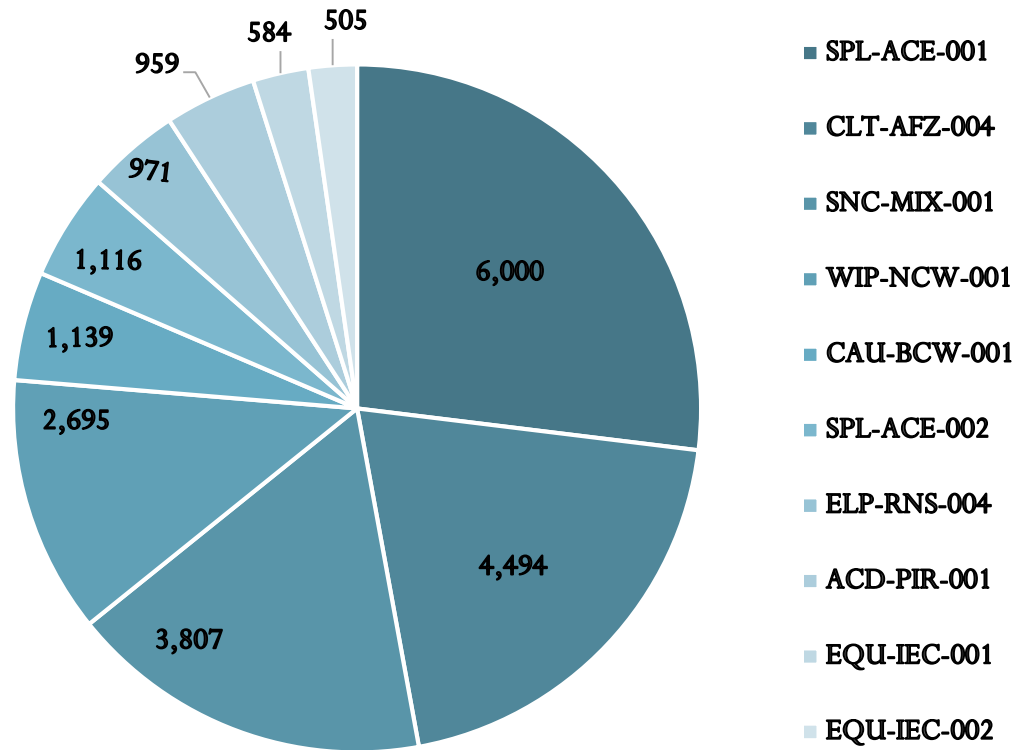


Annual Waste Report for 2020

Top Ten Hazardous Waste Profiles (by weight in lbs.)



SPL-ACE-001: Acetone Release into Bldg 30 Neutralization Tank

CLT-AFZ-004: Antifreeze/Ethylene Glycol from Bldg 24C Generator 2 and Generator 8

SNC-MIX-001: Mixed Non-Chlorinated Solvents

WIP-NCW-001: Non-Chlorinated Solvent Wipes

CAU-BCW-001: Bulk Caustic Waste

SPL-ACE-002: Limestone Contaminated with Acetone from DDL Release

ELP-RNS-004: Water from Cleaning Plating Shop Trenches, Floors, and Pits

ACD-PIR-001: Piranha Etch+ SC2 from DDL

EQU-IEC-001: Anion Exchange Cylinder

EQU-IEC-002: Cation Exchange Cylinder

Manifested Hazardous Waste Containers

2018

- Containers: 261
- Weight (lbs): 27,125
- 104 lbs/container

2019

- Containers: 276
- Weight (lbs): 35,184
- 127 lbs/container

2020

- Containers: 153
- Weight (lbs): 27,927
- 183 lbs/container

Top Five Hazardous Waste Profiles (by weight)

2018

1. SNC-MIX-001: Mixed Non-Chlorinated Solvents
2. WIP-NCW-001: Non-Chlorinated Solvent Wipes
3. CAU-BCW-001: Bulk Caustic Waste
4. ACD-PIR-001: Piranha Etch+ SC2 from DDL
5. ACM-ANS-002: Aluminum Anodizing Solution

