Hazardous Materials and Waste Management Plan

for

RASIRC Imperial Project

Prepared by

J. Kevin Selby
Head of Manufacturing;
Director – Environmental, Health, and Safety
RASIRC, Inc.

11/6/2024 Imperial County (Approval)
6/10/2025 California Department of Toxic Substances Control (Review)

Preface – June 2025 Update

This Hazardous Materials and Waste Management Plan (HMWMP) was originally developed and submitted as part of the permitting package for the RASIRC Imperial facility. The plan was reviewed and accepted by the Imperial County Certified Unified Program Agency (CUPA) in 2024 as meeting applicable state and local requirements for hazardous materials and waste management under the California Environmental Reporting System (CERS).

Following DTSC's independent review of the Mitigated Negative Declaration (MND) for the RASIRC Imperial facility (State Clearinghouse No. 2025041465), issued in April 2025, the Department issued additional written comments dated June 3, 2025. In response to DTSC's specific requests, this revised version of the HMWMP incorporates supplemental details and clarifications in the following key areas:

- Waste characterization methodology
- Engineering confirmation of enclosed processing environments
- Facility-wide and process-specific secondary containment systems
- Construction details for hazardous material and waste storage structures

This update is provided to ensure consistency with DTSC expectations and to support final agency coordination ahead of the upcoming Imperial County Planning Commission hearing. All new content directly addressing DTSC feedback is clearly identified within the relevant sections of this document.

RASIRC remains committed to full transparency and regulatory alignment at every stage of the permitting and construction process.

Introduction and Purpose

Purpose

This Hazardous Materials and Waste Management Plan provides a structured approach to managing hazardous substances and wastes, ensuring safety, regulatory compliance, and environmental protection at the facility. Each section of the plan aligns with CUPA requirements, supporting regular inspections, employee training, emergency preparedness, and responsible waste disposal practices. It aims to protect employees, the public, and the environment from potential hazards.

Scope

This plan is applicable to all employees, contractors, and visitors who handle or are exposed to hazardous materials and associated hazardous waste at the RASIRC Imperial facility.

Regulatory Framework

CUPA Program Compliance

This plan complies with California Health and Safety Code requirements, including the Hazardous Materials Business Plan (HMBP), California Environmental Reporting System (CERS), Small Quantity hazardous waste generator requirements, and spill prevention protocols.

Other Applicable Regulations

The RASIRC Imperial Hazardous Materials and Waste Management plan complies with OSHA, EPA, DTSC (Department of Toxic Substances Control), and Imperial County CUPA agency requirements.

Facility Identification and Chemical Inventory

Facility Information

Name: RASIRC

Address: The RASIRC Imperial facility is located at GPS coordinates 32.90959271996148, -115.51144045909557, near the city of Brawley.

Facility EPA ID number: **PENDING (EPA ID number has been requested)**

Point of contact:

J. Kevin Selby
Head of Manufacturing; Director – EHS
858-902-9258
kselby@rasirc.com

Chemical Inventory

The RASIRC Imperial facility will annually update its inventory of all hazardous materials in the California Environmental Reporting System (CERS). All Safety Data Sheets (SDS) shall also be reviewed on an annual basis. In addition, the chemical

inventory will be provided to the Imperial County Fire Department as conditions warrant but at a minimum, on an annual basis.

The plan will include:

Hazardous Materials: Description, storage quantities, and locations (e.g., hydrazine, nitrogen).

Hazardous Waste: Types of waste generated, including waste codes and quantities.

Facility Layout Maps: Detailed facility layout diagrams (see Appendix B: Facility Layout) indicating chemical storage/usage locations, name of chemicals, physical state, volume, and NFPA designations.

Enclosed Work Environment Documentation (Added in response to DTSC Comment #2a)

DTS Comment #2a: "*Include documentation and engineering drawings to confirm the enclosed work environment.*"

Facility drawings, including floorplans and ventilation system layouts, confirm that hazardous chemical handling and purification operations will occur in enclosed, negatively pressurized rooms with dedicated exhaust scrubbers and abatement systems. (see Appendix A: Process Flow Diagram). These areas are:

- Isolated from non-process zones
- Monitored for air integrity and pressure differentials
- Documented in various reports and studies submitted with permit applications and CUP conditions precedent requirements.
    - Conditional Use Permit No. 24-0024, Initial Study No. 24-0034 (September 3. 2024)
    - Emergency Response Action Plan (ERAP) (November 5, 2024)
    - Air Quality Analysis Report (December 6, 2024)
    - Health Risk Assessment Report (June 6, 2025)

Hazardous Materials Storage and Handling Procedures

Storage Requirements

All storage of hazardous materials will be in designated areas equipped with secondary containment.

