



October 31, 2024

Arizona Department of Environmental Quality
1110 W. Washington St. #160
Phoenix, AZ 85007

Attention: Mr. Chuck Allen
Senior Environmental Engineer

Subject: RCRA Part B Permit Application
Ecobat Solutions Arizona, Inc.

Mr. Allen:

Enclosed please find the RCRA Part B Permit Application for Ecobat Solutions Arizona, Inc. to be located at 1474 N. VIP Boulevard, Casa Grande, AZ 85122. We have included a hard copy with original signatures along with a flash drive that contains the full document and the separate sections in both word and pdf format.

If you have any questions regarding this application, please contact me at (626) 937-3245 or via email at mike.buckantz@ecobat.com.

Sincerely,

A handwritten signature in blue ink that reads "Michael R. Buckantz". The signature is fluid and cursive.

Michael R. Buckantz
Manager, Environmental Technical Support



Ecobat Solutions Arizona, Inc.

RCRA Part B Permit Application

1474 N. VIP Blvd.

Casa Grande, Pinal County, Arizona

EPA ID NO.: AZR000527002

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PART A
APPLICATION

United States Environmental Protection Agency RCRA SUBTITLE C SITE IDENTIFICATION FORM	
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1. Reason for Submittal (Select only one.)

<input type="checkbox"/>	Obtaining or updating an EPA ID number for on-going regulated activities (Items 10-17 below) that will continue for a period of time.
<input type="checkbox"/>	Submitting as a component of the Hazardous Waste Report for _____ (Reporting Year)
<input type="checkbox"/>	Site was a TSD facility, a reverse distributor, and/or generator of $\geq 1,000$ kg of non-acute hazardous waste, > 1 kg of acute hazardous waste, or > 100 kg of acute hazardous waste spill cleanup in one or more months of the reporting year (or State equivalent LQG regulations)
<input type="checkbox"/>	Notifying that regulated activity is no longer occurring at this Site
<input type="checkbox"/>	Obtaining or updating an EPA ID number for conducting Electronic Manifest Broker activities
<input checked="" type="checkbox"/>	Submitting a new or revised Part A (permit) Form

2. Site EPA ID Number

A	Z	R	0	0	0	5	2	7	0	0	2
---	---	---	---	---	---	---	---	---	---	---	---

3. Site Name

Ecobat Solutions Arizona, Inc.

4. Site Location Address

Street Address	1474 N. VIP Blvd		
City, Town, or Village	Casa Grande	County	Pinal
State	AZ	Country	USA
		Zip Code	85122
Latitude	32.889736	Longitude	-111.784806
		<input type="checkbox"/> Use Lat/Long as Primary Address	

5. Site Mailing Address

Same as Location Street Address

Street Address		
City, Town, or Village		
State	Country	Zip Code

6. Site Land Type

<input checked="" type="checkbox"/> Private	<input type="checkbox"/> County	<input type="checkbox"/> District	<input type="checkbox"/> Federal	<input type="checkbox"/> Tribal	<input type="checkbox"/> Municipal	<input type="checkbox"/> State	<input type="checkbox"/> Other
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7. North American Industry Classification System (NAICS) Code(s) for the Site (at least 5-digit codes)

A. (Primary) 335910	C.
B. 335911	D.

8. Site Contact Information

 Same as Location Address

First Name	Eric	MI	Last Name	Knowles	
Title	Plant Manager				
Street Address	1474 N. VIP Boulevard				
City, Town, or Village	Casa Grande				
State	AZ	Country	USA	Zip Code	85122
Email	Eric.Knowles@ecobat.com				
Phone	(760) 514-8494	Ext	Fax		

9. Legal Owner and Operator of the Site

A. Name of Site's Legal Owner

 Same as Location Address

Full Name	Ecobat Solutions Arizona, Inc.				Date Became Owner (mm/dd/yyyy)
Owner Type	<input checked="" type="checkbox"/> Private <input type="checkbox"/> County <input type="checkbox"/> District <input type="checkbox"/> Federal <input type="checkbox"/> Tribal <input type="checkbox"/> Municipal <input type="checkbox"/> State <input type="checkbox"/> Other				
Street Address	2121 Pearl Street, Suite 1400				
City, Town, or Village	Dallas				
State	TX	Country	USA	Zip Code	75201
Email	Mark.Hoffman@ecobat.com				
Phone	(845) 239-3060	Ext	Fax		
Comments					

B. Name of Site's Legal Operator

 Same as Location Address

Full Name	Ecobat Solutions Arizona, Inc.				Date Became Operator (mm/dd/yyyy)
Operator Type	<input checked="" type="checkbox"/> Private <input type="checkbox"/> County <input type="checkbox"/> District <input type="checkbox"/> Federal <input type="checkbox"/> Tribal <input type="checkbox"/> Municipal <input type="checkbox"/> State <input type="checkbox"/> Other				
Street Address					
City, Town, or Village					
State		Country		Zip Code	
Email					
Phone		Ext	Fax		
Comments					

10. Type of Regulated Waste Activity (at your site)

Mark "Yes" or "No" for all current activities (as of the date submitting the form); complete any additional boxes as instructed.

A. Hazardous Waste Activities

<input checked="" type="checkbox"/> Y <input type="checkbox"/> N	1. Generator of Hazardous Waste—If "Yes", mark only one of the following—a, b, c	
<input checked="" type="checkbox"/>	a. LQG	-Generates, in any calendar month, 1,000 kg/mo (2,200 lb/mo) or more of non-acute hazardous waste (includes quantities imported by importer site); or - Generates, in any calendar month, or accumulates at any time, more than 1 kg/mo (2.2 lb/mo) of acute hazardous waste; or - Generates, in any calendar month or accumulates at any time, more than 100 kg/mo (220 lb/mo) of acute hazardous spill cleanup material.
<input type="checkbox"/>	b. SQG	100 to 1,000 kg/mo (220-2,200 lb/mo) of non-acute hazardous waste and no more than 1 kg (2.2 lb) of acute hazardous waste and no more than 100 kg (220 lb) of any acute hazardous spill cleanup material.
<input type="checkbox"/>	c. VSQG	Less than or equal to 100 kg/mo (220 lb/mo) of non-acute hazardous waste.
<input type="checkbox"/> Y <input checked="" type="checkbox"/> N	2. Short-Term Generator (generates from a short-term or one-time event and not from on-going processes). If "Yes", provide an explanation in the Comments section. <i>Note: If "Yes", you MUST indicate that you are a Generator of Hazardous Waste in Item 10.A.1 above.</i>	
<input checked="" type="checkbox"/> Y <input type="checkbox"/> N	3. Treater, Storer or Disposer of Hazardous Waste—Note: Part B of a hazardous waste permit is required for these activities.	
<input checked="" type="checkbox"/> Y <input type="checkbox"/> N	4. Receives Hazardous Waste from Off-site Spent Lithium batteries are Universal Waste upon arrival.	
<input checked="" type="checkbox"/> Y <input type="checkbox"/> N	5 Recycler of Hazardous Waste	
<input checked="" type="checkbox"/>	a. Recycler who stores prior to recycling	
<input type="checkbox"/>	b. Recycler who does not store prior to recycling	
<input type="checkbox"/> Y <input checked="" type="checkbox"/> N	6. Exempt Boiler and/or Industrial Furnace—If "Yes", mark all that apply.	
<input type="checkbox"/>	a. Small Quantity On-site Burner Exemption	
<input type="checkbox"/>	b. Smelting, Melting, and Refining Furnace Exemption	

B. Waste Codes for Federally Regulated Hazardous Wastes. Please list the waste codes of the Federal hazardous wastes handled at your site. List them in the order they are presented in the regulations (e.g. D001, D003, F007, U112). Use an additional page if more spaces are needed.

D001	D006	D011	F003			
D002	D007	D039	F005			
D003	D008	D040				
D004	D009	F001				
D005	D010	F002				

C. Waste Codes for State Regulated (non-Federal) Hazardous Wastes. Please list the waste codes of the State hazardous wastes handled at your site. List them in the order they are presented in the regulations. Use an additional page if more spaces are needed.

11. Additional Regulated Waste Activities (NOTE: Refer to your State regulations to determine if a separate permit is required.)

A. Other Waste Activities

<input checked="" type="checkbox"/> Y <input type="checkbox"/> N	1. Transporter of Hazardous Waste—If “Yes”, mark all that apply.
<input checked="" type="checkbox"/>	a. Transporter Transporter of locally generated lithium batteries.
<input type="checkbox"/>	b. Transfer Facility (at your site)
<input type="checkbox"/> Y <input checked="" type="checkbox"/> N	2. Underground Injection Control
<input checked="" type="checkbox"/> Y <input type="checkbox"/> N	3. United States Importer of Hazardous Waste
<input type="checkbox"/> Y <input checked="" type="checkbox"/> N	4. Recognized Trader—If “Yes”, mark all that apply.
<input type="checkbox"/>	a. Importer
<input type="checkbox"/>	b. Exporter
<input type="checkbox"/> Y <input checked="" type="checkbox"/> N	5. Importer/Exporter of Spent Lead-Acid Batteries (SLABs) under 40 CFR 266 Subpart G—If “Yes”, mark all that apply.
<input type="checkbox"/>	a. Importer
<input type="checkbox"/>	b. Exporter

B. Universal Waste Activities

<input checked="" type="checkbox"/> Y <input type="checkbox"/> N	1. Large Quantity Handler of Universal Waste (you accumulate 5,000 kg or more) - If “Yes” mark all that apply. Note: Refer to your State regulations to determine what is regulated.
<input checked="" type="checkbox"/>	a. Batteries
<input type="checkbox"/>	b. Pesticides
<input type="checkbox"/>	c. Mercury containing equipment
<input type="checkbox"/>	d. Lamps
<input type="checkbox"/>	e. Aerosol Cans
<input type="checkbox"/>	f. Other (specify) _____
<input type="checkbox"/>	g. Other (specify) _____
<input checked="" type="checkbox"/> Y <input type="checkbox"/> N	2. Destination Facility for Universal Waste Note: A hazardous waste permit may be required for this activity.

C. Used Oil Activities

<input type="checkbox"/> Y <input checked="" type="checkbox"/> N	1. Used Oil Transporter—If “Yes”, mark all that apply.
<input type="checkbox"/>	a. Transporter
<input type="checkbox"/>	b. Transfer Facility (at your site)
<input type="checkbox"/> Y <input checked="" type="checkbox"/> N	2. Used Oil Processor and/or Re-refiner—If “Yes”, mark all that apply.
<input type="checkbox"/>	a. Processor
<input type="checkbox"/>	b. Re-refiner
<input type="checkbox"/> Y <input checked="" type="checkbox"/> N	3. Off-Specification Used Oil Burner
<input type="checkbox"/> Y <input checked="" type="checkbox"/> N	4. Used Oil Fuel Marketer—If “Yes”, mark all that apply.
<input type="checkbox"/>	a. Marketer Who Directs Shipment of Off-Specification Used Oil to Off-Specification Used Oil Burner
<input type="checkbox"/>	b. Marketer Who First Claims the Used Oil Meets the Specifications

D. Pharmaceutical Activities

<input type="checkbox"/> Y <input checked="" type="checkbox"/> N	1. Operating under 40 CFR Part 266, Subpart P for the management of hazardous waste pharmaceuticals—if “Yes”, mark only one. Note: See the item-by-item instructions for definitions of healthcare facility and reverse distributor.
<input type="checkbox"/>	a. Healthcare Facility
<input type="checkbox"/>	b. Reverse Distributor
<input type="checkbox"/> Y <input checked="" type="checkbox"/> N	2. Withdrawing from operating under 40 CFR Part 266, Subpart P for the management of hazardous waste pharmaceuticals. Note: You may only withdraw if you are a healthcare facility that is a VSQG for all of your hazardous waste, including hazardous waste pharmaceuticals.

12. Eligible Academic Entities with Laboratories—Notification for opting into or withdrawing from managing laboratory hazardous wastes pursuant to 40 CFR Part 262, Subpart K.

<input type="checkbox"/> Y <input checked="" type="checkbox"/> N	A. Opting into or currently operating under 40 CFR Part 262, Subpart K for the management of hazardous wastes in laboratories— If “Yes”, mark all that apply. Note: See the item-by-item instructions for definitions of types of eligible academic entities.
<input type="checkbox"/>	1. College or University
<input type="checkbox"/>	2. Teaching Hospital that is owned by or has a formal written affiliation with a college or university
<input type="checkbox"/>	3. Non-profit Institute that is owned by or has a formal written affiliation with a college or university
<input type="checkbox"/> Y <input checked="" type="checkbox"/> N	B. Withdrawing from 40 CFR Part 262, Subpart K for the management of hazardous wastes in laboratories.

13. Episodic Generation

<input type="checkbox"/> Y <input checked="" type="checkbox"/> N	Are you an SQG or VSQG generating hazardous waste from a planned or unplanned episodic event, lasting no more than 60 days, that moves you to a higher generator category. If “Yes”, you must fill out the Addendum for Episodic Generator.
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14. LQG Consolidation of VSQG Hazardous Waste

<input type="checkbox"/> Y <input checked="" type="checkbox"/> N	Are you an LQG notifying of consolidating VSQG Hazardous Waste Under the Control of the Same Person pursuant to 40 CFR 262.17(f)? If “Yes”, you must fill out the Addendum for LQG Consolidation of VSQG hazardous waste.
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15. Notification of LQG Site Closure for a Central Accumulation Area (CAA) (optional) OR Entire Facility (required)

<input type="checkbox"/> Y <input checked="" type="checkbox"/> N	LQG Site Closure of a Central Accumulation Area (CAA) or Entire Facility.
A. <input type="checkbox"/> Central Accumulation Area (CAA) or <input type="checkbox"/> Entire Facility	
B. Expected closure date: _____ mm/dd/yyyy	
C. Requesting new closure date: _____ mm/dd/yyyy	
D. Date closed : _____ mm/dd/yyyy	
<input type="checkbox"/>	1. In compliance with the closure performance standards 40 CFR 262.17(a)(8)
<input type="checkbox"/>	2. Not in compliance with the closure performance standards 40 CFR 262.17(a)(8)

16. Notification of Hazardous Secondary Material (HSM) Activity

<input type="checkbox"/> Y <input checked="" type="checkbox"/> N	Are you notifying under 40 CFR 260.42 that you will begin managing, are managing, or will stop managing hazardous secondary material under 40 CFR 260.30, 40 CFR 261.4(a)(23), (24), (25), or (27)? If "Yes", you must fill out the Addendum to the Site Identification Form for Managing Hazardous Secondary Material.
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17. Electronic Manifest Broker


<input type="checkbox"/> Y <input checked="" type="checkbox"/> N	Are you notifying as a person, as defined in 40 CFR 260.10, electing to use the EPA electronic manifest system to obtain, complete, and transmit an electronic manifest under a contractual relationship with a hazardous waste generator?
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18. Comments (include item number for each comment)

N/A

19. Certification I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations. **Note: For the RCRA Hazardous Waste Part A permit Application, all owners and operators must sign (see 40 CFR 270.10(b) and 270.11).**

Signature of legal owner, operator or authorized representative	Date (mm/dd/yyyy)
	10/29/2024
Printed Name (First, Middle Initial Last) Mark Hoffman	Title Environmental Director
Email Mark.Hoffman@ecobat.com	
Signature of legal owner, operator or authorized representative	Date (mm/dd/yyyy)
Printed Name (First, Middle Initial Last)	Title
Email	

United States Environmental Protection Agency HAZARDOUS WASTE PERMIT PART A FORM	
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1. Facility Permit Contact

First Name	Eric	MI	Last Name	Knowles
Title	Plant Manager			
Email	Eric.Knowles@ecobat.com			
Phone	(760) 514-8494	Ext	Fax	

2. Facility Permit Contact Mailing Address

Street Address	1474 N. VIP Boulevard		
City, Town, or Village	Casa Grande		
State	AZ	Country	USA
Zip Code	85122		

3. Facility Existence Date (mm/dd/yyyy)

2/2/2023

4. Other Environmental Permits

A. Permit Type	B. Permit Number											C. Description	
E	C	3	1	4	2	6	.	0	0	0			Air Permit, Pinal County Air Quality Cont
E	D	S	A	-	2	2	-	0	0	2	7	5	Conditional Use Permit, City of Casa Gran

5. Nature of Business

Lithium Ion Battery Recycling Facility

6. Process Codes and Design Capacities

Line Number	A. Process Code			B. Process Design Capacity		C. Process Total Number of Units	D. Unit Name
				(1) Amount	(2) Unit of Measure		
1	S	0	1	870	Tons	1	Outdoor Battery Storage
2	S	9	9	870	Tons	1	Normal Risk and At-Risk

7. Description of Hazardous Wastes (Enter codes for Items 7.A, 7.C and 7.D(1))

Line No.	A. EPA Hazardous Waste No.				B. Estimated Annual Qty of Waste	C. Unit of Measure	D. Processes									
							(1) Process Codes				(2) Process Description (if code is not entered in 7.D1))					
1	D	0	0	1	35,000	Tons	S	0	1	S	9	9				
2	D	0	0	2												Included with above
3	D	0	0	3												Included with above
4	D	0	0	4												Included with above
5	D	0	0	5												Included with above
6	D	0	0	6												Included with above
7	D	0	0	7												Included with above
8	D	0	0	8												Included with above
9	D	0	0	9												Included with above
1	0	D	0	1	0											Included with above
1	1	D	0	1	1											Included with above

8. Map

Attach to this application a topographical map, or other equivalent map, of the area extending to at least one mile beyond property boundaries. The map must show the outline of the facility, the location of each of its existing intake and discharge structures, each of its hazardous waste treatment, storage, or disposal facilities, and each well where it injects fluids underground. Include all spring, rivers, and other surface water bodies in this map area. See instructions for precise requirements.

9. Facility Drawing

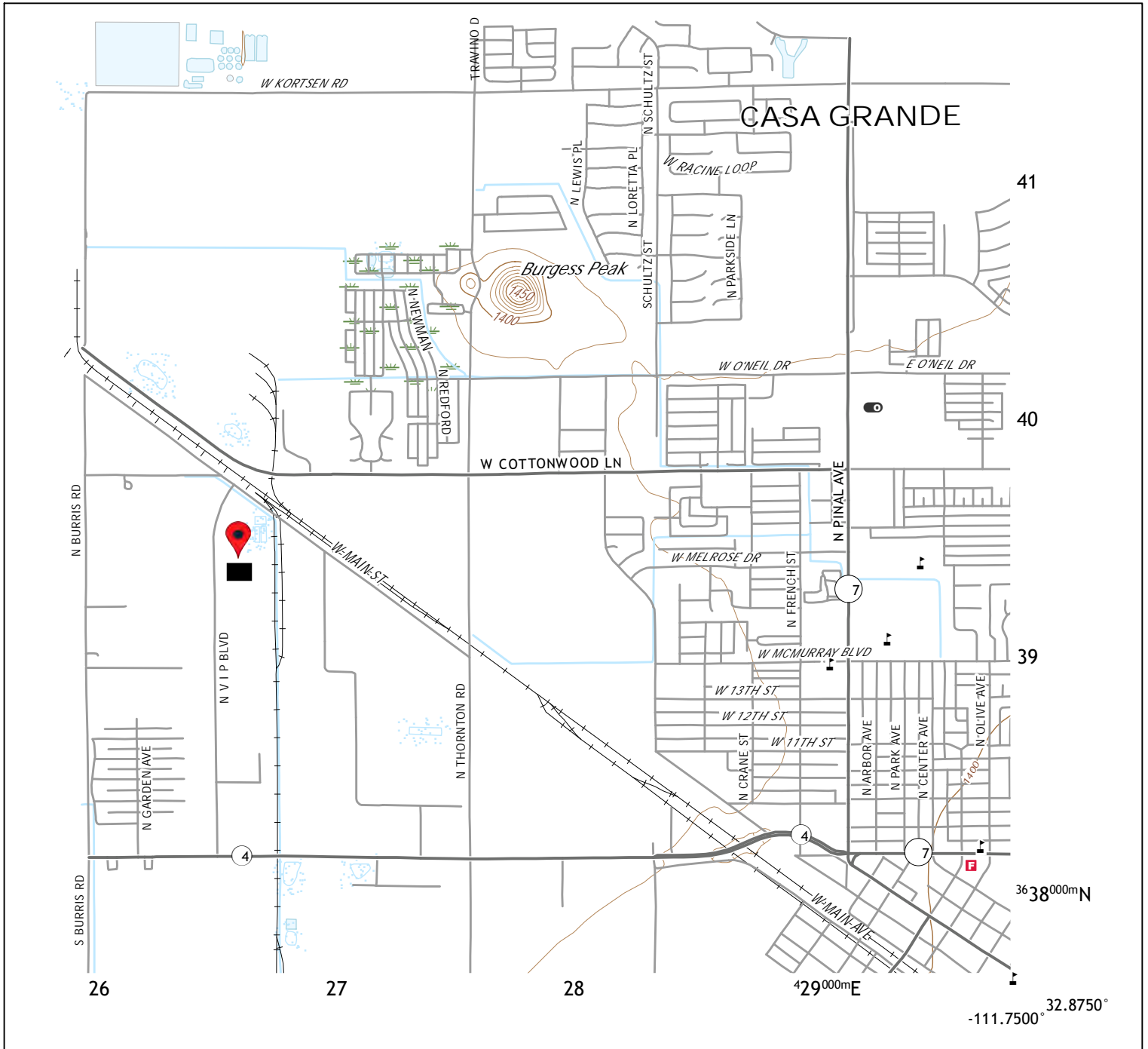
All existing facilities must include a scale drawing of the facility. See instructions for more detail.

10. Photographs

All existing facilities must include photographs (aerial or ground-level) that clearly delineate all existing structures; existing storage, treatment, and disposal areas; and sites of future storage, treatment, or disposal areas. See instructions for more detail.

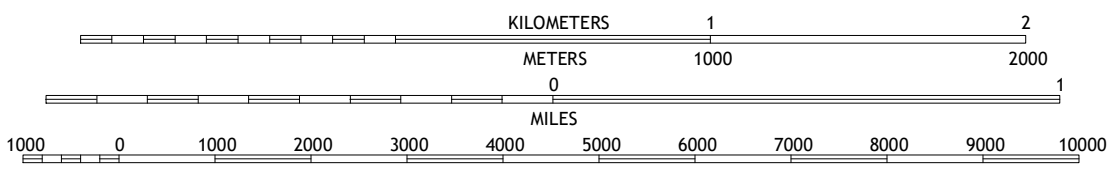
11. Comments

(Continuation of Item 7)
D039, D040, F001, F002, F003, F005 All included with Line Item 1.



