



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF ENFORCEMENT AND COMPLIANCE ASSURANCE

DATE: See date of Branch Manager signature

SUBJECT: CLEAN AIR ACT INSPECTION REPORT
Republic Services / Cycle Chem Elizabeth Facility, NJ

FROM: Daniel Heins, Environmental Scientist
Technical Enforcement Branch 1, Air Enforcement Division

THRU: Gregory Fried, Branch Manager
Technical Enforcement Branch 1, Air Enforcement Division

TO: File

BASIC INFORMATION

Facility Name: Republic Services Elizabeth Facility (permitted as Cycle Chem, Inc.)
Facility Location: 217 South First Street, Elizabeth, NJ 07206
EPA RCRA ID: NJD002200046
EPA FRS ID: 110064065808

Date of Inspection: December 18, 2024

EPA Inspector(s):

1. Daniel Heins, Air Inspector, EPA OECA
2. Katherine Marmanides, Air Inspector, EPA Region 2
3. Julian Velez, Air Inspector, EPA Region 2

Facility Personnel:

1. Anthony Marty, Environmental Compliance Manager – Republic Services
2. Yaritza De Jesus, Operations Supervisor – Republic Services
3. JT Treloar, General Manager – Republic Services

Contact Email Address: amarty@republicservices.com

Purpose of Inspection: Partial compliance evaluation for the Clean Air Act and American Innovations and Manufacturing Act

Facility Type: Hazardous waste treatment storage and disposal facility (TSDF)

Regulations Central to Inspection: 40 C.F.R. Parts 82 & 84

Arrival Time: 10:05

Departure Time: 12:50

Inspection Type:

- ☒ Unannounced Inspection
- ☐ Announced Inspection

- ☒ Presented Credentials
- ☒ Stated authority and purpose of inspection
- ☒ Provided CBI warning to facility, no CBI identified
- ☒ Provided U.S. EPA point of contact to the facility

SITE OVERVIEW

The following information was obtained verbally from Republic Services (“Republic”) representatives during the opening conference unless otherwise stated.

Ownership and Other Locations:

Cycle Chem, Inc is the named and permitted entity for the Republic Services Elizabeth Facility (“The Facility”). There is a sister Cycle Chem facility in Lewisberry, PA. Previously, Cycle Chem was owned by ACV Environmental and operated under that name. In 2021, Republic Services acquired ACV Environmental, including the Cycle Chem facilities. The facility currently operates under the Republic Services name. According to their 2023 Annual Report to investors,¹ Republic owns and operates 22 TSDFs across the country and is a major company across various aspects of the waste management industry.

Operations

The Facility is a hazardous waste TSDF, receiving containers and bulk loads of both hazardous and non-hazardous wastes. Generators ship wastes to the facility and provide a waste characterization based on either a material safety data sheet or waste sample analysis. Republic does QA/QC including sampling of the material. If the received material is off specification from the generator manifest, they will work with the generator to determine the appropriate path forward. Among the most significant waste streams received by volume are lead-contaminated soils and flammable liquids.

Some wastes are consolidated prior to shipment, others stay in original containers. Some wastes are treated or partially treated on site, others are gathered and shipped untreated to other facilities

¹ Available at <https://investor.republicservices.com/financials/reports>

for treatment / disposal. On-site treatments include neutralization of acids and bases and treating characteristic metal wastes to RCRA Subtitle D standards.

The Facility does not process Benzene Waste Organic NESHAP (BWON) Part 61 Subpart FF wastes. If the facility receives any BWON waste, the containers sit in storage unopened to be sent to partner facilities that are permitted to handle BWON wastes.

Drummed waste may be consolidated. Empty drums are sent by trailer twice a week to a separate facility, Patrick Kelley Drums, for cleaning and reconditioning.

The Facility has a tank farm for liquid wastes, which are shipped out by tanker. Flammable liquids may be sent to third party cement kilns for incineration.

If the Facility receives any appliances that could contain refrigerants, they send them over to the Lewisberry facility to processing. Cylinders of refrigerant gases are received and shipped out without any consolidation or processing and sent to either A-Gas Rapid Recovery or SET Environmental for disposal.

Republic is currently constructing a solid waste processing building for non-hazardous waste solidification and for treating metals-contaminated waste as part of a consent agreement.