All chemical storage areas shall be well-ventilated, temperature-controlled, fire protected, and properly labeled.

DTS Comment #2b: "*Clarify if there is a secondary containment system around the building and critical process areas. These containment systems should be capable of capturing Hydrazine or its byproducts in the event of a spill, leak, or structural failure to prevent environmental contamination*."

Secondary containment extends beyond individual containers to include process rooms and outdoor chemical handling areas:

- Indoor process areas are coated with chemical-resistant epoxy and feature bermed perimeters with trench drains to capture spills and fire sprinkler water in accordance with California Building Code's H2 Occupancy.
- Spill volumes up to 110% of the largest container volume are accounted for.

Handling Procedures

All facility personnel shall be trained in safe handling practices for each type of hazardous material. See Employee Training section of this document for more detailed information.

All employees, contractors, and visitors shall wear appropriate personal protective equipment (PPE) (e.g., gloves, goggles, respirators) as specified in the chemical SDS information.

Spill Prevention

The RASIRC Imperial facility shall have spill containment systems, such as berms and spill pallets, around storage areas. Spill response kits (e.g., absorbents, containers, etc.) will be in all areas where the potential for a chemical release could occur. Employees will be trained in spill containment and response procedures.

DTSC Comment #2c: "*Elaborate construction details on the external buildings where the purified Hydrazine will be stored. Protection of the sub-soil should be*

done through a secondary containment to prevent any potential spills/leaks from leaching into the soil. "

Hazardous waste and unrefined hydrazine will be housed in commercially available prefabricated storage structures specifically rated for flammable materials. These units are equipped with built-in secondary containment and will be installed on an engineered concrete pad adjacent to the main building. A specification data sheet for one such unit is attached for reference. (see Appendix C: Storage Unit Datasheet).

The external hazardous waste storage structure is engineered to prevent soil contamination:

- Built with reinforced, sealed concrete flooring and integrated curb berms
- Lined with an impermeable chemical-resistant coating
- Fully covered and lockable
- Periodically inspected for signs of cracks, wear, or seepage
- Designed to capture and contain leaks or spills from hydrazine-containing waste

Regular documented inspections of containers and secondary containment systems for signs of wear or leaks shall be performed.

Hazardous Waste Management

Waste Classification

Hydrazine, a highly toxic and reactive chemical, is classified as hazardous waste due to its potential to harm human health and the environment. The specific waste classification depends on the regulatory framework in use, but generally:

U.S. EPA (RCRA): In the United States, under the Resource Conservation and Recovery Act (RCRA), hydrazine is classified as a hazardous waste if it meets certain criteria (e.g., ignitability, toxicity, corrosivity, or reactivity). It is often listed under the "P-list" (P068) or "U-list" if it is unused but discarded.

UN Classification: Hydrazine is typically classified as a Class 8 corrosive material and may also be a Class 6.1 toxic substance, depending on its concentration.

Globally Harmonized System (GHS): Hydrazine is classified as acutely toxic (Acute Tox. 3) and is a carcinogen (Carc. 1B), corrosive to metals, and harmful to aquatic life.

Waste Characterization Methods (Added in response to DTSC Comment #1)

DTSC Comment #1: "*Section 10 "Description of Project" of the MND states: "The purified hydrazine is trademarked as Brute ® Hydrazine. Hazardous waste will be collected and properly disposed of by a licensed third-party company." Please elaborate on the proposed waste characterization methods and include them in future environmental documents*."

Hazardous wastes will be characterized using a combination of generator knowledge and analytical testing methods in accordance with U.S. EPA SW-846 guidelines. Characterization includes:

- Identification of waste based on process knowledge
- Verification through sampling and lab analysis for key parameters (pH, ignitability, reactivity, etc.)
- Classification under RCRA and applicable California waste codes

Documentation of all characterization decisions and supporting data will be retained and made available during inspections or upon regulatory request.

