data entered in the EPA Moderated Transaction System. We also recommend that the EPA develop a process to reduce the likelihood of Quality Assurance Program auditor conflicts of interest; communicate requirements, expectations, and consequences to program auditors to minimize the likelihood that invalid RINs are verified; and track audit firm consulting services. Further, we recommend that the EPA integrate its system to facilitate oversight of RFS rules and regulations. The Agency agreed with our recommendations and provided acceptable planned corrective actions with estimated milestone dates. We consider the recommendations resolved with corrective actions pending.

Noteworthy Achievements

The Office of Transportation and Air Quality has implemented numerous controls to track RINs and reduce RIN fraud since the RFS program began, such as an engineering review, attest engagement, and EPA Moderated Transaction System implementation.



OFFICE OF INSPECTOR GENERAL
U.S. ENVIRONMENTAL PROTECTION AGENCY

September 19, 2023

MEMORANDUM

SUBJECT: The EPA Must Improve Controls and Integrate Its Information System to Manage Fraud Potential in the Renewable Fuel Standard Program
Report No. 23-P-0032

FROM: Sean W. O'Donnell, Inspector General

TO: Joseph Goffman, Principal Deputy Assistant Administrator
Office of Air and Radiation

This is our report on the subject audit conducted by the U.S. Environmental Protection Agency Office of Inspector General. The project number for this audit was [OA-FY21-0293](#). This report contains findings that describe the problems the OIG has identified and corrective actions the OIG recommends. Final determinations on matters in this report will be made by EPA managers in accordance with established audit resolution procedures.

The Office of Air and Radiation is responsible for the issues discussed in this report.

In accordance with EPA Manual 2750, your office provided acceptable planned corrective actions and estimated milestone dates in response to OIG recommendations. All recommendations are resolved, and no final response to this report is required. If you submit a response, however, it will be posted on the OIG's website, along with our memorandum commenting on your response. Your response should be provided as an Adobe PDF file that complies with the accessibility requirements of section 508 of the Rehabilitation Act of 1973, as amended. The final response should not contain data that you do not want to be released to the public; if your response contains such data, you should identify the data for redaction or removal along with corresponding justification.

We will post this report to our website at www.epaoig.gov.

Table of Contents

Chapters

1	Introduction	1
	Purpose	1
	Background	1
	Noteworthy Achievements	5
	Responsible Offices	6
	Scope and Methodology	6
	Prior Reports	7
2	The EMTS and the QAP Need Additional Controls to Ensure Compliance with Key Regulatory Requirements	9
	The EPA Allows Companies to Submit RIN Transactions to the EMTS After Regulatory Deadlines	10
	The EMTS Does Not Screen RIN Generation Based on Registered Renewable Fuel Production Capacity	12
	The EPA Does Not Verify RIN Transactions in the EMTS	13
	The EPA’s QAP Does Not Ensure Independence Between QAP Auditors and Renewable Fuel Producers	14
	Conclusions	16
	Recommendations	16
	Agency Response and OIG Assessment	17
3	The EPA’s System Hindered Program Administration and RIN Oversight and Caused Data-Quality Problems	18
	The EPA’s Information Systems Should Be Designed to Achieve Objectives, Respond to Risks, and Produce Quality Information	18
	The Design of the EPA’s RFS Information System Impedes Program Administration and Compliance Oversight	19
	The EPA’s System-Integration Efforts Have Been Slowed by Limited Resources and Other Factors	20
	The EPA’s Information System Caused Resource and Data-Quality Problems that Hindered RIN Oversight	21
	DART Limitations Reduced Access to EMTS Data and Impacted RIN Data Analyses	21
	Conclusions	22
	Recommendations	22
	Agency Response and OIG Assessment	22
4	Status of Recommendations	24

--continued--

Appendixes

A	Key Definitions	25
B	Genscape and Gen-X Energy Group: A Case Study of Invalid RINs	26
C	Subpart M Reporting Requirements	30
D	Agency’s Response to Draft Report	31
E	Distribution	35

Chapter 1

Introduction

Purpose

The U.S. Environmental Protection Agency Office of Inspector General [initiated](#) this audit to determine whether the EPA Moderated Transaction System, or EMTS, and Quality Assurance Program, or QAP, include controls to identify and reduce the generation and trading of invalid Renewable Identification Numbers, or RINs, which are used to demonstrate compliance with the renewable fuel standards as overseen by the EPA Office of Transportation and Air Quality, or OTAQ.

Top Management Challenges Addressed

This audit addresses the following top management challenges for the Agency, as identified in the OIG's *U.S. Environmental Protection Agency Fiscal Year 2023 Top Management Challenges [report](#)*, issued October 28, 2022:

- Mitigating the causes and adapting to the impacts of climate change.
- Enforcing compliance with environmental laws and regulations.

Background

With the passage of the Energy Policy Act of 2005, Congress amended the Clean Air Act and created the Renewable Fuel Program to reduce greenhouse gas emissions and to expand the nation's renewable fuels sector while reducing reliance on imported oil. Congress later amended the Renewable Fuel Standard, or RFS, program, with the enactment of the Energy Independence and Security Act of 2007. The EPA implemented the program with final rules in 2007 and 2010.¹ The RFS program requires a certain volume of renewable fuel to replace or reduce the quantity of petroleum-based transportation fuel, heating oil, or jet fuel. Congress set targets for the total amount of renewable fuel to replace petroleum-based fuels each year through 2022. To achieve the targets set by Congress, the EPA translates the volume targets into individual compliance obligations, known as **renewable volume obligations**, that each refiner or importer of gasoline or diesel fuel, known as an **obligated party**, must meet every year.

Renewable Fuel Producers Generate RINs that Are Used by Refiners and Importers to Meet Their Renewable Volume Obligations

Obligated parties achieve compliance with their renewable volume obligations by obtaining and retiring credits known as RINs. When renewable fuel is produced or imported, the renewable fuel producer or

¹ "Regulation of Fuels and Fuel Additives: Renewable Fuel Standard Program," 72 Fed. Reg. 23,900 (May 1, 2007), also known as RFS1, and "Regulation of Fuels and Fuel Additives: Changes to Renewable Fuel Standard Program," 75 Fed. Reg. 14,670 (Mar. 26, 2010), also known as RFS2. The EPA amended the RFS2 program shortly after promulgation.

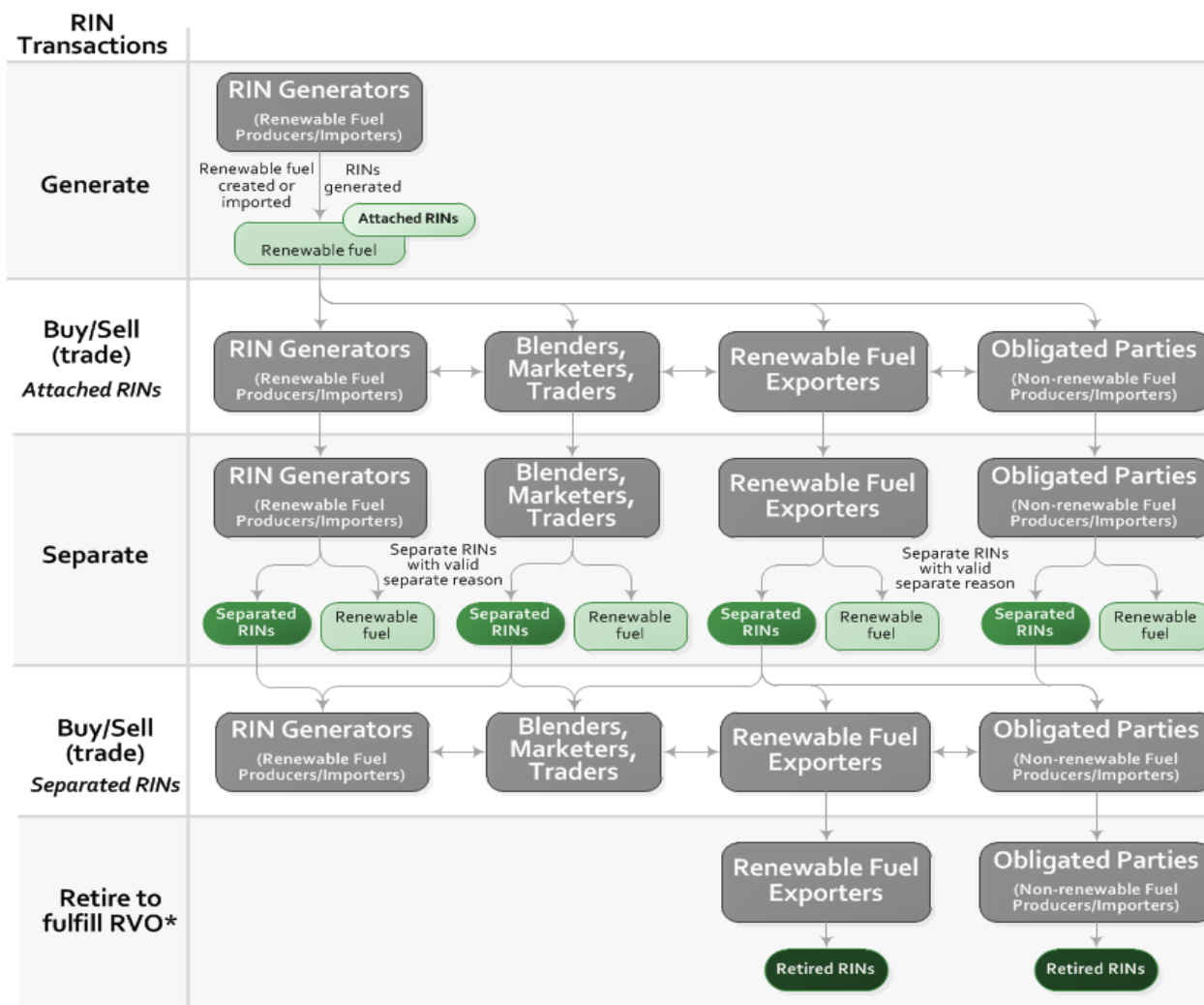
importer, also referred to as the **RIN generator**, generates a certain number of RINs for each gallon. Depending on the type of renewable fuel generated, one gallon of renewable fuel is equivalent to 1 to 1.7 RINs. The RIN generator reports these RINs to the EPA by entering them into the EMTS, which is the EPA's database of record for all transactions involving RINs. At this point in the process, the RINs are considered "attached" to the renewable fuel. The renewable fuel and its attached RINs can be sold to other renewable fuel producers, fuel blenders, obligated parties, or any other party that has registered with the EPA to trade RINs.