SITE TOUR

EPA conducted a site tour from approximately 11:45 to 12:30. Escorted by Republic staff, EPA walked through the storage facility, starting by walking through the area of pallets of waste containers ready to be shipped out. One pallet contained two refrigerators marked by the generator "Don't Vent" which are being sent to a third party for disposal and a tank labeled as containing "freon" and isobutane.

EPA walked through various waste storage areas and by the tank farm.

EPA went to compressed gas storage. This area included two cylinders labeled as containing R-22 (chlorodifluoromethane, an HCFC) from Verizon received on July 16, 2024 and flagged for disposal to SET, in addition to various non-refrigerant gas cylinders and fire extinguishers.

Photos and/or Videos: were taken during the inspection. See Appendix A.

Field Measurements: were not taken during this inspection.

INSPECTION CONFERENCE

EPA asked Republic for specific documents relating to a shipment of hydrofluorocarbon (HFC) refrigerant imported by Nourse Farms in 2024 that was sent to the Elizabeth Facility for destruction, as Nourse Farms did not have the required import allowances. The initial import paperwork identified the shipment as being of three cylinders of R-449a, totaling 246 pounds. R-

449a is a refrigerant sometimes sold under the brand name Opteon™ XP40 with the following composition:²

Chemical Name	Common Name	Concentration (%)
1,1,1,2-Tetrafluoroethane	HFC-134a	25.7
2,3,3,3-Tetrafluoropropene	HFO-1234yf	25.3
Pentafluoroethane	HFC-125	24.7
Difluoromethane	HFC-32	24.3

Reviewed documents:

Prior to the inspection, EPA reviewed documents provided to Nourse Farms by Republic Services, and brought these to the inspection to confirm and discuss:

- “Certificate of Destruction” (undated but created no later than August 5, 2024)
 - Signed statement from Republic Services stating “This certificate is to verify that the wastes specified on the following manifest numbers have been properly managed in accordance with all local, state and federal regulations”
- Generator manifest from Nourse Farms
 - Manifest # 02592783JJK, 8/1/2024
 - 3 cylinders totaling 200 pounds with a US DOT packing description of “UN1078, Refrigerant gases, n.o.s., (1,1,1,2-Tetrafluoroethane, Pentafluoroethane), 2.2, ERG #126”
 - Management code H141, indicating “The site receiving this waste stored/bulked and transferred the waste with no treatment or recovery (H010-H129), fuel blending (H061), or disposal (H131-H135) at that receiving site.”³

During the inspection, EPA reviewed the following provided by Republic Services:

- A copy of the same generator manifest for Nourse Farms, matching the document EPA had
- Outgoing manifest to SET Environmental*
 - Manifest # 024691362JJK, 10/14/2024
 - 19 total gas cylinders
 - Three entries with refrigerants, totaling 9 cylinders:

#	US DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	Cylinders	Total Pounds
1	UN3159, 1,1,1,2-Tetrafluoroethane, 2.2	1	30
2	UN1956, Compressed gas, n.o.s., (1,1,1,2-Tetrafluoroethane), 2.2	5	150
9	UN3159, 1,1,1,2-Tetrafluoroethane	3	15

- 10 other cylinders of non-refrigerant gases such as hydrogen sulfide and chlorine

² See Safety Data Sheet for R-449a <https://www.airgas.com/msds/001202.pdf>

³ See “Management Method Codes” section at page 110 of “RCRA Subtitle C Reporting Instructions and Forms” https://rcrapublic.epa.gov/rcrainfoweb/documents/rcra_subtitleC_forms_and_instructions.pdf

- All refrigerant cylinders marked with management code H129 “Other treatment (specify in comments; not reportable as H071-H124)”³ though comments do not specify the other treatment method
- Certificate of Disposal Validation List for Nourse Farms*
 - Three line entries for the generator Nourse Farms, all marked with a destination of “Facility – SET” with a ship/disposal date of 10/14/2024, linking them to outbound manifest 024691362JJJ, page 1, line 1
- Generator waste profile form from Nourse Farms
 - Profile ID: 1038209
 - “DuPont Opteon XP40 Cylinders”
 - 53 kilograms
 - Identifies physical characteristics based on SDS/MSDS
 - Approximately 25% each of 1,1,1,2-Tetrafluoroethane, 2,3,3,3-Tetrafluoropropene, and Pentafluoroethane
 - No specific treatment is requested or identified
- Container Ship-Out Log (excerpts)*
 - For 2024 shipments from Cycle Chem Elizabeth to RapidRecover and to SET
 - 58 total containers sent to RapidRecover on three separate dates
 - 97 total containers sent to SET on three separate dates
 - 40 containers were sent out on 10/14
- Example “Certificate of Disposal” documents for two non-refrigerant loads
 - Identified facility that the loads were transferred to for disposal