Storage and Labeling

Only DOT-approved containers will be used for hazardous waste storage, with all applicable labeling on the containers and storage location.

The RASIRC Imperial hazardous waste will be stored in a designated, secure area adjacent to the main building. The structure will be covered and provided with proper secondary containment.

Accumulation Time Limits

Based upon expected hazardous waste The RASIRC Imperial facility has been designated as a Small Quantity Generator. The accumulation window is 180 days, but the actual accumulation span will be significantly less.

Waste Minimization

Where feasible, the RASIRC Imperial facility will implement hazardous waste reduction initiatives in accordance with state and local hazardous waste regulations.

Emergency Response and Spill Contingency

Spill Response Procedures

In the event of a spill, the facility Emergency Coordinator shall be immediately notified and efforts to contain the spill using absorbents and neutralizing agents will be initiated.

Personnel shall be evacuated as necessary.

The RASIRC Imperial Emergency Response Action Plan (ERAP) will be activated for spills that exceed any agency reportable limits and/or pose an imminent threat to employees, the facility, or the environment.

Spill Reporting

Timely reporting ensures appropriate response actions are taken to mitigate hazards to human health and the environment.

If a chemical release exceeds the reportable quantities established by the Certified Unified Program Agency (CUPA), immediate notification shall be made to the following agencies:

California Office of Emergency Services (Cal OES): (800)-852-7550.

California Office of Emergency Services

Imperial County CUPA: (760) 352-0381

IC PhD

Imperial County Environmental Health Division: (442) 265-1888

National Response Center (NRC): If the release exceeds federal reportable quantities under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA): (800)-424-8802

California Office of Emergency Services

Additionally, if the release poses an immediate threat to public health or safety, 911 will be called to alert local emergency responders.

Emergency Equipment

Adequate and appropriate spill response kits, PPE, and fire suppression equipment shall be readily available on-site.

A list of all facility emergency equipment and their location in the facility shall be included in the Chemical Inventory report provided to the Imperial County Fire Department.

Employee Training

Training Program

All employees handling hazardous materials and waste shall undergo initial and annual refresher training.

Training topics include hazard communication, proper handling and storage, emergency response, and spill containment procedures.

Recordkeeping

All training sessions, including training dates, employee names, and topics covered shall be maintained for a minimum of three years.

Inspections and Recordkeeping

Routine Inspections

Weekly inspections of hazardous material and waste storage areas shall be conducted. Inspections shall document findings and any corrective actions taken.

Recordkeeping

Accurate records of waste generation, disposal, and associated manifests shall be maintained in compliance with CUPA requirements. Records shall be maintained for three years and digitally accessible to facilitate agency inspections.

Waste Disposal and Transport

Approved Vendors

The RASIRC Imperial facility shall use only licensed hazardous waste transporters and disposal facilities to ensure compliance with all applicable federal, state, and local hazardous waste disposal regulations.

Manifesting

Hazardous waste disposal manifests shall be completed and maintained for every shipment of hazardous wastes. These manifests shall ensure that facility hazardous waste is transported and disposed of according to regulatory requirements.