In many instances, the renewable fuel and the attached RINs are bought by fuel blenders who combine the renewable fuel with petroleum-based fuel and sell the blended fuel to service stations. When renewable fuel is blended with other fuel, the associated RINs are "separated" from the renewable fuel. Blenders can then sell these separated RINs to other registered market participants. These separated RINs are often bought by obligated parties to meet their renewable volume obligation. Once a RIN has been used to meet a compliance obligation, it is considered retired. An example of an obligated party that may purchase and retire separated RINs is a refinery that does not have blending operations.

Some obligated parties have blending operations. In those instances, the obligated parties may purchase renewable fuel and the attached RINs and blend the fuel themselves. They would separate the RINs and retire them for compliance and may sell any excess separated RINs on the market. The market structure allows obligated parties flexibility in how they achieve compliance with their renewable volume obligations.

Figure 1 illustrates the RIN transactions from generation to retirement in the EMTS.

Figure 1: RIN transactions in the EMTS



Source: EPA depiction of RIN transactions in the EMTS. (EPA image)

* Renewable Volume Obligation.

RIN trades occur on public exchanges by private contracts or through other types of transactions. As of January 2022, about 2,400 parties had registered with the EPA to trade RINs, of which about 800 were actively entering RIN transactions. Of the active participants, approximately 400 were obligated parties, 300 were renewable fuel producers, and 100 were RIN owners. Trade volume for 2022 included 194,870 transactions involving the trade of over 25 billion RINs valued at approximately \$38 billion.

Requirements for Reporting RIN Transactions

The RFS rules and regulations promulgated pursuant to the Energy Independence and Security Act of 2007, or RFS2, require companies to enter RIN transactions into the EMTS within five or ten business days, depending on the type of transaction. Parties enter into a trade agreement outside of the EMTS, and each of the trading partners enters a separate record in the EMTS. The EMTS compares the buyer and seller entries for accuracy and consistency. If the buy and sell records pass the quality-assurance

checks, the EMTS transfers the RINs between accounts. RINs generation in EMTS must also pass quality-assurance checks before the RINs are added to the renewable fuel producer's account.

OTAQ manages the EMTS. According to an OTAQ director, OTAQ developed the reporting requirements to ensure real-time RIN reporting in the EMTS. Prior to the RFS2, market participants submitted RIN transactions on a quarterly or annual basis. The 2009 RFS2 proposed rule described the rationale behind requiring real-time reporting via the EMTS, noting that the EMTS would ultimately provide a mechanism for screening RINs, as well as a structured environment for conducting RIN transactions. Screening RINs, according to the proposed rule, would identify errors and give parties much greater confidence that the RINs that they handle are genuine. Effective RIN screening requires timely submission of reportable events, that is, entry of data into the EMTS within established regulatory deadlines.

The RFS2 prohibits any party from creating or transferring invalid RINs. The regulation lists several types of invalid RINs, including RINs that duplicate a valid RIN, RINs that are based on incorrect volumes of renewable fuel, RINs that do not represent a renewable fuel as defined in the regulation, and RINs that were otherwise improperly generated. Invalid RINs can enter the RINs market through recordkeeping or reporting mistakes by the company or fraudulent RIN generation.

RIN Fraud and Enforcement Actions

There have been numerous RIN fraud cases since the RFS program began in 2005. In 2013, the EPA finalized its first enforcement actions in the RFS program. In total, the EPA has taken 16 separate enforcement actions against 15 different companies from 2013 through 2021. The EPA took a majority (13, or approximately 81 percent) of the enforcement actions because of the generation and sale of fraudulent RINs.

In response to fraud cases that occurred 2011–2013, the EPA finalized additional regulatory provisions in July 2014 that established a voluntary QAP to verify the RINs generated by renewable fuel producers.²

RIN Fraud

- Thirteen companies transacted nearly 339 million invalid RINs.
- These companies collected approximately \$87 million in proceeds from the sale of fraudulent RINs.
- Sixty-eight companies purchased the fraudulent RINs, resulting in 198 administrative settlement agreements.
- These 68 companies purchased a total of 164,082,257 fraudulent RINs and paid about \$8.1 million in civil penalties.

The QAP Was Created to Provide Third-Party Verification of RINs

Renewable fuel producers can use the QAP to audit and verify that they have properly generated RINs that are valid for compliance purposes. The EPA established the QAP to mitigate fraud that was primarily occurring at small biodiesel facilities and to provide producers with a way to demonstrate the validity of their RINs to potential buyers. The final QAP rule noted that fraud cases in the program had led to

² "RFS Renewable Identification Number (RIN) Quality Assurance Program," 79 Fed. Reg. 42078 (Jul. 18, 2014).

inefficiencies and a significant reduction in the overall liquidity in the RIN market, resulting in greater difficulty for smaller renewable fuel producers to sell their RINs.

The EPA's OTAQ manages the QAP and maintains a registration process for QAP audit providers. A potential QAP audit provider must first register with the EPA. Once approved in OTAQ's registration system, the QAP auditor must file a request to associate itself with a renewable fuel producer in the system. Once the renewable fuel producer approves the association request, the QAP auditor can begin auditing the renewable fuel producer. The QAP audit provider must use an approved quality-assurance plan—which consists of elements that an independent third-party auditor must check to verify that the RINs generated by a renewable fuel producer or importer are valid—as the basis for its verification of RINs generated by the renewable fuel producer.

The 2014 QAP rule established independence requirements for QAP audit providers. The rule and amendments made to the RFS2 regarding independent third-party auditors require auditors to be free from any interest or the appearance of any interest in the renewable fuel producer and not to be operated by the renewable fuel producer or any subsidiary or employee of the renewable fuel producer. Further, third-party auditors are precluded from owning and trading RINs.

The rule acknowledges that the QAP imposes an implicit conflict of interest since RIN generators must pay for third-party auditing services. The QAP rule also discusses the potential for deeper conflicts of interest that may arise when a renewable fuel producer pays a third-party auditor for a suite of consulting services, providing a substantial financial incentive for the third-party auditor to ignore potential issues that may have occurred during prior audit services and were identified using the quality-assurance plan. Chief concerns to the EPA when writing the QAP rule were conflicts of interest that could cause QAP audit providers to verify RINs that should be invalidated and reported to the EPA. The QAP rule and RFS2 amendments grant the EPA the authority to revoke a QAP auditor's registration at any time if the Agency determines that the auditor has failed to meet the Agency's regulatory requirements, which the Agency has only done once as of the time of this audit.

Noteworthy Achievements

Since the RFS program's inception, OTAQ has implemented several controls to improve the tracking of RINs and to reduce the number of invalid RIN transactions, including the:

- **Engineering review.** An *engineering review* is an independent third-party review and written report that includes a site visit to the renewable fuel producer to ensure that it exists and that it is capable of producing the fuel blend for which the company is registering. The engineering review must be completed at the time of registration and once every three years thereafter.
- **Attest engagement.** An *attest engagement* is an annual third-party audit of company records and information reported to the EPA.
- **EMTS implementation.** The EMTS replaced a RIN reporting and tracking system that required each RIN to have a unique 38-digit code. OTAQ found the codes to be confusing to program participants and prone to errors that were difficult to detect and correct, resulting in invalid

RINs. The EMTS provided a mechanism to screen RIN transactions to reduce the number of reporting errors and has made the RIN reporting process more efficient.

The EPA has stated that these controls have improved RINs tracking and helped to reduce RINs fraud.

Responsible Offices

OTAQ, which is within the Office of Air and Radiation, is responsible for developing regulations for and implementing the RFS program. It is OTAQ's responsibility to develop and implement controls to reduce the generation and trading of invalid RINs. From fiscal year 2018 through 2022, OTAQ's Compliance Division spent \$19.1 million, or approximately \$3.8 million per year, on RFS implementation and oversight. The OTAQ Compliance Division's Data Center, which administers RFS technology applications, including the EMTS, annually spent around 75 percent of that total, or \$3.1 million. This figure included personnel, consisting of generally nine to 11 full-time employees, and other costs related to maintaining the RFS information technology applications. The Office of Enforcement and Compliance Assurance, or OECA, is responsible for conducting preinspection reviews using OTAQ information technology systems and inspecting companies and pursuing any appropriate enforcement actions.

Scope and Methodology

We conducted this performance audit from October 2021 to November 2022 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

We assessed the internal controls necessary to satisfy our audit objective.³ In particular, we assessed the internal control components—as outlined in the U.S. Government Accountability Office's *Standards for Internal Control in the Federal Government*—significant to our audit objectives. Any internal control deficiencies we found are discussed in this report. Because our audit was limited to the internal control components deemed significant to our audit objective, it may not have disclosed all internal control deficiencies that may have existed at the time of the audit.