*Documents marked with asterisks were revised in the post-inspection submittal. The above information is from the documents as reviewed during the inspection, changes are noted in the last section of the report.

EPA retained copies of all reviewed documents except for the non-refrigerant example Certificates of Disposal and the Nourse Farms generator manifest (having confirmed it matched the manifest EPA had).

EPA highlighted that the “Proof of Destruction” provided to Nourse Farms was provided prior to the date of the shipment to SET, and confirmed that the cylinders would have been in storage, intact and waiting for shipment at the time of that document being generated. Republic stated that this document was not the typical “Proof of Disposal” records they provide to generators but confirmed that it was signed by a Republic customer services representative. Republic stated that they normally would not provide a proof of disposal document until the material was treated or shipped off site for disposal, showing two example documents for non-refrigerant loads.

EPA asked if Republic had a copy of the Verification of Destruction / Proof of Destruction from SET. Republic stated that they only request these documents if asked to by the original generators. Republic reached out to SET during the inspection to get this documentation. EPA noted that the generator needed a Verification of Destruction from the final destruction facility with specific information about timing and method of HFC destruction.

EPA highlighted there was not a clear match for the Nourse Farms cylinders (3 at 200 total pounds according to the generator manifest) on the outgoing manifest to SET that Republic said included them. Republic highlighted the line item for 5 cylinders at 150 total pounds could include the Nourse Farms cylinders. EPA asked how the entry could have two extra cylinders but 50 fewer pounds, and Republic stated that Republic does not verify the weights on the manifests for wastes that are do not have a per pound disposal cost and thus the weights may be approximate estimates from the truck drivers associated with the manifests. The US DOT Description entry for this (and the other refrigerant entries) did not match the generator manifest, though it was possible that the R-449a, as a refrigerant blend, was referred to by its largest constituent, HFC-134a, on the outgoing manifest. EPA asked if Republic could readily identify the other generators associated with the refrigerants in the outgoing manifest reviewed. Republic stated they would need to go through the generator manifests to identify these and that could be a follow up item.

EPA confirmed that each line item on the Container Ship-Out Log is an individual cylinder/container, then noted that this log had 40 total cylinders associated with the 10/14/2024 ship out to SET, while the manifest for that shipment only had 19 cylinders. Republic confirmed that there were no other manifests associated with that shipment date.

After the inspection, EPA asked via email if Republic had provided further instruction on disposal method for the refrigerants in manifest 024691362JJK, noting that management code H129 is for “other treatment” that should be specified in comments.

Requested Documents

EPA requested the following documents to be submitted via email by January 8, 2025:

- Destruction Verification / Proof of Destruction from SET for the refrigerants in the 10/14 manifest
- Generator manifests associated with the rest of the refrigerant cylinders included in the 10/14 outgoing manifest to SET
- Digital copies of the documents provided on site

Concerns:

At the closing conference, EPA identified the following concerns based off the inspection:

- “Certificate of Destruction”
 - Republic provided a signed (but undated) “Certificate of Destruction” to Nourse Farms before the refrigerants had even left their facility for destruction and with no knowledge about the anticipated timing or method of destruction
- Records consistency / accuracy
 - The 200 lbs of HFC in three cylinders identified in the Nourse Farms incoming generator manifest could not clearly be identified on the outgoing manifest to SET Environmental
 - The outgoing container log indicated 40 containers of waste were sent to SET on October 14, 2024, but the only outgoing manifest to SET for that date identified only 19 containers, leaving 21 containers unaccounted for.

REQUESTED DOCUMENTS AND FOLLOW-UP

Via email on January 8, 2025, Anthony Marty provided on behalf of Republic some of the requested documents and provided updated versions of documents reviewed on site.