Plan Review and Updates

Annual Review

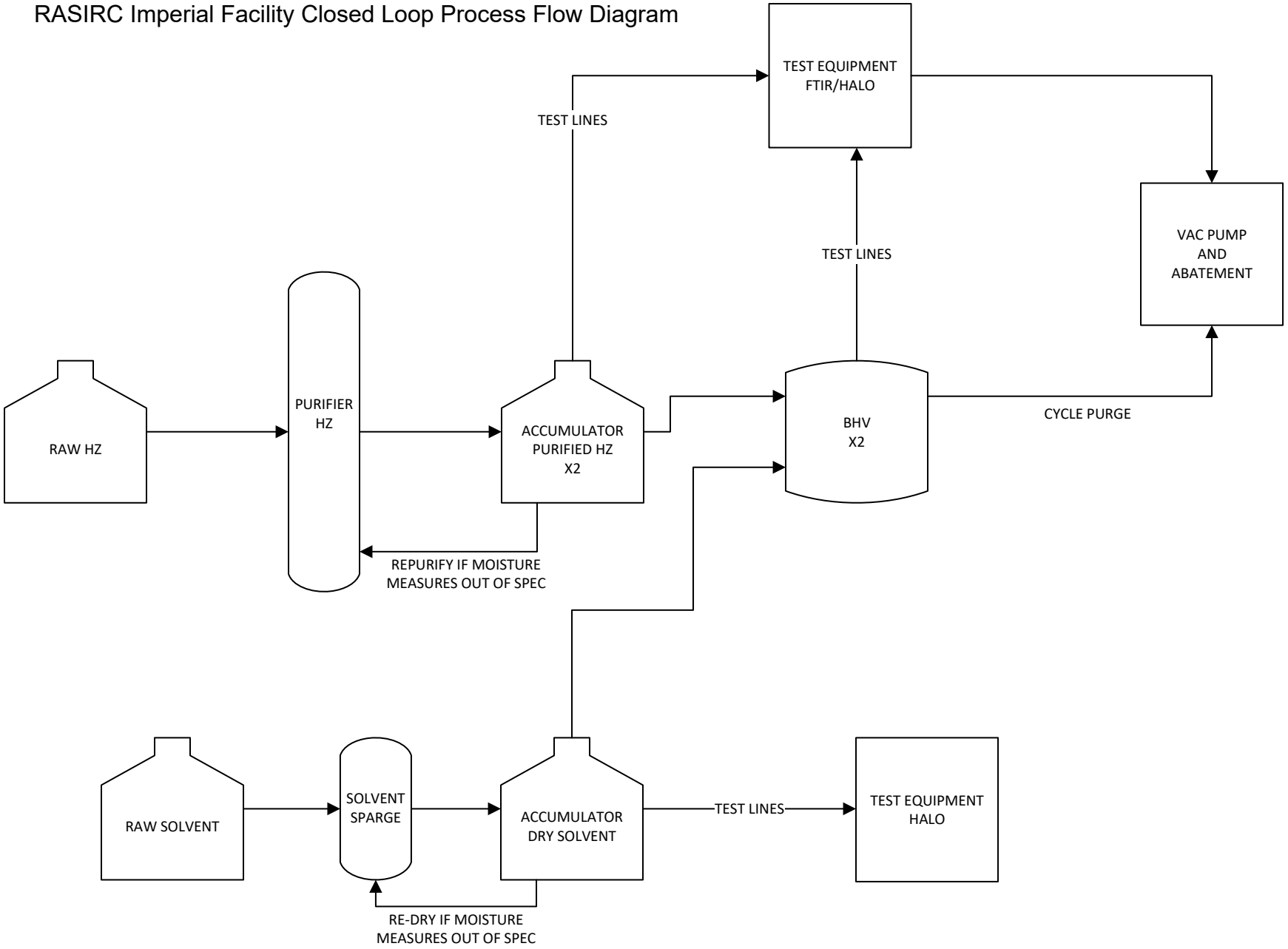
The RASIRC Imperial Hazardous Materials and Waste Management Plan shall be reviewed and updated annually, or as necessary, when operational changes, regulatory updates, or after any significant incident occurs.