To answer the audit objective, we reviewed the Energy Policy Act of 2005; the Energy Independence and Security Act of 2007; and the EPA's policies, guidance, and regulations related to RFS implementation, as well as controls applicable to generating and trading RINs. We interviewed staff and managers in OTAQ and OECA; two EPA OIG investigators; and staff and managers from the Government Accountability Office, the Commodity and Futures Trading Commission, the Treasury Inspector General for Tax Administration, and the Internal Revenue Service.

³ An entity designs, implements, and operates internal controls to achieve its objectives related to operations, reporting, and compliance. The U.S. Government Accountability Office sets internal control standards for federal entities in GAO-14-704G, *Standards for Internal Control in the Federal Government*, issued September 10, 2014.

To obtain an understanding of and to test the internal controls, we reviewed system architecture documents and obtained access to the RFS program's company and facility registration system test site; the EMTS test database; the EMTS live database; and the Data Analysis and Reporting Tool, or DART. DART is a searchable database of the RIN transactions entered in the EMTS. In the EMTS test database, we entered RIN transactions with three fictional companies, or dummy companies, we created to identify existing system controls and to determine whether the system correctly tracked RIN transactions. We also downloaded and assessed RIN data from the EMTS live database and used DART to identify blocked companies, missing data, data outliers, and data errors.

We reviewed a sample of quarterly and annual reports for nine of approximately 800 active companies to determine whether any required reports were missing, whether the reports were complete and accurate, and whether the reports were submitted to the EPA by the applicable deadlines. To obtain this sample, we randomly selected RIN buyers and sellers from a DART transaction dataset; used DART and internet searches to categorize the companies as obligated parties, renewable fuel producers, or RIN owners; and selected the first three companies of each type for the sample. For the obligated parties, we requested all reports from 2017 through 2019. For the renewable fuel producers and RIN owners, we requested all reports for 2020 and 2021. To assess the QAP, we interviewed Agency staff, reviewed Agency QAP procedures, and obtained and reviewed the QAP *General Plans* and *General QAP Checklists* for three active QAP audit providers. We also reviewed the EPA's 2014 QAP rule and its 2016 proposal to introduce additional QAP independence requirements.

Prior Reports

The EPA OIG has conducted two RFS program audits since the program's inception. They include:

- OIG Report No. [13-P-0373](#), *The EPA Should Improve Monitoring of Controls in the Renewable Fuel Standard Program*, issued September 5, 2013. This report concluded that, while the EPA has RFS controls in place, the Agency should require the electronic submission of all RFS reporting requirements. The audit found that the EPA needed to modify its existing electronic systems to track the submission of RFS reporting requirements. The report recommended that the EPA implement tracking for third parties that complete RFS program reporting requirements and conduct such tracking to determine whether there are any conflicts of interest. The EPA completed all corrective actions to address the report recommendations. This 2013 audit was closer in scope to this audit, but it was completed before the establishment of the QAP and did not include EMTS testing or RIN data analyses.
- OIG Report No. [16-P-0275](#), *EPA Has Not Met Certain Statutory Requirements to Identify Environmental Impacts of Renewable Fuel Standard*, issued August 18, 2016. This report concluded that the EPA was not meeting the congressional requirements established by the Energy Independence and Security Act of 2007 to provide objective analysis on the environmental impacts of the RFS program to inform science-based decision-making on biofuel policy. The audit team noted a number of RFS program reporting requirements that the EPA

must meet. The EPA has completed corrective actions for two of the four recommendations. The corrective actions for the other two recommendations are due to be completed in 2024.

Chapter 2

The EMTS and the QAP Need Additional Controls to Ensure Compliance with Key Regulatory Requirements

We identified deficiencies in the EMTS and the QAP that limit the effectiveness of RFS regulations, which are intended to help prevent the generation or trading of invalid RINs. Specifically, we concluded that the EPA:

- Does not require timely submission of RIN transactions. The EPA allows companies to submit RIN transactions to the EMTS up to 30 business days after the date of the transaction while the RFS2 requires reporting within five or ten business days, depending on the type of transaction. Late reporting to the EMTS could result in more invalid RINs being generated and traded outside of the EMTS, which affects RIN market efficiency and the EPA's public RIN data-reporting quality.
- Does not prevent companies from generating RINs in excess of their registered renewable fuel production capacity. As a result, there is greater potential for companies to record more RINs in the EMTS than are feasible based on their operations.
- Does not verify RIN transactions entered in the EMTS despite the RFS2 prohibiting any party from creating or transferring invalid RINs and the RFS program's history of fraudulent RIN transactions.
- Does not ensure independence between QAP audit providers and renewable fuel producers. For example, the EPA allows QAP audit providers to perform paid consulting services, such as engineering reviews, for renewable fuel producers in addition to QAP services. Thus, QAP audit providers are allowed to verify services that they previously provided to the producer and may have incentives to ignore potential issues. A RIN fraud case described in Appendix B in which a QAP audit provider verified RINs that it knew to be fraudulent underscores the importance of strong independence requirements in establishing an effective QAP.

EPA staff stated that existing RFS controls, such as required RIN reporting, EMTS screening, and the QAP, together with the buyer-beware marketplace, provide sufficient assurance of integrity in RIN generation and trading. Since the RFS program began in 2005, however, the EPA has documented nearly 339 million fraudulent RINs and fraudulent RIN sales of approximately \$87 million. The EPA is still at risk of not detecting fraudulent activity given the control deficiencies we found. Until the EMTS and QAP controls are improved, the EPA cannot provide reasonable assurance that the RFS program is achieving its goals of reducing greenhouse gas emissions and expanding the nation's renewable fuels sector while reducing reliance on imported oil or that its reporting to Congress and the public accurately depicts RFS program activity.

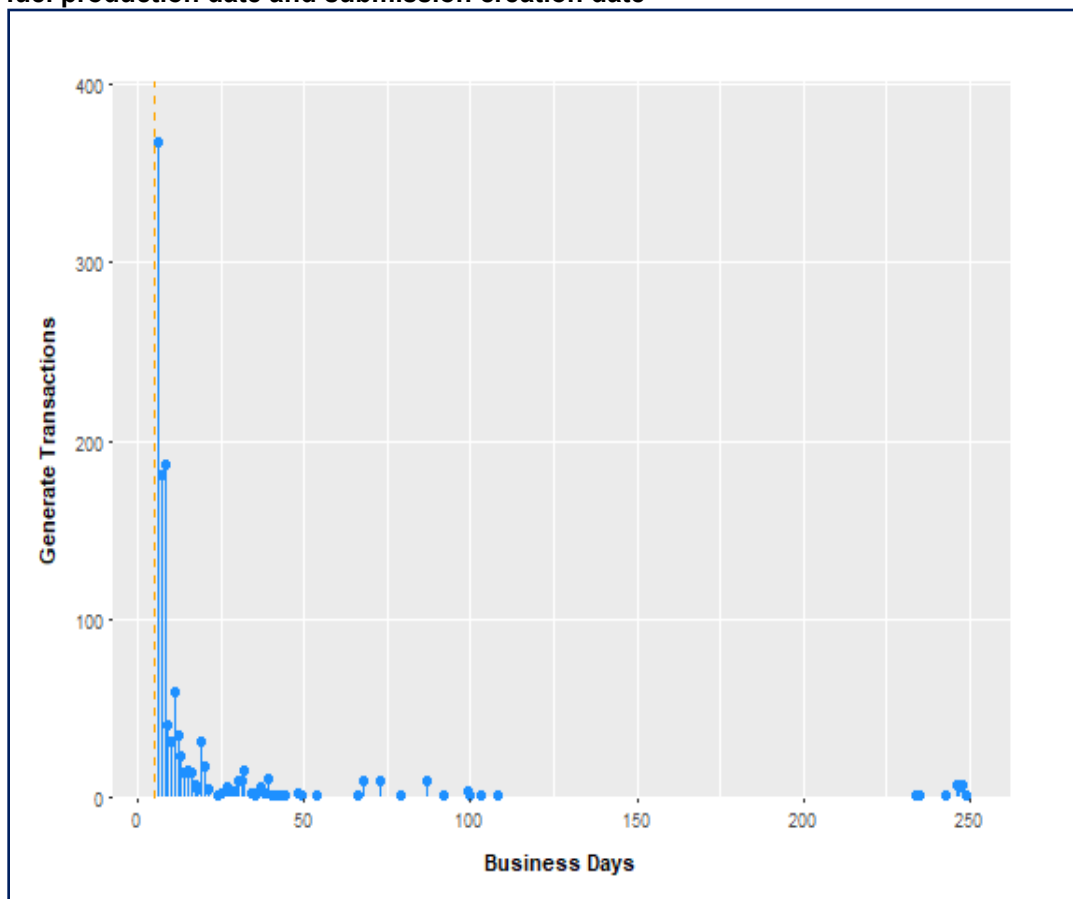
The EPA Allows Companies to Submit RIN Transactions to the EMTS After Regulatory Deadlines

The EPA is not enforcing the RFS2 requirements regarding timely submission of RIN transactions. We tested the EMTS by registering four dummy companies in OTAQ's registration system. After we registered the companies, we executed trades with three of them to identify whether EMTS internal controls ensured compliance with the RFS2 and limited invalid RIN generation and trading.⁴ We determined that the EMTS allows users to enter RIN transactions after the regulatory deadlines without flagging the transactions as overdue. When conducting sell and separate transaction scenarios, we were able to submit the transactions to the EMTS eight and nine business days, respectively, after the reportable event date.