Republic stated that SET had not yet destroyed the cylinders from Nourse Farms and will follow up when the Destruction Verification / Proof of Destruction is available. An email chain (final email dated 12/30/24) with SET was provided discussing the shipment and requesting a Certificate of Destruction for the manifest. The email chain showed that the shipment was received 10/30/24 but that the cylinders were not yet treated and thus SET could not yet provide a Certificate of Destruction. SET attached a copy of the final manifest in the 12/30 email, signed and dated to 12/30 with various corrections/discrepancies noted by SET as the designated facility, updating the document from the 10/14 manifest reviewed by EPA. These included:

- Adding methyl chloride to entry number 2 in addition to tetrafluoroethane
- Changing various management codes, including:
 - 1 changed to H141 “The site receiving this waste stored/bulked and transferred the waste with no reclamation, recovery, destruction, treatment or disposal at that site”³
 - 2 changed to H090 “Polymerization (LDR standard as treatment method)”³
 - 9 changed to H100 “Physical treatment only (adsorption/absorption/separation/stripping/dewatering)”³

Republic provided a different version of the manifest post-receipt by SET. This version was the same as the SET-provided manifest, except the update to H100 for 9 was crossed out changed with unique handwriting to H040 (“Incineration – thermal destruction other than use as a fuel”). Republic stated via email that the management code was incorrectly listed as H129 on the original manifest and was corrected as of 10/29/24. Republic stated that they made this change on their copy of the manifest and that the change is reflected in e-Manifest.

Republic provided a copy of the Nourse Farms generator manifest, but did not provide the generator manifests for the other refrigerants in the 10/14 SET shipment.

Republic revised the Certificate of Disposal Validation list to identify the Nourse Farms shipment as Line 9 on the outgoing manifest (3 cylinders of HFC-134a totaling 15 pounds).

Republic provided a “final batch sheet” for the ship out log with information for the 19 cylinders on manifest #024691362JJK. Republic stated that the batch sheet system is an internal tool for tracking and the sheet reviewed was prior to shipment. Republic did not provide information clarifying the fate of the other 21 cylinders. This batch sheet, in addition to also identifying the Nourse Farms cylinders as Line 9 on outgoing manifest, identified Line 1 from that manifest as coming from Cycle Chem’s PA facility (receipt 3607-4-1) and Line 2 as coming from Energy Transfer Marketing & Terminal (receipt 10400-7-1 through 4) and Fedex Ground (receipt 10528-8-1).

Via email on January 24, 2025, Anthony Marty provided additional documents and clarifications on request from EPA.

Republic confirmed that they were identifying the Nourse cylinders on the outgoing manifest as line 9, with three cylinders with a total of 15 pounds of 1,1,1,2-Tetrafluoroethane, noting the weights were estimates.

Republic provided emails requesting from SET Environmental the outgoing manifest and destruction verification for the shipment, but SET had not yet provided these. In these emails, SET confirmed that the final disposal code for these was H040 for incineration. As of date of report signing, Republic has not provided a destruction verification for the shipment or identified the final disposal facility.

Republic provided additional manifests.

- Manifest 026060459JJK / Receipt 3607
 - Generator: Cycle Chem, Lewisberry, PA
 - Receipt date 12/26/2023
 - Contained (in addition to non-refrigerant wastes) 1 cylinder with 10 pounds of refrigerant aerosols identified as the HFC R-134a (Line 4)
- Manifest 026100889JJK / Receipt 10528
 - Generator: Fedex Ground, Keasbey, NJ
 - Receipt date: 7/22/2024
 - Contained (in addition to non-refrigerant wastes) 1 cylinder with 10 pounds with a USDOT description of “UN1956, Compressed gas, n.o.s. (fluorinated [sic] hydrocarbons, nitrogen), 2.2 ERG No. 126” (Line 9, though Line 8 was crossed out)
- Manifest 023587084JJK / Receipt 10400
 - Generator: Energy Transfer Marketing & Terminals, Marcus Hook, PA
 - Receipt date: 7/24/2024
 - Contained (in addition to other wastes with specific non-refrigerant identification):
 - 1 cylinder with 50 pounds with a DOT description of “UN1950, waste, aerosols, 2.1” (line 2)
 - 12 cylinders with 20 pounds with a DOT description of “UN1956, waste, compressed, gas, n.o.s. (air, benzene) 2.2” (line 7)

Republic did not provide an explanation for the discrepancy in waste description compared to the outgoing manifest entry for the Energy Transfer Marketing & Terminals cylinders.