Legend

SCALE 1:24 000



ROAD CLASSIFICATION

- Expressway
- Secondary Hwy
- Ramp
- Local Connector
- Local Road
- 4WD
- Interstate Route
- US Route
- State Route



 associates environmental	Associates Environmental 18141 Beach Boulevard, Suite 200 Huntington Beach, CA 92648 (949) 352-4941 Fax (714) 362-9085		
	Description Ecobat Solutions Arizona, Inc. Figure 1 - Site Location Map		
Job No.	Drawing Date	Drawn By:	Drawing
433-147	12-07-2023	MO	1.0



Legend	
	Property Boundary
	HWMU: Hazardous Waste Management Unit
	1370 Elevation Contour
	Registered Well (Location Approximate)

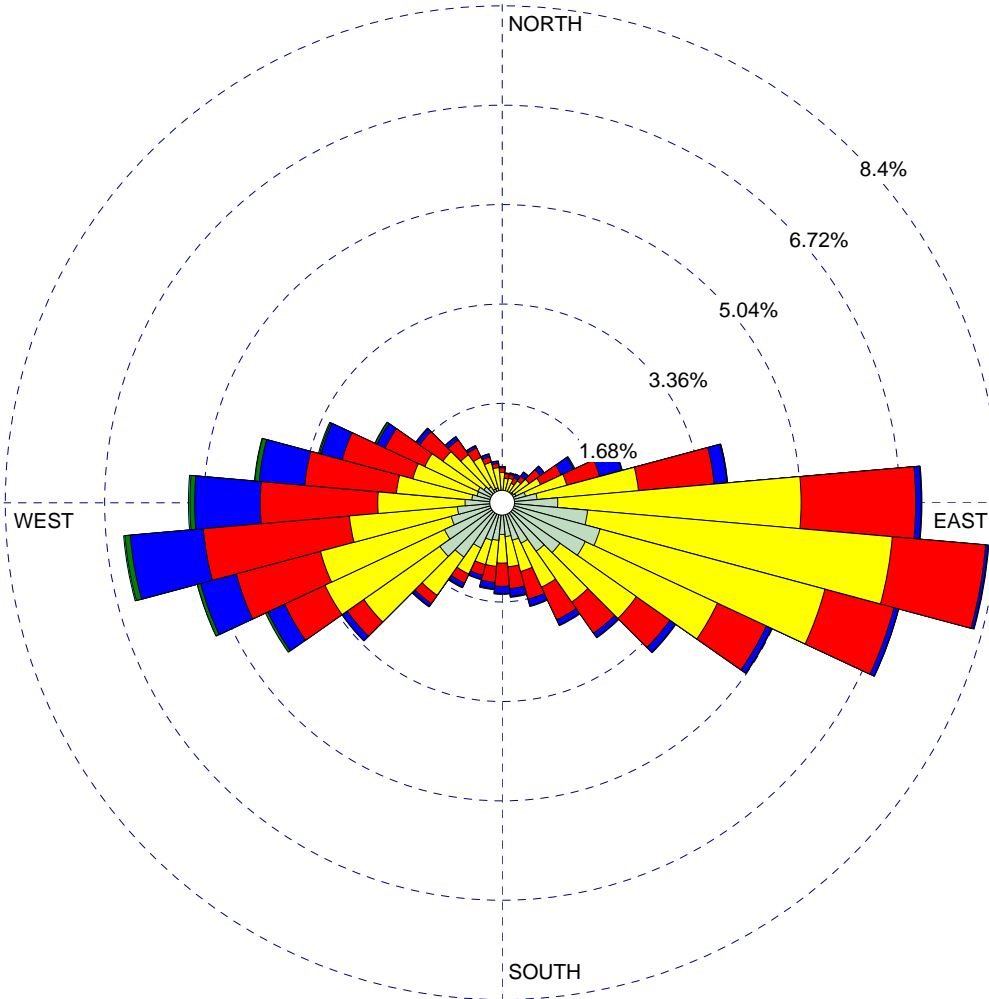
		Associates Environmental 18141 Beach Boulevard, Suite 200 Huntington Beach, CA 92648 (949) 352-4941 Fax (714) 362-9085	
		Description Ecobat Solutions Arizona, Inc. 1474 North V.I.P. Blvd. Casa Grande, Arizona 85122	
Secondary Description Figure 2 - Surrounding Topography		Scale	
Job No.: 433-147	Drawing Date: 12-07-2023	Drawn By: MO	Drawing Version: 1.0

WIND ROSE PLOT:

Station #23183 - PHOENIX/SKY HARBOR INT'L ARPT, AZ

DISPLAY:

**Wind Speed
Direction (blowing from)**



WIND SPEED
(m/s)

- >= 11.10
 - 8.80 - 11.10
 - 5.70 - 8.80
 - 3.60 - 5.70
 - 2.10 - 3.60
 - 0.50 - 2.10
- Calms: 0.87%

COMMENTS:

DATA PERIOD:

**Start Date: 1/1/2017 - 00:00
End Date: 12/31/2021 - 23:59**

COMPANY NAME:

Ecobat Solutions Arizona, Inc.

MODELER:

Figure 2a - Wind Rose

CALM WINDS:

0.87%

TOTAL COUNT:

43613 hrs.

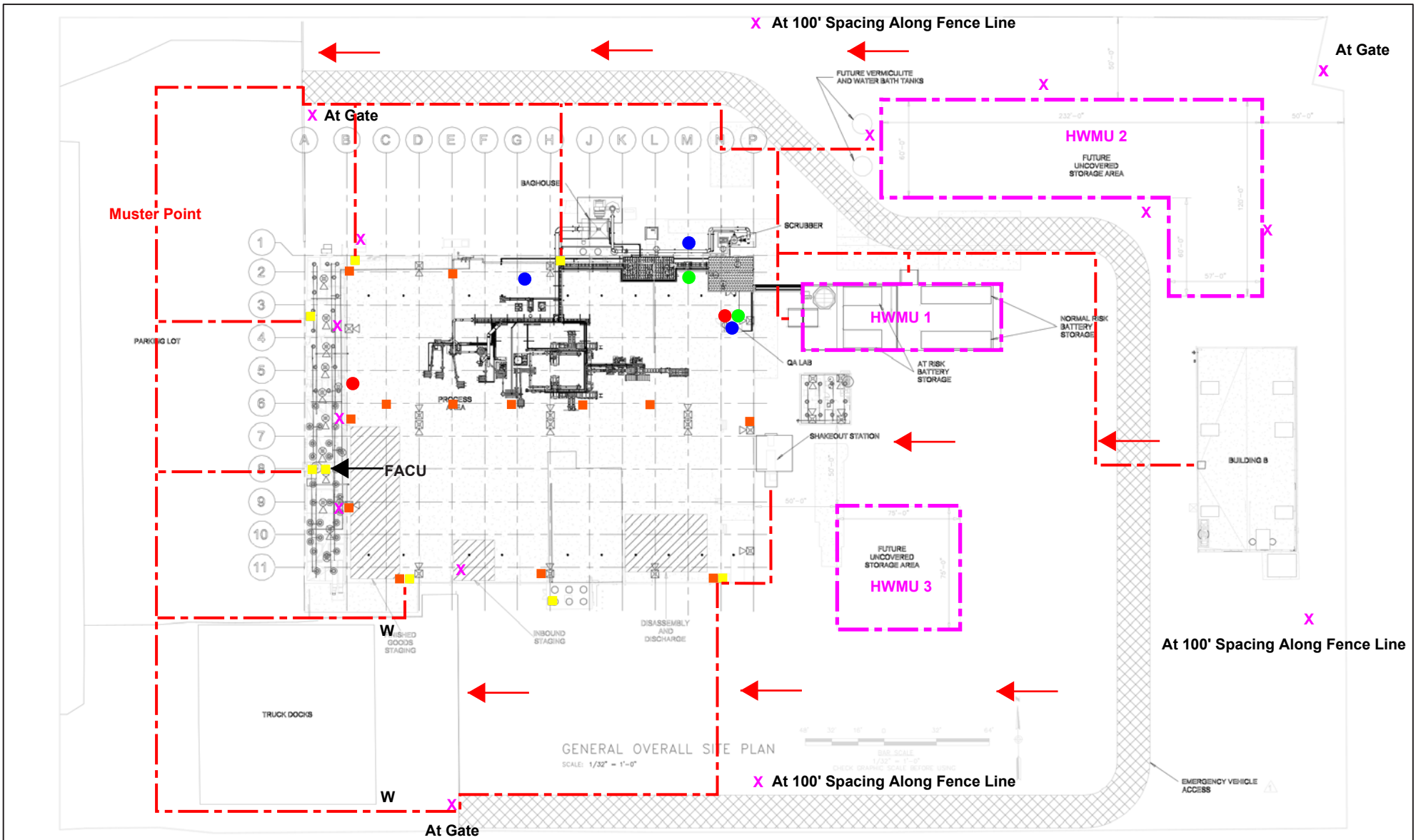
AVG. WIND SPEED:

3.23 m/s

DATE:

9/14/2023

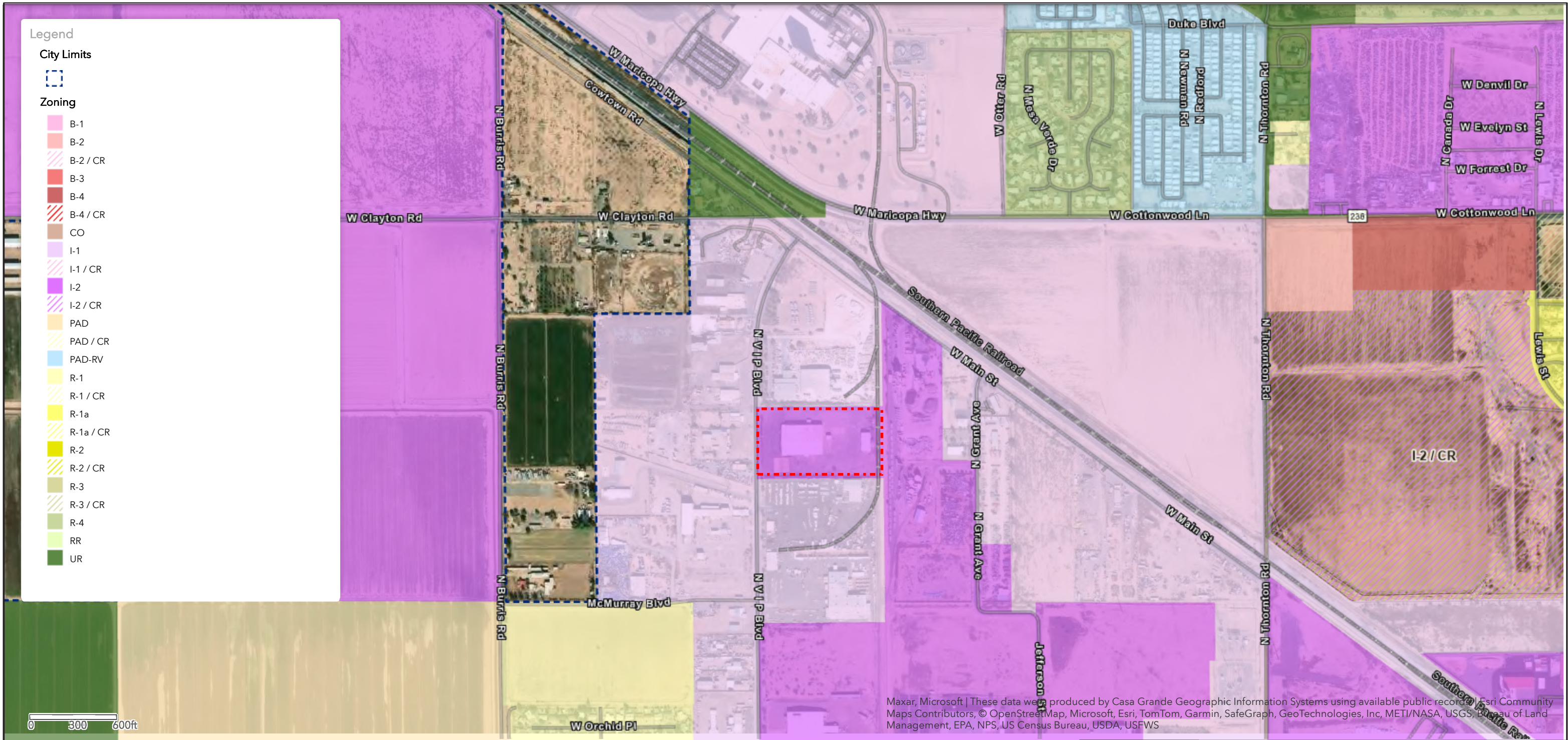
PROJECT NO.:



- Legend**
- Direction of Flow
 - Unit Emergency Exit Route
 - Fire Pull Station
 - Fire Extinguisher
 - First Aid Kit
 - Spill Kit
 - Shower + Eyewash
 - Warning Sign
 - Dry Well Location
 - HWMU: Hazardous Waste Management



		Associates Environmental 18141 Beach Boulevard, Suite 200 Huntington Beach, CA 92648 (949) 352-4941 Fax (714) 362-9085	
		Description Ecobat Solutions Arizona, Inc. 1474 North V.I.P. Blvd. Casa Grande, Arizona 85122	
Secondary Description Figure 3 - Site Map		Scale	
Job No.: 433-147	Drawing Date: 07-12-2024	Drawn By: MO	Drawing Version: 1.0



Legend

----- Property Boundary



Associates Environmental
 18141 Beach Boulevard, Suite 200
 Huntington Beach, CA 92648
 (949) 352-4941 Fax (714) 362-9085

Description		Ecobat Solutions Casa Grande, Inc. 1474 North V.I.P. Blvd. Casa Grande, Arizona 85122	
Secondary Description		Scale	
Figure 4 - Zoning Map			
Job No.:	Drawing Date:	Drawn By:	Drawing Version:
433-147	07-12-2024	MO	1.0



Part B Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision according to a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature

October 29, 2024

Date

Mark D. Hoffman / Ecobat Resources US, LLC

Printed Name/Title

845-673-2225

Telephone Number

CHARACTER BACKGROUND REFERENCE FORMS



**CHARACTER/BACKGROUND REFERENCE FORM
FOR HAZARDOUS WASTE FACILITY PERMIT APPLICATION
FORM FOR KEY EMPLOYEE**

BACKGROUND

Pursuant to ARS § 49-922.C. and A.A.C. R18-8-270.J, the Arizona Department of Environmental Quality (ADEQ) requires that permit applicants and other persons associated with a hazardous waste management facility supply character/background information sufficient to demonstrate their reliability, expertise, integrity, and competence to operate a hazardous waste facility. The attached application supplement shall be provided to ADEQ at the time that a hazardous waste permit application to treat, store, or dispose of hazardous waste is submitted and at such times when Key Employees are added or changed.

DEFINITIONS

“Applicant” is defined as the corporation, company, partnership, or other entity seeking a hazardous waste facility permit and identified in the permit application.

“Key Employee” is defined as any person employed by the Applicant in a supervisory capacity or empowered to make discretionary decisions with respect to the solid waste or hazardous waste operations of the facility. This definition may include positions such as the plant manager, environmental manager, emergency coordinator(s), and training director(s).

INSTRUCTIONS

- Each of the applicant’s Key Employees must complete a copy of this form as part of the hazardous waste permit application. It may also be required in any request to transfer, reissue, or modify a Hazardous Waste Permit.
- All questions must be answered completely.
- As indicated on the last page of this form, all statements herein are to be made under oath.
- ADEQ may coordinate with other state, federal, and local agencies to verify the information provided herein, as well as to obtain additional information as needed. The Attorney General’s Office may conduct background investigations on any or all of the persons identified in the Applicant’s submittals.
- Additional background or reference information may be submitted if you believe that it will help the ADEQ to render a decision on your application. Additional sheets can be attached as necessary.
- Send completed forms to:

Arizona Department of Environmental Quality
Hazardous Waste Permits Unit
1110 W. Washington Street
Phoenix, Arizona 85007

CHARACTER/BACKGROUND REFERENCE FORM

1. General Information

Full name

Mark Daniel Hoffman
(First) (Middle) (Last)

Date of birth*

May 12 1974
(Month) (Day) (Year)

Place of birth*

Bronx New York Bronx County
(City) (State) (County)

Social Security Number*

Current residence*

41 Mitchell Lane
(Street)
Westtown New York 10998
(City) (State) (Zip)

Information marked with "*" will be held confidential and will not be made available in a public file.

Are you a U.S. citizen?

Yes No

2. Employment History (last 5 years)

Dates From/To and Position

Name and Address of Employer

Dates From/To: Dec. 2011 - Sept. 2023
Position: : Senior Environmental Health
and Safety Compliance Manager

Ecobat Resources New York, LLC
(Name)
65 Ballard Road
(Street)
Middletown, N.Y. 10941
(City) (State) (Zip)

Dates From/To: Sept. 2023 - Present
Position: : Environmental Director

Ecobat Resources US, LLC
(Name)
2121 N. Pearl Street, Suite 1400
(Street)
Dallas, TX 75201
(City) (State) (Zip)

Dates From/To: _____
Position: : _____

(Name)

(Street)

(City) (State) (Zip)

CHARACTER/BACKGROUND REFERENCE FORM

3. Have you read and do you understand the Arizona hazardous waste laws, rules, and regulations? Yes No

4. Have you been convicted of a felony within the last five years? Include guilty and nolo contendere (no contest) pleas. Yes No

If "yes", please specify

the court(s) in which the conviction(s) was/were entered (name and location) _____

date of each conviction _____

original charge(s) _____

offense(s) convicted of _____

5. Have you been convicted of a misdemeanor relating to environmental matters within the last 5 years? Include guilty and nolo contendere (no contest) pleas. Yes No

If "yes", please specify:

The court(s) in which the conviction(s) was/were entered _____

Date of each conviction _____

Original charge(s) _____

Offense(s) convicted of _____

6. Has any governmental or judicial entity provided you with notice that you are subject to any restraining order, injunction or similar order related to environmental matters within the last 5 years? Yes No

If "yes", please specify:

Date of each order _____

The court, agency or other entity which issued order(s) _____

Type of action _____

Is the action still pending? Yes

No

CHARACTER/BACKGROUND REFERENCE FORM

7. Are you presently the subject of any investigation or proceeding by the U.S. EPA or government authority in any state regarding environmental issues? Yes No

If "yes", indicate the nature of the investigation of the proceeding and the name and location of the government authority _____

8. Have you ever had a business or professional license revoked or suspended? Yes No

If yes, provide the address of the licensing authority and the date of the action/order. _____

9. Have you ever been denied a business or professional license? Yes No

If yes, provide the address of the licensing authority and the date of the action/order. _____

10. Have you voluntarily surrendered a business or professional license in the last 5 years? Yes No

If yes, provide the address of the licensing authority and the date of the action/order. _____

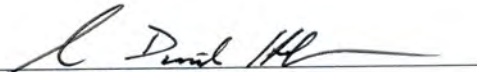
CHARACTER/BACKGROUND REFERENCE FORM

STATE OF New York)

County of Orange)

I, Mark Daniel Hoffman, having been duly
(full name--printed or typed)

sworn, depose and say that the foregoing information is in all respect true and correct to the best of my knowledge. I understand that providing false information is a felony.


(Signature)

SUBSCRIBED AND SWORN to before me this 15th day of March, 20 24.


(Notary Public)

My Commission expires:

05/15/2025

KEYANA L. DOWNES
NOTARY PUBLIC-STATE OF NEW YORK
No. 01DO6358802
Qualified in Orange County
My Commission Expires 05-15-2025



**CHARACTER/BACKGROUND REFERENCE FORM
FOR HAZARDOUS WASTE FACILITY PERMIT APPLICATION
FORM FOR KEY EMPLOYEE**

BACKGROUND

Pursuant to ARS § 49-922.C. and A.A.C. R18-8-270.J, the Arizona Department of Environmental Quality (ADEQ) requires that permit applicants and other persons associated with a hazardous waste management facility supply character/background information sufficient to demonstrate their reliability, expertise, integrity, and competence to operate a hazardous waste facility. The attached application supplement shall be provided to ADEQ at the time that a hazardous waste permit application to treat, store, or dispose of hazardous waste is submitted and at such times when Key Employees are added or changed.

DEFINITIONS

“Applicant” is defined as the corporation, company, partnership, or other entity seeking a hazardous waste facility permit and identified in the permit application.

“Key Employee” is defined as any person employed by the Applicant in a supervisory capacity or empowered to make discretionary decisions with respect to the solid waste or hazardous waste operations of the facility. This definition may include positions such as the plant manager, environmental manager, emergency coordinator(s), and training director(s).

INSTRUCTIONS

- Each of the applicant’s Key Employees must complete a copy of this form as part of the hazardous waste permit application. It may also be required in any request to transfer, reissue, or modify a Hazardous Waste Permit.
- All questions must be answered completely.
- As indicated on the last page of this form, all statements herein are to be made under oath.
- ADEQ may coordinate with other state, federal, and local agencies to verify the information provided herein, as well as to obtain additional information as needed. The Attorney General’s Office may conduct background investigations on any or all of the persons identified in the Applicant’s submittals.
- Additional background or reference information may be submitted if you believe that it will help the ADEQ to render a decision on your application. Additional sheets can be attached as necessary.
- Send completed forms to:

Arizona Department of Environmental Quality
Hazardous Waste Permits Unit
1110 W. Washington Street
Phoenix, Arizona 85007

CHARACTER/BACKGROUND REFERENCE FORM

1. General Information

Full name Eric Anthony Knowles
(First) (Middle) (Last)

Date of birth* 09 14 1974
(Month) (Day) (Year)

Place of birth* Tehachapi Ca USA
(City) (State) (County)

Social Security Number* 606 01 5802

Current residence* 20182 N. Snowflake dr
(Street)
Maricopa AZ 85138
(City) (State) (Zip)

Information marked with "*" will be held confidential and will not be made available in a public file.

Are you a U.S. citizen? Yes X No _____

2. Employment History (last 5 years)

<u>Dates From/To and Position</u>	<u>Name and Address of Employer</u>
Dates From/To: <u>11/06/2023 - Present</u> Position: <u>Plant Manager</u>	<u>Ecobat Solutions</u> <small>(Name)</small> <u>1474 N. VIP BLVD</u> <small>(Street)</small> <u>Casa Grande AZ 85122</u> <small>(City) (State) (Zip)</small>
Dates From/To: <u>2/01/08 - 11/05/2023</u> Position: <u>Production Superintendent</u>	<u>US Borax / Rio Tinto Minerals</u> <small>(Name)</small> <u>14486 Borax Rd</u> <small>(Street)</small> <u>Boron Ca 93516</u> <small>(City) (State) (Zip)</small>
Dates From/To: _____ Position: _____	_____ <small>(Name)</small> _____ <small>(Street)</small> _____ <small>(City) (State) (Zip)</small>

CHARACTER/BACKGROUND REFERENCE FORM

-
7. Are you presently the subject of any investigation or proceeding by the U.S. EPA or government authority in any state regarding environmental issues? Yes _____
No X

If "yes", indicate the nature of the investigation of the proceeding and the name and location of the government authority

-
8. Have you ever had a business or professional license revoked or suspended? Yes _____
No X

If yes, provide the address of the licensing authority and the date of the action/order.

-
9. Have you ever been denied a business or professional license? Yes _____
No X

If yes, provide the address of the licensing authority and the date of the action/order.

-
10. Have you voluntarily surrendered a business or professional license in the last 5 years? Yes _____
No X

If yes, provide the address of the licensing authority and the date of the action/order.

CHARACTER/BACKGROUND REFERENCE FORM

STATE OF Arizona)

County of Pinal)

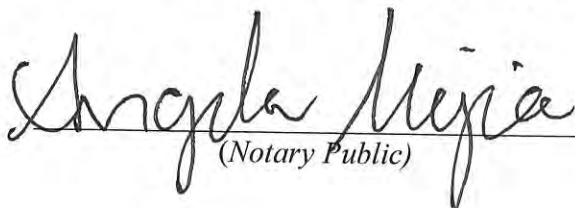
I, ERIC ANTHONY KNOWLES, having been duly
(full name--printed or typed)

sworn, depose and say that the foregoing information is in all respect true and correct to the best of my knowledge. I understand that providing false information is a felony.



(Signature)

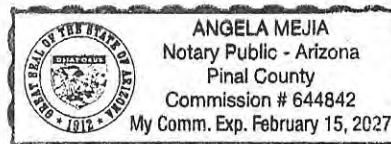
SUBSCRIBED AND SWORN to before me this 20th day of March, 20 24.



(Notary Public)

My Commission expires:

02/15/2027





OPERATING PERMIT APPLICATION CHECKLIST



ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

AHWMA/RCRA OPERATING PERMIT APPLICATION

COMPLETENESS/TECHNICAL EVALUATION CHECKLIST

DISCLAIMER: This checklist is not an official ADEQ policy document. This checklist is a tool used by ADEQ permit writers to evaluate hazardous waste permit applications. The checklist is periodically revised by ADEQ, following the adoption of new regulatory requirements.

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS				
SECTION A. PART A GENERAL INFORMATION REQUIREMENTS				
Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
A-1	Description of Activities Conducted which Require Facility to Obtain a Permit under the Resource Conservation and Recovery Act (RCRA), and Brief Description of Nature of the Business	270.13(a),(m)		
A-2	Name, Mailing Address, and Location of Facility for which the Application is Submitted, including a Topographic Map	270.13(b),(l)		
A-3	Up to Four Standard Industrial Classification Codes which Best Reflect the Products or Services Provided by the Facility	270.13(c)		
A-4	Operator/Owner's Name, Address, Telephone Number, and Ownership Status	270.13(d),(e)	Ownership status must include status as federal, state, private, public, or other entity.	
A-5	Facility is New, Existing, or Located on Indian Lands	270.13(f),(g)	Description must include information on whether this is a first or revised application with date of last signed permit application.	
A-6	Description of Processes to be Used for Treating, Storing, and Disposing of Hazardous Waste	270.13(i)	Description must include design capacity for these items.	
A-7	Specification of the Hazardous Wastes Listed or Designated Under 261	270.13(j)	Specifications must include estimate on quantity of waste to be treated, stored, or disposed of.	

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS				
SECTION A. PART A GENERAL INFORMATION REQUIREMENTS				
Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
A-8 Listing of all Permits or Construction Approvals Received or Applied for	270.13(k)	Permits include the following programs: Hazardous Waste Management under RCRA; Underground Injection Control under the Solid Waste Disposal Act; Prevention of Significant Deterioration, Nonattainment Program, and National Emissions Standards for Hazardous Pollutants under the Clean Air Act; ocean dumping permits under the Marine Protection Research and Sanctuaries Act; dredge and fill permits under Section 404 of the Clean Water Act; or other relevant environmental permits including state permits.	Attachment A	

Notes:

- ^a Considerations in addition to the requirements presented in the regulations.
- ^b For each requirement, this column must indicate one of the following: NA for not applicable, IM for information missing, or the exact location of the information in the application.
- ^c If application is deficient in an area, prepare a comment describing the deficiency, attach it to the checklist, and reference the comment in this column.