We also used OTAQ's DART to determine how often companies were reporting RIN transactions late and how far past the deadlines the submissions occurred. Our analysis focused on data submitted for generate, buy, sell, separate, and retire transactions for cellulosic biofuel and biomass-based diesel RIN transactions from January 1 through December 31, 2021. We concluded that most transactions were submitted on time. However, our analysis found hundreds of late submissions, and 24 transactions were submitted nearly 250 business days late. As depicted in Figure 2, the late transactions we identified involved the trading of 97,752,959 RINs with an approximate market value of \$133 million.

⁴ The fourth dummy company was a QAP audit provider. The EMTS does not allow QAP audit providers to execute RIN trades.

Figure 2. Biomass-based diesel RIN generation data over five business days between fuel production date and submission creation date



Generate transactions are required to be submitted to the EMTS within five business days of the reportable event. Our analysis identified hundreds of instances in 2021 in which generate transactions were submitted well past the five-day regulatory deadline, some by nearly 250 business days.

Source: OIG analysis of RINs biomass-based diesel generation data. (EPA OIG image)

OTAQ Provided Companies with Flexibility in Submitting RIN Transactions to the EMTS

A remedial action is required in the EMTS when the number of business days between the RIN assignment or the trade date and the submission date exceed a specified threshold.⁵ However, the EMTS threshold is set at 30 days, rather than the five or ten business days depending on the transaction type, that would ensure adherence to the RFS2. Failure to submit required information within the five- or ten-day reporting window constitutes a violation of the RFS2. However, the Agency’s rationale is that

⁵ The EPA requires remedial actions by parties that engage in activities that are violations of the RFS regulations.

the 30-day threshold strikes a reasonable balance between escalating transactions that are only a few days late and those that are significantly late.

An OTAQ director told us that the RFS2 reporting thresholds are not enforced because OTAQ wanted to provide companies with more flexibility and to reduce remedial actions. OTAQ staff further explained that the EPA has a process for following up on late reporting. Companies that report RIN transactions late must file a remedial action through the OTAQ help desk. OTAQ holds a weekly meeting to discuss selected remedial actions—primarily for missed RINs generation—and may discuss some actions with OECA. There are different procedures for entering remedial actions in EMTS depending on the type of remedial action.

RIN Reporting Flexibility Undermines RFS2 Real-Time Reporting Goals

Delays in RIN transaction reporting may cause RIN errors to go undiscovered for many months and negatively affect the EPA’s RIN market analyses and reporting to regulated parties. As noted above, the EMTS was established to screen information submitted with RIN transactions, including the number of RINs, the RIN price, and the fuel type and feedstock used to generate the RINs. The EMTS cannot identify RIN errors until the transaction is entered in the system. If a RIN seller agrees to a RIN trade before the RINs have been entered into and screened by the EMTS, there is greater potential for errors to be propagated throughout the distribution system with each trade from party to party. For example, if a RIN seller agrees to sell RINs on the external market that would have been flagged by the EMTS as containing an error, the RINs could be sold and repeatedly resold. We determined that the company or companies holding the invalid RINs at the compliance deadline could have problems identifying the point at which the error occurred and remediating the RINs to demonstrate compliance. Historically, the EPA has levied millions of dollars in fines for invalid RINs on companies through administrative settlement agreements. Timely reporting of RIN transactions to the EMTS could help to reduce the number of errors that lead to invalid RINs and compliance problems.

A lag in reporting may also affect the EPA’s assessment of overall RIN market health and liquidity and the Agency’s public reporting of RIN data. For example, based on data in the EMTS, the EPA reports weekly RIN pricing and aggregated monthly RIN transaction data. Delays in RIN transaction reporting may cause these reported data to be incomplete or inaccurate, which could make it difficult for regulated parties to characterize real-time RIN supply and pricing.

The EMTS Does Not Screen RIN Generation Based on Registered Renewable Fuel Production Capacity

The EMTS does not have a screening check that compares a company’s RINs generation with its reported renewable fuel production capacity. Using one of our dummy companies, we generated RINs for a facility registered with no renewable fuel production capacity. We were able to generate 1,000 RINs, even though the production values we entered for our facility in the EMTS for both the “Total Capacity—Baseline Volume” and “Total Capacity—Actual Peak” fields were zero. An OTAQ manager was unaware of any related EMTS business rules or quality-assurance checks in place to

address this control gap, and the EPA had no immediate plans to restrict RIN generation in the EMTS based on registered production capacity.

The RFS2 prohibits invalid RIN generation, and OTAQ developed the EMTS, in part, to screen RIN generation and trades between market participants in the RFS program. An OTAQ manager told us that the EMTS contains business rules that screen RIN generation based on data submitted to the EPA during the RFS registration and reporting processes. For example, we found that the EMTS does not allow a company to generate RINs for a renewable fuel that is not registered. The EMTS also prevents an obligated party from using retired, expired, or duplicate RINs to comply with the RFS. Without a business rule that compares RIN generation to renewable fuel production capacity, there is greater potential for companies to generate more RINs in the EMTS than are feasible based on their operations.

The RFS2 Requires Companies to Report Production Capacity but Does Not Limit RIN Generation Based on This Information

The RFS2 increased reporting requirements for producers; each producer must provide information about existing and planned production capacity in its annual *Production Outlook Report*. Despite having these data available, an OTAQ manager said that the EPA has not used them to check RIN generation and that the Agency has not developed a business rule to screen RIN generation based on production capacity. EPA staff told us that they do not limit for capacity because the RFS2 does not strictly limit RIN generation in this manner. EPA staff agreed that an EMTS business rule could be used to perform an automated comparison of RIN generation to production capacity.

The Lack of EMTS Controls Related to Production Capacity Could Result in More Invalid RIN Generation and Trading

The lack of a control over RIN generation that is specifically tied to registered renewable fuel production capacity is a control deficiency that could allow companies to generate more RINs in the EMTS than are feasible based on their operations. Such RIN generation may be invalid since it is not commensurate with the registered renewable fuel production capacity. Excess RIN generation could have a pervasive effect on the overall RIN market because generated RINs flow into the market and are ultimately traded among market participants and are retired for compliance. An OTAQ director told us that the EMTS is only as good as the data that are entered in the system by participating companies. OTAQ could help to ensure that renewable fuel producers are not generating excess RINs if it used the EMTS to check each company's renewable fuel production capacity against the company's RIN generation. This new business rule would represent an impactful internal control over RIN generation in the EMTS and could reduce invalid RIN trading.

The EPA Does Not Verify RIN Transactions in the EMTS

We concluded that the EPA does not regularly verify RIN transactions entered in the EMTS by cross-referencing EMTS data with documentation supporting the transactions, despite the RFS2 prohibiting any party from creating or transferring invalid RINs and the RFS program's history of RIN fraud.

The EPA Relies on External Mechanisms to Verify RIN Transactions

An OTAQ director told us that the OTAQ's Fuel Compliance Center staff approach EMTS RIN data with a “trust but verify through other mechanisms approach.” However, the RFS2 requires documentation supporting RIN transactions to be reported to the EPA or held by the companies involved that can be used by EPA staff to verify RIN transactions. For example, RIN buyers and sellers must retain a *Product Transfer Document*, which includes information on the buyer and seller; the volume of fuel being transferred; the quantity of RINs being traded; and the reason for the trade, such as standard trade or remedial action.

According to the director, the EPA does not have the resources to verify RIN transactions. OTAQ relies on RIN vetting in the external marketplace and through other mechanisms rather than internal verification. The production processes and trade agreements that lead to RIN transactions occur wholly outside of the EPA in a buyer-beware marketplace. An EPA staff member told us that it is the RIN buyer's responsibility to ensure that the RINs that the buyer is purchasing are valid. Under the buyer-beware marketplace, if the purchased RINs are not valid, the buyer is responsible for replacing the invalid RINs with valid RINs at the buyer's expense. The EPA believes that the buyer-beware market approach and potential penalties, when combined with the RFS registration process, EMTS screening, and third-party auditing, including the QAP and attest engagements, prevent widespread RIN fraud within the RFS program.

The RFS Program Is at Greater Risk of Invalid RIN Transactions Because It Lacks an Internal Review Process

The lack of an internal review process for RIN transactions is a control deficiency that places the RFS program at greater risk for fraud and other data-quality concerns. The buyer-beware approach has not always identified problematic transactions. As noted above, the EPA's enforcement cases to date have resulted in 198 administrative settlement agreements with buyers that paid approximately \$87 million for fraudulent RINs. These buyers either did not thoroughly vet the RINs that they purchased or knew of fraudulent RIN activity and proceeded with their purchases anyway. Further, as noted in the section below, there are independence concerns with third-party auditing—specifically, in the QAP—that may undermine external RIN verification.

The EPA's QAP Does Not Ensure Independence Between QAP Auditors and Renewable Fuel Producers

Weaknesses in ensuring third-party auditor independence may undermine the QAP's verification of RINs. Specifically, the program structure allows for conflicts of interest that may cause QAP audit providers to verify RINs that they know or suspect are invalid. QAP regulations require QAP auditors to be independent from the renewable fuel producers that they are auditing. To promote QAP auditor independence, the 2014 QAP rule and its amendments to the RFS2 prohibit a third-party auditor from conducting both the QAP audit and the annual attest engagement for a renewable fuel producer in the same calendar year.