2019

1. ETC-FPL-001¹: FPL (Forest Products Laboratory) Aluminum Etchant
2. SNC-MIX-001: Mixed Non-Chlorinated Solvents
3. WIP-NCW-001: Non-Chlorinated Solvent Wipes
4. CAU-BCW-001: Bulk Caustic Waste
5. ACD-PIR-001: Piranha Etch+ SC2 from DDL

2020

1. SPL-ACE-001²: Acetone Release into Bldg 30 Neutralization Tank
2. CLT-AFZ-004³: Antifreeze/Ethylene Glycol from Bldg 24C Generator 2 and Generator 8
3. SNC-MIX-001: Mixed Non-Chlorinated Solvents
4. WIP-NCW-001: Non-Chlorinated Solvent Wipes
5. CAU-BCW-001: Bulk Caustic Waste

1: Plating bath leak in November of 2019 generated fourteen 55 gallon drums of waste

2: DDL acetone bath release into the neutralization system generated three 270 gallon totes of F003 waste

3: Draining of antifreeze for generators at 24C generated two 270 gallon totes of antifreeze with D008 (lead)

Top Five Hazardous Waste Collection Sites (by weight)

Rank	Building	Room	Description	Code	Total lbs.	Containers
1	030	003	DDL Chemical Storage Facility	553	11,256 ¹	485
2	005	E014D	Electroplating Facility	547	3,218	23
3	029	128	Precision Cleaning Area	549	2,420	71
4	024C	130	Bldg 24C Generator Room	220	2,300 ²	1
5	022	C283	Ocean Ecology Lab	616	897	21

1: Three containers totaling 6,000 lbs from the acetone release mentioned in slides 3 and 6.

2: Two additional containers totaling 2,194 lbs were generated in 2019 but shipped in 2020. This is why the weight doesn't match, relative to slide 2 (4,494 lbs), for antifreeze from generators at 24C (CLT-AFZ-004).

Pollution Prevention

- Pollution Prevention efforts have improved since the implementation of the hazardous materials management system (HMMS) and the Chemical Reuse Center.
- Four 4 liter bottles and four 1 liter bottles of methanol were issued to the Ocean Ecology Lab (Bldg. 22-C283) on January 22, 2020.
- Four 1 pint bottles of ethanol were issued to the code 240 (Bldg. 9-015) protective services for COVID-19 decontamination on April 20, 2020.
- Ten 1 pint bottles of ethanol were issued to the code 670 (Bldg. 21 rooms C023 & 233) for lab/COVID-19 decontamination on July 21, 2020.
- 1 gallon of Aeroglaze Z306 coating was received on October 1, 2020 as part of a lab clean out in Bldg. 34. MEMD was able to receive it and issue it back out to Bldg. 5-195A coatings lab on the same day.
- 100 mL of tert-butylamine was mistakenly ordered by code 545. Code 270 reached out to MEMD and needed it picked up from the shipping and receiving warehouse on December 1, 2020. MEMD queried HMMS and was able to find a user at a lab in Bldg. 34-C174A and transfer it for reuse on the same day.

HMMS: 10 years of Waste Data at GSFC

2020 marks a decade since the first GSFC waste container was entered into HMMS. Below are some trends over the last 10 years.

- The DDL, Plating Shop, Pre Clean, and the two heating and refrigeration plants round out the top five hazardous waste generators at GSFC.
- The top five hazardous wastes at GSFC were mixed non-chlorinated solvents, non-chlorinated solvent wipes, bulk caustic waste, the Bldg. 24 chiller chemical cleaning, and piranha/SC2 cleaner from the DDL.
- GSFC generates on average about 37,000 lbs. of hazardous waste per year.
- December, June and October are when our heaviest shipments occur. November and January were the months with the least amount of weight shipped.