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS				
SECTION B. FACILITY DESCRIPTION				
Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
B-1	General Description	270.14(b)(1)	Attachment B	
B-2	Topographic Map	270.14	Attachment B	
B-2a	General Requirements	270.14(b)(19)	Attachment B	
	Scale and Date	270.14(b)(19)(i)	Attachment B	
	The 100-Year Flood Plain Area	270.14(b)(19)(ii)	Attachment B	
	Surface Waters	270.14(b)(19)(iii)	Attachment B	
	Surrounding Land Use	270.14(b)(19)(iv)	Attachment B	
	Wind Rose	270.14(b)(19)(v)	Attachment B	
	Map Orientation	270.14(b)(19)(vi)	Attachment B	
	Legal Boundaries	270.14(b)(19)(vii)	Attachment B	
	Access Control	270.14(b)(19)(viii)	Attachment B	
	Injection and Withdrawal Wells (On Site and Off Site)	270.14(b)(19)(ix)	Attachment B	
	Buildings and Other Structures	270.14(b)(19)(x)	Attachment B	
	Drainage and Flood Control Barriers	270.14(b)(19)(xi)	Attachment B	
	Location of the Treatment or Disposal Unit(s) and Decontamination Areas	270.14(b)(19)(xii)	Attachment B	
	Location of Solid Waste Management Units	270.14(d)(1)(i)	Attachment B	

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS				
SECTION B. FACILITY DESCRIPTION				
Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
B-2b	Additional Information on the Topographic Map for Land Disposal Facilities	270.14(c)(3)	N/A	
	Uppermost Aquifer and Hydraulically Connected Aquifers Beneath Facility Property	270.14(c)(2)	N/A	
	Groundwater Flow Direction	270.14(c)(2)	N/A	
	Waste Management Areas	270.14(c)(3)	N/A	
	Property Boundaries	270.14(c)(3)	N/A	
	Point of Compliance Location	270.14(c)(3); 264.95	Point of compliance is defined in 264.95. N/A	
	Location of Groundwater Monitoring Wells	270.14(c)(3); 264.97	N/A	
	Extent of any Groundwater Contaminant Plume	270.14(c)(4)(i)	N/A	
B-3	Facility Location Information	270.14(b)(11); 264.18	Attachment B	
B-3a	Seismic Requirements	270.14(b)(11)(i), (ii); 264.18(a)	Seismic requirements applicable only to new facilities. N/A - Attachment B	
	Political Jurisdiction in which Facility is Proposed to be Located	270.14(b)(11)(i)	N/A	
	Indication of Whether Facility is Listed in Appendix VI of 264 (New Facilities)	270.14(b)(11)(i)	Attachment B	
	New Facility must be Located at Least 200 feet from a Fault which has had Displacement in Holocene Time	270.14(b)(11)(ii); 264.18(a)	If facility location is listed in Appendix VI of 264, this information is required. N/A	

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS				
SECTION B. FACILITY DESCRIPTION				
Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
B-3b	Flood Plain Requirements	270.14(b)(11)(iii), (iv); 264.18(b)	Attachment B	
	Copy of Federal Insurance Administration or other Flood Map	270.14(b)(11)(iii)	Reference source used to determine whether facility is located in 100-year flood plain.	Attachment B
B-3b(1)	Demonstration that Facility is Designed, Constructed, Operated, and Maintained to Prevent Washout, or Detailed Description of Procedures to be Followed to Remove Hazardous Waste to Safety before Facility is Flooded	270.14(b)(11)(iv); 264.18(b)	Flood plain requirements applicable if facility is located in 100-year flood plain.	N/A
B-3b(1)(a)	Engineering Analysis to Indicate the Various Hydrodynamic and Hydrostatic Forces Expected to Result from the 100-Year Flood Plain	270.14(b)(11)(iv); 264.18(b)	Flood plain requirements applicable if facility is located in 100-year flood plain.	N/A
	Demonstration that no Adverse Effects will Result from Failure to Remove Waste by Providing:	270.14(b)(11)(iv); 264.18(b)(ii)	Flood plain requirements applicable if facility is located in 100-year flood plain.	N/A
	Volume and Physical and Chemical Characteristics of the Waste in the Facility	270.14(b)(11)(iv); 264.18(b)(ii)(A)	Flood plain requirements applicable if facility is located in 100-year flood plain.	N/A
	Concentration of Hazardous Constituents that Would Potentially Affect Surface Waters as a Result of Washout	270.14(b)(11)(iv); 264.18(b)(ii)(B)	Flood plain requirements applicable if facility is located in 100-year flood plain.	N/A
	Impact of such Concentration on Current or Potential uses of, and Water Quality Standards Established for, the Affected Surface Waters	270.14(b)(11)(iv); 264.18(b)(ii)(C)	Flood plain requirements applicable if facility is located in 100-year flood plain.	N/A

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS				
SECTION B. FACILITY DESCRIPTION				
Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
Impact of Hazardous Constituents on the Sediments of Affected Surface Waters, or the Soils of the 100-Year Flood Plain, that could Result from Washout	270.14(b)(11)(iv); 264.18(b)(ii)(D)	Flood plain requirements applicable if facility is located in 100-year flood plain.	N/A	
Plan and Schedule for Future Compliance	270.14(b)(11)(v)	Flood plain requirements applicable if facility is located in 100-year flood plain and not in compliance with 264.18(b).	N/A	
B-4 Traffic Patterns	270.14(b)(10)	Show turns across traffic lanes and stacking lanes, if appropriate.	Attachment B	
Estimate of Number and Types of Vehicles around the Facility	270.14(b)(10)		Attachment B	
Traffic Control Signs and Signals	270.14(b)(10)		Attachment B	
Road Surface Composition and Load-Bearing Capacity	270.14(b)(10)		Attachment B	

Notes:

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- ^b For each requirement, this column must indicate one of the following: NA for not applicable, IM for information missing, or the exact location of the information in the application.
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CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS				
SECTION C. WASTE CHARACTERISTICS				
Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
C-1	Chemical and Physical Analyses	270.14(b)(2); 264.13(a)	Data generated by testing the waste, published data on the waste, or data gathered from similar processes may be used.	Attachment C
C-1a	Containerized Waste	270.15(b)(1); 264.172	Demonstrate that waste is compatible with container construction materials.	Attachment C
C-1b	Waste in Tank Systems	270.16(a); 264.190(a); 264.191(b)(2); 264.192(a)(2)	Demonstrate that tank construction materials are compatible with waste stored in tank.	N/A
C-1c	Waste in Piles	270.18(a); 264.250(c)(1), (4)		N/A
C-1d	Landfilled Wastes	270.21(a) 264.13(c)(3); 264.314	Demonstrate that sorbent materials are non-biodegradable.	N/A
C-1e	Wastes Incinerated and Wastes used in Performance Tests	270.19(c); 270.62(b); 264.341		N/A
C-1f	Wastes to be Land Treated	270.20(b)(4); 264.271(a)(1), (2); 264.272; 264.276, Part 261 Appendix VIII	If food-chain crops will be grown in or on treatment zone, identify hazardous constituents reasonably expected to be in or derived from waste.	N/A
C-1g	Wastes in Miscellaneous Treatment Units	270.23(d)		N/A
C-1h	Wastes in Boilers and Industrial Furnaces	270.66(c); 266.102(b)		N/A
C-1i	Wastes on Drip Pads	270.26; 264.570		N/A

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS**SECTION C. WASTE CHARACTERISTICS**

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
C-2 Waste Analysis Plan	270.14(b)(3); 264.13(b),(c)		Attachment C	
C-2a Parameters and Rationale	270.14(b)(3); 264.13(b)(1)		Attachment C	
C-2b Test Methods	270.14(b)(3); 264.13(b)(2)		Attachment C	
C-2c Sampling Methods	270.14(b)(3); 264.13(b)(3)	If a sampling method described in 261 Appendix I is not used, facility must provide detailed description of proposed method and demonstrate its equivalency.	Attachment C	
C-2d Frequency of Analyses	270.14(b)(3); 264.13(b)(4)		Attachment C	
C-2e Additional Requirements for Wastes Generated Off Site	270.14(b)(3); 264.13 (b)(5), (c); 264.73(b)	Describe statistical method used to determine a representative sample of incoming waste.	Attachment C	
C-2f Additional Requirements for Ignitable, Reactive, or Incompatible Wastes	270.14(b)(3); 264.13(b)(6); 264.17		Attachment C	
C-2g Additional Requirements Pertaining to BIF Facilities	270.22; 266.102(e)(6)(ii) (C),(e)(6)(iii)		N/A	
C-3 Waste Analysis Requirements Pertaining to Land Disposal Restrictions	270.14(b)(3); 264.13; 264.73; Part 268		N/A	

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS**SECTION C. WASTE CHARACTERISTICS**

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
C-3a Waste Analysis	270.14(a); 264.13(a)(1); 268.1; 268.7; 268.9; 268.32 - 268.37; 268.41 - 268.43	Waste that was newly identified or newly listed as hazardous after 11/08/84 for which the U.S. Environmental Protection Agency has not promulgated land disposal prohibitions or treatment standards are not subject to land disposal provisions.	N/A	
C-3a(1) Spent Solvent and Dioxin Wastes	270.14(a); 264.13(a)(1); 268.2(f)(1); 268.7; 268.30; 268.31		N/A	
C-3a(2) California List Wastes	270.14(a); 264.13(a)(1); 268.7; 268.32; 268.42(a); RCRA Section 3004(d)		N/A	
C-3a(3) Listed Wastes	270.14(a); 264.13(a)(1); 268.7; 268.33 - 268.36; 268.41 - 268.43	Arsenic-containing nonwastewater may use the extraction procedure (EP) toxicity test to determine compliance with treatment standards.	N/A	
C-3a(4) Characteristic Wastes	270.14(a); 264.13(a)(1); 268.7, 268.9; 268.37; Part 268 Appendix I, IX	Characteristic D008 lead nonwastewater and D004 arsenic nonwastewater may use EP toxicity test to determine compliance with treatment standards.	N/A	
C-3a(5) Radioactive Mixed Waste	270.14(a); 264.13(a); 268.7; 268.35(c),(d); 268.36(d); 268.42(d)	Hazardous debris containing radioactive waste must comply with treatment standards specified in 268.45.	N/A	
C-3a(6) Leachates	270.14(a); 264.13(a); 268.35(a)	Leachate that originates from newly identified waste is not coded as F039 waste, but is labeled with newly listed waste code from which it is derived.	N/A	

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS**SECTION C. WASTE CHARACTERISTICS**

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
C-3a(7) Lab Packs	270.14(a); 264.13(a); 268.7(a)(7),(8); 268.42(c); Part 268 Appendix IV	Lab packs containing California list polychlorinated biphenyls (PCB) or dioxins must be treated according to special incineration requirements detailed in 268.42(a).	N/A	
C-3a(8) Contaminated Debris	270.13(n); 268.2(g); 268.7; 268.9; 268.36; 268.45		N/A	
C-3a(9) Waste Mixtures and Wastes with Overlapping Requirements	270.14(a); 264.13(a)(1); 268.7; 268.9; 268.41; 268.43; 268.45(a)	Waste that carries more than one characteristic or listed waste code must be treated to the most stringent treatment requirement for each hazardous waste constituent of concern.	N/A	
C-3a(10) Dilution and Aggregation of Wastes	270.14(a); 268.3		N/A	
C-3b Notification, Certification, and Recordkeeping Requirements	270.14(a); 264.13; 264.73; 268.7; 268.9(d)		N/A	
C-3b(1) Retention of Generator Notices and Certifications	270.14(a); 264.13; 268.7(a)		N/A	
C-3b(2) Notification and Certification Requirements for Treatment Facilities	270.14(a); 264.13; 268.7(b)		N/A	
C-3b(3) Notification and Certification Requirements for Land Disposal Facilities	270.14(a); 264.13; 268.7(c)(1)		N/A	
C-3b(4) Wastes Shipped to Subtitle C Facilities	270.14(a); 264.13; 268.7(a),(b)(6)		N/A	
C-3b(5) Wastes Shipped to Subtitle D Facilities	270.14(a); 264.13; 268.7(d); 268.9(d)		N/A	

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS				
SECTION C. WASTE CHARACTERISTICS				
Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
C-3b(6) Recyclable Materials	270.14(a); 264.13; 268.7(b)(7)		N/A	
C-3b(7) Recordkeeping	270.14(a); 264.13; 264.73; 268.7(a)(5),(a)(6),(a)(7), (d)	Recycling facilities must keep records of name and location of each entity receiving hazardous waste-derived product.	N/A	
C-3c Requirement Pertaining to the Storage of Restricted Wastes	270.14(a); 264.73; 268.50		N/A	
C-3c(1) Restricted Wastes Stored in Containers	270.14(a); 264.73; 268.50(a)(2)(i)		N/A	
C-3c(2) Restricted Wastes Stored in Tanks	270.14(a); 264.73; 268.50(a)(2)(ii)		N/A	
C-3c(3) Storage of Liquid PCB Wastes	270.14(a); 264.73; 268.50(f)		N/A	
C-3d Exemptions, Extensions, and Variances to Land Disposal Restrictions			N/A	
C-3d(1) Case-by-Case Extensions to an Effective Date	270.14(b)(21); 268.5		N/A	
C-3d(2) Exemption from Prohibition	270.14(b)(21); 268.6		N/A	
C-3d(3) Variance from a Treatment Standard	270.14(a); 264.73; 268.7; 268.44		N/A	
C-3d(4) Requirements for Surface Impoundments Exempted from Land Disposal Restrictions	270.14(a); 264.13(b)(7); 268.4; 268.14		N/A	

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS				
SECTION C. WASTE CHARACTERISTICS				
Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
C-3d(4)(a) Exemption for Newly Identified or Listed Wastes	270.14(a); 264.13; 268.14	If owner/operator continues to treat newly listed or characteristic hazardous waste after 48 months from promulgation of new waste listing or characteristic, surface impoundment must be in compliance with 268.4.	N/A	
C-3d(4)(b) Treatment of Wastes	270.14(a); 264.13; 268.4(a)(1),(b)		N/A	
C-3d(4)(c) Sampling and Testing	270.14(a); 264.13(b)(6); 268.4(a)(2)(i),(iv)		N/A	
C-3d(4)(d) Annual Removal of Residues	270.14(a); 264.13(b)(7)(iii); 268.4(a)(2)(ii)		N/A	
C-3d(4)(e) Design Requirements	270.14(a); 264.13; 268.4(a)(3),(4)		N/A	

Notes:

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CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS

SECTION D. PROCESS INFORMATION - CONTAINERS

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
D-1 Containers	270.15; 264.170		Attachment D	
D-1a Containers with Free Liquids	270.15; 264.175(a),(b)	Containers storing waste with free liquids must meet secondary containment requirements of 264.175(b).	Attachment D	
D-1a(1) Description of Containers	270.14(b)(1); 264.171,172	Specify numbers of containers, sizes, and specifications.	Attachment D	
D-1a(2) Container Management Practices	270.14(a); 264.173	Containers must be kept closed and must not be handled in any manner which could cause them to rupture or leak. Specify aisle space and stacking height.	Attachment D	
D-1a(3) Secondary Containment System Design and Operation	270.15(a)(1); 264.175(a),(d)	Provide detailed design and profile drawings showing container storage areas.	Attachment D	
D-1a(3)(a) Requirement for the Base or Liner to Contain Liquids	270.15; 264.175(b)(1)	Demonstrate that base is impervious to waste stored and precipitation.	Attachment D	
D-1a(3)(b) Containment System Drainage	270.15(a)(2); 264.175(b)(2)	Containment system must be designed and operated to remove liquids resulting from leaks, spills, or precipitation.	Attachment D	
D-1a(3)(c) Containment System Capacity	270.15(a)(3); 264.175(b)(3)	Containment system must have capacity to hold 10 percent of container volume or volume of the largest container, whichever is greater.	Attachment D	
D-1a(3)(d) Control of Runon	270.15(a)(4); 264.175(b)(4)	Runon from storm water must be prevented unless containment system has sufficient excess capacity.	Attachment D	
D-1a(3)(e) Removal of Liquids from Containment System	270.15(a)(5); 264.175(b)(5)	Accumulated liquids must be removed in timely manner to prevent containment system from overflowing.	Attachment D	
D-1b Containers without Free Liquids			N/A	

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS**SECTION D. PROCESS INFORMATION - CONTAINERS**

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
D-1b(1) Test for Free Liquids	270.15(b)(1)	Documentation that waste does not contain free liquids must be provided by test results or other information.	N/A	
D-1b(2) Description of Containers	270.14(a); 264.171; 264.172	Describe numbers, sizes, and specifications of containers.	N/A	
D-1b(3) Container Management Practices	270.14(a); 264.173	Same comment as D-1a(2).	N/A	
D-1b(4) Container Storage Area Drainage	270.15(b)(2); 264.175(c)	Same comment as D-1a(3)(b).	N/A	

Notes:

^a Considerations in addition to the requirements presented in the regulations.

^b For each requirement, this column must indicate one of the following: NA for not applicable, IM for information missing, or the exact location of the information in the application.

^c If application is deficient in an area, prepare a comment describing the deficiency, attach it to the checklist, and reference the comment in this column.

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS				
SECTION D. PROCESS INFORMATION - TANKS				Section is Not Applicable
Section and Requirement	Federal Regulation	Review Consideration ^a	Location in Application ^b	See Attached Comment Number ^c
D-2	Tank Systems	270.16; 264.191 - 194		
D-2a	Tank Systems Descriptions	270.14(b)(1)	Describe type (aboveground, underground) and specific location of each tank.	
D-2a(1)	Dimensions and Capacity of each Tank	270.16(b)		
D-2a(2)	Description of Feed Systems, Safety Cutoff, Bypass Systems, and Pressure Controls	270.16(c); 264.194(b)		
D-2a(3)	Diagram of Piping, Instrumentation, and Process Flow	270.16(d)		
D-2a(4)	Ignitable, Reactive, and Incompatible Wastes	270.16(j); 264.17(b); 264.198,199	Demonstrate that waste is stored or treated in a way that protects against ignition or reaction.	
D-2b	Existing Tank Systems			
D-2b(1)	Assessment of Existing Tank System's Integrity	270.16(a); 264.191	A written tank assessment must be certified by an independent, qualified, registered professional engineer.	
D-2c	New Tank System			
D-2c(1)	Assessment of New Tank System's Integrity	270.16(a),(e); 264.192(a)	A written tank assessment must be certified by an independent, qualified, registered professional engineer.	
D-2c(2)	Description of Tank System Installation and Testing Plans and Procedures	270.16(f); 264.192(b) - (e)	A new tank installation must be inspected by an independent, qualified, installation inspector or registered professional engineer.	
D-2d	Containment and Detection of Releases	270.16(g); 264.193	Leak detection system must be capable of detecting leaks within 24 hours.	

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS**SECTION D. PROCESS INFORMATION - TANKS**

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
D-2d(1) Plans and Description of the Design, Construction, and Operation of the Secondary Containment System	270.16(g); 264.193(b) - (f)			
D-2d(1)(a) Tank Age Determination	270.16(g); 264.193(a)	Age of each tank must be accurately determined to ascertain when secondary containment requirements apply.		
D-2d(1)(b) Requirements for Secondary Containment and Leak Detection	270.16(g); 264.193(b),(c); 264.1101(b)(3)(iii)	A detailed description of the construction, installation, and operation of the secondary containment system is required.		
D-2d(1)(c) Requirements for External Liner, Vault, Double-walled Tank or Equivalent Device	270.16(g); 264.193(d),(e)	Secondary containment must consist of liner, vault, double-walled tank, or equivalent device approved by regional administrator.		
D-2d(1)(d) Secondary Containment and Leak Detection Requirements for Ancillary Equipment	270.16(g); 264.193(f)	Secondary containment is required for ancillary equipment except as provided in 264.193(f).		
D-2d(1)(e) Containment Buildings Used as Secondary Containment for Tank Systems	270.16(g); 264.1101(b)(3)(iii)	A containment building can serve as secondary containment for a tank system provided it meets requirements of 264.193(b),(c)(1&2),(d)(1).		
D-2d(2) Requirements for Tank Systems until Secondary Containment is Implemented	270.16(h); 264.193(i)	Annual leak tests are required until secondary containment is provided.		
D-2d(3) Variance from Secondary Containment Requirements	270.16(h); 264.193(g)			
D-2d(3)(a) Variance Based on a Demonstration of Equivalent Protection of Groundwater and Surface Water	270.16(h)(1); 264.193(g)(1),(h)	Detailed plans and engineering and hydrogeologic reports are required to demonstrate equivalent protection of groundwater and surface water.		

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS				
SECTION D. PROCESS INFORMATION - TANKS				
Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
D-2d(3)(b) Variance Based on a Demonstration of No Substantial Present or Potential Hazard	270.16(h)(2); 264.193(g)(2),(h)	Provide detailed assessment of substantial present or potential hazards posed to human health or the environment, should a release enter the environment.		
D-2d(3)(c) Exemption Based on No Free Liquids and Location Inside a Building	270.16(h); 264.190(a)	Demonstrate that tanks used to treat or store hazardous waste contain no free liquid as defined by Paint Filter Test (SW-846 Method 9095).		
D-2e Controls and Practices to Prevent Spills and Overflows	270.16(i); 264.194(a),(b); 264.195	Provide detailed description of controls and practices used to prevent spills and overflows.		

Notes:

- ^a Considerations in addition to the requirements presented in the regulations.
- ^b For each requirement, this column must indicate one of the following: NA for not applicable, IM for information missing, or the exact location of the information in the application.
- ^c If application is deficient in an area, prepare a comment describing the deficiency, attach it to the checklist, and reference the comment in this column.

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS**SECTION D. PROCESS INFORMATION - WASTE PILES**

Section is Not Applicable

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
D-3 Waste Piles	270.18; 264.250 - 259			
D-3a List of Wastes	270.18(a)	List all hazardous waste to be placed in waste piles.		
D-3b Liner Exemption	270.18(b)			
D-3b(1) Enclosed Dry Piles	270.18(b); 264.250(c)	Demonstrate that neither runoff, nor leachate is generated from the pile.		
D-3b(1)(a) Protection from Precipitation	270.18(b); 264.250(c)	Demonstrate that pile is inside or under structure that provides complete protection from precipitation.		
D-3b(1)(b) Free Liquids	270.18(b); 264.250(c)(1)	Demonstrate that neither liquids, nor materials containing free liquids are placed in the pile.		
D-3b(1)(c) Runon Protection	270.18(b); 264.250(c)(2)	Demonstrate that pile is protected from surface water runon.		
D-3b(1)(d) Wind Dispersal Control	270.18(b); 264.250(c)(3)	Demonstrate that pile design and operation controls wind dispersal of waste.		
D-3b(1)(e) Leachate Generation	270.18(b); 264.250(c)(4)	Demonstrate that pile will not generate leachate through decomposition or other reactions.		
D-3b(2) Exemption for Monofills	270.18(b); 264.251(e)	This exemption applies only to waste generated from foundry furnace emission controls or metal casting molding sand that are not hazardous waste for reasons other than toxicity characteristics.		
D-3b(3) Alternate Design/No Migration	270.18(c)(1); 264.251(b)	This exemption from liner requirements is based on documenting that design, operating practices, and local aspects will prevent migration of hazardous constituents into groundwater or surface water in the future.		

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS

SECTION D. PROCESS INFORMATION - WASTE PILES

Section and Requirement	Federal Regulation	Review Consideration ^a	Location in Application ^b	See Attached Comment Number ^c
D-3b(4) Exemption Based on Alternative Design and Location	270.18(c)(1); 264.251(d)	Document that alternative design and operating practices, together with location characteristics, will prevent migration of any hazardous constituent into groundwater or surface water at least as effectively as a double liner with leachate detection system, and will allow detection of hazardous constituents through the top liner as least as effectively.		
D-3b(5) Exemption for Replacement Waste Piles	270.18(c); 264.251(f)	Demonstrate (1) that existing unit was constructed in compliance with design standards of Sections 3004(o)(1)(A)(i) and 3004(o)(5) of Resource Conservation and Recovery Act, and (2) there is no reason to believe that liner is not functioning as designed.		
D-3c Liner System	270.18(c)(1); 264.251(a)(1)(i),(c)	Describe liner system and demonstrate that flow of liquids through liner will be prevented.		
D-3c(1) Liner Description	270.18(c)(1); 264.251(a)(1)(i),(c)	Describe and draw liner system to demonstrate that any flow of liquids through the liner will be prevented.		
D-3c(1)(a) Synthetic Liners	270.18(c)(1); 264.251(a)(1),(c) (1)	Describe type, thickness, material, and brand name and manufacturer of liner.		
D-3c(1)(b) Soil Liner	270.18(c)(1); 264.251(a),(c)(1)(i) (B)	Describe bottom composite liner including its classification, thickness, and hydraulic conductivity.		
D-3c(2) Liner Location Relative to High Water Table	270.18(c)(1); 264.251(a)(1)(i)	Provide data showing seasonal fluctuations in depth to water table and the location of seasonal high water table in relation to liner system.		