The 2014 QAP Rule Lacks Independence Requirements Needed to Prevent Conflicts of Interest for QAP Auditors

The 2014 QAP rule allows a QAP audit provider to perform the QAP audit and other consulting services for the same renewable fuel producer. In the preamble to the 2014 QAP rule, the EPA agreed with commenters' concerns that allowing an auditor to perform cradle-to-grave services, which include all services needed to comply with RFS regulatory requirements, as well as RIN verification under the QAP, could tie the auditor's financial interests to those of the renewable fuel producer and potentially create an incentive for the auditor to not report issues or invalid RINs. However, the final QAP rule only prohibits QAP audit providers from performing both the annual attest engagement and the QAP RIN verification for a renewable fuel producer in the same calendar year.

QAP audit providers are allowed to perform engineering reviews for a producer in addition to RIN verification services. Further, QAP audit providers can provide RIN verification services for a producer for which it previously provided attest engagement services. This means that a QAP audit provider, while executing its quality-assurance plan to verify a producer's RINs generation, may verify services that the audit provider previously provided to the producer and may have financial and reputational incentives to ignore problems identified.

In our view, such business relationships may undermine the EPA's stated goal of QAP audit provider independence and exacerbate concerns that QAP audit providers may verify RINs that should be invalidated and reported to the EPA. The EPA allows QAP audit providers to perform a suite of consulting services for producers because the Agency did not want to exclude potential third-party auditors from participating in the QAP. Further, the EPA did not want to discourage renewable fuel producers from using the program by introducing requirements that would increase QAP compliance costs.

Genscape Case May Demonstrate the Risk Posed by a Lack of QAP Auditor Independence

In the beginning stages of the QAP, Genscape, a QAP audit provider, verified over 71 million fraudulently generated RINs that were reportedly later sold for \$57 million. Instead of invalidating the RINs because of the fraud its auditor had uncovered while executing Genscape's quality-assurance plan, Genscape verified the RINs, citing only the potential for fraud. After investigating the matter, the EPA revoked Genscape's registration as a QAP audit provider in 2019 and required the company to replace the invalid RINs. Later that same year, Genscape appealed the EPA's decision. In 2022, the EPA and Genscape entered into a settlement agreement requiring Genscape to purchase and retire 24 million RINs over a four-year period.

The EPA determined that Genscape ignored the auditor's evidence and verified the RINs based on assurances from the president of one of the renewable fuel producers involved. This information suggests that Genscape, as a QAP audit provider, did not act independently of the renewable fuel producer, resulting in RINs being verified and sold in the external market that should have been

reported to the EPA as invalid. The Genscape case reinforces the need for independence between the QAP audit providers and the renewable fuel producers in the QAP. An OECA attorney told us that the QAP, as it was formed at the time of our audit, is ineffective because of the concerns over the independence between QAP audit providers and the renewable fuel producers under audit. Appendix B contains a timeline of events and additional details on the Genscape case.

Conclusions

While the RFS program's internal controls provide some screening and verification of RINs and prevention of fraudulent activity, the EPA needs to institute more controls to provide reasonable assurance that the generation and trading of RINs comply with the RFS2. This is particularly true given the program's history of invalid RIN transactions and fraud. Internal oversight of RIN transactions would improve EMTS data quality, ensuring that the EPA reports quality data to Congress and the public. In addition, internal oversight would assist the Agency in meeting RFS program goals to reduce greenhouse gas emissions and to expand the nation's renewable fuels sector. The Agency should upgrade the EMTS with additional functions that ensure compliance with key provisions of the RFS2.

We found that OTAQ does not verify RIN transactions entered in the EMTS, relying instead on third-party auditors and the buyer-beware RIN marketplace structure to verify RIN transactions. However, we found that the QAP structure allows potential conflicts of interest that increase the likelihood of QAP auditors verifying invalid RINs despite questions or problems that arise during the QAP auditing process. Strong independence—created through separation of duties—should be a cornerstone of protection against the generation and trading of invalid RINs in the RFS program.

Recommendations

We recommend that the assistant administrator for Air and Radiation:

1. Improve adherence to the five- and ten-business-day reporting requirements for Renewable Identification Number transactions in Renewable Fuel Standard regulations.
2. Develop a process to identify and review instances in which Renewable Identification Number generation exceeds registered or reported renewable fuel production capacity.
3. Develop a risk-based selection process to verify Renewable Identification Number transactions entered in the EPA Moderated Transaction System.
4. Develop a process to reduce the likelihood of Quality Assurance Program auditor conflicts of interest during Quality Assurance Program reviews.
5. Communicate relevant requirements, expectations, and consequences from Renewable Fuel Standard regulations to Quality Assurance Program auditors to minimize the likelihood that they verify Renewable Identification Numbers that are invalid.

6. Annually review the scope of consulting services that Quality Assurance Program auditors are performing for renewable fuel producers to identify prohibited relationships.

Agency Response and OIG Assessment

The Office of Air and Radiation agreed with the OIG's findings and Recommendations 1 through 6. For Recommendations 1 through 3, the Office of Air and Radiation agreed to develop necessary processes and policies to improve RINs program controls and operations, including working with OECA as necessary. For the remaining recommendations, the Office of Air and Radiation communicated its planned actions, as well as actions it has already taken, to improve the Quality Assurance Program. We believe that the proposed corrective actions will satisfy the intent of these recommendations. Therefore, we consider Recommendations 1 through 6 resolved with corrective actions pending. Appendix D contains the Agency's response to the draft report.

Chapter 3

The EPA's System Hindered Program Administration and RIN Oversight and Caused Data-Quality Problems

Despite spending approximately \$3 million annually to administer its RFS technology applications, the EPA lacks an integrated information system with the automated reporting functions needed to efficiently manage the RFS program. There are four primary technology applications within the RFS information system. One application, DC FUEL, was not linked to other applications, making it difficult to identify compliance problems and to produce quality information. Further, DART is not useful for conducting large RIN data queries and has other limitations that reduce access to the EMTS data and impact RIN data analyses. The Government Accountability Office's *Standards for Internal Control in the Federal Government* states that information systems must be designed to achieve program objectives, respond to risks, and produce quality information. The EPA recognizes the need to integrate its information system and upgrade DART to improve RFS program implementation but is still considering options given limited resources, security and confidentiality concerns, and ever-expanding RFS program data needs. The lack of an integrated information system and the limitations of DART:

- Hindered EPA oversight of RINs and the RFS program.
- Placed significant burden on staff to address information requests.
- Resulted in data-quality problems, including missing data and incomplete reports.

The EPA's Information Systems Should Be Designed to Achieve Objectives, Respond to Risks, and Produce Quality Information

The Government Accountability Office's *Standards for Internal Control in the Federal Government* states that "management should design the entity's information system and related control activities to achieve objectives and respond to risks." Technology-enabled information processes are commonly referred to as information technology and are an integral part of an entity's information system. According to the *Standards for Internal Control*, information technology requires an infrastructure in which to operate, including communication networks for linking information technologies.

An **information system** is the people, processes, data, and technology that management organizes to obtain, communicate, or dispose of information.

The *Standards for Internal Control* further states that management should use quality information to support the internal control system, which involves processing relevant data from reliable sources into quality information within the entity's information system. Quality information is appropriate, current, complete, accurate, accessible, and provided on a timely basis. Management uses quality information to

make informed decisions and to evaluate the entity's performance in achieving key objectives and addressing risks.

The Design of the EPA's RFS Information System Impedes Program Administration and Compliance Oversight

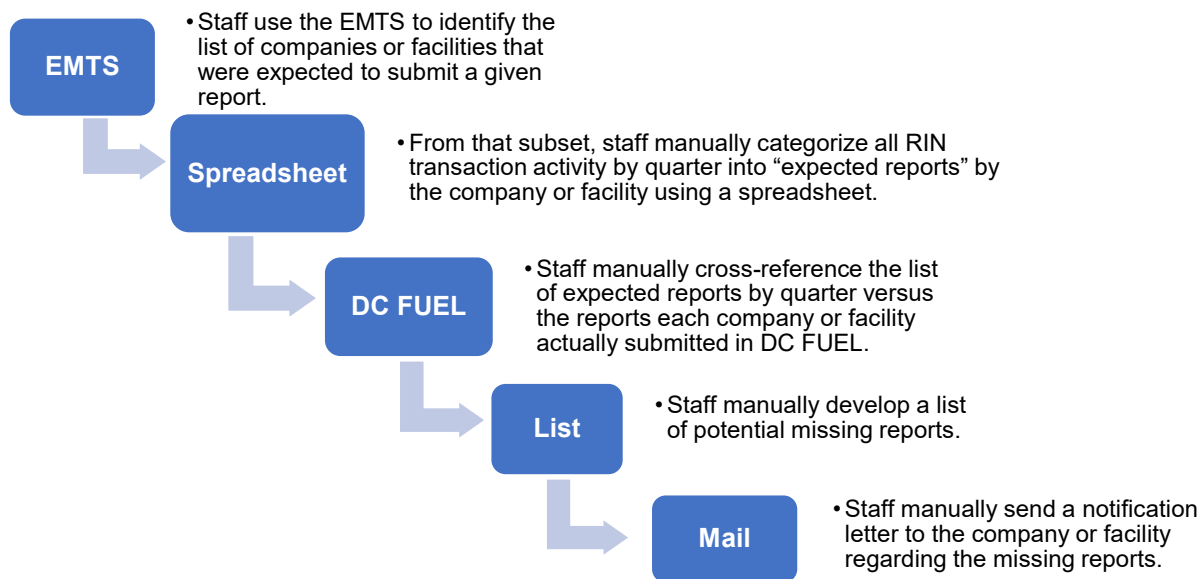
The applications within the EPA's RFS information system used to manage and oversee RINs are not fully integrated. In addition, they lack automatic reporting functions to identify potential compliance problems. The OTAQ Compliance Division's Data Center, which administers RFS technology applications, spent around \$3.1 million annually from fiscal year 2018 through 2022. However, OTAQ's information system is not designed to efficiently manage RFS program data. OTAQ administers the RFS program using four primary applications:

- DART—which is a searchable database of information copied from the EMTS and the OTAQ Fuels Registration system, including RIN transactions.
- DC FUEL—which includes a submission portal for quarterly and annual company reports, including attest engagements and engineering reviews, and a database that securely stores quarterly and annual reports submitted through the portal.
- EMTS—which receives and stores RIN transactions from registered companies and facilities.
- OTAQ Fuels Registration—which is the RFS program's company and facility registration system.

