



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8
RESOURCE CONSERVATION AND RECOVERY ACT**

GENERAL INFORMATION

Facility Name: Agile Space Industries

RCRA ID: COR000256933

Facility Location:

1125 CR 309A, Durango, CO 81303
Lat/Long: 37.158066, -107.738595

Facility Contact:

Jeremy Dyess, Director of Test Operations
(206) 295-5585

Notification Status:

Large Quantity Generator (LQG)

Date of Inspection: September 26, 2024

Arrival Time: 9:20 a.m.

Departure Time: 3:30 p.m.

Lead Inspector & Report Author: Jacquelyn Vega, U.S. EPA Region 8 Inspector

Inspection Attendees:

1. Andy Woodward, U.S. EPA Region 8
2. Mitch Dorsk, Southern Ute
3. Jeremy Dyess, Agile Space Industries (ASI), Director of Test Operations
4. Alex Romme, ASI
5. Ty Fredlund, ASI
6. Tyler Graziano, ASI
7. Mike Fitzpatrick, ASI
8. Finley Marshall, ASI
9. Ethan Greiner, ASI
10. Mesa Hollintek, ASI
11. Keith Lask, ASI
12. James Whitla, ASI
13. Jeremy Shrom, ASI

Type and Purpose of Inspection: Compliance Evaluation Inspection
Compliance with RCRA Subtitle C

Facility Type: Space rocket testing, NAICS 541380 (Testing laboratories and services)

Applicable Regulations: 40 CFR Parts 260-279

Inspection Type: Unannounced Inspection
EPA Inspection

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Disclaimer

This report is a summary of observations and information gathered from the facility at the time of the inspection. The information provided does not constitute a final decision on compliance with RCRA regulations, nor is it meant to be a comprehensive summary of all activities and processes conducted at the facility.

OPENING CONFERENCE

The following information was obtained verbally during the inspection from Jeremy Dyess, ASI Director of Test Operations, unless otherwise noted. Upon arrival at the facility, an opening conference was conducted with Mr. Dyess. Andy Woodward and I presented our inspector credentials to Mr. Dyess and explained the purpose of the inspection. We were not denied access to the facility and were allowed to inspect all areas that we selected for inspection.

General Facility and Process Description: ASI conducts testing of rocket engines. ASI has two locations, which includes an office building by the airport and the testing site about one mile away. Hazardous waste is generated and transported from the testing site location. In RCRAInfo, the testing site is designated as a large quantity generator (LQG) and the office building is the mailing address at 820 Airport Rd., Durango, CO. ASI has been in business since 2010 and leased 8 acres for the testing area from the airport in 2012. Twelve full-time employees work at this location. The shop operates Monday through Friday from 7:00 a.m. to 5:00 p.m.

ASI tests and qualifies rocket engines and novel combustion devices on test stands at the Durango testing site (facility). The engines that are tested use a variety of liquid chemical propellants. When a testing campaign is completed and the propellant needs to be changed, then the remaining propellant in the engines and tanks are drained and rinsed. The operational propellants currently used are HPH (high purity hydrazine), MMH (monomethylhydrazine), M2O (two hydrazine chemicals blended together), and OX (liquid oxygen).

TOUR INFORMATION

All photographs collected by EPA during the inspection and referenced below are included in Attachment 1 – EPA Photographs.

The generation and management of the following waste streams were discussed. Some waste streams may change over time depending on the engine testing campaigns being run. The amount of waste generated varies depending on the campaigns and when the propellant needs to be changed out to a different type.

HPH, MMH, M2O, and OX solids and rinses are generated from switching out propellants. DI water is used to rinse all propellants, and isopropyl alcohol is used for MMH. Wastes from testing are also generated, put into bags and designated as soft goods. Waste codes used are U133, P068, D001, D002, and D003, depending on the waste and specific characteristics.

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Confidential Business Information (CBI): No CBI was discussed during the inspection.

Areas of the facility toured: We walked through the testing site, waste accumulation areas, and collected photos.