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS**SECTION D. PROCESS INFORMATION - WASTE PILES**

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
D-3c(3) Calculation of Required Soil Liner Thickness	270.18(c)(1); 264.251(a)(1)(i)	Calculations using either numerical simulation techniques (unsaturated flow conditions) or Darcy Law-derived transit time equations (saturated flow conditions) must be provided.		
D-3c(4) Liner Strength Requirements	270.18(c)(1); 264.251(a)(1)(i)	Provide calculations showing minimum strength requirements for liners considering pressure gradients, installation and operating stresses, and climatic change stresses.		
D-3c(5) Liner Strength Demonstration	270.18(c)(1); 264.251(a)(1)(i)	Demonstrate that liner exceeds minimum strength requirements.		
D-3c(6) Liner/Waste Compatibility Testing Results	270.18(c)(1); 264.251(a)(1)(i)	Demonstrate that liner material is compatible with both waste and leachate.		
D-3c(7) Liner Installation	270.18(c)(1); 264.251(a)(1)(i)	Describe procedures for installing liner.		
D-3c(7)(a) Synthetic Liner Seaming	270.18(c)(1); 264.251(a)(1)(i)	Describe techniques to be used to bond membrane liner seams and the strength and chemical compatibility of seams with waste and leachate.		
D-3c(7)(b) Soil Liner Compaction	270.18(c)(1); 264.251(a)(1)(i)	Describe procedures for installing soil liner and compacting liner to achieve desired permeability. Include maximum height of lifts to be placed.		
D-3c(7)(c) Installation Inspection/testing Programs	270.18(c)(1); 264.254(a)	Describe quality assurance/quality control procedures to be used during liner installation.		
D-3c(8) Liner Coverage	270.18(c)(1); 264.251(a)(1)(iii)	Demonstrate that liner will be installed to cover all surrounding earth likely to be in contact with waste or leachate.		

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS**SECTION D. PROCESS INFORMATION - WASTE PILES**

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
D-3c(9) Liner Exposure Prevention	270.18(c)(1); 264.251(a)(1)(i)	Demonstrate that either the liner is protected from, or is resistant to, exposure to climatic conditions.		
D-3c(10) Synthetic Liner Bedding	270.18(c)(1); 264.251(a)(1)(i)	Demonstrate that sufficient bedding will be provided above and below liner to prevent rupture during installation and operation.		
D-3d Liner Foundation Report				
D-3d(1) Liner Foundation Design Description	270.18(c)(1); 264.251(a)(1)(ii)	Describe liner foundation design and materials of construction and ability to withstand expected static and dynamic loadings.		
D-3d(2) Subsurface Exploration Data	270.18(c)(1); 264.251(a)(1)(ii)	Verify engineering characteristics of foundation materials through subsurface exploration.		
D-3d(3) Laboratory Testing Data	270.18(c)(1); 264.251(a)(1)(ii)			
D-3d(4) Engineering Analyses	270.18(c)(1); 264.251(a)(1)(ii)			
D-3d(4)(a) Settlement Potential	270.18(c)(1); 264.251(a)(1)(ii)			
D-3d(4)(b) Bearing Capacity and Stability	270.18(c)(1); 264.251(a)(1)(ii)			
D-3d(4)(c) Potential for Bottom Heave or Blow-Out	270.18(c)(1); 264.251(a)(1)(ii)			
D-3d(4)(d) Construction and Operational Loading	270.18(c)(1); 264.251(a)(1)(ii)			
D-3d(5) Foundation Installation Procedures	270.18(c)(1); 264.251(a)(1)(ii)			

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS**SECTION D. PROCESS INFORMATION - WASTE PILES**

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
D-3d(6) Foundation Installation Inspection Program	270.18(c)(1); 264.251(a)(1)(ii)	Describe quality assurance/quality control procedures to be used during foundation installation.		
D-3e Leachate Collection and Removal System	270.18(c); 264.251(a)(2),(c) (2)	Describe design and operation of system to collect and remove leachate from new portions of existing waste piles and from new waste piles.		
D-3e(1) Upper Leachate Collection and Removal System	270.18(c)(1); 264.251(a)(2),(c) (2)	Describe design and operating conditions to ensure that leachate depth over the liner does not exceed 1 foot.		
D-3e(2) Leachate Detection System	270.18(c)(1); 264.251(a)(2),(c) (3)	Describe design and operating features of leachate detection system.		
D-3e(2)(a) Grading and Drainage	270.18(c)(1); 264.251(a)(2); 264.221(c)(2)(ii)	Demonstrate that leak detection system design meets or exceeds specifications described in referenced regulations.		
D-3e(3) Chemical Resistance	270.18(c); 264.251(a)(2)(i)(A) (c)(3); 264.251(c)(3)	Demonstrate that all leachate collection and removal system components are chemically resistant to waste managed in the pile and the leachate expected to be generated.		
D-3e(4) Strength of Materials	270.18(c); 264.251(a)(2)(i)(B); 264.251(c)(3)	Demonstrate that system components are of sufficient strength and thickness to prevent collapse under expected static and dynamic loadings.		
D-3e(5) Prevention of Clogging	270.18(c); 264.251(a)(2)(ii); 264.251(c)(3)	Demonstrate that leachate collection and removal system's design and operation will prevent clogging throughout active life and post-closure period of waste pile.		

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS**SECTION D. PROCESS INFORMATION - WASTE PILES**

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
D-3e(6) Installation	270.18(c); 264.251(a)(2)	Describe installation methods and construction quality assurance/quality control procedures.		
D-3e(7) Maintenance	270.18(c); 264.251(a)(2)	Describe anticipated maintenance activities that will be used to assure proper leachate management system operation throughout pile's expected active life.		
D-3e(8) Liquid Removal	270.18(c); 264.251(c)(3)	Describe leachate removal system, including sumps and other equipment, and fate of the collected leachate.		
D-3e(9) Location Relative to Water Table	270.18(c); 264.251(c)(4)	Demonstrate that operation of leak detection system will not be adversely affected by presence of groundwater.		
D-3f Action Leakage Rate	270.18(c)(1)(v); 264.252	Action leakage rate must be approved by regional administrator based on system design.		
D-3f(1) Determination of Action Leakage Rate	270.18(c)(1)(v); 264.252(a)	Determine action leakage rate for waste pile units subject to 264.251(c),(d). Include adequate safety margin to allow for uncertainties in design, construction, operation, and location of leak detection system, waste and leachate characteristics, sources of other liquids in system, and proposed response actions.		
D-3f(2) Monitoring of Leakage	270.18(c)(1)(v); 264.252(b)	Weekly leachate flow rate data must be converted to average daily flow rate.		
D-3g Leakage Response Action Plan	270.18(c)(1)(v); 264.253			
D-3g(1) Response Action	270.18(c)(1)(v); 264.253(a)	Provide response action plan to describe actions to be taken if flow rate into leak detection system exceeds action leakage rate.		

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS**SECTION D. PROCESS INFORMATION - WASTE PILES**

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
D-3g(2) Leak and/or Remedial Determinations	270.18(c)(1)(v); 264.253(b),(c)	Response action plan must describe actions to be taken to comply with 264.223(b),(c) if the action leakage rate is exceeded.		
D-3g(3) Notifications	270.18(c)(1)(v); 264.253(b)	Response action plan must indicate that regional administrator will be (1) notified in writing within 7 days of determining that action leakage rate has been exceeded, (2) provided with preliminary assessment and action plan within 14 days of initial determination that action leakage rate has been exceeded, and (3) provided with status report within 30 days after original notification that action leakage rate has been exceeded. Regional administrator must receive monthly status reports for as long as flow rate exceeds action leakage rate.		
D-3h Runon Control System	270.18(c)(2); 264.251(g)	Describe system that will be used to prevent runon into active portions of piles.		
D-3h(1) Calculation of Peak Flow	270.18(c)(2); 264.251(g)	Identify peak surface water flow expected to result from 25-year design storm. Describe data sources and methods used to make peak flow calculation.		
D-3h(2) Design and Performance	270.18(c)(2); 264.251(g)	Demonstrate that runon control system design will prevent runon from reaching active portions of unit.		
D-3h(3) Construction	270.18(c)(2); 264.251(g)	Describe runon control system construction methods and any construction quality assurance/quality control procedures.		

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS				
SECTION D. PROCESS INFORMATION - WASTE PILES				
Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
D-3h(4) Maintenance	270.18(c)(2); 264.251(g)	Describe any maintenance activities required to assure continued proper runoff system operation throughout unit's active life.		
D-3i Runoff Control System	270.18(c)(3); 264.251(h)	Describe the runoff control system to be used to collect and control runoff from active portions.		
D-3i(1) Calculation of Peak Flow	270.18(c)(3); 264.251(h)	Identify the total runoff volume expected to result from a 24-hour, 25-year storm, and include data sources and methods used to make peak flow calculation.		
D-3i(2) Design and Performance	270.18(c)(3); 264.251(h)	Demonstrate that system has sufficient capacity to collect and hold total runoff volume calculated in D-3i(1).		
D-3i(3) Construction	270.18(c)(3); 264.251(h)	Describe runoff system construction methods and any construction quality assurance/quality control procedures.		
D-3i(4) Maintenance	270.18(c)(3); 264.251(h)	Describe any maintenance activities required to assure continued proper runoff system operation throughout unit's active life.		
D-3j Management of Collection and Holding Units	270.18(c)(4); 264.251(i)	Describe how collection and holding facilities will be managed to maintain system design capacity.		
D-3k Control of Wind Dispersal	270.18(c)(5); 264.251(j)	Describe how pile is covered or otherwise managed to control wind dispersal.		
D-3l Groundwater Monitoring Exemption	270.18(b); 264.90(b)(2)	To receive exemption from groundwater monitoring requirements of Subpart F, conditions specified in D-3l(1) through D-3l(7) must be met.		

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS**SECTION D. PROCESS INFORMATION - WASTE PILES**

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
D-3l(1) Engineered Structure	270.18(b); 264.90(b)(2)(i)	Provide design data showing that unit is engineered structure.		
D-3l(2) No Liquid Wastes	270.18(b); 264.90(b)(2)(ii)	Describe procedures for ensuring that no liquid waste or waste containing free liquids will be received by, or contained in, unit.		
D-3l(3) Exclusion of Liquids	270.18(b); 264.90(b)(2)(iii)	Demonstrate how liquids, precipitation, and other runoff and runoff will be excluded from unit.		
D-3l(4) Containment System	270.18(b); 264.90(b)(2)(iv)	Describe containment system (both inner and outer layers) that will enclose waste.		
D-3l(5) Leak Detection System	270.18(b); 264.90(b)(2)(v)	Describe design and operating data demonstrating leak detection system built into each containment layer.		
D-3l(6) Operation of Leak Detection System	270.18(b); 264.90(b)(2)(vi)	Demonstrate means for ensuring continuing operation and maintenance of leak detection systems during active life of unit and closure and post-closure care periods.		
D-3(7) No Migration	270.18(b); 264.90(b)(2)(vii)	Demonstrate to reasonable degree of certainty that unit will not allow hazardous constituents to migrate beyond outer layer of containment system prior to end of post-closure care period.		
D-3m Treatment Within the Pile	270.18(e)	If any treatment is conducted in pile, provide descriptions specified in D-3m(1) through D-3m(3).		
D-3m(1) Treatment Process Description	270.18(e)	Describe the process by which wastes are treated and the effect of the treatment on the wastes.		

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS

SECTION D. PROCESS INFORMATION - WASTE PILES

Section and Requirement		Federal Regulation	Review Consideration ^a	Location in Application ^b	See Attached Comment Number ^c
D-3m(2)	Equipment Used	270.18(e)	Describe any equipment or other materials required to initiate or promote treatment.		
D-3m(3)	Residuals Description	270.18(e)	Describe nature and quantity of waste remaining in pile after treatment is complete.		
D-3n	Special Waste Management Plan for Piles Containing Wastes F020, F021, F022, F023, F026, and F027	270.18(i); 264.259	If waste pile is not enclosed, provide plan describing how pile will be designed, constructed, operated, and maintained in order to protect human health and environment.		
D-3n(1)	Waste Description	270.18(i)(1); 264.259(a)(1)	Identify volume, physical, and chemical characteristics of waste, including potential to migrate through soil or volatilize or escape into atmosphere.		
D-3n(2)	Soil Description	270.18(i)(2); 264.259(a)(2)	Describe attenuative properties of underlying and surrounding soils or other materials.		
D-3n(3)	Mobilizing Properties	270.18(i)(3); 264.259(a)(3)	Describe mobilizing properties of other materials codisposed of with this waste.		
D-3n(4)	Additional Management Techniques	270.18(i)(4); 264.259(a)(4)	Document effectiveness of additional treatment, design, operating, or monitoring techniques.		
D-3o	Construction Quality Assurance Program	270.18(c)(iv); 264.19	Provide written construction quality assurance program to comply with regulations found in 264.19.		

Notes:

- ^a Considerations in addition to the requirements presented in the regulations.
- ^b For each requirement, this column must indicate one of the following: NA for not applicable, IM for information missing, or the exact location of the information in the application.
- ^c If application is deficient in an area, prepare a comment describing the deficiency, attach it to the checklist, and reference the comment in this column.

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS**SECTION D. PROCESS INFORMATION - SURFACE IMPOUNDMENTS**

Section is Not Applicable.

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
D-4 Surface Impoundments				
D-4a List of Wastes	270.17(a)	Provide list of all hazardous waste placed, or to be placed, in surface impoundments.		
D-4b Liner System Exemption Requests	270.17(b)			
D-4b(1) Exemption Based on Existing Portion	270.17(b)(1); 264.221(c)	Existing portions of surface impoundments with waste in place on November 8, 1994, and having only vertical expansion are exempted from liner system requirements. New units, lateral expansion of existing units, and replacement units at existing facilities are not exempt. Provide plan indicating limits of existing portions.		
D-4b(2) Exemption Based on Alternative Design and Location	270.17(b)(1); 264.221(d)			
D-4b(3) Exemption for Replacement Surface Impoundments	270.17(b); 264.221(f)			
D-4c Liner System, General Items	270.17(b)(1)	Provides discussion of the following items that apply to liner system as a whole.		
D-4c(1) Liner System Description	270.17(b)(1)	Provide detailed description of liner system, demonstrating that any flow of liquids into and through liners will be prevented. The liner system includes liner foundation, bottom composite liner, leachate detection system, top synthetic liner, and any protective layer placed to protect top synthetic liner.		
D-4c(2) Liner System Location Relative to High Water Table	270.17(b)(1), (3); 264.221(a)	Provide geological cross sections showing groundwater levels with seasonal fluctuations and liner foundation elevations.		

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS

SECTION D. PROCESS INFORMATION - SURFACE IMPOUNDMENTS

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
D-4c(3) Load on Liner System	270.17(b)(1); 264.221(a)(1),(b)	Provide results of calculations defining maximum loads or stresses that will be placed on liner system.		
D-4c(4) Liner System Coverage	270.17(b)(1); 264.221(a)(1), (b)	Demonstrate that liner system will be installed to cover all surrounding earth likely to be in contact with waste or leachate.		
D-4c(5) Liner System Exposure Prevention	270.17(b)(1); 264.221(a)(1), (b)	Demonstrate that liner system will not be exposed to elements, or that if exposed, exposure will not result in unacceptable degradation of system.		
D-4d Liner System Foundation				
D-4d(1) Foundation Description	270.17(b)(1); 264.221(a)(2)	Describe foundation for liner system, including materials, and indicate bearing elevations and any load-bearing embankments placed to support liner system.		
D-4d(2) Subsurface Exploration Data	270.17(b)(1); 264.221(a)(2)	The engineering characteristics of liner system foundation materials should be verified through subsurface explorations. Provide information to fully describe these efforts.		
D-4d(3) Laboratory Testing Data	270.17(b)(1); 264.221(a)(2)	Provide index testing results to classify site materials and lab test data to evaluate engineering properties of foundation materials. Provide references to standard test procedures.		
D-4d(4) Engineering Analyses	270.17(b)(1); 264.221(a)(2)	Provide engineering analyses based on subsurface exploration and laboratory testing data. Include discussion of methods used, assumptions, copies of calculations, and appropriate references.		

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS				
SECTION D. PROCESS INFORMATION - SURFACE IMPOUNDMENTS				
Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
D-4d(4)(a) Settlement Potential	270.17(b)(1); 264.221(a)(2)	Provide estimates of total and differential settlement of liner system foundation.		
D-4d(4)(b) Bearing Capacity	270.17(b)(1); 264.221(a)(2)	Provide analysis of allowable bearing capacity of liner system foundation.		
D-4d(4)(c) Potential for Excess Hydrostatic or Gas Pressure	270.17(b)(1); 264.221(a)(2)	Provide estimates of potential or bottom heave or blow-out of liner system or line foundation due to unequal hydrostatic or gas pressures.		
D-4e Liner System, Liners				
D-4e(1) Synthetic Liners	270.17(b)(1); 264.221(a),(c)	For each synthetic liner in system or under consideration, provide the following general information: thickness; type; material; brand name; and manufacturer.		
D-4e(1)(a) Synthetic Liner Compatibility Data	270.17(b)(1); 264.221(a)(1)	Provide summary and discussion of test results and conclusions as to suitability of synthetic liner based on liner/waste compatibility testing.		
D-4e(1)(b) Synthetic Liner Strength	270.17(b)(1); 264.221(a)(1)	Provide data showing that synthetic liners, including seams, have sufficient strength after exposure to waste and waste leachate.		
D-4e(1)(c) Synthetic Liner Bedding	270.17(b)(1); 264.221(a)(2)	Demonstrate that sufficient bedding will be provided above and below the synthetic liners to prevent rupture during installation and operation. Synthetic membrane of bottom composite liner should be placed directly on soil portion.		
D-4e(2) Soil Liners	270.17(b)(1); 264.221(a); (c)(1)	Describe soil portion of bottom composite liner, including classification, thickness, hydraulic conductivity, and material specifications.		

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS**SECTION D. PROCESS INFORMATION - SURFACE IMPOUNDMENTS**

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
D-4e(2)(a) Material Testing Data	270.17(b)(1); 264.221(c)	Provide complete results for index tests, laboratory and/or in situ permeability tests, strength tests, consolidation tests, and shrink-swell properties of soil liner material. Discuss potential for dispersion and piping of soil due to flow of liquid through soil liner layer.		
D-4e(2)(b) Soil Liner Compatibility Data	270.17(b)(1); 264.221(a)(1)	Provide complete results of permeability testing of soil liner material using representative of leachate from surface impoundment.		
D-4e(2)(c) Soil Liner Strength	270.17(b)(1); 264.221(a)(1)	Demonstrate that soil liner has sufficient strength to support loads/stresses computed in item D-4c(3).		
D-4f Liner System, Leachate Detection System	270.17(b)(1); 264.221(c)(2)			
D-4f(1) Systems Operation and Design	270.17(b)(1); 264.221(c)(2),(4)	Describe design features of leachate detection system and how system will function to detect any leakage through either liner in timely manner.		
D-4f(2) Drainage Material	270.17(b)(1); 264.221(c)(2)(ii)	Describe leachate detection system drainage material.		
D-4f(3) Grading and Drainage	270.17(b)(1); 264.221(c)(2)	Indicate slopes of leachate detection system and provide contour plan for system along with plan showing layout and spacing of piping system and any sumps, pumps, etc. Demonstrate that leak detection system is appropriately graded to assure that leakage at any point in liner system is detected in timely manner.		
D-4f(4) System Compatibility	270.17(b)(1); 264.221(c)(2)(iii)			

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS				
SECTION D. PROCESS INFORMATION - SURFACE IMPOUNDMENTS				
Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
D-4f(5) System Strength				
D-4f(5)(a) Stability of Drainage Layers	270.17(b)(1); 264.221(c)(2)(iii)	Demonstrate that drainage layer of leachate detection system has sufficient soil-bearing capacity to support loads. Provide calculations showing that drainage layer placed on sloped surfaces of surface impoundment or foundations will be stable during construction.		
D-4f(5)(b) Strength of Piping	270.17(b)(1); 264.221(c)(2)(iii)	Demonstrate that pipes used in piping systems have sufficient strength to support loads as computed in item D-4c(3).		
D-4f(6) Prevention of Clogging	270.17(b)(1); 264.221(c)(2)(iv)			
D-4f(7) Liquid Removal	270.17(b)(1); 264.221(c)(2)(v), (c)(3)	Indicate fate of collected leachate, which is considered hazardous waste.		
D-4f(8) Location Relative to Water Table	270.17(b)(3); 264.221(c)(4)			
D-4g Liner System, Construction and Maintenance				
D-4g(1) Material Specifications	270.17(b)(1); 264.221(a)			
D-4g(1)(a) Synthetic Liners	270.17(b)(1); 264.221(a)	Provide detailed material specifications for specific synthetic liner(s) to be used.		
D-4g(1)(b) Soil Liners	270.17(b)(1); 264.221(a)	For soil liners constructed of borrowed material, provide specifications; for soil liners using in-place soil, provide specifications to be used to assure that all existing materials meet requirements of liner design.		

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS**SECTION D. PROCESS INFORMATION - SURFACE IMPOUNDMENTS**

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
D-4g(1)(c) Leachate Detection System	270.17(b)(1); 264.221(a)	Provide material specifications for drainage layer material, filter fabric or filter layer, piping, and sumps.		
D-4g(2) Construction Specifications				
D-4g(2)(a) Liner System Foundation	270.17(b)(1); 264.221(a)	For installed foundations, provide construction specifications of foundation installation procedures. For units that use the in-place material for liner system foundation, provide construction specifications for preparation.		
D-4g(2)(b) Soil Liner	270.17(b)(1); 264.221(a),(a)(2)	Describe procedures for installing soil liner.		
D-4g(2)(c) Synthetic Liners	270.17(b)(1); 264.221(a); 264.226(a)(1)	Provide construction specifications for placement of synthetic liners.		
D-4g(2)(d) Leachate Detection System	270.17(b)(1); 264.221(a)	Provide construction specifications for placement of leachate detection system components, including drainage layers, piping, filter layers, sumps, pumps, etc.		
D-4g(3) Construction Quality Assurance (CQA) Program	270.17(b)(1),(4); 270.30(k)(2); 264.19; 264.226(a)	Provide complete details of CQA program to be used during construction of liner system to assure that it is built as designed.		
D-4g(4) Maintenance Procedures for Leachate Detection System	270.17(b)(1); 264.221(a)	Describe anticipated maintenance activities that will be used to assure proper operation of leachate detection systems throughout surface impoundment's expected life.		

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS				
SECTION D. PROCESS INFORMATION - SURFACE IMPOUNDMENTS				
Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
D-4g(5) Liner Repairs During Operations	270.17(b)(1); 264.221(a)	Describe methods that will be used to repair any damage to liner that occurs while surface impoundment is in operation (such as a drag line ripping the liner during cleaning operations).		
D-4h Action Leakage Rate	270.17(b)(5); 264.222			
D-4h(1) Determination of Action Leakage Rate	270.17(b)(5); 264.222(a)	Identify action leakage rate for surface impoundment units subject to liner system provisions of 264.221(c) and 264.221(d).		
D-4h(2) Monitoring of Leakage	270.17(b)(5); 264.222(b)			
D-4i Leakage Response Action Plan	270.17(b)(5); 264.223			
D-4i(1) Response Action	270.17(b)(5); 264.223(a)			
D-4i(2) Leak and/or Remedial Determinations	270.17(b)(5); 264.223(b),(c)			
D-4i(3) Notifications	270.17(b)(5); 264.223(b)			
D-4j Prevention of Overtopping	270.17(b)(6); 264.221(g)	Describe design and/or operating procedures that will protect against impoundment overtopping/overflow.		
D-4j(1) Design Features	270.17(b)(6); 264.221(g)	Describe design features used to prevent overtopping, such as spillways or weirs for flow-through systems, automatic or manual controls, and sensors and alarms.		

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS**SECTION D. PROCESS INFORMATION - SURFACE IMPOUNDMENTS**

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
D-4j(2) Operating Procedure	270.17(b)(6); 264.221(g)	If operating procedures are instrumental to preventing overtopping, describe those procedures.		
D-4j(3) Overtopping Prevention	270.17(b)(6); 264.221(g)	Unless foolproof controls are used to prevent overtopping, provide results of calculations showing that adequate freeboard will be available following 100-year, 24-hour storm event.		
D-4j(4) Freeboard Requirements	270.17(b); 264.221(g)	Freeboard requirements associated with normal and extreme wind activity should be determined unless automatic controls are used and freeboard equals or exceeds 2 feet.		
D-4j(5) Outflow Destination	270.17(b); 264.221(g)	Describe fate of liquids released through flow control devices. Identify location to which waste would be moved in event of emergency.		
D-4k Dike Stability				
D-4k(1) Engineer's Certification	270.17(d); 264.226(c)			
D-4k(2) Dike Design Description	270.17(b)(7); 264.221(h)	Provide data and/or drawings specifying design layout of the dikes and their components, including materials of construction. Determine capability of dikes to withstand failure from expected static and dynamic loadings and effects of erosion.		
D-4k(3) Erosion and Piping Protection	270.17(b); 264.221(h)	Demonstrate that dikes are designed and constructed to minimize erosion and piping, and to prevent failure due to excessive erosion. Describe procedures for correcting erosion problems identified during unit's operating life.		

