

CHEMICAL HAZARD & WASTE DISPOSAL REGISTER

Vertex Research Institute — Synthetic & Bio-Organic Facility (Building 4)

Regulatory Compliance Tracking Log under OSHA 29 CFR 1910.1450 & EPA RCRA Guidelines

ACTIVE LOG

ACTIVE SAA CONTAINERS

14 Drums

Satellite Accumulation Area

TOTAL Q2 ACCUMULATION

482.5 L / 94 kg

Liquid Vol & Solid Mass

LAST MANIFEST DISPOSAL

18-MAY-2026

Manifest #MNF-2026-0881

EHS COMPLIANCE AUDIT

PASSED

Next Audit: 15-AUG-2026

SECTION 1: Active High-Hazard Chemical Inventory & Storage Matrix

This section logs highly regulated chemical stocks maintained in synthetic laboratories 401–404. All materials listed require GHS labeling, secondary containment, and daily SAA inspection.

Reg ID	Chemical / Material	CAS No.	GHS Class	Location	Max Cap	Cur Qty	Status
CH-1021	Dichloromethane	75-09-2	Toxic / Carcinogen	Cab-4A (Vent)	50.0 L	32.5 L	COMPLIANT
CH-1022	Hydrofluoric Acid (48%)	7664-39-3	Acute Tox / Corrosive	Acid Cab 2	5.0 L	2.5 L	SECURED
CH-1025	Sodium Hydride (60%)	7646-69-7	Water Reactive	Dry Box 1	2.5 kg	1.2 kg	COMPLIANT
CH-1029	Tetrahydrofuran (Anhyd)	109-99-9	Flammable / Peroxide	Flamm Cab 3	40.0 L	28.0 L	TEST DUE
CH-1033	Nitromethane	75-52-5	Explosive Hazard	Flamm Cab 1	10.0 L	4.0 L	COMPLIANT
CH-1040	Osmium Tetroxide	20816-12-0	Severe Toxicity	Tox Safe B	25.0 g	10.0 g	RESTRICTED
CH-1044	Pyridine	110-86-1	Flammable / Harmful	Flamm Cab 4	20.0 L	11.5 L	COMPLIANT
CH-1051	Trifluoroacetic Acid	76-05-1	Corrosive Liquid	Acid Cab 1	15.0 L	8.0 L	COMPLIANT

SECTION 2: Satellite Accumulation Area (SAA) Container Log

Continuous tracking of active waste accumulation drums located in Building 4 SAA. Containers must be capped except when receiving waste and transferred to central storage within 55 days of start date or when reaching 95% capacity.

Drum ID	Waste Stream Category	Primary Constituents	Cap.	Current Fill	Start Date	Max Date	Action
W-2026-01	Non-Halogen Solvent	Acetone, EtOAc, Hexanes (60:30:10)	200 L	175 L (87.5%)	02-APR-2026	27-MAY-2026	PREP XFER
W-2026-02	Halogenated Solvent	CH2Cl2, Chloroform, TFA trace	200 L	140 L (70.0%)	10-APR-2026	05-JUN-2026	ACTIVE
W-2026-03	Corrosive Acid Waste	Dilute HNO3, H2SO4, Aqueous	50 L	38 L (76.0%)	15-APR-2026	10-JUN-2026	ACTIVE
W-2026-04	Corrosive Base Waste	NaOH, KOH, Ethanol Aqueous	50 L	42 L (84.0%)	18-APR-2026	13-JUN-2026	ACTIVE
W-2026-05	Heavy Metal Aqueous	Pd/C residues, Ni, Cu salts in H2O	20 L	11 L (55.0%)	22-APR-2026	17-JUN-2026	ACTIVE
W-2026-06	Toxic Solid Debris	Pipette tips, silica gel, vials	100 L	85 L (85.0%)	05-APR-2026	30-MAY-2026	PREP XFER
W-2026-07	Reactive Solid	Quenched NaH, Raney Ni solids	10 L	4.5 L (45.0%)	28-APR-2026	23-JUN-2026	ACTIVE

Mandatory SAA Compliance Check Notice: Drum **W-2026-01** and **W-2026-06** are approaching their 55-day regulatory transfer threshold. EHS Operations has scheduled Main Storage Vault transfer for **26-MAY-2026**. Contact EHS Officer Marcus Vance (Ext. 4409) prior to sealed container transport.