Each application contains the RIN information that may be necessary to address congressional or management information requests or to pursue enforcement cases.

The EPA requires 19 different annual and quarterly reports to administer the RFS program and to oversee compliance. The DART, EMTS, and the OTAQ Fuels Registration applications share information to a degree, but DC FUEL—the database that holds annual compliance, RIN transaction, and other required reports—is not integrated with those applications. Therefore, staff must manually synthesize data to determine whether a particular company or facility has submitted the applicable quarterly and annual reports, as required by the RFS2. OTAQ's oversight process for identifying missing RFS reports illustrates how system design is causing resource and data-quality problems. Figure 3 illustrates the OTAQ RFS reporting oversight process.

Figure 3: OTAQ RFS reporting oversight process



Source: OIG analysis of information provided by OTAQ. (EPA OIG image)

The lack of integration of DC FUEL with the other applications also affects RIN compliance oversight. OTAQ told us that it cross-checks RIN retirement data from the *Annual Compliance Reports* stored in DC FUEL with RIN data reported to the EMTS. However, this is a manual process that OTAQ staff carry out; therefore, not all obligated party compliance reports are checked. OECA must perform a similar assessment when it seeks to understand whether a particular facility is complying with the applicable RFS2 requirements. Further, OTAQ systems do not generate automatic alerts when a company does not retire sufficient RINs to comply with the standards or submit the required reports.

The EPA’s System-Integration Efforts Have Been Slowed by Limited Resources and Other Factors

The EPA is exploring ways to improve its RFS information system. OTAQ agreed that it must integrate DC FUEL with other applications to efficiently address information requests, to administer the RFS program in accordance with the RFS2, and to perform program oversight activities. An OTAQ director told us that the RFS program’s biggest challenges are the amount of time and the number of staff resources needed to answer information requests from various stakeholders. However, OTAQ views system integration as a longer-term goal that must be balanced with more immediate needs, such as upgrading the EMTS to support future rulemakings. Further, OTAQ management said it must consider whether an integrated and accessible, cloud-based information system can reduce vulnerability to system failures; securely store RFS program data, including confidential business information provided by participating companies; and be adequately backed up in case of failure.

The EPA's Information System Caused Resource and Data-Quality Problems that Hindered RIN Oversight

The resource-intensive process described in Figure 3 has led OTAQ to prioritize its oversight on one type of report at a time. From 2016 through 2020, OTAQ staff focused on identifying missing attest engagements; in 2021, OTAQ's oversight shifted to engineering reviews. Oversight of other required reports—such as RIN generation, RIN transaction, and annual compliance reports—is not prioritized given the time-consuming oversight process and resource constraints. The result of insufficient oversight, in this case, is missing or poor-quality data.

During our audit, we requested all applicable reports for nine different companies. Fulfilling this initial request took OTAQ 48 calendar days and following up on the problems we identified required additional time. Our analysis found that some of the requested reports were missing. In addition, we found numerous other examples of noncompliance, including reports that were:

- Missing required information.
- Not signed and certified by the owner or responsible corporate officer.
- Submitted after the applicable deadline.

We attribute the missing reports to DC FUEL not being linked to other applications and not having automated reporting functions to identify compliance problems. Appendix C contains additional information on our analysis of the reports.

DART Limitations Reduced Access to EMTS Data and Impacted RIN Data Analyses

In addition to the system deficiencies identified above, DART is not useful for conducting large queries of RIN transactions from the EMTS and is prone to data-migration problems and system failures. OTAQ implemented DART to retrieve RIN transaction data more easily from the EMTS, which is not searchable unless the user has knowledge of structured query language and the ability to write queries. OTAQ uses DART to:

- Conduct planning.
- Perform analytical work.
- Address inquiries from management and Congress.
- Respond to Freedom of Information Act requests.
- Set standards.

As the RFS program has expanded, DART has not been upgraded to or replaced with a reporting tool that can query the tens of millions of RIN records reported to the EMTS. We used DART extensively

during our audit and found that data downloads are limited to 100,000 records and that larger queries time-out or cause the system to fail. OECA staff told us they had experienced similar problems with DART when conducting preinspection reviews. We also identified system replication problems. For more than a week—spanning late February through early March 2022—DART was not replicating data from the EMTS, which reduced access to certain RIN transactions. We also found that the number of buy transactions for standard RIN trades did not match the number of sell transactions, which should not occur because these are always one-for-one transactions that include a buy and a sell. OTAQ determined that the discrepancy was due to data-migration errors between the EMTS and DART.

OTAQ is aware of DART’s limitations and has been attempting to upgrade performance and to find a replacement system. A 2021 server upgrade has helped DART performance somewhat, but the problems with large queries remain.

Conclusions

The EPA’s nonintegrated information system is causing problems with RFS program administration and RIN compliance oversight. It is challenging for the EPA to respond to information requests without placing a significant burden on staff resources to synthesize data from the various systems. Further, we found data-quality problems that raised concerns about the accuracy and completeness of the EPA’s RIN and RFS reporting data, as well as data-accessibility problems that affected OECA’s preinspection processes. The EPA must take interim steps to upgrade or replace the applications in use, including DART, and must determine how to integrate its systems in the coming years to effectively administer an expanding RFS program.

Recommendations

We recommend that the assistant administrator for Air and Radiation:

7. Integrate key applications to reduce staff burden and to allow better oversight of Renewable Identification Number and Renewable Fuel Standard program requirements and engage the Office of Enforcement and Compliance Assurance in the integration process to ensure all inspection and enforcement data needs are addressed in the integrated system.
8. Enhance or replace the Data Analysis and Reporting Tool to facilitate external information requests and Office of Enforcement and Compliance Assurance inspections.

Agency Response and OIG Assessment

The Office of Air and Radiation agreed with the OIG’s findings and Recommendations 7 and 8. The Office of Air and Radiation communicated the steps already in progress to integrate its RFS program applications and to enhance or replace DART. We believe that the proposed corrective actions will satisfy the intent of these recommendations. Therefore, we consider Recommendations 7 and 8

resolved with corrective actions pending. Appendix D contains the Agency's response to the draft report.

Status of Recommendations

Rec. No.	Page No.	Recommendation	Status*	Action Official	Planned Completion Date
1	16	Improve adherence to the five- and ten-business-day reporting requirements for Renewable Identification Number transactions in Renewable Fuel Standard regulations.	R	Assistant Administrator for Air and Radiation	3/31/24
2	16	Develop a process to identify and review instances in which Renewable Identification Number generation exceeds registered or reported renewable fuel production capacity.	R	Assistant Administrator for Air and Radiation	3/31/24
3	16	Develop a risk-based selection process to verify Renewable Identification Number transactions entered in the EPA Moderated Transaction System.	R	Assistant Administrator for Air and Radiation	12/31/24
4	16	Develop a process to reduce the likelihood of Quality Assurance Program auditor conflicts of interest during Quality Assurance Program reviews.	R	Assistant Administrator for Air and Radiation	6/30/23
5	16	Communicate relevant requirements, expectations, and consequences from Renewable Fuel Standard regulations to Quality Assurance Program auditors to minimize the likelihood that they verify Renewable Identification Numbers that are invalid.	R	Assistant Administrator for Air and Radiation	3/31/24
6	17	Annually review the scope of consulting services that Quality Assurance Program auditors are performing for renewable fuel producers to identify prohibited relationships.	R	Assistant Administrator for Air and Radiation	12/31/23
7	22	Integrate key applications to reduce staff burden and to allow better oversight of Renewable Identification Number and Renewable Fuel Standard program requirements and engage the Office of Enforcement and Compliance Assurance in the integration process to ensure all inspection and enforcement data needs are addressed in the integrated system.	R	Assistant Administrator for Air and Radiation	9/30/28
8	22	Enhance or replace the Data Analysis and Reporting Tool to facilitate external information requests and Office of Enforcement and Compliance Assurance inspections.	R	Assistant Administrator for Air and Radiation	12/31/25

* C = Corrective action completed.

R = Recommendation resolved with corrective action pending.

U = Recommendation unresolved with resolution efforts in progress.

Key Definitions

Confidential Business Information: Proprietary information, considered confidential to the submitter, the release of which would cause substantial business injury to the owner.

Enforcement Action: An action undertaken by the EPA under authority granted to it under various federal environmental statutes. An administrative action by the EPA or a state agency may be in the form of a notice of violation.

Greenhouse Gases: Gases, such as carbon dioxide and methane, that trap heat in the atmosphere.

Notice of Violation: An informal notice sent from the EPA to a company or facility describing violations.

Preinspection Review: A review conducted by OECA staff and contractors using a preinspection checklist to determine whether a formal inspection is warranted. The checklist calls for inspectors to collect information on RIN transactions and compliance reporting.

Remedial Action: An action taken by a party to remedy a violation of the standard.

Renewable Fuel Producer: An entity that converts a renewable feedstock into a renewable fuel. Under the RFS program, renewable fuel producers and renewable fuel importers are solely responsible for generating RINs and assigning them to batches of renewable fuel.