Testing wastes are collected in soft goods bags in a Conex trailer. OX wastes are put into green bags, M2O/MMH wastes are put into yellow bags, and HPH wastes are put into red bags. The bags of hazardous waste are taken weekly to a locked fire cabinet located just outside of the Conex. The bags are placed in 5-gallon pails inside the fire cabinet, which is being managed as a satellite accumulation area. During the inspection, three pails had waste in them and the others were empty. All three of the pails were labeled with a hazardous waste sticker and the contents (OX only, M2O only, and HPH only). I observed that an indication of the hazards was not marked on any of the containers. Additionally, one container of used vac oil was also present in the cabinet. ASI has not had to dispose of any used vac oil yet, but plans to send to a local used oil collection facility.

The central accumulation area was in an open area outside of the warehouse. Three 55-gallon drums and one 5-gallon pail was present. Hazardous waste was accumulated in two of the 55-gallon drums, and one was empty. Both drums had an accumulation date of 8/21/24 and were labeled with the words "Hazardous Waste". One was marked "HPH only" and one was marked "M2O only". The 5-gallon pail had an accumulation date of 8/19/24, was labeled with the words "Hazardous Waste", and marked "HPH". I observed that an indication of the hazards was not marked on any of the containers. Inspections of the area are done monthly. All employees carry hand-held radios around with them.

Record Review:

ASI changed their generator status to LQG from SQG on 6/20/24. Facility representatives explained that ASI changed their waste determinations for the rinses around August 2023 after discussions with EPA Region 8 and CDPHE. Prior to July 2023, they were adding a treatment chemical ZeenKleen, which neutralizes hydrazine, to the rinsate water. ASI was not characterizing the rinsate water as a hazardous waste. After discussions with EPA and CDPHE, they began adding the listed waste codes to the rinse waters. ZeenKleen is no longer added to the waste, since it adds to the volume shipped for disposal. All of ASI's hazardous waste is shipped to Clean Harbors Aragonite for incineration.

Manifests were reviewed from 11/04/22 to the present, with the most recent manifest shipped off-site on 6/05/24. Personnel training and the Contingency Plan were reviewed. The Contingency Plan needs to be updated to reflect that the facility is now a large quantity generator. ASI has a map showing locations of fire extinguishers, but it needs to be added to the Contingency Plan.

CLOSING CONFERENCE

Regarding the satellite accumulation in the fire cabinet, we discussed that hazardous wastes can only be accumulated at the initial point of generation and the wastes cannot be moved from one satellite to

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another. ASI proposed moving the bags from the Conex building to the fire cabinet at the end of each shift. We discussed that the hazardous waste needs to be kept under the control of the operator.

We discussed that indications of the hazards must be labeled on containers at all satellite and central accumulation areas. For the central accumulation area, we discussed that inspections of the area need to be done weekly, and the specific areas that need to be checked.

On September 26, 2024, Jeremy Dyess sent an email detailing the information that he had provided to the staff [Attachment 2]. He included the following issues to address:

- Waste from the trailer needs to be moved to the satellite by the end of each shift
- Inspect and record weekly inspections of the central waste area
- Overfill drum and spill kit
- Hazardous waste sign for central accumulation area
- Indication of hazards on satellite area containers

On October 18, 2024, Jeremy Dyess sent an email with photos documenting changes that had been made since our inspection [Attachment 2]. The photos showed hazard stickers on the drums in the central accumulation area, hazard stickers on neutralized hydrazine waste containers, and hazard stickers on hazardous waste satellite containers in the fire cabinet. Review of the response indicated that the words “Hazardous Waste” need to be added to any of the plastic containers of hazardous waste. Specifically, neutralized hydrazine waste would still have the U133 waste code.

SIGNATURES

JACQUELYN VEGA Digitally signed by JACQUELYN VEGA
Date: 2025.04.21 16:03:40 -06'00'

Jacquelyn Vega, RCRA Inspector

KRISTIN MCNEILL Digitally signed by KRISTIN
MCNEILL
Date: 2025.04.21 08:41:56 -06'00'

Kristin McNeill, Supervisor
RCRA Enforcement Section
Enforcement and Compliance Assurance Division

ATTACHMENT LIST

Attachment 1 – EPA Photographs
Attachment 2 – Emails sent on 9/26/24 and 10/18/24 by Jeremy Dyess