SECTION 3: Certified Waste Disposal Manifest & Chain of Custody Log

Official Record of Off-Site Waste Shipments under EPA Hazardous Waste Manifest Regulations (40 CFR Part 262). All shipments must be transported by licensed hazardous material haulers to certified Treatment, Storage, and Disposal Facilities (TSDF).

Transporter:	Apex Env. Logistics LLC	Transporter EPA ID:	NYR000293841	Driver Name:	Robert Thorne
TSDF Facility:	CleanEarth Remediation	TSDF EPA ID:	NJD002182049	Vehicle ID:	HazMat Rig #409
Manifest #:	019482011-JJK	Shipment Date:	18-MAY-2026	Cert. Rec'd:	22-MAY-2026

Item	Container ID	Chemical Composition & Profile	DOT Class	Hazard	Qty/Vol	Package Type	TSDF Code	Status
01	Drum M-2026-88	Waste Organics (Acetone 40%, MeOH 40%, Toluene 20%)	Class (Flammable)	3	205 L	Steel (1A1) Drum	H040 (Incin.)	VERIFIED
02	Drum M-2026-89	Dichloromethane 85%, Triethylamine 15%	Class 6.1 (Toxic)		205 L	Steel (1A1) Drum	H040 (Incin.)	VERIFIED
03	Carboy M-2026-90	Waste Nitric Acid 25%, HCl 15%, Water 60%	Class 8 (Corrosive)		50 L	Poly (1H1) Carboy	H132 (Neut.)	VERIFIED
04	Drum M-2026-91	Contaminated Lab Debris (Gloves, Absorbents, Vials)	Class 9 (Misc Haz)		110 L	Fiber (1G) Drum	H141 (Landfill)	VERIFIED
05	Pail M-2026-92	Mercury Thermometers & Hg Apparatus in Vermiculite	Class 8 (Corrosive/Hg)		15 L	Steel Pail (1A2)	H010 (Hg Rec.)	VERIFIED
06	Cyl M-2026-93	Spent Anhydrous Ammonia Cylinder (Lecture Bottle)	Class 2.3 (Poison Gas)		2.5 kg	Steel Cyl (3AA)	H081 (Recycle)	VERIFIED

SECTION 4: In-House Chemical Neutralization & Deactivation Protocol Log

Pre-disposal chemical treatments authorized under SOP-EHS-042-REV3. Only qualified bench chemists with level-3 EHS certification may perform neutralization or quenching procedures. All treated solutions must undergo pH and temperature verification prior to SAA container discharge.

Batch ID	Date / Time	Initial Substrate	Deactivation Agent & Method	Final pH	Technician	Supervisor
NEUT-081	04-MAY-11:30	2.5 L P-Fluorobenzoyl Chloride	Slowly added to 10% cold NaOH with stirring	7.8 pH	Dr. Sarah Chen	M. Vance
NEUT-082	09-MAY-14:15	500 mL Triethylaluminum	Dilute Solution in Heptane quenched via iPrOH/N2	N/A	Dr. Aris Thorne	M. Vance
NEUT-083	12-MAY-10:00	4.0 L Concentrated H2SO4	Neutralized with Aqueous Na2CO3 Slurry	7.2 pH	Elena Rostova	M. Vance
NEUT-084	19-MAY-15:45	1.0 L Sodium Azide Solution	Oxidized via Nitrous Acid / Sodium Nitrite	6.9 pH	Dr. Sarah Chen	M. Vance
NEUT-085	22-MAY-09:20	3.0 L Chromic Acid Solution	Reduced via NaHSO3 then neutralized with Ca(OH)2	8.1 pH	Elena Rostova	M. Vance

SECTION 5: Incidental Chemical Release & Spill Containment Log

Log of minor lab releases managed under local containment protocols during Q2 2026. Major spills exceeding reportable quantities (RQ) trigger immediate OSHA/EPA notifications.