DIGITAL SIGNATURES

**DANIEL
HEINS**

Digitally signed by DANIEL
HEINS
Date: 2025.02.04 18:06:02
-08'00'

Daniel Heins, Lead Inspector

**GREGORY
FRIED**

Digitally signed by
GREGORY FRIED
Date: 2025.02.14
13:15:22 -05'00'

Gregory Fried, Supervisor

APPENDICES AND ATTACHMENTS

Appendix A: Digital Image Log

Attachments

#	Name	Pages	Source of Copy
1	"Certificate of Destruction" for Manifest 025927383JJK	1	Email attachment to EPA from Nourse Farms representative
2	Generator Manifest 025927383JJK	3	Email attachment to EPA from Nourse Farms representative, matches copy provided on-site
3	Outgoing Manifest 024691362JJK 10/14	2	Republic Services, scanned from copy provided on-site
4	Certificate of Disposal Validation List for Nourse Farms	1	Republic Services, scanned from copy provided on-site
5	Container Ship-Out Log excerpts for RapidRecovery and SET	5	Republic Services, scanned from copy provided on-site
6	Waste/Material Profile Form, Profile ID 1038209	4	Republic Services, scanned from copy provided on-site
7	Outgoing Manifest 024691362JJK 10/30	2	Republic Services, via 1/8 email
8	Container Ship-Out Log	1	Republic Services, via 1/8 email
9	Waste/Material Profile Form, Profile ID 1038209	4	Republic Services, via 1/8 email
10	Generator Manifest 025927383JJK	1	Republic Services, via 1/8 email
11	Certificate of Disposal Validation List for Nourse Farms	1	Republic Services, via 1/8 email
12	Email from SET #1	6	Republic Services, via 1/8 email
13	Outgoing Manifest 024691362JJK 10/30	2	SET (via email attached in Republic Services 1/8 email)
14	Email follow-up from Republic #1	4	Republic Services 1/8 email
15	Email Follow up from Republic #2	8	Republic Services 1/24 email
16	Email from SET #2	11	Republic Services, via 1/24 email
17	Generator manifest 026060459JJK	2	Republic Services, via 1/24 email
18	Generator manifest 026100889JJK	2	Republic Services, via 1/24 email
19	Generator manifest 023587084JJK	2	Republic Services, via 1/24 email
20-30	Inspection photos listed in Appendix A	11	EPA

APPENDIX A: DIGITAL IMAGE LOG

Inspector Name: Katherine Marmanides

Archival Record Location: US EPA SharePoint

Date: December 18, 2024

Digital Camera Photos

Picture #	File Name	Time (EST)*	Description
1	IMG_1663.JPG	11:54	Refrigerant cylinders in storage cage
2	IMG_1664.JPG	11:54	Republic label on cylinder "R 10398-1-1" with description of R-22 cylinder and outbound approval labeled SET and dated 7/16/2024
3	IMG_1665.JPG	11:55	Generator label for "R 10398-1-2" (from the Republic label) identifying as R-22 from Verizon of New Jersey
4	IMG_1666.JPG	11:55	Cylinders of R22 labeled (by Republic) with "R 10398-1-1" and "R-10398-1-2"
5	IMG_1667.JPG	11:57	Duplicate of picture #2
6	IMG_1668.JPG	11:58	Generator label for "R 10398-1-1" (from the Republic label) identifying as R-22 from Verizon of New Jersey
7	IMG_1669.JPG	11:58	Duplicate of previous
8	IMG_1670.JPG	11:58	Duplicate of previous
9	IMG_1671.JPG	12:00	Two refrigerators awaiting ship-out and a tank labeled both as freon and isobutane
10	IMG_1672.JPG	12:01	Label and "flammable" markings on refrigerator
11	IMG_1673.JPG	12:01	Generator-provided label from Metro North Railroad identifying it as a refrigerator using R600a (isobutane)

*Note: Timestamps on the photos are all displayed off by one hour, these are the actual photo times.