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS**SECTION D. PROCESS INFORMATION - SURFACE IMPOUNDMENTS**

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
D-4k(4) Subsurface Soil Conditions	270.17(b)(7); 264.221(h)	Engineering characteristics of dike foundation materials should be verified through testing and subsurface explorations, as necessary. These explorations may include: test borings; test pits or trenches; in situ tests; and geophysical exploration methods.		
D-4k(5) Stability Analysis	270.17(b); 264.221(h)	Describe stability analyses and results for the following conditions, as appropriate: foundation soil bearing failure or settlement; failure in dike slopes; failure of impoundment cut slopes; build-up of hydrostatic pressure due to failure of drainage system, dike cover, and liner; and rapid drawdown.		
D-4k(6) Strength and Compressibility Test Results	270.17(b); 264.221(h)	Provide results of strength and consolidation tests on dike materials together with description of sampling procedures and test methods.		
D-4k(7) Dike Construction Procedures	270.17(b); 264.221(h)	Describe methods to be used to construct dikes at new units.		
D-4k(8) Dike Construction Inspection Program	270.17(b); 264.221(h)	Describe inspection, monitoring, sampling and testing methods, and frequencies to be used during dike construction to assure that new dikes meet design requirements.		
D-4l Special Waste Management Plan for Surface Impoundments Containing Wastes F020, F021, F022, F023, F026, and F027	270.17(i); 264.231(a)			

Notes:

^a Considerations in addition to the requirements presented in the regulations.

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- ^b For each requirement, this column must indicate one of the following: NA for not applicable, IM for information missing, or the exact location of the information in the application.
- ^c If application is deficient in an area, prepare a comment describing the deficiency, attach it to the checklist, and reference the comment in this column.

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS

SECTION D. PROCESS INFORMATION - INCINERATORS

Section is Not Applicable.

Section and Requirement	Federal Regulation	Review Consideration ^a	Location in Application ^b	See Attached Comment Number ^c
D-5 Incinerators	270.19; 264.340 - 264.351			
D-5a Justification for Exemption	270.19(a)	To justify exemption under 264.340(b) or (c), document the following: (1) waste contains no, or insignificant, concentrations of Part 261, Appendix VIII materials; and (2) waste is considered hazardous solely because it is (a) ignitable and/or corrosive, or (b) reactive.		
D-5b Trial Burn	270.19(b)			
D-5b(1) Trial Burn Plan	270.19(b)	Submit trial burn plan or results of trial burn, including all required determinations.		
D-5b(1)(a) Detailed Engineering Description of Incinerator	270.62(b)(2)(ii)	Provide information per regulatory citation. Also, include process and instrumentation diagram.		
D-5b(1)(b) Sampling and Monitoring Procedures	270.62(b)(2)(iii)	Describe sampling and monitoring procedures during trial burn per regulatory citation. Sampling and analysis methods approved by the U.S. Environmental Protection Agency (EPA) must be used or, alternatively, a demonstration of equivalence with EPA-approved methods must be made.		
D-5b(1)(c) Trial Burn Schedule	270.62(b)(2)(iv)			
D-5b(1)(d) Test Protocols	270.62(b)(2)(v)			
D-5b(1)(e) Pollution Control Equipment Operation	270.62(b)(2)(vi)			
D-5b(1)(f) Shutdown Procedures	270.62(b)(2)(vii)			
D-5c Data Submitted in Lieu of Trial Burn	270.19(c)	Provide information per regulatory citation in lieu of trial burn plan.		

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS**SECTION D. PROCESS INFORMATION - INCINERATORS**

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
D-5c(1) Detailed Engineering Description of Incinerator	270.19(c)(2)	Provide information per regulatory citation. Also, include process and instrumentation diagram.		
D-5c(2) Expected Incinerator Operation	270.19(c)(6)			
D-5c(3) Design and Operating Conditions	270.19(c)(4)			
D-5c(4) Previous Trial Burn Results	270.19(c)(5)	Describe results from all previously conducted, approved trial burns.		
D-5d Determinations	270.62(b)(7)			

Notes:

^a Considerations in addition to the requirements presented in the regulations.

^b For each requirement, this column must indicate one of the following: NA for not applicable, IM for information missing, or the exact location of the information in the application.

^c If application is deficient in an area, prepare a comment describing the deficiency, attach it to the checklist, and reference the comment in this column.

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS				
SECTION D. PROCESS INFORMATION - LANDFILLS			Section is Not Applicable	
Section and Requirement	Federal Regulation	Review Consideration ^a	Location in Application ^b	See Attached Comment Number ^c
D-6	Landfills	270.21; 264.300 - 264.317		
D-6a	List of Wastes	270.21(a)		
D-6b(1)	Exemption Based on Existing Portion	270.21(b)(1); 264.301(a)	Existing portions of landfills that have waste in place on November 8, 1984, and will have only vertical expansion are exempted from liner system requirements. Provide plan showing limits of existing portion.	
D-6b(2)	Exemption Based on Alternative Design and Location	270.21(b)(1); 264.301(d)		
D-6b(3)	Exemption for Replacement Landfill Unit	270.21(b)(1); 264.301(f)		
D-6b(4)	Exemption for Monofills	270.21(b)(1); 264.301(e)		
D-6b(5)	Groundwater Monitoring Exemption	270.21(c); 264.90(b)(2)	If exemption from Subpart F groundwater monitoring requirements is sought, provide data demonstrating that the following conditions are met.	
D-6b(5)(a)	Engineered Structure	270.21(c); 264.90(b)(2)(i)	Provide design data showing that unit for which exemption is sought is an engineered structure.	
D-6b(5)(b)	No Liquid Waste	270.21(c); 264.90(b)(2)(ii)	Describe procedures for ensuring that no liquid waste or waste containing free liquids will be received by, or contained, in the unit.	
D-6b(5)(c)	Exclusion of Liquids	270.21(c); 264.90(b)(2)(iii)	Provide design and operating data demonstrating how liquids, precipitation, and other runoff will be excluded from the unit.	

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS**SECTION D. PROCESS INFORMATION - LANDFILLS**

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
D-6b(5)(d) Containment System	270.21(c); 264.90(b)(2)(iv)	Describe containment system (both inner and outer layers) that will enclose waste.		
D-6b(5)(e) Leak Detection System	270.21(c); 264.90(b)(2)(v)	Describe design and operating data demonstrating leak detection system built into each containment layer.		
D-6b(5)(f) Operation of Leak Detection System	270.21(c); 264.90(b)(2)(vi)	Demonstrate means for ensuring continuing operation and maintenance of leak detection systems during active life of unit and closure and post-closure care periods.		
D-6b(5)(g) No Migration	270.21(c); 264.90(b)(2)(vii)	Demonstrate that unit will not allow hazardous constituents to migrate beyond outer layer of containment system prior to end of post-closure care period.		
D-6c Liner System, General Items	270.21(b)(1); 264.301(a),(c)	Discuss the items that apply to liner system as a whole.		
D-6c(1) Liner System Description	270.21(b)(1); 264.301(a),(c)	Provide detailed description of liner system, demonstrating that any flow of liquids into and through liners will be prevented. Liner system includes liner foundation, bottom composite liner, leachate detection system, top synthetic liner, and any protective layer placed to protect leachate collection system from damage.		
D-6c(2) Liner System Location Relative to High Water Table	270.21(b)(1); 264.301(a)(1)(i)	Provide geological cross sections showing groundwater levels with seasonal fluctuations and liner foundation elevations.		

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS				
SECTION D. PROCESS INFORMATION - LANDFILLS				
Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
D-6c(3) Loads on Liner System	270.21(b)(1); 264.301(a)(1)(i)	Provide results of calculations defining maximum loads or stresses that will be placed on liner system considering: <input type="checkbox"/> both static and dynamic loads <input type="checkbox"/> stresses due to installation or construction <input type="checkbox"/> stresses resulting from operating equipment <input type="checkbox"/> stresses due to maximum quantity of waste, cover, and proposed post-closure land use <input type="checkbox"/> stresses resulting from settlement, subsidence, or uplift <input type="checkbox"/> internal and external pressure gradients.		
D-6c(4) Liner System Coverage	270.21(b)(1); 264.301(a)(1)(iii)			
D-6c(5) Liner System Exposure Prevention	270.21(b)(1); 264.301(a)(1)(i)	Demonstrate that the liner system will not be exposed to wind or sunlight or, if exposure to any part of the system is to be permitted, that such exposure will not result in unacceptable degradation of that portion of the system.		
D-6d Liner System, Foundation				
D-6d(1) Foundation Description	270.21(b)(1); 264.301(a)(1)(ii)	Describe foundation for liner system, including foundation materials and indicate bearing elevations on geological and construction drawings. Indicate any load-bearing embankments placed to support liner system.		

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS				
SECTION D. PROCESS INFORMATION - LANDFILLS				
Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
D-6d(2) Subsurface Exploration Data	270.21(b)(1); 264.301(a)(1)(ii)	Verify engineering characteristics of liner system foundation materials through subsurface explorations. Provide information to fully describe these efforts.		
D-6d(3) Laboratory Testing Data	270.21(b)(1); 264.301(a)(1)(ii)	Provide index testing results to classify site materials and lab test data to evaluate engineering properties of foundation materials. Provide references to standard test procedures.		
D-6d(4) Engineering Analyses	270.21(b)(1); 264.301(a)(1)(ii)	Provide engineering analyses based on subsurface exploration and laboratory testing data. Include discussion of methods used, assumptions, copies of calculations, and appropriate references.		
D-6d(4)(a) Settlement Potential	270.21(b)(1); 264.301(a)(1)(ii)	Provide estimates of total and differential settlement of liner system foundation. Consider stresses imposed by liner system and applicable stresses computed in item D-6c(3).		
D-6d(4)(b) Bearing Capacity	270.21(b)(1); 264.301(a)(1)(ii)	Provide analysis of allowable bearing capacity of liner system foundation.		
D-6d(4)(c) Stability of Landfill Slopes	270.21(b)(1); 264.301(a)(1)(ii)	Provide, as appropriate, analyses of stability of: C excavated slopes for units constructed below grade C embankment slopes for units constructed with earthen dikes or berms C landfill slopes consisting of liner system or cover system placed on waste.		
D-6d(4)(d) Potential for Excess Hydrostatic or Gas Pressure	270.21(b)(1); 264.301(a)(1)(ii)	Provide estimates of potential for bottom heave or blow-out of liner system due to unequal hydrostatic or gas pressures.		
D-6e Liner System, Liners				

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS**SECTION D. PROCESS INFORMATION - LANDFILLS**

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
D-6e(1) Synthetic Liners	270.21(b)(1); 264.301(a)(1)(ii),(c)	For each synthetic liner in system or under consideration, provide following general information: thickness; type; material; brand name; and manufacturer.		
D-6e(1)(a) Synthetic Liner Compatibility Data	270.21(b)(1); 264.301(a)(1)(i)	Provide summary and discuss test results and conclusions as to suitability of synthetic liner based on liner/waste compatibility testing.		
D-6e(1)(b) Synthetic Liner Strength	270.21(b)(1); 264.301(a)(1)(i)	Provide data showing that synthetic liners, including seams, have sufficient strength after exposure to waste and waste leachate.		
D-6e(1)(c) Synthetic Liner Bedding	270.21(b)(1); 264.301(a)(1)(ii)	Demonstrate that sufficient bedding will be provided above and below synthetic liners to prevent rupture during installation and operation. Synthetic membrane of bottom composite liner should be placed directly on soil portion.		
D-6e(2) Soil Liners	270.21(b)(1); 264.301(a),(c)	Provide description of soil portion of bottom composite liner, including its classification, thickness, hydraulic conductivity, and material specifications.		
D-6e(2)(a) Material Testing Data	270.21(b)(1); 264.301(c)	Provide complete results for index tests, laboratory and/or in situ permeability tests, strength tests, consolidation tests, and shrink-swell properties of soil liner material. Discuss potential for dispersion and piping of soil due to flow of liquid through soil liner layer.		
D-6e(2)(b) Soil Liner Compatibility Data	270.21(b)(1); 264.301(a)(1)(i); 264.301(c)(3)(iii)	Provide complete test results of permeability testing of soil liner material using representative of leachate from surface impoundment.		

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS

SECTION D. PROCESS INFORMATION - LANDFILLS

Section and Requirement	Federal Regulation	Review Consideration ^a	Location in Application ^b	See Attached Comment Number ^c
D-6e(2)(c) Soil Liner Strength	270.21(b)(1); 264.301(a)(1)(i); 264.301(c)(3)(iii)	Demonstrate that soil liner has sufficient strength to support loads/stresses computed in item D-4c(3).		
D-6f Liner System, Leachate Collection/Detection Systems	270.21(b)(1); 264.301(a)(2); 264.301(c)(2),(3)			
D-6f(1) System Operation and Design	270.21(b)(1); 264.301(a)(2); 264.301(c)(2),(3)	Describe design features of leachate detection system and how system will function to detect any leakage through either liner in timely manner.		
D-6f(2) Drainage Material	270.21(b)(1); 264.301(a)(2),(c)(3) (ii)	Describe leachate detection system drainage material.		
D-6f(3) Grading and Drainage	270.21(b)(1); 264.301(a)(2),(c)(2), (3)	Indicate slopes of leachate detection system and provide contour plan for system along with plan showing layout and spacing of piping system and any sumps, pumps, etc. Demonstrate that leak detection system is appropriately graded to assure that leakage at any point in liner system is detected in timely manner.		
D-6f(4) Maximum Leachate Head	270.21(b)(1); 264.301(a)(2),(c)(2)			
D-6f(5) Systems Compatibility	270.21(b)(1); 264.301(a)(2)(i)(A), (c)(3)(iii)			
D-6f(6) Systems Strength	270.21(b)(1); 264.301(a)(2)(i)(B), (c)(3)(iii)			

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS				
SECTION D. PROCESS INFORMATION - LANDFILLS				
Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
D-6f(6)(a) Stability of Drainage Layers	270.21(b)(1); 264.301(a)(2)(i)(B), (c)(3)(iii)			
D-6f(6)(b) Strength of Piping	270.21(b)(1); 264.301(a)(2)(i)(B), (c)(3)(iii)	Demonstrate that pipe used in piping systems have sufficient strength to support loads as computed in item D-6c(3).		
D-6f(7) Prevention of Clogging	270.21(b)(1); 264.301(a)(2)(ii), (c)(3)(iv)			
D-6f(8) Liquid Removal	270.21(b)(1); 264.301(c)(3)(v),(4)			
D-6f(9) Location Relative to Water Table	270.21(b)(1)(iii); 264.301(c)(5)			
D-6g Liner System, Construction and Maintenance				
D-6g(1) Material Specifications				
D-6g(1)(a) Synthetic Liners	270.21(b)(1); 264.301(a)(1)	Provide detailed material specifications for specific synthetic liner or liners to be used.		
D-6g(1)(b) Soil Liners	270.21(b)(1); 264.301(a)(1)	For soil liners constructed of borrowed material, provide specifications. For soil liners using in-place soil, provide specifications to be used to assure that all existing materials meet requirements of liner design.		
D-6g(1)(c) Leachate Collection/Detection Systems	270.21(b)(1); 264.301(a),(c)	Provide material specifications for drainage layer material, filter fabric or filter layer, piping, and sumps.		
D-6g(2) Construction Specifications				

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS**SECTION D. PROCESS INFORMATION - LANDFILLS**

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
D-6g(2)(a) Liner System Foundation	270.21(b)(1); 264.301(a)(1); 264.303(a)	Provide construction specifications of foundation installation procedures. For units that use in-place material for liner system foundation, provide construction specifications for preparation of foundation.		
D-6g(2)(b) Soil Liner	270.21(b)(1); 264.301(a)(1); 264.303(a)(2)	Describe procedures for installing soil liner.		
D-6g(2)(c) Synthetic Liners	270.21(b)(1); 264.301(a)(1); 264.303(a)(1)	Provide construction specifications for placement of synthetic liners.		
D-6g(2)(d) Leachate Collection/Detection Systems	270.31(b)(1); 264.301(a),(c)	Provide construction specifications for placement of all components of leachate collection/detection systems.		
D-6g(3) Certified Quality Auditor (CQA) Program	270.21(b)(1); 270.30(k)(2); 264.19; 264.303(a)	Provide complete details of CQA program to be used during construction of liner system to assure that it is built as designed.		
D-6g(4) Maintenance Procedures for Leachate Collection/Detection Systems	270.21(b)(1); 264.301(a),(c)	Describe anticipated maintenance activities that will be used to assure proper operation of leachate collection/detection systems throughout landfill's expected life.		
D-6g(5) Liner Repairs During Operations	270.21(b)(1); 264.301(a)	Describe methods that will be used to repair any damage to liner that occurs while landfill is in operation during placement of waste (such as a dozer ripping the liner).		
D-6h Action Leakage Rate	270.21(b)(1)(v); 264.302			
D-6h(1) Determination of the Action Leakage Rate	270.21(b)(1)(v); 264.302(a)			

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS**SECTION D. PROCESS INFORMATION - LANDFILLS**

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
D-6h(2) Monitoring the Leakage	270.21(b)(1)(v); 264.302(b)	To determine if action leakage rate has been exceeded, owner/operator must convert required leachate flow rate monitoring data to average daily flow rate for each sump. This average daily flow rate must be calculated weekly during active life of facility and closure period, and monthly during post-closure care period.		
D-6i Leakage Response Action Plan	270.21(b)(1)(v); 264.304			
D-6i(1) Response Actions	270.21(b)(1)(v); 264.304(a)			
D-6i(2) Leak and/or Remedial Determinations	270.21(b)(1)(v); 264.304(b),(c)			
D-6i(3) Notifications	270.21(b)(1)(v); 264.304(b)			
D-6j Runon and Runoff Control Systems				
D-6j(1) Runon Control System	270.21(b)(2); 264.301(g)	Describe system that will be used to prevent runon onto active portions of landfills.		
D-6j(1)(a) Design and Performance	270.21(b)(2); 264.301(g)	Describe runon control system design and how that design prevents runon from reaching active portions of site. Provide plan view.		
D-6j(1)(b) Calculation of Peak Flow	270.21(b)(1); 264.301(g)	Identify peak surface water flow expected to result from 2-year design storm. Provide copies of calculations and data.		
D-6j(2) Runoff Control System	270.21(b)(3); 264.301(h)	Describe runoff control system to be used to collect and control runoff from active portions.		

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS

SECTION D. PROCESS INFORMATION - LANDFILLS

Section and Requirement	Federal Regulation	Review Consideration ^a	Location in Application ^b	See Attached Comment Number ^c
D-6j(2)(a) Design and Performance	270.21(b)(3); 264.301(h)	Describe runoff collection and control system design. Indicate fate of collected runoff that is considered hazardous waste until tested and/or treated.		
D-6j(2)(b) Calculation of Peak Flow	270.21(b)(3); 264.301(h)	Identify total runoff volume expected to result from at least a 24-hour, 25-year storm event. Provide copies of calculations and data.		
D-6j(3) Management of Collection and Holding Units	270.21(b)(4); 264.301(i)	Describe how collection and holding facilities associated with runoff and runoff control systems will be emptied or otherwise managed expeditiously after storms to maintain system design capacity. Describe fate of liquids discharged from these systems.		
D-6j(4) Construction	270.21(b)(2),(3); 264.301(g),(h)	Provide detailed construction and material specifications for runoff and runoff control systems.		
D-6j(5) Maintenance	270.21(b)(2),(3); 264.301(g),(h)	Describe any maintenance activities required to assure continued proper operations of runoff and runoff control systems throughout active life of unit.		
D-6k Control of Wind Dispersal	270.21(b)(5); 264.301(j)			
D-6L Liquids in Landfills				
D-6L(1) Bulk or Noncontainerized Free Liquids	270.21(h); 264.314	Describe procedures that will be used to ensure that no bulk or noncontainerized liquid hazardous waste or waste with free liquids will be placed in landfill. Demonstrate, by paint filter test, Method 9095, that no free liquids will be placed in landfill.		

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS

SECTION D. PROCESS INFORMATION - LANDFILLS

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
D-6L(2) Containers Holding Free Liquids	270.21(h); 264.314(d)	For facilities that intend to dispose of containers holding free liquids, describe how free liquids will be removed from containers or stabilized within container before container is placed in landfill. If liquid is removed, container must be backfilled or crushed.		
D-6L(3) Restriction to Small Containers	270.21(h); 264.314(d)(2)	If small containers are to be disposed of in landfill, demonstrate by indicating container volume, that containers will be very small (such as ampules).		
D-6L(4) Nonstorage Containers	270.21(h); 264.314(d)(3)	If nonstorage containers are to be disposed of in landfill, demonstrate by describing the containers designed to hold free liquids for use other than storage (e.g., batteries, capacitors).		
D-6L(5) Lab Packs	270.21(h); 264.314(d)(4)	Describe how it will be assured that lab packs to be landfilled containing free liquids meet requirements for lab packs.		
D-6L(5)(a) Inside Containers	270.21(h); 264.314(d)(4); 264.316(a)			
D-6L(5)(b) Overpack	270.21(h); 264.314(d)(4); 264.316(b)	Demonstrate that overpacking consists of metal, Department of Transportation (DOT) containers, metal DOT containers, with open heads no larger than 110 gallons; and sufficient sorbent material determined to be non-biodegradable to completely sorb all liquid contents of inside container.		

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS				
SECTION D. PROCESS INFORMATION - LANDFILLS				
Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
D-6L(5)(c) Sorbent Material	270.21(h); 264.314(d)(4),(e) 264.316	Demonstrate that sorbent materials used are no capable of reacting dangerously with, being decomposed by, or being ignited by contents of inside containers.		
D-6L(5)(d) Incompatible Wastes	270.21(h); 264.314(d)(4); 264.316(d)	Demonstrate that incompatible waste will not be placed in same outside containers.		
D-6L(5)(e) Reactive Wastes	270.21(h); 264.314(d)(4); 264.316(d)	Demonstrate that incompatible waste will not be placed in same outside containers.		
D-6m Containerized Wastes	270.21(i); 264.315			
D-6n Special Waste Management Plan for Landfills Containing Wastes F020, F021, F022, F023, F026, and F027	270.21(j); 264.317	Provide plan for waste management in this special facility. Plan must address the following factors.		
D-6n(1) Waste Descriptions	270.21(j)(1); 264.317(a)(1)	Identify volume, physical, and chemical characteristics of waste, including potential to migrate through soil or volatilize or escape into atmosphere.		
D-6n(2) Soil Description	270.21(j)(2); 264.317(a)(2)	Describe attenuative properties of underlying and surrounding soils or other materials.		
D-6n(3) Mobilizing Properties	270.21(j)(2); 264.317(a)(2)	Describe mobilizing properties of other materials codisposed of with this waste.		

Notes:

^a Considerations in addition to the requirements presented in the regulations.

^b For each requirement, this column must indicate one of the following: NA for not applicable, IM for information missing, or the exact location of the information in the application.

^c If application is deficient in an area, prepare a comment describing the deficiency, attach it to the checklist, and reference the comment in this column.

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS				
SECTION D. PROCESS INFORMATION - LAND TREATMENT				Section is Not Applicable
Section and Requirement	Federal Regulation	Review Consideration ^a	Location in Application ^b	See Attached Comment Number ^c
D-7	Land Treatment	270.20; 264.270 - 264.283		
D-7a	Treatment Demonstration	270.20(a); 264.272		
D-7a(1)	Demonstration Wastes	270.20(a)(1); 264.272(a),(c)(1)(i)	Describe waste used in demonstration and waste to be treated during normal operation. Identify concentrations of all hazardous constituents reasonably expected to be present in both wastes.	
D-7a(2)	Demonstration Data Sources	270.20(a)(2); 264.272(b)	Describe source of data used for treatment demonstration and provide available determinations.	
D-7a(2)(a)	Existing Literature	270.20(a)(2); 264.272(b)	If existing literature is used to demonstrate treatment, submit brief written review of scientific literature and previous studies that contain pertinent information. Information sources should be properly referenced. In general, existing literature will not be acceptable as demonstration unless it can be shown that site and waste characteristics are identical to those in literature.	
D-7a(2)(b)	Operating Data	270.20(a)(2); 264.272(b)	Provide any operating data gathered from units to be permitted, including application rate data and operating records.	
D-7a(3)	Laboratory/Field Testing Programs	270.20(a)(3); 264.272(b),(c)	Field and laboratory tests to be used for demonstration must be thoroughly described. Include interpretive discussions as appropriate.	