Inc. ID	Date / Time	Location	Substance & Volume	Containment & Remediation Action	EHS Review
SPL-2026-04	08-MAY-09:15	Lab 402 Hood 3	250 mL Acetonitrile	Applied absorbent pillows; hood exhaust ramped. Drummed in W-2026-01.	CLOSED
SPL-2026-05	16-MAY-16:30	Lab 404 Bench B	50 mL HCl Acid (37%)	Neutralized with Spill-X-A agent, swept and containerized. No injuries.	CLOSED
SPL-2026-06	21-MAY-11:05	SAA Vault	1.2 L Mixed Organics	Secondary containment caught leakage. Re-drummed and floor scrubbed.	CLOSED

SECTION 6: Quarterly Regulatory Compliance Audit & Inspection Sign-Off

This Chemical Hazard & Waste Disposal Register has been audited for completeness, accuracy, and adherence to Federal, State, and Institutional EHS directives. Verified entries constitute a legal record of chain-of-custody for hazardous materials managed by Vertex Research Institute.

Quarterly Compliance Evaluation Checklist — Q2 2026			
Compliance Criteria Item		Status	Compliance Criteria Item
1. All SAA containers labeled with GHS hazards & start dates		PASSED	5. Weekly SAA inspection logs completed & filed
2. Flammable liquids stored within rated safety cabinets		PASSED	6. Eyewash & safety shower monthly testing verified
3. Peroxide-forming solvents tested within 6-month window		ATTN REQ	7. Secondary containment trays clean & liquid-free
4. EPA Manifest Certificates of Destruction archived		PASSED	8. Chemical emergency spill kits fully stocked

Formal Compliance Declaration & Regulatory Certification

I hereby certify under penalty of law that I have personally examined and am familiar with the information submitted in this Chemical Hazard & Waste Disposal Register (Form EHS-WDR-v4.2). Based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate, and complete to the best of my knowledge. All hazardous waste streams listed have been classified, packaged, marked, and labeled in accordance with applicable national and local environmental standards.

Dr. Aris Thorne

Lead Chemical Safety Officer

Date: 31-MAY-2026

Marcus Vance, MS, CSP

Director of Environmental Health & Safety

Date: 31-MAY-2026

Dr. Elena Rostova

VP of Research Operations

Date: 01-JUN-2026

SECTION 7: Emergency Contacts & Regulatory Response Directory

Role / Authority	Contact Person	Internal Phone / Ext	Emergency Cell / 24-hr
EHS On-Call Officer	Duty Officer (Rotational)	Ext. 4400 / Desk B4	+1 (555) 019-2831
HazMat Incident Commander	Marcus Vance	Ext. 4409 / Office 102	+1 (555) 019-8820
Chemical Hygiene Officer	Dr. Aris Thorne	Ext. 4112 / Lab 401	+1 (555) 019-3341
Facilities & Exhaust Engineering	Tech Ops Center	Ext. 4000 / Bldg 1	+1 (555) 019-9000
Certified Waste Carrier (Apex)	Dispatch	1-800-555-APEX	+1 (555) 012-4411
National Response Center (NRC)	Federal Hotline	N/A	1-800-424-8802

Vertex Research Institute · Environmental Health & Safety Office · Building 4, 100 Innovation Way, Tech District
This register must be retained in laboratory records for a minimum of five (5) years pursuant to 40 CFR 262.40.