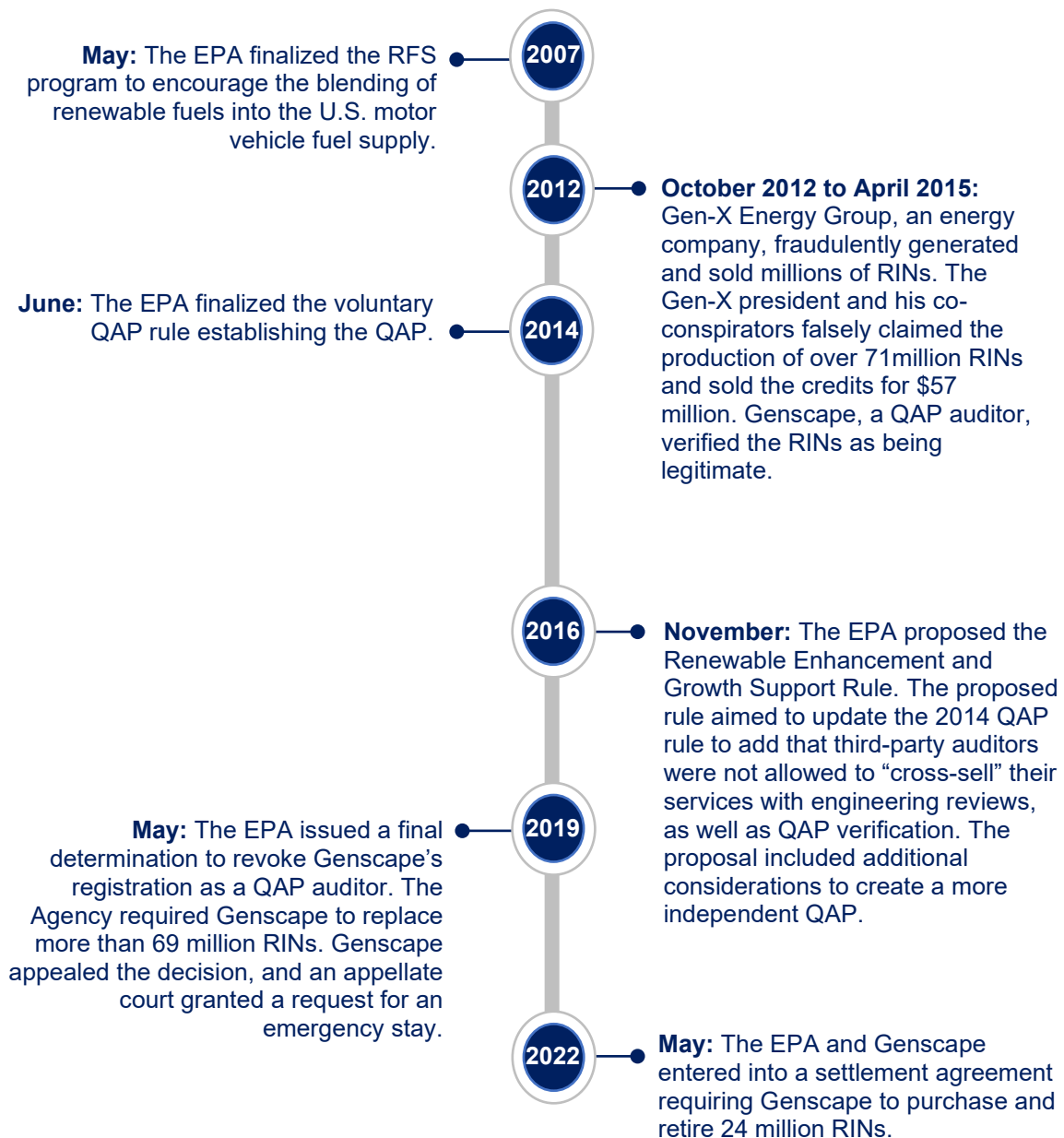
RIN Market Participant: A foreign or domestic company that participates in the RIN market. A company may fall under one or more of the following categories: obligated parties (refiners and importers of gasoline or diesel), renewable fuel exporters, renewable fuel producers, or registered RIN market participants. A company can change from year to year based on their trading business.

Structured Query Language: A standardized programming language that is used to manage relational databases and perform various operations on the data in them.

Genscape and Gen-X Energy Group: A Case Study of Invalid RINs

Genscape, a QAP audit provider, verified RINs that it knew to be fraudulent, resulting in millions of dollars in fraudulent RIN sales. Figure B-1 and the text below provide a timeline and descriptions of key events related to the case.

Figure B-1: QAP and Genscape timeline of events



Source: OIG analysis based on the EPA’s website, the 2014 QAP final rule, and the 2016 REGS proposal. (EPA OIG image)

On January 4, 2017, the EPA issued a notice of intent to revoke the ability of Genscape, a third-party QAP auditor, to verify RINs under the RFS QAP.



The EPA took this action to hold Genscape accountable for failing to meet all elements of its approved Quality Assurance Plan and for verifying millions of RINs that were fraudulently generated by two companies: Gen-X Energy Group Inc. and Southern Resources and Commodities LLC.



The president of Gen-X Energy Group was sentenced to eight years in prison for his involvement in a fraud scheme to falsely claim the production of over 71 million marketable biofuel credits. This complex scheme involved multiple co-conspirators, crossed state lines, and spanned 2012–2015. The individuals involved reportedly sold the phony credits for \$57 million. The Gen-X Energy Group president and the co-conspirators also received approximately \$9.5 million from the Internal Revenue Service in excise credit refunds.



The Gen-X president said that he turned to fraud in late 2012 when he feared he would have to shut his company down. “It’s like dropping a pebble in a pond and you create those ripples ... the choice to drop that pebble was on me,” he said.

The Gen-X president enriched himself dramatically at the height of the scheme. It was disclosed in court that he purchased a \$100,000 boat and two vehicles worth \$50,000 each and received a sports car, luxury watch, and boxes of cash as kickbacks. The cash was used to buy gold coins and silver bars to help conceal the fraud.

Two others were also sentenced to prison for their part in the Gen-X fraud scheme. These individuals used their companies to conspire with Gen-X to round renewable fuel. *Rounding* refers to driving the same fuel material back and forth between facilities to generate fraudulent renewable energy credits and tax credits.

They rounded fuel between the Gen-X facility and a business in Othello, Washington, countless times generating hundreds of thousands in false credits, which they sold for \$296,000. They also filed false claims with the Internal Revenue Service for \$284,546 in excise credit refunds.



A person in California was also sentenced in connection with the Gen-X fraud. This individual falsely claimed the production of more than 9.4 million credits, which were sold for more than \$6 million, and filed false claims with the Internal Revenue Service for \$2,506,094 in excise credit refunds.



The EPA informed Gen-X Energy Group and Southern Resources and Commodities on December 24, 2015, that, based on the plea agreement and associated court filings, RINs that those companies produced were potentially invalid.

On January 29, 2016, the EPA notified via email companies that own, used, or transferred Gen-X Energy Group or Southern Resources and Commodities potentially invalid RINs that they may assert an affirmative defense.

The EPA separately entered into administrative settlement agreements with three obligated parties that collectively used more than 7.7 million unverified Gen-X Energy Group RINs that were generated prior to the interim QAP rule going into effect:



- Calumet Superior used 119,371 RINs generated by Gen-X to meet its 2013 renewable volume obligations and agreed to pay \$11,937 in use violation penalties.
- PBF Holding Company used 7,524,021 RINs generated by Gen-X to meet its 2012 and 2013 renewable volume obligations and agreed to pay \$250,000 in use violation penalties (\$250,000 total penalty cap).
- Vitol used 98,140 RINs generated by Gen-X to meet its 2013 renewable volume obligations and agreed to pay \$9,814 in use violation penalties.

On May 31, 2019, the EPA issued a final determination to revoke Genscape's registration as a QAP auditor. Additionally, the Agency required Genscape to replace more than 69 million RINs on or before July 30, 2019.

Genscape appealed the decision and a request for an emergency stay on EPA's determination was granted by the appellate court.

The company said in a statement to a media outlet, "We are equally disappointed in the actions of Gen-X Energy Group, Inc. and Southern Resources and Commodities, LLC, and worked with the Department of Justice and the EPA through the legal process to ensure they were brought to justice. While we were also misled by their practices, we acted in good faith when conducting our business and had no part in their purposeful fraud. We will continue to pursue a better, more just outcome."^{*}

^{*} Neeley, T., "Genscape Must Replace RINs," *DTN/Progressive Farmer*, August 7, 2019.



The EPA said in its final determination that Genscape identified fraudulent activities early on but did not do enough to stop them or to replace the fraudulent RINs. "While conducting routine QAP activities, ... Genscape saw highly anomalous transportation patterns of trucks entering and departing the facility. Those observations led to concerns that fuel was leaving the facility and reentering the facility as feedstock in what is called a 'fuel-to-feedstock cycle.' ... Genscape essentially uncovered the fraudulent scheme at SRAC [Southern Resources and Commodities] and documented its findings."



In April 2014, Genscape required Gen-X to take steps to correct fraudulent actions that were identified; however, the EPA claimed that Genscape failed to complete a number of requested measures to curtail the fraud. "Genscape uncovered and documented extensive evidence of SRAC's [Southern Resources and Commodities] fraudulent fuel-to-feedstock loop. Yet, instead of invalidating the RINs, in September of 2014, Genscape chose to ignore the obvious indicia of fraud and verified the RINs."

The Agency said in its determination that Genscape indicated it was aware of possible fraud concerns at the Gen-X plant.