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS

SECTION D. PROCESS INFORMATION - LAND TREATMENT

Section and Requirement	Federal Regulation	Review Consideration ^a	Location in Application ^b	See Attached Comment Number ^c
D-7a(3)(a) Toxicity Testing	270.20(a)(2); 264.272(b)	Describe acute toxicity test procedures used to estimate impact of waste application or waste constituents on soil biota responsible for waste treatment.		
D-7a(3)(b) Field Plot Testing	270.20(a)(2),(3); 264.272(b),(c)	Describe field plot studies used to demonstrate treatability of waste(s) or waste constituents.		
D-7a(3)(c) Laboratory Testing	270.20(b)(2),(3); 264.272(b),(c)	Describe laboratory test methods used to demonstrate treatability of waste(s) or waste constituents.		
D-7b Land Treatment Program	270.20(b); 264.271	Describe characteristics and operating conditions of land treatment unit(s) to be permitted.		
D-7b(1) List of Wastes	270.20(b)(1); 264.271(b)			
D-7b(2) Operating Procedures	270.20(b)(2); 264.273(a)	Describe operating procedures used to assure uniform and complete degradation, transformation, and immobilization.		
D-7b(2)(a) Waste Application Rates	270.20(b)(2)(i); 264.273(a)(1)	Identify rate and frequency of waste application and concentration of limiting constituents in waste.		
D-7b(2)(b) Waste Application Methods	270.20(b)(2)(i); 264.273(a)(1)	Describe method(s) used to apply and incorporate waste into treatment zone.		
D-7b(2)(c) Control of Soil pH	270.20(b)(2)(ii); 264.273(a)(2)	Identify acceptable limits of soil pH and describe rationale for those limits. Describe how soil pH will be measured and adjusted, including a schedule for the same.		

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS**SECTION D. PROCESS INFORMATION - LAND TREATMENT**

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
D-7b(2)(d) Enhancement of Microbial or Chemical Reactions	270.20(b)(2)(iii); 264.273(a)(3)	Describe measures used to enhance treatment, including method and frequency of such measures (e.g., fertilization, microbial inoculations, soil aeration).		
D-7b(2)(e) Control of Soil Moisture	270.20(b)(2)(iv); 264.273(a)(4)	Identify limits on soil moisture content. Describe how soil moisture will be monitored and adjusted, if necessary.		
D-7c Unsaturated Zone Monitoring Plan	270.20(b)(3); 264.278	Submit unsaturated zone monitoring plan describing measures used to determine if hazardous wastes have migrated from treatment zone.		
D-7c(1) Soil-Pore Liquid Monitoring	270.20(b)(3); 264.278	Describe program for sampling and analysis of soil-pore liquid to detect migration of dissolved constituents below treatment zone.		
D-7c(1)(a) Sampling Location	270.20(b)(3)(ii); 264.278(b), (d)	Identify sampling locations and indicate that samples will be collected immediately below treatment zone.		
D-7c(1)(b) Sampling Frequency	270.20(b)(3)(i); 264.278(e)	Provide schedule for sampling soil-pore liquid.		
D-7c(1)(c) Sampling Equipment	270.20(b)(3)(i); 264.278(e)	Identify equipment used to obtain soil-pore liquid samples.		
D-7c(1)(d) Sampling Equipment Installation	270.20(b)(3)(i); 264.278(e)	Describe procedures used to install soil-pore liquid monitoring devices.		
D-7c(1)(e) Sampling Procedures	270.20(b)(3)(i); 264.278(e)(1),(2)			
D-7c(1)(f) Analytical Procedures	270.20(b)(3)(iii); 264.278(e)(3)	Identify analytical procedures used to determine concentration of hazardous constituents in soil-pore liquid samples.		

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS**SECTION D. PROCESS INFORMATION - LAND TREATMENT**

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
D-7c(1)(g) Chain of Custody	270.20(b)(3)(iv); 264.278(e)(4)			
D-7c(1)(h) Background Values	270.20(b)(3)(v); 264.278(c)	Describe sampling and analytical program used to establish background soil-pore liquid concentrations of hazardous constituents. Provide background data, if available.		
D-7c(1)(i) Statistical Methods	270.20(b)(3)(vi); 264.278(f)	Describe statistical methods that will be used to determine differences between background and treatment zone concentrations of hazardous constituents.		
D-7c(1)(j) Justification of Principle Hazardous Constituents	270.20(b)(3)(vii); 264.278(a)(2)	Provide suggested list of 261 Appendix VIII hazardous constituents to be monitored for in soil-pore liquids.		
D-7c(2) Soil Core Monitoring	270.20(b)(3); 264.278	Describe program for monitoring soil cores to detect migration of hazardous constituents below treatment zone.		
D-7c(2)(a) Sampling Location	270.20(b)(3)(ii); 264.278(b),(d)	Identify sampling locations and indicate that soil cores will be collected immediately below treatment zone.		
D-7c(2)(b) Sampling Frequency	270.20(b)(3)(i); 264.278(e)	Provide schedule for sampling soil.		
D-7c(2)(c) Sampling Equipment	270.20(b)(3)(i); 264.278(e)	Identify equipment used to sample soil cores.		
D-7c(2)(d) Sampling Procedures	270.20(b)(3)(i); 264.278(e)(1),(2)			
D-7c(2)(e) Analytical Procedures	270.20(b)(3)(iii); 264.278(e)(3)	Identify analytical methods used to determine concentration of hazardous constituents in soil core samples.		

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS**SECTION D. PROCESS INFORMATION - LAND TREATMENT**

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
D-7c(2)(f) Chain of Custody	270.20(b)(3)(iv); 264.278(e)(4)			
D-7c(2)(g) Background Values	270.20(b)(3)(v); 264.278(c)	Describe sampling and analytical program used to establish background soil core concentrations of hazardous constituents. Provide background data, if available.		
D-7c(2)(h) Statistical Methods	270.20(b)(3)(vi); 264.278(f)	Describe statistical methods that will be used to determine differences between background and treatment zone concentrations of hazardous constituents.		
D-7c(2)(i) Justification of Principal Hazardous Constituents	270.20(b)(3)(vii); 264.278(a)(2)	Provide suggested list of 261 Appendix VIII hazardous constituents to be monitored for in soil core samples.		
D-7d Treatment Zone Description	270.20(b)(5); 264.271(c)	Identify dimensions of treatment zone.		
D-7d(1) Horizontal and Vertical Dimensions	270.20(b)(5); 264.271(c)			
D-7d(2) Soil Survey	270.20(b)(2); 264.272(c)(1)(iv)	Provide map or plat plan delineating horizontal boundaries of treatment zone and all soil series occurring within treatment zone.		
D-7d(3) Soil Series Descriptions	270.20(b)(2); 264.272(c)(1)(iv)	Submit description of each soil series identified within treatment zone.		
D-7d(4) Soil Sampling Data	270.20(b)(2); 264.272(1)(iv)			
D-7d(5) Seasonal High Water Table	270.20(b); 264.271(c)(2)	Identify depth to seasonal high water table and source of that data.		

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS**SECTION D. PROCESS INFORMATION - LAND TREATMENT**

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
D-7e Unit Design, Construction, Operation, and Maintenance	270.20(c); 264.273	Describe design, construction, operation, and maintenance of runon, runoff, and wind dispersal controls.		
D-7e(1) Runon Control	270.20(c)(1); 264.273(c)	Submit scale drawing of unit showing any runon controls used.		
D-7e(2) Runoff Control	270.20(c)(1); 264.273(c)	Describe runoff collection and control system.		
D-7e(3) Minimizing Hazardous Constituent Runoff	270.20(c)(3); 264.273(b)			
D-7e(4) Management of Accumulated Runon and Runoff	270.20(c)(4); 264.273(e)	Describe fate of collected surface water, including sampling and analysis protocols for determining contaminant levels.		
D-7e(5) Control of Wind Dispersal	270.20(c)(6); 264.273(f)			
D-7f Food-Chain Crops	270.20(d); 264.276	Demonstrate that there is no substantial risk to human health or environment caused by growth of food-chain crops on unit.		
D-7f(1) Food-Chain Crop Demonstration	270.20(d); 264.276(a)(1)			
D-7f(1)(a) Demonstration Basis	270.20(d)(1),(2); 264.276(a)(3)(i)	Show that demonstration results will be representative of unit to be permitted.		
D-7f(1)(b) Test Procedures	270.20(d)(3); 264.276(a)(3)(ii)	Describe procedures used in any tests referenced or conducted.		
D-7f(2) Cadmium-Bearing Wastes	270.20(e); 264.276(b)			

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS				
SECTION D. PROCESS INFORMATION - LAND TREATMENT				
Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
D-7f(2)(a) Crops for Human Consumption	270.20(e); 264.276(b)(1)	If crops are to be grown for human consumption, provide: soil pH; soil pH controls; cadmium-loading rate; and soil cation exchange capacity.		
D-7f(2)(b) Animal Feed	270.20(e); 264.276(b)(2)	If only animal feed is to be grown, provide soil pH and soil pH controls. Provide copy of operating plan demonstrating how animal feed will be distributed to preclude ingestion by humans, including control of alternative land use.		
D-7g Special Waste Management Plan for Land Treatment Units Containing Wastes F020, F021, F022, F023, F026, and F027	270.20(i); 264.283	Provide plan describing how land treatment units containing referenced waste are, or will be, designed, constructed, operated, and maintained to protect human health and environment.		
D-7g(1) Waste Description	270.20(i)(1); 264.283(a)(1)			
D-7g(2) Soil Description	270.20(i)(2); 264.283(a)(2)			
D-7g(3) Mobilizing Properties	270.20(i)(3); 264.283(a)(3)			
D-7g(4) Additional Management Techniques	270.20(i)(4); 264.283(a)(4)			
D-7h Incompatible Wastes	270.20(h); 264.282	Indicate that incompatible waste will not be placed in, or on, the same treatment zone.		

Notes:

^a Considerations in addition to the requirements presented in the regulations.

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- ^b For each requirement, this column must indicate one of the following: NA for not applicable, IM for information missing, or the exact location of the information in the application.
- ^c If application is deficient in an area, prepare a comment describing the deficiency, attach it to the checklist, and reference the comment in this column.

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS				
SECTION D. PROCESS INFORMATION - MISCELLANEOUS TREATMENT				Section is Not Applicable
Section and Requirement	Federal Regulation	Review Consideration ^a	Location in Application ^b	See Attached Comment Number ^c
D-8	Miscellaneous Units	270.23; 264.601	Identify all miscellaneous units that treat, store, or dispose of hazardous waste at facility, but do not fit current definition of container, tank, surface impoundment, etc. These units may include: <ul style="list-style-type: none"> C geologic repositories C deactivated missile silos C thermal treatment units other than incinerators, boilers, or industrial furnaces C units open burning and open detonating explosive waste C certain chemical/physical/biological treatment units. 	
D-8a	Description of Miscellaneous Units	270.23(a)		
D-8b	Waste Characterization	270.23; 264.601(a)(1), (b)(1),(c)(1)	Provide information on volume and concentration of waste in order to determine release potential.	
D-8c	Treatment Effectiveness	270.23(d)		
D-8d	Environmental Performance Standards for Miscellaneous Units		Environmental performance standards must be established and maintained to protect human health and environment.	
D-8d(1)	Protection of Groundwater and Subsurface Environment	270.23(b),(c); 264.601(a)		
D-8d(1)(a)	Environmental Assessment	270.23(b),(c); 264.601(a)	Applicant must conduct assessment of potential for releases to groundwater or the subsurface environment. Both saturated and unsaturated zones must be considered in evaluating potential for subsurface migration.	

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS**SECTION D. PROCESS INFORMATION - MISCELLANEOUS TREATMENT**

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
D-8d(1)(b) Performance Standards	270.23(b); 264.601	Based on assessments, performance standards must be developed and maintained.		
D-8d(2) Protection of Surface Water, Wetlands, and Soil Surfaces	270.23(b),(c); 264.601(b)			
D-8d(2)(a) Environmental Assessment	270.23(b),(c); 264.601(b)	Applicant must conduct assessment of potential for releases to surface water, wetlands, or soil surface.		
D-8d(2)(b) Performance Standards	270.23; 264.601	Based on assessments, performance standards must be developed and maintained.		
D-8d(3) Protection of the Atmosphere	270.23(b),(c); 264.601			
D-8d(3)(a) Environmental Assessment	270.23(b),(c); 264.601(c)	Applicant must conduct assessment of potential for release to air.		
D-8d(3)(b) Performance Standards	270.23; 264.601	Based on assessments, performance standards must be developed and maintained.		
D-8e Monitoring, Analysis, Inspection, Response, Reporting, and Corrective Action	270.23(a); 264.602			
D-8e(1) Elements of a Monitoring Program	270.23(a); 264.602	Monitoring program must include procedures for sampling, analysis, and evaluation of data, suitable response procedures, and a regular inspection schedule.		
D-8e(2) Air Monitoring Alternatives	270.23(a); 264.602	For situations in which ambient air monitoring would be unsafe or impractical, possible alternatives may include analysis of waste, emissions measurements, and periodic monitoring with portable detectors.		

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Notes:

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CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS				
SECTION D. PROCESS INFORMATION - BOILERS/INDUSTRIAL FURNACES Section is Not Applicable				
Section and Requirement	Federal Regulation	Review Consideration ^a	Location in Application ^b	See Attached Comment Number ^c
D-9	Boilers and Industrial Furnaces (BIF)			
D-9a	Waivers/Exemptions	270.22(a)(2)(i); 266.104(a)(4); 266.110	If applying for waiver or exemption, provide information demonstrating compliance with requirements outlined in this section.	
D-9a(1)	Waiver of Destruction and Removal Efficiency (DRE) Trial Burn for Boilers	270.22(a)(2)(i); 266.104(a)(4); 266.110		
D-9a(2)	Low Risk Waste Exemption	270.22(a)(2)(ii); 266.104(a)(5); 266.109(a)	The DRE standard for a BIF may be waived provided certain criteria listed in regulatory citation are met and documented.	
D-9a(3)	Waiver of Particulate Matter Standard	270.22(a)(4); 266.109(b)	The particulate matter standard of 266.105 and trial burn for particulate matter may be waived if: the BIF complies with Tier I or Adjusted Tier I metals feed rate screening limits under 266.106(b) or (e) and submits documentation showing conformance with trial burn waiver under checklist Section D-9a(4) below; and BIF meets requirements of low risk waste exemption under checklist Section D-9a(2) above.	
D-9a(4)	Waiver of Trial Burn for Metals	270.22(a)(3); 266.106(b),(e)		
D-9a(5)	Waiver of Trial Burn for Hydrogen Chloride (HCl)/Cl ₂	270.22(a)(5); 266.107(b),(e)		
D-9b	Pretrial Burn Requirements for New BIFs	270.66(b)(1); 266.102(d)(4)(i); 266.102(e)	Time required to bring new BIF to point of operational readiness for trial burn must be minimum necessary and cannot exceed 720 hours, or up to 1,440 hours if applicant shows good cause for requiring an extension.	

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS
SECTION D. PROCESS INFORMATION - BOILERS/INDUSTRIAL FURNACES

Section and Requirement	Federal Regulation	Review Consideration ^a	Location in Application ^b	See Attached Comment Number ^c
D-9b(1) Pretrial Burn Requirements for New BIFs - Organic Emission Standards	270.66(b)(1)(i); 266.102(e)(2); 266.104(d),(e)			
D-9b(2) Pretrial Burn Requirements for New BIFs - Particle Matter Emissions Standards	270.66(b)(1)(i); 266.105			
D-9b(3) Pretrial Burn Requirements for New BIFs - Metal Emissions Standards	270.66(b)(1)(i); 266.102(e)(4)(i), (ii); 266.106			
D-9b(4) Pretrial Burn Requirements for New BIFs - Alternative Metals Approach	270.66(b); 266.102(e)(4)(iii); 266.106(f)	For conformance with alternative metals approach, description of operating conditions must: describe approach that will be used to comply; specify how approach ensures compliance with metals emissions standards of 266.106(c) and (d); specify how approach can be effectively implemented and monitored; and provide such other information as necessary to ensure that the standards of 266.106(c) or (d) are met.		
D-9b(5) Pretrial Burn Requirements for New BIFs - Hydrogen Chloride/Chlorine Emission Standards	270.66(b)(1)(i); 266.102(e)(5)(i); 266.107			
D-9b(6) Pretrial Burn Requirements for New BIFs - Fugitive Emissions	270.66(b)(1)(i); 266.102(e)(7)(i)	Description of operating conditions must thoroughly describe method by which fugitive emissions will be controlled.		
D-9b(7) Pretrial Burn Requirements for New BIFs - Automatic Waste Feed Cutoff	270.66(b)(1)(i); 266.102(e)(7)(ii), (iii)			

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS					
SECTION D. PROCESS INFORMATION - BOILERS/INDUSTRIAL FURNACES					
	Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
D-9b(8)	Pretrial Burn Requirements for New BIFs - Monitoring Requirements	270.66(b)(1)(i); 266.102(e)(8),(10)			
D-9c	Trial Burn Plan Requirements for All BIFs	270.66(b)(2),(c), (e); 266.102(d)(4)(ii)			
D-9d	Trial Burn Results	270.22(a)(6); 270.66(d),(f)	Results of trial burn, as specified in regulatory citation, must be submitted within 90 days of completing trial burn. The submittal must be certified on behalf of applicant by signature of a person authorized to sign a permit application or a report under 270.11.		
D-9e	Post-Trial Burn Requirements for New BIFs	270.66(b)(3)(ii); 266.102(d)(4)(iii),(e)	Post-trial burn requirements for new BIFs are the same as pretrial burn requirements for new BIFs with the following exceptions: <ul style="list-style-type: none"> C No documentation of total burn hours is required; no limit to length of time for burning. C Must submit statement identifying conditions necessary to operate in compliance. C Must submit statement specifying that BIF will stop burning when changes in combustion properties or feed rates or BIF design or operating conditions deviate from approved post-trial burn period. 		

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS				
SECTION D. PROCESS INFORMATION - BOILERS/INDUSTRIAL FURNACES				
Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
D-9f Data in Lieu of Trial Burn	270.22(a)(6); 270.66(c)(3)	A BIF may seek exemption from trial burn requirements by submitting information provided by previous compliance testing of same device, or from compliance testing or trial or operational burns of similar BIFs burning similar hazardous waste under similar conditions.		
D-9g Alternative Hydrocarbons (HC) Limit for Industrial Furnaces with Organic Matter in Raw Materials	270.22(b); 266.104(f)			
D-9h Alternative Metals Implementation Approach	270.22(c); 266.106(f)	For conformance with an alternative metals implementation approach, the information must: <ul style="list-style-type: none"> C Describe approach that will be used to comply. C Specify how approach ensures compliance with the metals emissions standards of 266.106(c) and (d). C Specify how approach can be effectively implemented and monitored. C Provide such other information as necessary to ensure that standards are met. 		
D-9i Monitoring Requirements	270.22; 266.102(e)(6),(8)	Various parameters must be continuously monitored per 266.102(e)(6) while burning hazardous waste. Data must be maintained in operating record until closure of facility.		
D-9j Automatic Waste Feed Cutoff System	270.22(d); 266.102(e)(7)(ii)	All facilities must submit description of automatic waste feed cutoff system, including any pre-alarm systems that may be used.		

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS				
SECTION D. PROCESS INFORMATION - BOILERS/INDUSTRIAL FURNACES				
Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
D-9k Direct Transfer Standards	270.22(e); 266.111; Part 264 Subparts I and J	BIFs that directly feed hazardous waste from a transport vehicle to a BIF without use of a storage unit must submit a description of the direct transfer procedures that will be used, along with other information as specified in regulatory citation.		
D-9k(1) Direct Transfer Standards - Containment System	270.22(e); 264.175	In areas where direct transfer vehicles are located, a complete description of containment system must be provided.		
D-9k(2) Direct Transfer Standards - Condition of Containers	270.22(e); 264.171			
D-9k(3) Direct Transfer Standards - Compatibility of Waste with Container	270.22(e); 264.172			
D-9k(4) Direct Transfer Standards - Management of Containers	270.22(e); 264.173			
D-9k(5) Direct Transfer Standards - Special Requirements of Ignitable or Reactive Waste	270.22(e); 264.176	Provide documentation of location of all containers holding ignitable/reactive waste.		
D-9k(6) Direct Transfer Standards - Special Requirements of Incompatible Wastes	270.22(e); 264.177	Provide statement and description of procedures to ensure compliance with management standards for incompatible waste.		
D-9k(7) Direct Transfer Standards - Closure	270.22(e); 264.178	Describe how all hazardous waste and hazardous waste residues will be removed from containment system at closure.		

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS					
SECTION D. PROCESS INFORMATION - BOILERS/INDUSTRIAL FURNACES					
Section and Requirement		Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
D-9k(8)	Direct Transfer Standards - Secondary Containment Requirements	270.22(e); 266.111(e)	Owners/operators must submit documentation demonstrating conformance with secondary containment requirements of 265.193(b),(c), and (f) - (h).		
D-9L	Bevill Residues	270.22(f); 266.112; Part 266 Appendices VII and IX			

Notes:

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CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS				
SECTION D. PROCESS INFORMATION - CONTAINMENT BUILDINGS				Section is Not Applicable
Section and Requirement	Federal Regulation	Review Consideration ^a	Location in Application ^b	See Attached Comment Number ^c
D-10	Containment Buildings	270.14(a),(b) 264.1100 - 264.1102		
D-10a	Containment Building Description	270.14(a),(b) 264.1100(a); 264.1101(a)		
D-10a(1)	Construction	270.14(a),(b) 264.1100(a); 264.1101(a)	Provide description of unit, include dimensions and materials of construction.	
D-10a(2)	Strength Requirements	270.14(a),(b) 264.1100(a); 264.1101(a)	Provide results of calculations defining maximum loads or stresses that will be placed on containment building system.	
D-10a(3)	Design Requirements for Units Not Managing Liquids	270.14(a),(b) 264.1100(b); 264.1101(d)		
D-10a(3)(a)	Primary Barrier	270.14(a),(b) 264.1100(a),(b); 264.1101(a)(4)	Provide detailed description of primary barrier, and demonstrate that it is sufficiently durable to withstand movement of personnel, waste, and handling equipment within unit.	
D-10a(4)	Design Requirements for Units Managing Liquids	270.14(a),(b) 264.1100(c); 264.1101(a)(4),(b)		
D-10a(4)(a)	Primary Barrier	270.14(a),(b) 264.1100(c)(1); 264.1101(b)(1)	Describe how primary barrier is designed and constructed to prevent migration of hazardous constituents into barrier.	

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS				
SECTION D. PROCESS INFORMATION - CONTAINMENT BUILDINGS				
Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
D-10a(4)(b) Liquid Collection System	270.14(a),(b) 264.1100(c)(2); 264.1101(b)(3)	Describe in detail liquid collection system that must be designed and constructed of materials to minimize accumulation of liquid on primary barrier.		
D-10a(4)(c) Secondary Containment System	270.14(a),(b) 264.1100(c)(3)			
D-10a(4)(c)(i) Leak Detection System	270.14(a),(b) 264.1100(c)(3); 264.1101(a),(b)(3)	Describe design and operating features of leak detection system.		
D-10a(4)(C)(ii) Secondary Barrier	270.14(a),(b) 264.1100(b)(3); 264.1101(b)(3)	Describe how secondary barrier is designed and constructed to prevent migration of hazardous constituents into barrier.		
D-10a(4)(d) Temporary Variance from Secondary Containment Requirements	270.14(a),(b) 264.1101(b)(4)			
D-10a(4)(e) Waiver of Secondary Containment Requirements	270.14(a),(b) 264.1101(e)			
D-10a(5) Design of Units Managing Both Liquids and Nonliquids in the Same Unit	270.14(a),(b) 264.1101(d)	Identify areas of containment building that are constructed both with and without secondary containment, if applicable.		
D-10a(6) Compatibility of Structure with Wastes	270.14(a),(b) 264.1101(a)(2), (b)(3)(iii)	Demonstrate that all surfaces in contact with hazardous waste, collected liquids, or leachate must be chemically compatible with those waste.		
D-10a(7) Fugitive Dust Emissions	270.14(a),(b) 264.1100(d); 264.1101(c)(1)(iv); Part 60 Appendix A			

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS

SECTION D. PROCESS INFORMATION - CONTAINMENT BUILDINGS

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
D-10a(8) Structural Integrity Requirements	270.14(a),(b) 264.1101(a)(2)			
D-10a(9) Certification of Design	270.14(a),(b) 264.1101(c)(2)			
D-10b Containment Building Operations	270.14(a),(b) 264.1101(c)			
D-10b(1) Primary Barrier Integrity	270.14(a),(b) 264.1101(b)(2)(ii), (c)(1)(i)			
D-10b(2) Volume of Waste	270.14(a),(b) 264.1101(c)(1)(ii)	Describe how owner/operator will maintain level of stored and/or treated hazardous waste within containment walls of unit so that height of any containment wall is not exceeded.		
D-10b(3) Tracking of Waste Out of Unit	270.14(a),(b) 264.1100(e); 264.1101(c)(1)(iii)			
D-10b(4) Liquids Removal	270.14(a),(b) 264.1101(b)(2)(ii), (b)(3)	Describe sumps and liquid removal methods for liquids collection and leak detection systems. Indicate fate of collected liquids and leachates, which are considered hazardous waste.		
D-10b(5) Management of Incompatible Wastes	270.14(a),(b) 264.1101(a)(3)	Indicate whether incompatible waste or treatment reagents will be placed in the unit or its secondary containment system.		
D-10b(6) Management of Liquids and Nonliquids in the Same Unit	270.14(a),(b) 264.1101(d)(2),(3)	For containment buildings that contain areas both with and without secondary containment, describe measures to prevent release of liquids or wet materials into areas without secondary containment.		