CUPA Notification

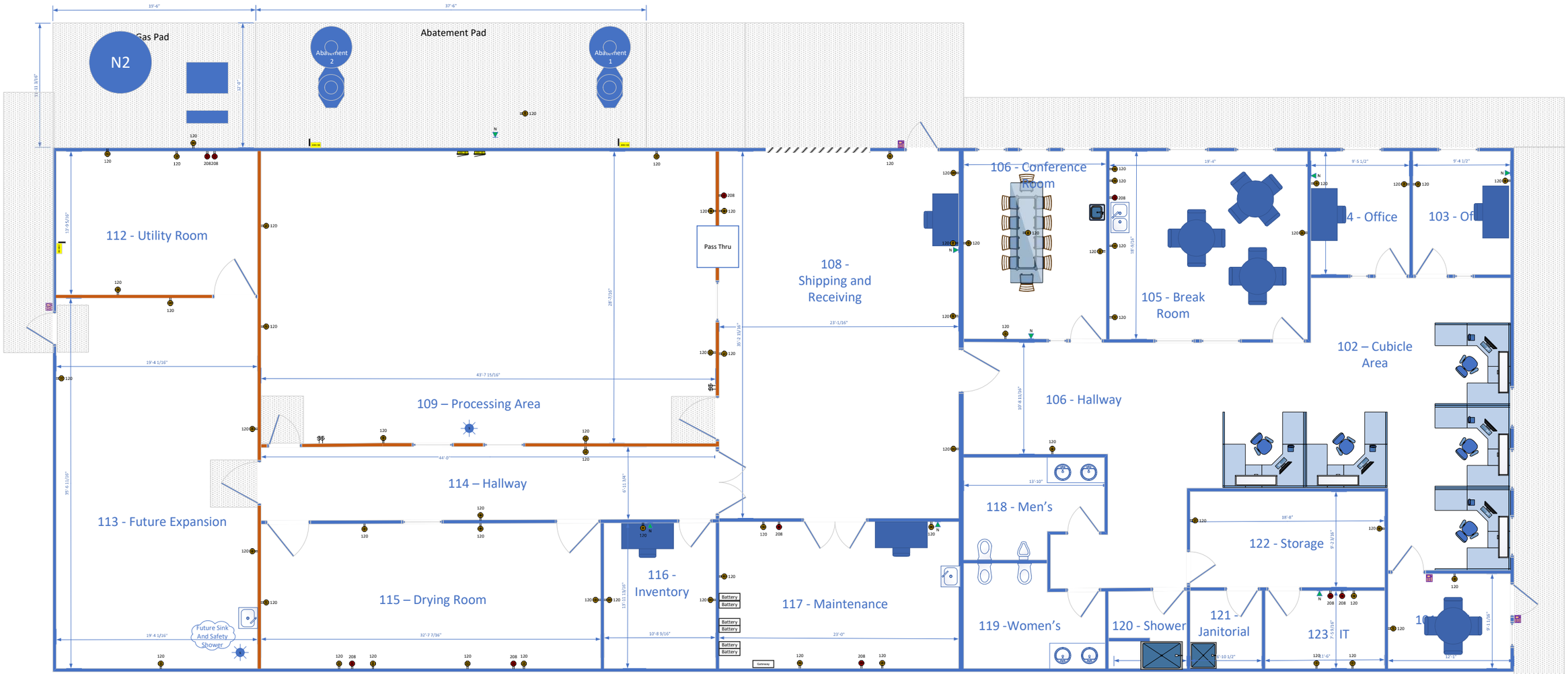
All plan updates shall be reported to Imperial County CUPA via the California Environmental Reporting System (CERS) to ensure the agency has the most current information on file.

Appendix A: RASIRC Imperial Facility Process Flow Diagram

RASIRC Imperial Facility Closed Loop Process Flow Diagram



Appendix B: RASIRC Imperial Facility Layout


N2
Gas Pad
Abatement Pad
Abatement 2
Abatement 1
112 - Utility Room
109 – Processing Area
114 – Hallway
113 - Future Expansion
115 – Drying Room
Future Sink And Safety Shower
116 - Inventory
117 - Maintenance
Pass Thru
108 - Shipping and Receiving
106 - Conference Room
106 - Hallway
105 - Break Room
104 - Office
103 - Of
102 – Cubicle Area
118 - Men's
119 -Women's
120 - Shower
121 - Janitorial
122 - Storage
123 IT
Battery
Gateway

Appendix C: Storage Unit Datasheet

U.S. CHEMICAL storage® Justrite Safety Group

FireLoc™

FireLoc™ is the perfect choice for the storage of flammables where a fire rating is necessary. Each model utilizes 2-hour fire-rated, non-combustible, weatherproof construction per UL 263 & ASTM E-119. Multiple layers of UL classified fire-resistant gypsum wall board are encased between exterior and interior heavy gauge Galvanneal sheet steel for maximum durability. The roof/ceiling meets a Class A flame spread rating and wind uplift exceeds UL Rating 1-60. Each model exceeds EPA 40-CFR. FireLoc is designed to be placed within 10 to 75 feet of existing structures and/or property set-backs (consult with local code authority).