"Genscape admitted in an email to EPA dated March 13, 2014, that the 'upstream and downstream supply chain complexity creates the risk of processed fuel re-entering the supply chain, especially where fuel is chemically similar to the original feedstock.' ... Genscape could not 'eliminate the possibility that renewable fuel has entered the feedstock supply chain.'"

Ultimately, in 2022, the EPA and Genscape settled the appeal, and Genscape was required to retire 24 million RINs rather than 69 million RINs.

Subpart M Reporting Requirements

Our review of quarterly and annual reports found that all 27 reports were missing required information. We found that some of the templates used, including OTAQ's *Unified Report Form*, did not fully align with required information, leading the submitters to omit information needed to monitor RINs. For example, some of the RIN activity reports were missing fields for the following items:

- Separate summaries of assigned and separated RINs.
- The number of current-year RINs owned at the start of the quarter.
- The number of prior-year RINs owned at the start of the quarter.
- The total current-year RINs purchased.
- The total prior-year RINs purchased.
- The total current-year RINs sold.
- The total prior-year RINs sold.
- The total current-year RINs retired.
- The total current-year RINs retired that are invalid as defined in 40 C.F.R. § 80.1431(a).
- The total prior-year RINs retired.
- The total prior-year RINs retired that are invalid as defined in 40 C.F.R. § 80.1431(a).
- The number of current-year RINs owned at the end of the quarter.
- The number of prior-year RINs owned at the end of the quarter.
- The number of RINs generated.
- The volume of renewable fuel (in gallons) owned at the end of the quarter.
- A list of contractual affiliates that had a contract with the party that did not result in transfer of RINs to the party during the reporting period.

Some of the annual compliance reports were missing fields for current-year RINs, prior-year RINs, or any RINs from the reporting period that were retired for compliance due to being invalid.

Agency's Response to Draft Report



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

July 7, 2023

OFFICE OF
AIR AND
RADIATION

MEMORANDUM

SUBJECT: OAR Comments on OIG Draft Report: “The EPA Must Improve Controls and Integrate Its Information System to Manage Fraud Potential in the Renewable Fuel Standard Program” Project No. OA-FY21-0293, May 23, 2023

FROM: Joseph Goffman
Principal Deputy Assistant Administrator for
Office of Air and Radiation

A handwritten signature in black ink, appearing to be "J. Goffman", written over a horizontal line.

TO: Michael Davis, Director
Environmental Investment and Infrastructure Directorate Office of Audit
Office of the Inspector General

The Office of Air and Radiation (OAR) welcomes the opportunity to review and comment on the Office of the Inspector General (OIG) report titled “The EPA Must Improve Controls and Integrate Its Information System to Manage Fraud Potential in the Renewable Fuel Standard Program (Draft Report).” We appreciate the OIG audit team’s investigation of the Renewable Fuel Standard (RFS) Quality Assurance Program (QAP) and the EPA Moderated Transaction System (EMTS) to see if additional controls are needed to strengthen program compliance and mitigate the potential for fraud.

Our responses to the OIG’s specific recommendations for OAR are as follows:

Recommendation 1: Improve adherence to the five- and ten-business day reporting requirements for Renewable Identification Number transactions in Renewable Fuel Standard regulations.

Response 1: EPA agrees with this recommendation. EPA intends to improve adherence of the five- and ten-business day reporting deadlines for Renewable Identification Number (RIN) transactions by engaging in implementation outreach with regulated stakeholders to inform them of the regulatory requirements and of the potential consequences of failing to submit RIN transactions in a timely manner. EPA also intends to review the number of transactions outside of the window and establish procedures to limit the submission of certain late transactions without going through EPA's established remedial action process.

Planned Completion Date: FY 2024, Quarter 2.

Recommendation 2: Develop a process to identify and review instances in which Renewable Identification Number generation exceeds registered or reported renewable fuel production capacity.

Response 2: EPA agrees with this recommendation. OAR intends to develop a process to identify and review instances in which RIN generation exceeds registered or reported renewable fuel production capacity. OAR also intends to identify for the Office of Enforcement and Compliance Assurance (OECA) any instances where a renewable fuel producer has exceeded its registered renewable fuel production capacity for further potential investigation. OAR also notes that it recently finalized in the 2020-2022 RFS Final Rule changes that will help improve the quality of submitted capacity information and aid in OAR's identification and review of registered capacities.¹

Planned Completion Date: FY 2024, Quarter 2

Recommendation 3: Develop a risk-based selection process to verify Renewable Identification Number transactions entered in the EPA Moderated Transaction System.

Response 3: EPA agrees with this recommendation. OAR intends to work with OECA to develop a risk-based selection process to verify RIN transactions by integrating identified factors into OECA's existing risk-based auditing tool.

Planned Completion Date: FY 2025, Quarter 1

Recommendation 4: Develop a process to reduce the likelihood of Quality Assurance Program auditor conflicts of interest during Quality Assurance Program reviews.

Response 4: EPA agrees with this recommendation. OAR has recently finalized enhancements to the RFS third-party independence requirements that will further mitigate any conflicts of interests by QAP auditors during QAP reviews. OAR intends to conduct outreach with QAP auditors to better inform them of the new regulatory requirements and discuss how QAP auditors intend to avoid conflicts of interest under the new provisions. OAR also intends to integrate oversight of the independence requirements with the annual QAP reregistration process under 40 CFR 80.1450(g).

¹ See 87 FR 39600, 39651-39652 (July 1, 2022).

Planned Completion Date: FY 2024, Quarter 3

Recommendation 5: Communicate relevant requirements, expectations, and consequences from Renewable Fuel Standard regulations to Quality Assurance Program auditors to minimize the likelihood that they verify Renewable Identification Numbers that are invalid.

Response 5: EPA agrees with this recommendation. OAR intends to communicate relevant requirements, expectations, and consequences from RFS regulations to QAP auditors prior to the 2024 annual reregistration process under 40 CFR 80.1450(g). OAR also intends to issue notices of deficiencies to QAP auditors whose QAPs are insufficient such that the QAP auditors will no longer be able to verify RINs under the RFS program until the deficiencies are resolved.

Planned Completion Date: FY 2024, Quarter 2

Recommendation 6: Annually review the scope of consulting services that Quality Assurance Program auditors are performing for renewable fuel producers to identify prohibited relationships.

Response 6: EPA agrees with this recommendation. As discussed in Response 4, EPA intends to integrate review of the new independence requirements for QAP auditors into the annual reregistration process under 40 CFR 80.1450(g). This annual reregistration review would include reviewing the scope of services provided by QAP providers to ensure compliance with the independence requirements under 40 CFR 80.1471.

Planned Completion Date: FY 2024, Quarter 1.

Recommendation 7: Integrate key applications to reduce staff burden and to allow better oversight of Renewable Identification Number and Renewable Fuel Standard program requirements and engage the Office of Enforcement and Compliance Assurance in the integration process to ensure all inspection and enforcement data needs are addressed in the integrated system.

Response 7: EPA agrees with this recommendation. OAR is already moving in that direction and plans to continue integration of the key registration and reporting systems with EMTS to reduce staff burden and improve oversight as resources permit.

Planned Completion Date: FY 2028, Quarter 4

Recommendation 8: Enhance or replace the Data Analysis and Reporting Tool to facilitate external information requests and Office of Enforcement and Compliance Assurance inspections.

Response 8: EPA agrees with this recommendation. OAR will enhance or replace the Data Analysis and Reporting Tool (DART) to facilitate information requests as resources permit.

Planned Completion Date: FY 2026, Quarter 1

If you have any questions regarding this response, please contact Mary Manners, Deputy Director, Compliance Division, Office of Transportation and Air Quality, at (734) 214-4873.

cc: Elizabeth Shaw, OAR
Sarah Dunham, OAR-OTAQ
William Niebling, OAR

Distribution

The Administrator
Deputy Administrator
Chief of Staff, Office of the Administrator
Deputy Chief of Staff for Management, Office of the Administrator
Assistant Administrator of Air and Radiation
Assistant Administrator for Enforcement and Compliance Assurance
Agency Follow-Up Official (the CFO)
Agency Follow-Up Coordinator
General Counsel
Associate Administrator for Congressional and Intergovernmental Relations
Associate Administrator for Public Affairs
Principal Deputy Assistant Administrator of Air and Radiation
Principal Deputy Assistant Administrator for Enforcement and Compliance Assurance
Deputy Assistant Administrator for Stationary Sources, Office of Air and Radiation
Deputy Assistant Administrator for Mobile Sources, Office of Air and Radiation
Deputy Assistant Administrator for Air and Radiation
Director, Office of Continuous Improvement, Office of the Chief Financial Officer
Director, Office of Civil Enforcement, Office of Enforcement and Compliance Assurance
Audit Follow-Up Coordinator, Office of the Administrator
Audit Follow-Up Coordinator, Office of Air and Radiation
Audit Follow-Up Coordinator, Office of Enforcement and Compliance Assurance



Whistleblower Protection

U.S. Environmental Protection Agency

The whistleblower protection coordinator's role is to educate Agency employees about prohibitions on retaliation and employees' rights and remedies in cases of reprisal. For more information, please visit the whistleblower protection coordinator's [webpage](#).

Contact us:



Congressional Inquiries: OIG.CongressionalAffairs@epa.gov



Media Inquiries: OIG.PublicAffairs@epa.gov



EPA OIG Hotline: OIG.Hotline@epa.gov



Web: epaoig.gov

Follow us:



X (formerly Twitter): [@epaoig](https://twitter.com/epaoig)



LinkedIn: linkedin.com/company/epa-oig



YouTube: youtube.com/epaoig



Instagram: [@epa.ig.on.ig](https://www.instagram.com/epa.ig.on.ig)



www.epaoig.gov