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS				
SECTION D. PROCESS INFORMATION - CONTAINMENT BUILDINGS				
Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
D-10b(7) Fugitive Dust Emissions	270.14(a),(b) 264.1100(d); 264.1101(c)(1)(iv); Part 60 Appendix A			
D-10b(8) Treatment of Wastes	270.14(a),(b) 264.1101(b)(3)(ii)	If treatment of waste is conducted in containment building, describe how treatment will be conducted to prevent release of liquids, wet materials, or liquid aerosols to other portions of building.		
D-10b(9) Equipment Decontamination	270.14(a),(b) 264.1101(c)(1)(iii)	Identify area used to decontaminate equipment and collect and manage any rinsate from decontamination. Identify fate of decontamination residues.		
D-10c Containment Buildings as Tank Secondary Containment	270.14(a),(b) 264.1101(b)(3)(iii)	Indicate whether containment building is intended to serve as a secondary containment system for a tank placed in the building. The unit must meet the requirements of 264.193(b), 264.193(c)(1), 264.193(c)(2), and 264.193(d)(1).		

Notes:

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CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS				
SECTION D. PROCESS INFORMATION - DRIP PADS				Section is Not Applicable
Section and Requirement	Federal Regulation	Review Consideration ^a	Location in Application ^b	See Attached Comment Number ^c
D-11	Drip Pads	270.26; 264.570 - .575		
D-11a	Drip Pad Description	270.26(c); 264.573(a)		
D-11a(1)	Construction	270.26(c); 264.573(a)(1) - (4); 264.573(b)(1) - (3)	Provide a description of the unit including dimensions and materials of construction. Drip pads must: be constructed of nonearthen materials; be sloped to free-drain treated wood drippage, rain and other waters or wastes to the associated collection system; and, have a curb or berm around the perimeter.	
D-11a(1)(a)	Existing Drip Pads	270.26(c); 264.572(a); 264.573(a)(4)	Existing drip pads must have a hydraulic conductivity of less than or equal to 1×10^{-7} centimeters per second. Provide a copy of the most recent written assessment of the drip pad. This assessment must be reviewed and certified by an independent, qualified registered professional engineer (PE). The assessment must be reviewed, updated and recertified annually.	
D-11a(1)(b)	New Drip Pads	270.26(c); 264.572(b); 264.573(b)	New drip pads must have a synthetic liner installed below the pad. The liner must be constructed of materials that will prevent waste from being absorbed into the liner. A leakage detection system and a leakage collection system are also required.	
D-11b(1)	Preventive Maintenance	270.26(c); 264.573(c)	Drip pads must be maintained to remain free of cracks, gaps, corrosion, etc., that could cause a release of hazardous waste.	

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS

SECTION D. PROCESS INFORMATION - DRIP PADS

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
D-11b(2) Prevent Runon and Runoff	270.26(c); 264.573(d), (e), (L)	The drip pad and associated collection system must be operated to prevent runoff. Unless protected by a structure, the runon and runoff control systems must have the capacity to prevent flow onto the drip pad from a 24-hour, 25-year storm. All collection systems must be emptied as soon as possible after storms to maintain design capacity.		
D-11b(3) Certification	270.26(c); 264.573(g)	Provide certification from a qualified, registered PE stating the drip pad meets the requirements of section 264.573.		
D-11b(4) Maintaining Collection System	270.26(c); 264.573(h)	Provide plan for removal of drippage and accumulated precipitation from collection system as necessary to prevent overflow.		
D-11b(5) Cleaning Drip Pad Surface	270.26(c); 264.573(i),(j)	Drip pad surface must be cleaned appropriately to allow weekly inspection of the entire surface and to minimize tracking of hazardous waste or hazardous waste constituents off the drip pad.		
D-11b(6) Recordkeeping	270.26(c); 264.573(k)	Maintain records sufficient to document that all treated wood is held on the pad following treatment in accordance with the requirements of this section.		

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CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS				
SECTION E. GROUNDWATER MONITORING				Section Not Applicable
Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
E-1	Exemption from Groundwater Protection Requirements	270.14(c)		
E-1a	Waste Piles	270.18(b); 264.90(b)(2), (5)		
E-1b	Landfill	270.14(c); 264.90(b)(2)		
E-1c	No Migration	270.14(c); 264.90(b)(4)		
E-1d	Drip Pad	270.26(b); 264.90(b)(2)		
E-2	Interim Status Groundwater Monitoring Data	270.14(c)(1)		
E-2a	Description of Wells	270.14(c)(1)	A copy of topographic map provided for 270.14(b) on which location and identification of each interim status monitoring well is indicated. Details of design and construction of each interim status monitoring well.	
E-2b	Description of Sampling and Analysis Procedures	270.14(c)(1); 265.92	A copy of facility's groundwater sampling and analysis plan.	
E-2c	Monitoring Data	270.14(c)(1); 265.92	Provide all interim status monitoring results.	
E-2d	Statistical Procedures	270.14(c)(1); 265.93	Provide information relating to statistical procedures.	
E-2e	Groundwater Assessment Plan	270.14(c)(1); 265.93(d)(2)	If required, based on statistical comparison results, provide specific plan for groundwater quality assessment program along with results obtained from implementation of plan.	

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS				
SECTION E. GROUNDWATER MONITORING				
Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
E-3	General Hydrogeologic Information	270.14(c)(2)	Include description of regional and site-specific geologic and hydrogeological setting.	
E-4	Topographic Map Requirements	270.14(c)(2), (3),(4)(i)		
E-5	Contaminant Plume Description	270.14(c)(2), (4),(7)	In some cases, contaminant plumes may be defined under groundwater quality assessment programs carried out during interim status period which may not address complete list of Appendix VIII constituents as required under 270.14(c)(4). Additional monitoring may be required to identify concentration of each Appendix VIII constituent in plume.	
E-6	General Monitoring Program Requirements	270.14(c)(5); 264.90(b)(4); 264.97		
E-6a	Description of Wells	270.14(c)(5); 264.97(a),(b),(c)		
E-6b	Description of Sampling and Analysis Procedures	270.14(c)(5); 264.97(d),(e),(f)		
E-6c	Procedures for Establishing Background Quality	270.14(c)(5); 264.97(a)(1),(g)		
E-6d	Statistical Procedures	270.14(c)(5); 264.97(h), (i)(1),(5),(6)		
E-6d(1)	Parametric Analysis of Variance (ANOVA)	270.14(c)(5); 264.97(h)(1), (i)(2)		

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS**SECTION E. GROUNDWATER MONITORING**

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
E-6d(2) Nonparametric ANOVA (based on ranks)	270.14(c)(5); 264.97(h)(2), (i)(2)			
E-6d(3) Tolerance or Prediction Interval Procedure	270.14(c)(5); 264.97(h)(3), (i)(4)			
E-6d(4) Control Chart Approach	270.14(c)(5); 264.97(h)(4), (i)(3)			
E-6d(5) Alternative Approach	270.14(c)(5); 264.97(h)(5),(i)			
E-7 Detection Monitoring Program	270.14(c)(6); 264.91(a)(4); 264.98			
E-7a Indicator Parameters, Waste Constituents, Reaction Products to be Monitored	270.14(c)(6) (i); 264.98(a)			
E-7b Groundwater Monitoring System	270.14(c)(6) (ii); 264.97(a) (2),(b),(c); 264.98(b)	Identify number, location, and depth of each well, and describe well construction materials.		
E-7c Background Groundwater Concentration Values for Proposed Parameters	270.14(c)(6) (iii); 264.97 (g); 264.98(c), (d)			
E-7d Proposed Sampling and Analysis Procedures	270.14(c)(6) (iv); 264.97 (d),(e),(f); 264.98(d),(e), (f)			

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS**SECTION E. GROUNDWATER MONITORING**

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
E-7e	Statistically Significant Increase in any Constituent or Parameter Identified at any Compliance Point Monitoring Well	270.14(c)(6); 264.98(g); Part 264 Appendix IX		
E-8	Compliance Monitoring Program	270.14(c)(7); 264.99		
E-8a	Waste Description	270.14(c)(7)(i)	Description must include historical records of volumes, types, and chemical composition of waste placed in units in waste management areas.	
E-8b	Characterization of Contaminated Groundwater	270.14(c)(7)(ii)	For each well at point of compliance and for each background well, provide concentrations of each constituent in 261 Appendix VIII, major cations and anions, and constituents listed in Table 1 of 264.94, if not already mentioned above.	
E-8c	Hazardous Constituents to be Monitored in Compliance Program	270.14(c)(7) (iii); 264.98 (g)(3); 264.99 (a)(1)		
E-8d	Concentration Limits	270.14(c)(7) (iv); 264.94, 264.97(g),(h); 264.99(a)(2)		
E-8e	Alternate Concentration Limits	270.14(c)(7) (iv); 264.94 (b); 264.99 (a)(2)	Provide justification for establishing alternate concentration limits. Justification must address the following two factors.	
E-8e(1)	Adverse Effects on Groundwater Quality	270.14(c)(7)(iv); 264.94(b)(1)		

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS				
SECTION E. GROUNDWATER MONITORING				
Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
E-8e(2)	Potential Adverse Effects	270.14(c)(7)(iv); 264.94(b)(2)		
E-8f	Engineering Report Describing Groundwater Monitoring Systems	270.14(c)(7)(v); 264.95; 264.97(a)(2), (b),(c); 264.99(b)	Provide details supporting representative nature of groundwater quality at background monitoring points and compliance monitoring point.	
E-8g	Proposed Sampling and Statistical Analysis Procedures for Groundwater Data	270.14(c)(7)(vi); 264.97(d),(e),(f); 264.99(c) - (g)		
E-8h	Groundwater Protection Standard Exceeded at Compliance Point Monitoring Well	270.14(c)(8); 264.99(h),(i)		
E-9	Corrective Action Program	270.14(c)(8); 264.99(j); 264.100		
E-9a	Characterization of Contaminated Groundwater	270.14(c)(8)(i)	For each well at point of compliance and for each background well, provide concentrations of each constituent in 261 Appendix VIII, major cations and anions, and constituents listed in Table 1 of 264.94, if not already determined by the above.	
E-9b	Concentration Limits	270.14(c)(8)(ii); 264.94; 264.100(a)(2)		
E-9c	Alternate Concentration Limits	270.14(c)(8)(ii); 264.94(b); 264.100(a)(2)	Provide justification for establishing alternate concentration limits. Justification must address the following two factors.	

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS				
SECTION E. GROUNDWATER MONITORING				
Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
E-9c(1)	Adverse Effects on Groundwater Quality	270.14(c)(8); 264.94(b)(1)		
E-9c(2)	Potential Adverse Effects	270.14(c)(8); 264.94(b)(2)		
E-9d	Corrective Action Plan	270.14(c)(8) (iii); 264.100 (b)	Provide detailed plans and engineering report on corrective actions proposed for facility, including maps of engineered structures, construction details, plans for removing waste, description of treatment technologies, effectiveness of correction program, description of reinjection system, additional hydrogeologic data, operation and maintenance plans, and closure and post-closure plans.	
E-9e	Groundwater Monitoring Program	270.14(c)(8) (iv); 264.100 (d)		
E-9e(1)	Description of Monitoring System	270.14(c)(7) (v),(8)		
E-9e(2)	Description of Sampling and Analysis Procedures	270.14(c)(7) (v),(8)		
E-9e(3)	Monitoring Data and Statistical Analysis Procedures	270.14(c)(7) (v),(8)		
E-9e(4)	Reporting Requirements	270.14(c)(7); 264.100(g)		

Notes:

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Facility Name: Ecobat Solutions Arizona, Inc.

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information in the application.

° If application is deficient in an area, prepare a comment describing the deficiency, attach it to the checklist, and reference the comment in this column.

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS				
SECTION F. PROCEDURES TO PREVENT HAZARDS				
Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
F-1 Security	270.14(b)(4); 264.14		Attachment F	
F-1a Security Procedures and Equipment	270.14(b)(4); 264.14	Unless waiver is granted, facility must have surveillance system or a barrier to entry.	Attachment F	
F-1a(1) 24-Hour Surveillance System	270.14(b)(4); 264.14	Monitor/camera, guards, or personnel must continuously monitor or control access to active parts of facility.	Attachment F	
F-1a(2)(a) Barrier	270.14(b)(4); 264.14	This item required if 24-hour surveillance system is not feasible. Describe artificial or natural barrier.	Attachment F	
F-1a(2)(b) Means to Control Entry	270.14(b)(4); 264.14	This item required if 24-hour surveillance system is not feasible.	Attachment F	
F-1a(3) Warning Signs	270.14(b)(4); 264.14	Signs in english must be posted at each entrance, and be legible from 25 feet.	Attachment F	
F-1b Waiver	270.14(b)(4); 264.14	Owner/operator must prevent unknowing entry, and minimize unauthorized entry of persons or livestock unless can demonstrate:	Attachment F	
F-1b(1) Injury to Intruder	270.14(b)(4); 264.14	Assure physical contact with waste, structure, or equipment will not injure unknowing intruder.	Attachment F	
F-1b(2) Violation Caused by Intruder	270.14(b)(4); 264.14	Assure disturbance of waste or equipment by unauthorized intruder will not cause a violation.	Attachment F	
F-2 Inspection Schedule	270.14(b)(5); 264.15	Inspection is required for monitoring equipment, safety emergency equipment, communication and alarm systems, decontamination equipment, security devices, and operating and structural equipment.	Attachment F	

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS**SECTION F. PROCEDURES TO PREVENT HAZARDS**

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
F-2a General Inspection Requirements	270.14(b)(5); 264.15(a),(b); 264.33		Attachment F	
F-2a(1) Types of Problems	270.14(b)(5); 264.15(b)(3)	Inspection checklist must identify types of problem.	Attachment F	
F-2a(2) Frequency of Inspections	270.14(b)(5); 264.15(b)(4)	Based on rate of deterioration of equipment and probability of environmental or human health incident.	Attachment F	
F-2a(3) Schedule of Remedial Action	270.14(b)(5); 264.15(c)	Owner/operator must immediately remedy any deterioration or malfunction of equipment or structures to ensure problem does not lead to environmental or human health hazard.	Attachment F	
F-2a(4) Inspection Log	270.14(b)(5); 264.15(d)	Provide example log or summary.	Attachment F	
F-2b Specific Process Inspection Requirements	270.14(b)(5)		Attachment F	
F-2b(1) Container Inspection	270.14(b)(5); 264.174	Inspect at least weekly.	Attachment F	
F-2b(2) Tank System Inspection	270.14(b)(5); 264.195	Owner/operator must develop schedule and inspect at least once daily.	N/A	
F-2b(2)(a) Tank System External Corrosion and Releases	270.14(b)(5); 264.195(b)(1)	Owner/operator must inspect that aboveground portion and check for corrosion.	N/A	
F-2b(2)(b) Tank System Construction Materials and Surrounding Area	270.14(b)(5); 264.195(b)(3)	Observe construction materials and area around external portion for signs of release of hazardous waste.	N/A	
F-2b(2)(c) Tank System Overfilling Control Equipment	270.14(b)(5); 264.195(a)	Develop and follow schedule for inspection of overfill controls.	N/A	
F-2b(2)(d) Tank System Monitoring and Leak Detection Equipment	270.14(b)(5); 264.195(b)(2)	Analyze data gathered from monitoring equipment to ensure tank is operating according to design.	N/A	

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS**SECTION F. PROCEDURES TO PREVENT HAZARDS**

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
F-2b(2)(e) Tank System Cathodic Protection	270.14(b)(5); 264.195(c)	Inspect according to schedule.	N/A	
F-2b(3) Waste Pile Inspection	270.14(b)(5); 270.18(d); 264.254(b)	Describe how waste pile will be inspected daily and after storms.	N/A	
F-2b(3)(a) Runon and Runoff Control System	270.14(b)(5); 264.254(b)(1)	Inspections should identify deterioration, malfunction, or improper operation of control system.	N/A	
F-2b(3)(b) Wind Dispersal System	270.14(b)(5); 264.254(b)(2)	Facility should inspect proper function of wind dispersal system.	N/A	
F-2b(3)(c) Leachate Collection and Removal System	270.14(b)(5); 270.18 (d); 264.254(b)(3), (c)	Determine whether there is leachate present in functioning double liner system.	N/A	
F-2b(4) Surface Impoundment Inspection	270.14(b)(5); 270.17(c); 264.226(b),(c)	Describe how each surface impoundment will be inspected to meet requirements of monitoring and inspection and waiver requirement.	N/A	
F-2b(4)(a) Condition Assessment	270.14(b)(5); 264.226(b)	Describe how surface impoundment will be inspected weekly and after storms.	N/A	
F-2b(4)(a)(1) Overtopping Control System	270.14(b)(5); 264.226(b)(1)	Inspect for deteriorating, malfunction, or improper operation of control system.	N/A	
F-2b(4)(a)(2) Impoundment Contents	270.14(b)(5); 264.226(b)(2)	Inspect for sudden drop in level of impoundment contents.	N/A	
F-2b(4)(a)(3) Dikes and Containment Devices	270.14(b)(5); 264.226(b)(3)	Inspect for severe erosion in containment devices.	N/A	
F-2b(4)(b) Structural Integrity	270.14(b)(5); 264.226(c)	Specify procedure for assessing integrity of surface impoundments.	N/A	

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS**SECTION F. PROCEDURES TO PREVENT HAZARDS**

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
F-2b(4)(c) Leak Detection System	270.14(b)(5); 270.17(c); 264.226(d)	Describe how double liner system and leak detection system will be inspected.	N/A	
F-2b(5)(a) Incinerator and Associated Equipment	270.14(b)(5); 264.347(b)	Describe procedures for daily visual inspection of incinerator and associated equipment.	N/A	
F-2b(5)(b) Incinerator Waste Feed Cutoff System and Alarms	270.14(b)(5); 264.347(c)	Describe procedure and frequency of testing emergency waste feed cutoff system.	N/A	
F-2b(6) Landfill Inspection	270.14(b)(5); 264.303(b)	For operating landfill, describe how it will be inspected weekly and after storms.	N/A	
F-2b(6)(a) Runon and Runoff Control System	270.14(b)(5); 264.303(b)(1)	Deterioration, malfunction, or improper operation of runon and runoff control system.	N/A	
F-2b(6)(b) Wind Dispersal Control System	270.14(b)(5); 264.303(b)(2)	Proper functioning of wind dispersal control systems, where present.	N/A	
F-2b(6)(c) Leachate Collection and Removal System	270.14(b)(5); 264.303(b)(3), (c)	In properly functioning double liner system, is there a presence of leachate? Leak detection required under 264.301(c) or 264.301(d) must record amount of leakage from each system weekly.	N/A	
F-2b(7) Land Treatment Facility Inspection	270.14(b)(5); 264.273(g)	Describe how land treatment facility will be inspected weekly and after storms.	N/A	
F-2b(7)(a) Runon and Runoff Control System	270.14(b)(5); 264.273(g)(1)		N/A	
F-2b(7)(b) Wind Dispersal Control System	270.14(b)(5); 264.273(g)(2)		N/A	
F-2b(8) Miscellaneous Unit Inspections	270.14(b)(5); 264.602	Provide inspection program that ensures compliance with standards in 264.601 and 270.23.	N/A	

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS**SECTION F. PROCEDURES TO PREVENT HAZARDS**

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
F-2b(9) Boilers and Industrial Furnaces (BIF) Inspection	270.14(b)(5); 264.15; 266.102(a)(2)(ii),(e)(8); 266.111(e)(3)	Demonstrate that BIF will be visually inspected daily, automatic waste feed cutoff inspected at least weekly, and direct transfer area at least once an hour when waste is being transferred.	N/A	
F-2b(10) Containment Building Inspection	270.14(b)(5); 264.1101(c)(3), (4)	Demonstrate owner/operator will inspect and document at least weekly, monitoring equipment, leak detection equipment, containment building, and surrounding areas for waste releases.	N/A	
F-2b(11) Drip Pad Inspection	270.14(b)(5); 264.574	Demonstrate that the drip pad owner/operator will inspect and document at least weekly and after storms, the leak detection and collection equipment, the drip pad surface, and the runoff and runoff control systems for evidence of deterioration, malfunction, improper operation, or leakage of hazardous waste.	N/A	
F-3 Waiver or Documentation of Preparedness and Prevention Requirements	270.14(b)(6) 264.32(a) - (d)	Facility must submit justification for any waiver to requirements of this section.	N/A	
F-3(a) Equipment Requirements	270.14(b); 264.32		Attachment F	
F-3(a)(1) Internal Communication	270.14(b); 264.32(a)	Describe internal communication or alarm system used to provide immediate emergency instruction to personnel.	Attachment F	
F-3(a)(2) External Communication	270.14(b); 264.32(b)	Describe device for summoning emergency assistance from local police, fire, or state/local emergency response.	Attachment F	
F-3(a)(3) Emergency Equipment	270.14(b); 264.32(c)	Demonstrate that portable fire extinguishers, fire control equipment, spill control equipment, and decontamination equipment are available.	Attachment F	

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS				
SECTION F. PROCEDURES TO PREVENT HAZARDS				
Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
F-3(a)(4) Water and Fire Control	270.14(b); 264.32(d)	Demonstrate facility has adequate fire control systems, water volume and pressure, foaming equipment, automatic sprinklers, etc.	Attachment F	
F-3(a)(5) Testing and Maintenance of Equipment	270.14(b); 264.33	Demonstrate communication, alarm, fire control equipment, spill control equipment, and decontamination equipment are tested and maintained.	Attachment F	
F-3(a)(6) Access to Communication or Alarm System	270.14(b); 264.34	When waste is being hauled, all personnel must have access to internal alarm or communication device.	Attachment F	
F-3(b) Aisle Space Requirement	270.14(b); 264.35	Aisle space is required for unobstructed movement of personnel, fire protection equipment, spill control equipment, and decontamination equipment in case of emergency.	Attachment F	
F-3(c) Documentation of Arrangements with:	270.14(b); 264.37	Owner/operator must make arrangements, as appropriate, with type of waste and hazard potential, for the potential need for services.	Attachment F	
F-3(c)(1) Police/Fire Department	270.14(b); 264.37(a)(1)	Arrange to familiarize local fire department and police with facility.	Attachment F	
F-3(c)(2) Emergency Response Teams	270.14(b); 264.37(a)(2), (a)(3)		Attachment F	
F-3(c)(3) Local Hospitals	270.14(b); 264.37(a)(4)	Arrange to familiarize local hospital with properties of hazardous waste and possible types of injury or illness to expect.	Attachment F	
F-3(c)(4) Document Agreement Refusal	270.14(b); 264.37(b)	Document refusal to enter into a coordination agreement.	Attachment F	
F-4 Prevention Procedures, Structures, and Equipment	270.14		Attachment F	

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS**SECTION F. PROCEDURES TO PREVENT HAZARDS**

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
F-4(a) Unloading Procedures	270.14(b)(8)(i)	Describe procedure used to prevent hazards in unloading operations. Identify possible loading and unloading hazards, and document steps taken to minimize or eliminate possibility of these hazards.	Attachment F	
F-4(b) Runoff	270.14(b)(8)(ii)	Describe procedure used to prevent runoff from hazardous waste handling areas.	Attachment F	
F-4(c) Water Supplies	270.14(b)(8)(iii)	Describe procedure, structures, equipment used to prevent contamination of water supply.	Attachment F	
F-4(d) Equipment and Power Failure	270.14(b)(8)(iv)	Describe procedure used to mitigate the effects of equipment failure and power outages.	Attachment F	
F-4(e) Personnel Protection Procedures	270.14(b)(8)(v)	Describe procedure, structures, equipment used to prevent contamination of personnel to hazardous waste.	Attachment F	
F-4(f) Procedures to Minimize Releases to the Atmosphere	270.14(b)(8)(vi)	Describe procedure, structures, equipment used to prevent hazardous waste releases to the atmosphere.	Attachment F	
F-5 Prevention of Reaction of Ignitable, Reactive, and Incompatible Waste	270.14(b)(9)		Attachment F	
F-5a Precautions to Prevent Ignition or Reaction of Ignitable or Reactive Wastes	270.14(b)(9); 264.17(a),(b)	Waste must be protected from sources of ignition or reaction. Describe precautions taken by facility to prevent actual ignition, including sources of spontaneous ignition and radiant heat. Owner/operator must designate safe areas for smoking and open flames. Post signs where hazard exists.	Attachment F	
F-5b General Precautions for Handling Ignitable or Reactive Waste and Mixing of Incompatible Waste	270.14(b)(9); 264.17(a)	Describe precautions taken by facility to prevent reactions that generate heat, produce flammable byproducts, cause risk of fire or explosion, threaten structural integrity, or pose threat to human life or the environment.	Attachment F	