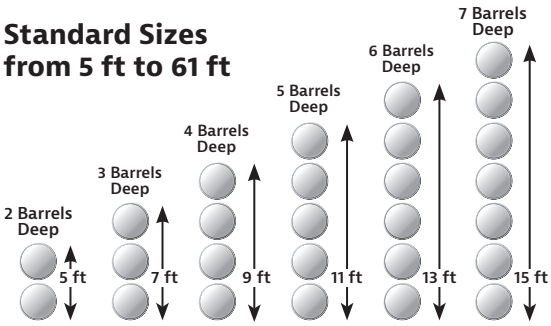
Standard Features

- 6" deep leakproof secondary containment
- UL listed doors
- UL listed electrical accessories
- Floor exceeds 1,000 psf—the best building base in the industry!
- Chemical-resistant epoxy primer & coating (interior & exterior)
- Gravity air flow vents have UL listed fire dampers with fusible links
- FM Global and Warnock-Hersey approved

Colors

White Bone Gray Green Brown

Standard Sizes from 5 ft to 61 ft



5, 7, 9, 11, 13 & 15 Feet Deep Models

Larger and custom sizes are available.
We offer same-day quotes as well as consultation.

Call or visit us online today

Phone: 1-800-233-1480
Email: info@uschemicalstorage.com
Web: USChemicalStorage.com

U.S. CHEMICAL storage® Justrite Safety Group

Chemical Classifications

Flammables

A flammable liquid is any liquid having a flashpoint below 100° F (37.8° C). However, the exception to this is any mixture having components with flashpoints of 100° F or higher when such components make up at least 99% of the mixture's volume. The flashpoint is the lowest temperature at which a flammable liquid will give off enough vapor to ignite briefly when exposed to a flame.

Flammable liquids are also referred to as Class 1 liquids. Class 1 liquids are separated into the following three classes:

CLASS 1A: Liquids that have flashpoints below 73° F (22.8° C), and a boiling point below 100° F (37.8° C). Examples of this class are Ethyl Ether and Pentane.

CLASS 1B: Liquids that have flashpoints below 73° F (22.8° C), and a boiling point of at least 100° F (37.8° C). Examples of this class are Acetone, Gasoline, and MEK.

CLASS 1C: Liquids that have flashpoints of at least 73° F (22.8° C), and below 100° F (37.8° C). Examples of this class are Turpentine and Xylene.

Combustibles

A combustible is a liquid having a flashpoint of at least 100° F (37.8° C).

Combustibles are divided into two classes:

CLASS II COMBUSTIBLES: Liquids that have a flashpoint of at least 100° F (37.8° C), and below 140° F (60° C). However, the exception to this is any mixture having components with flashpoints of 200° F (93.3° C), when such components make up at least 99% of the total volume of the mixture. Examples of this class are Kerosene and most oil-based paints.

CLASS III COMBUSTIBLES: Liquids with flashpoints of at least 140° F (60° C). Class III combustibles are divided into these two subcategories:

Class IIIA Combustibles - Liquids having a flashpoint of at least 140° F (60° C), and below 200° F (93.3° C). However, the exception to this is any mixture having components with flashpoints of 200° F (93.3° C) or higher, when such components make up at least 99% of the total volume of the mixture. An example of this class is Mineral Spirits.

Class IIIB Combustibles - Liquids having a flashpoint of at least 200° F (93.3° C). Examples of this class are Hydraulic Brake/ Transmission fluids, Lubricating Oils.

First Name: _____ **Last Name:** _____

Email: _____ **Phone:** _____

Company Name: _____

Size

Length: _____ Width: _____ Height: _____

Doors

❑ 36" Swing Qty: ____ ❑ 60" Swing Qty: ____ ❑ Roll-up Qty: ____

Materials/Chemicals (please list those to be stored in building)

_____

_____

Color (chemical-resistant epoxy coating)

❑ White ❑ Bone ❑ Gray ❑ Green ❑ Brown

Electrical Options

❑ Light

❑ Mechanical Fan

❑ Heating Min: _____ Max: _____

❑ Cooling Min: _____ Max: _____

❑ Fire Suppression System

Building Options

❑ Portable Eyewash ❑ Ramp

Shelving: ❑ none ❑ 1 tier ❑ 2 tier ❑ 3 tier ❑ more

❑ Other: _____

_____

_____

Delivery

❑ ASAP ❑ 1-3 months ❑ 6+ months

Setback from Occupied Structure

❑ Inside ❑ Attached ❑ 0-10 ft ❑ 10-75 ft ❑ 75+ ft

To go over this form with us and discuss your needs, please call:

1-800-233-1480 or fax it to 1-336-990-0076. Please include a phone number where we can reach you. Thank you!