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS**SECTION F. PROCEDURES TO PREVENT HAZARDS**

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
F-5b(1)	Documentation of Adequacy of Procedures	270.14(b); 264.17(c)	Published literature, trial test, waste analyses, or similar processes may be used.	Attachment F
F-5c	Management of Ignitable or Reactive Wastes in Containers	270.15(c); 264.176	Demonstrate that ignitable containers are at least 15 meters from facility property line.	Attachment F
F-5d	Management of Incompatible Wastes in Containers	270.15(d); 264.177	Describe procedures that ensure incompatible wastes and materials are not placed in same container.	N/A
F-5e	Management of Ignitable or Reactive Wastes in Tank Systems	270.16(j); 264.198	Describe operation procedures and how facility treats waste so it is no longer ignitable or how facility stores ignitable or reactive waste.	N/A
F-5f	Management of Incompatible Wastes in Tank Systems	270.16(j); 264.199	Demonstrate that incompatible waste and materials are not stored in same tank.	N/A
F-5g	Management of Ignitable or Reactive Wastes Placed in Waste Piles	270.18(g); 264.256	If waste is reactive or ignitable, describe how handling process will render waste pile nonreactive and/or nonignitable.	N/A
F-5h	Management of Incompatible Wastes Placed in Waste Piles	270.18(h); 264.257	Document how hazardous waste piles of incompatible materials are separated to render them nonreactive.	N/A
F-5i	Management of Ignitable or Reactive Wastes in Surface Impoundments	270.17(h); 264.229	If waste is reactive or ignitable, describe how handling process will render surface impoundments nonreactive and/or nonignitable.	N/A
F-5j	Management of Incompatible Wastes in Surface Impoundments	270.17(h); 264.230	Document how hazardous surface impoundments of incompatible materials are separated to render them nonreactive.	N/A
F-5k	Management of Ignitable or Reactive Wastes Placed in Landfills	270.21(f); 264.312	If waste is reactive or ignitable, describe how handling process will prevent reaction or ignition to landfills.	N/A

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS					
SECTION F. PROCEDURES TO PREVENT HAZARDS					
Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c	
F-5l	Management of Incompatible Wastes Placed in Landfills	270.21(g); 264.313	Document how hazardous landfills of incompatible materials are separated to render them nonreactive.	N/A	
F-5m	Management of Ignitable or Reactive Wastes Placed in Land Treatment Units	270.20(g); 264.281	If waste is reactive or ignitable, describe how handling process will render land treatment units nonreactive and/or nonignitable.	N/A	
F-5n	Management of Incompatible Wastes Placed in Land Treatment Units	270.20(h); 264.282	Document how land treatment unit piles of incompatible materials are separated to render them nonreactive.	N/A	
F-5o	Management of Incompatible Wastes Placed in Containment Buildings	270.14(a); 264.1101(a)(3)	Subsections include design, primary and secondary containment, barriers to prevent migration, leak detection, and facility logs.	N/A	

Notes:

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CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS**SECTION G. CONTINGENCY PLAN**

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
G-1 Contingency Plan	270.14(b)(7)		Attachment G	
G-2 Emergency Coordinators	270.14(b)(7); 264.52(d); 264.55	There must at least be one primary emergency coordinator available at all times.	Attachment G	
G-3 Implementation	270.14(b)(7); 264.52(a); 264.56(d)	Emergency coordinator to determine that facility has had a release, fire, or explosion that could threaten human health or the environment outside facility.	Attachment G	
G-4 Emergency Actions	270.14(b)(7); 264.56		Attachment G	
G-4a Notification	270.14(b)(7); 264.56(a)	Describe the method for immediate notification of facility personnel and necessary state and local agencies.	Attachment G	
G-4b Identification of Hazardous Materials	270.14(b)(7); 264.56(b)	Observation, records or manifest, or chemical analysis may be used by emergency coordinator.	Attachment G	
G-4c Assessment	270.14(b)(7); 264.56(c),(d)	Direct and indirect effects must be considered.	Attachment G	
G-4d Control Procedures	270.14(b)(7); 264.52(a)	Contingency plan must describe actions facility personnel must take in response to fires, explosions, or any unplanned release of hazardous waste to air, soil, or surface water.	Attachment G	
G-4e Prevention of Recurrence of Spread of Fires, Explosions, or Releases	270.14(b)(7); 264.56(e)	Measures must include stopping processes and operations, collecting and containing release of waste, and removing or isolating containers.	Attachment G	
G-4e(1) Monitor for Leaks, Pressure Buildup, Gas Generation or Ruptures of Released Material	270.14(b)(7); 264.56(f)	This item applies if facility stops operations.	Attachment G	

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS**SECTION G. CONTINGENCY PLAN**

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
G-4f Storage, Treatment, and Disposal of Released Material	270.14(b)(7); 264.56(g)	After emergency, emergency coordinator must provide for treating, storing, and disposing of recovered waste.	Attachment G	
G-4g Incompatible Waste	270.14(b)(7); 264.56(h)(1)	Until cleanup is complete, assure that incompatible waste is not stored together.	Attachment G	
G-4h Post-Emergency Equipment Management	270.14(b)(7); 264.56(h)(2)	Decontamination is required for emergency equipment.	Attachment G	
G-4h(1) Notification of Federal, State and Local Authorities before Resuming Operations	270.14(b)(7); 264.56(i)	Federal or state authorities must be notified within 15 days of occurrence.	Attachment G	
G-4i Container Spills and Leakage	270.14(b)(7); 264.52; 264.71	Specify procedures to be used when responding to container spills and leakage.	Attachment G	
G-4j Tank Spills and Leakage		For a tank or containment system from which there has been a leak or spill:	N/A	
G-4j(1) Stopping Waste Addition	270.14(b)(7); 264.196(a)	Document that the owner/operator will immediately stop the flow of hazardous waste.	N/A	
G-4j(2) Removing Waste	270.14(b)(7); 264.196(b)	Owner/operator will, within 24 hours after leak detected, remove waste and allow inspection and repair of the tank system to be performed.	N/A	
G-4j(3) Containment of Visible Releases	270.14(b)(7); 264.196(c)	Specify that a visual inspection of a release will be conducted, demonstrate further mitigation of leak will be prevented, and visible contamination will be removed and disposed of properly.	N/A	
G-4j(4) Notification Reports	270.14(b)(7); 264.196(d)	Demonstrate that any release to the environment will be reported to regional administrator within 24 hours of detection.	N/A	

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS					
SECTION G. CONTINGENCY PLAN					
Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c	
G-4j(5)	Provisions of Secondary Containment, Repair, or Closure	270.14(b)(7); 264.196(e)	Provision of secondary containment repair, otherwise closure is required.	N/A	
G4-k	Surface Impoundment Spills and Leakage	270.14(b)(7); 264.227	Surface impoundments must be removed from service when:	N/A	
G4-k(1)	Emergency Repairs	270.14(b)(7); 264.227	Describe procedures for removing surface impoundments from service.	N/A	
G4-k(1)(a)	Stopping Waste Addition	270.14(b)(7); 264.227(b)(1)	Procedures for stopping waste addition to the impoundment.	N/A	
G4-k(1)(b)	Containing Leaks	270.14(b)(7); 264.227(b)(2)	Procedures for containing leak.	N/A	
G4-k(1)(c)	Stopping Leaks	270.14(b)(7); 264.227(b)(3)	Procedures for stopping leak.	N/A	
G4-k(1)(d)	Preventing Catastrophic Failure	270.14(b)(7); 264.227(b)(4)	Procedures to stop or prevent catastrophic failure.	N/A	
G4-k(1)(e)	Emptying the Impoundment	270.14(b)(7); 264.227(b)(5)	Procedures for emptying impoundment, if necessary.	N/A	
G4-k(2)	Certification	270.14(b)(7); 264.226 (c); 264.227(d)(1)	Procedures for recertifying a dike's structural integrity if impoundment is removed from service due to actual or imminent failure.	N/A	
G4-k(3)	Repairs as a Result of Sudden Drop	270.14(b)(7); 264.227(d)(2)	Procedures to follow if impoundment is removed from service due to sudden drop in liquid level of the following:	N/A	
G4-k(3)(a)	Existing Portions of Surface Impoundment	270.14(b)(7); 264.227(d)(2)(i)	Installation of liner for any existing portion of impoundment.	N/A	
G4-k(3)(b)	Other Portions of the Surface Impoundment	270.14(b)(7); 264.227(d)(2)(ii)	Certification by qualified engineer for other than existing portions of the impoundment.	N/A	

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS**SECTION G. CONTINGENCY PLAN**

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
G4-1 Containment Building Leaks	270.14(b)(7); 264.1101(c)(3)	Through active life of building if owner/operator detects condition that could lead to release of hazardous waste.	N/A	
G-4l(1) Repair of Containment Building	270.14(b)(7); 264.1101(c)(3)	Within 7 days of detection, owner/operator must contact regional administrator. Enter record of discovery, remove contaminated portion of building from service, determine repair steps, and establish schedule for repair.	N/A	
G-4l(2) Certification Following Repair	270.14(b)(7); 264.1101(c)(3)(ii i)	Upon completion of repairs owner/operator must notify regional administrator.	N/A	
G-4m Drip Pad Spills and Leakage	270.14(b)(7); 264.573(m)	Throughout the active life of the drip pad, if a condition is detected that may have or has caused a release of hazardous waste, it must be repaired within a reasonably prompt period of time.	N/A	
G-4m(1) Stopping Waste Addition	270.14(b)(7); 264.573(m)(1)(ii)	Upon detection of leakage in the leak detection system, immediately remove the affected portion of the drip pad from service.	N/A	
G-4m(2) Determine Appropriate Cleanup and Repair	270.14(b)(7); 264.573(m)(1)(iii)	Establish a schedule for accomplishing the repairs.	N/A	
G-4m(3) Notification	270.14(b)(7); 264.573(m)(1)(iv)	Within 24 hours after discovery of the condition, notify the Regional Administrator or state director. Within 10 working days, provide written notice and a description of the repairs to be made to the drip pad.	N/A	
G-4m(4) Certification	270.14(b)(7); 264.573(m)(3)	Upon completing all repairs and clean up, provide certification signed by an independent, qualified registered PE.	N/A	

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS				
SECTION G. CONTINGENCY PLAN				
Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
G-5	Emergency Equipment	270.14(b)(7); 264.52(e)		Attachment G
G-6	Arrangements with Local Authorities	270.14(b)(7); 264.37; 264.52(c)	Police and fire departments, hospitals, and emergency response teams must be notified by owner/operator. Document refusal to enter into a coordination agreement.	Attachment G
G-7	Evacuation Plan for Facility Personnel	270.14(b)(7); 264.52(f)	Evacuation plans must include evacuation signals and primary and alternate evacuation routes.	Attachment G
G-8	Required Report Procedures for Recordkeeping and Reporting to Federal Authority	270.14(b)(7); 264.56(j)	Owner/operator must note on operation record the time, date and details of incidents which require implementation of contingency plan.	Attachment G
G-9	Location and Distribution of Contingency Plan	270.14(b)(7); 264.53	Copy of contingency plan must be maintained at facility and submitted to local authorities.	Attachment G

Notes:

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CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS**SECTION H. PERSONNEL TRAINING**

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
H-1 Outline of Introductory and Continuing Training Programs	270.14(b)(12); 264.16(a)(1)	Facility personnel must successfully complete classroom or on-the-job training which will allow them to responsibly perform in their positions.	Attachment H	
H-1a Job Title/Job Description	270.14(b)(12); 264.16(d)1, (d)(2)	Owner or operator must maintain records of job titles, names of employees, job descriptions, and types and amounts of training given to employees.	Attachment H	
H-1b Description of How Training will be Designed to Meet Actual Job Tasks	270.14(b)(12); 264.16(c),(d) (3)	Training must be conducted by a qualified person; there must also be an annual review of the training.	Attachment H	
H-1c Training Director	270.14(b)(12); 264.16(a)(2)	Program must be directed by person trained in hazardous waste procedures.	Attachment H	
H-1d Relevance of Training to Job Position	270.14(b)(12); 264.16(a)(2)	Training must include instruction on hazardous waste procedures relevant to each employee's position.	Attachment H	
H-1e Training for Emergency Response	270.14(b)(12); 264.16(a)(3)	Personnel must minimally be familiar with emergency procedures, emergency equipment, and emergency systems.	Attachment H	
H-2 Maintenance of Training Records/Copy of Personnel Training Documents	270.14(b)(12); 264.16(b),(d) (4),(e)	Training records on current personnel must be kept until closure of facility. Training must be completed within 6 months after date of employment.	Attachment H	

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Notes:

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CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS**SECTION I. CLOSURE POST-CLOSURE PLANS AND FINANCIAL REQUIREMENTS**

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
I-1	Closure Plans	270.14(b)(13)	Attachment I	
I-1a	Closure Performance Standard	270.14(b)(13) ; 264.111	Attachment I	
I-1b	Time and Activities Required for Partial Closure and Final Closure Activities	270.14(b)(13) ; 264.112(b)(1) through 264.112(b)(7)	Attachment I	
I-1c	Maximum Waste Inventory	270.14(b)(13) ; 264.112(b)(3)	Attachment I	
I-1d	Schedule for Closure	270.14(b)(13) ; 264.112(b)(6)	Attachment I	
I-1(d)(1)	Time Allowed for Closure	270.14(b)(13) ; 264.112(b)(2) ; 264.113(a) and (b)	Attachment I	
I-1d(1)(a)	Extension for Closure Time	270.14(b)(13) ; 264.113(a) and (b)	Attachment I	
I-1e	Closure Procedures	270.14(b)(13) ; 264.112; 264.114	Attachment I	

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS**SECTION I. CLOSURE POST-CLOSURE PLANS AND FINANCIAL REQUIREMENTS**

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
I-1e(1) Inventory Removal	270.14(b)(13) ; 264.112(b)(3)	Discuss methods for removing, transporting, treating, storing, or disposing of all hazardous wastes and identify the type(s) of off-site hazardous waste management units to be used.	Attachment I	
I-1e(2) Disposal or Decontamination of Equipment, Structure, and Soils	270.14(b)(13) ; 264.112(b)(4) ; 264.114	Provide a detailed description of the steps needed to decontaminate or dispose of all facility equipment and structures. Demonstrate that any hazardous constituents (i.e., Appendix VII) left at the unit will not impact any environmental media in excess of Agency-established exposure levels and that direct contact will not pose a threat to human health and the environment.	Attachment I	
I-1e(3) Closure of Disposal Units/Contingent Closures	270.14(b)(13)		N/A	
I-1e(3)(a) Disposal Impoundments	270.14(b)(13) ; 264.228(a)(2)		N/A	
I-1e(3)(a)(i) Elimination of Liquids	270.14(b)(13)		N/A	
I-1e(3)(a)(ii) Waste Stabilization	270.14(b)(13) ; 264.228(a)(2) (ii)		N/A	
I-1e(3)(b) Cover Design	270.14(b)(13) ; 264.228(a)(2) (iii);264.310 (a)		N/A	

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS				
SECTION I. CLOSURE POST-CLOSURE PLANS AND FINANCIAL REQUIREMENTS				
Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
I-1e(3)(c) Minimization of Liquid Migration	270.14(b)(13) ; 264.228(a)(2) (iii)(A); 264.310(a)(1)	Draft RCRA Guidance Document entitled <u>Landfill (Design--Liner Systems and Final Cover</u> (1982), suggests the following design for landfill cover systems (from top to bottom): a vegetated top cover, with a minimum of 24 inches of topsoil; a middle drainage layer (at least one foot thick with a saturated conductivity of not less than 1×10^{-3} cm/sec) overlain by a geotextile filter fabric or graded granular filter; and a low permeability bottom layer consisting of two components: an upper component of at least a 20 mil synthetic membrane protected above and below by at least six inches of bedding material, a lower component of at least 24 inches of low permeability (maximum hydraulic conductivity of 1×10^{-7} cm/sec) soil emplaced in lifts not exceeding six inches. For cover designs different than EPA-recommended designs, provide engineering calculations showing the proposed cover will provide long-term minimization of liquid migration through the cover.	N/A	
I-1e(3)(d) Maintenance Needs	270.14(b)(13) ; 264.228(a)(2) (iii)(B); 264.310(a)(2)		N/A	
I-1e(3)(e) Drainage and Erosion	270.14(b)(13) ; 264.228(a)(2) (iii)(C); 264.310(a)(3)	The following information should be provided: data demonstrating that the proposed final slopes will not cause significant cover erosion; description of drainage materials and their permeabilities; engineering calculations demonstrating free drainage of precipitation off of and out of the cover; and estimation of the potential for drainage-layer clogging.	N/A	

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS**SECTION I. CLOSURE POST-CLOSURE PLANS AND FINANCIAL REQUIREMENTS**

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
I-1e(3)(f) Settlement and Subsidence	270.14(b)(13) ; 264.228(a)(2) (iii)(D); 264.310(a)(4)	Include the following information: potential foundation compression; potential soil liner compression; and potential waste consolidation and compression resulting from waste dewatering, biological oxidation and chemical conversion of solids to liquids.	N/A	
I-1e(3)(g) Cover Permeability	270.14(b)(13) ; 264.228(a)(2) (iii)(E); 264.310(a)(5)		N/A	
I-1e(3)(h) Freeze/Thaw Effects	270.14(b)(13) ; 264.228(a)(2) (iii); 264.310(a)	Identify the average depth of frost penetration and describe the effects of freeze/thaw cycles on the cover.	N/A	
I-1e(4) Closure of Containers	270.14(b)(13) ; 264.178; 264.112(b)(3) ; 270.14(b)(13)	Address the following: hazardous waste removal and disposal; container decontamination and disposal; site decontamination and disposal including linings, soil, and washes; maximum inventory.	Attachment I	
I-1e(5) Closure of Tanks	270.14(b)(13) ; 264.197; 264.112(b)(3)	The description should address the following: waste removal from tanks and equipment; decontamination of all components; verification of decontamination; disposal of wastes and residues; and maximum inventory.	N/A	
I-1e(6) Closure of Waste Piles	270.14(b)(13) ; 270.18(h); 264.258	The description must address the following: procedure and criteria for determining whether or not decontamination has been successful; and sampling and analytical techniques.	N/A	

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS**SECTION I. CLOSURE POST-CLOSURE PLANS AND FINANCIAL REQUIREMENTS**

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
I-1e(7) Closure of Surface Impoundments	270.14(b)(13) ; 270.17(f); 264.228(a)(1), (2), and (b)	Surface impoundments without liners or with liners that do not meet the requirements must also provide contingent plans for closure in place and a contingent post-closure plan, except for impoundments requesting a liner exemption in accordance with D-4b.	N/A	
I-1e(8) Closure of Incinerators	270.14(b)(13) ; 264.351	Describe how, at closure, all hazardous waste and hazardous waste residues (including, but not limited to, ash, scrubber waters, and scrubber sludges) will be removed from the incinerator, associated ductwork, piping, air pollution control equipment, sumps, and any other structures or operating equipment such as pumps, valves, etc., that have come into contact with the hazardous waste. Alternatively, describe how the incinerator and associated units and equipment will be dismantled and disposed of as a hazardous waste.	N/A	
I-1e(9) Closure of Landfills	270.14(b)(13) ; 270.21(e); 264.310(a)	Provide detailed plans and engineering report that describes the final cover components in detail. Cover installation and construction quality assurance procedures should be thoroughly described.	N/A	
I-1e(10) Closure of Land Treatment Facilities	270.14(b)(13) ; 264.280(a); 270.20(f)		N/A	
I-1e(10)(a) Continuance of Treatment	270.14(b)(13) ; 264.280(a)(1) through (7)		N/A	
I-1e(10)(b) Vegetative Cover	270.14(b)(13) ; 270.20(f); 264.280(a)(8)		N/A	

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS				
SECTION I. CLOSURE POST-CLOSURE PLANS AND FINANCIAL REQUIREMENTS				
Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
I-1e(11) Closure of Miscellaneous Units	270.14(b)(13) ; 270.23(a)(2)		N/A	
I-1e(12) Closure of Boilers and Industrial Furnaces	270.14(b)(13) ; 266.102(a)(2) (vii)	Describe how, at closure, all hazardous waste and hazardous waste residues (including, but not limited to, ash, scrubber waters, and scrubber sludges) will be removed from the BIF unit, associated ductwork, piping, air pollution control equipment, sumps and any other structures or operating equipment such as pumps, valves, etc., that have come into contact with hazardous wastes. Alternatively, describe how the BIF and associated equipment will be dismantled and disposed of. If any wastes, waste residues, contaminated components, subsoils, structures or equipment remain after closure, provide plans for closing the BIF unit as a landfill and provide a post-closure care plan.	N/A	
I-1e(13) Closure of Containment Buildings	270.14(b)(13) ; 264.1102	Show that at closure all hazardous waste, hazardous waste residues, contaminated containment system, contaminated subsoils, and all structures and equipment contaminated with waste and leachate will be removed. If any wastes, waste residues, contaminated components, subsoils, structures or equipment remain after closure, provide plans for closing the containment building as a landfill and provide a post-closure care plan.	N/A	
I-2 Post-Closure Plans	270.14(b)(13)		Attachment I	

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS				
SECTION I. CLOSURE POST-CLOSURE PLANS AND FINANCIAL REQUIREMENTS				
Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
I-2a Inspection Plan	270.14(b)(13) ; 264.118(a); 264.197(b); 264.197(c)(2); 264.226(d)(2) ; 264.228(b); 264.228(c)(1) (ii); 264.258 (b); 264.258 (c)(1)(ii); 264.303(c); 264.310(b)	Rationale for determining the length of time between inspections should be provided.	Attachment I	
I-2b Monitoring Plan	270.14(b)(13) ; 264.118(b)(1) ; 264.197(b); 264.197(c)(2); 264.226(d)(2) ; 264.228(b); 264.228(c)(1) (ii); 264.258 (b); 264.258 (c)(1)(ii); 264.303(c); 264.310(b)		Attachment I	

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS				
SECTION I. CLOSURE POST-CLOSURE PLANS AND FINANCIAL REQUIREMENTS				
Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
I-2c Maintenance Plan	270.14(b)(13) ; 264.118(b)(2) ; 264.197(b); 264.197(c)(2); 264.228(b); 264.228(c)(1) (ii); 264.258 (b); 264.258(c) (1)(ii); 264.310 (b)	Describe the preventative and corrective maintenance procedures, equipment procedures, equipment requirements and material needs.	N/A	
I-2d Land Treatment	270.14(b)(13) ; 264.280(c)	Describe the operation, inspection, and maintenance programs to be used at the closed facility.	N/A	
I-2e Post-Closure Care for Miscellaneous Units	270.14(b)(13) ; 270.23(a)(3); 264.603		N/A	
I-2f Post-Closure Security	270.14(b)(13) ; 264.117(b) and (c)	Demonstrate that for property where hazardous wastes remain after partial or final closure, post-closure use must never be allowed to disturb the integrity of the final cover, liner(s), or any other components of the containment system, or the function of the facility's monitoring system.	N/A	
I-2g Post-Closure Contact	270.14(b)(13) ; 264.118(b)(3)		N/A	
I-3 Notices Required for Disposal Facilities	270.14(b)(13)		N/A	

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS**SECTION I. CLOSURE POST-CLOSURE PLANS AND FINANCIAL REQUIREMENTS**

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
I-3a	Certification of Closure	270.14(b)(13) ; 264.115; 264.280	N/A	
I-3b	Survey Plat	270.14(b)(13) ; 264.116	N/A	
I-3c	Post-Closure Certification	270.14(b)(13) ; 264.120	N/A	
I-3d	Post-Closure Notices	270.14(b)(13) ; 270.14(b)(14) ; 264.119	N/A	
I-4	Closure Cost Estimate	270.14(b)(15) ; 264.142	Attachment I	
I-5	Financial Assurance for Closure	270.14(b)(15) ; 264.143; 264.151	Attachment I	
I-5a	Closure Trust Fund	270.14(b)(15) ; 264.143(a); 264.151(a)(1)	Attachment I	
I-5b	Surety Bond	270.14(b)(15) ; 264.143(b), (c); 264.151 (b),(c)	Attachment I	

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS**SECTION I. CLOSURE POST-CLOSURE PLANS AND FINANCIAL REQUIREMENTS**

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
I-5b(1) Surety Bond Guaranteeing Payment into a Closure Trust Fund	270.14(b)(15) ; 264.143(b); 264.151(b)	Must provide bond or standby trust agreement. Bond must guarantee owner/operator will fund standby trust fund or provide financial assurance equal to penal sum.	Attachment I	
I-5b(2) Surety Bond Guaranteeing Performance of Closure	270.14(b)(15) ; 264.143(c); 264.151(c)	Guarantee owner/operator will perform closure required as worded in 264.151(c) and Subpart G.	Attachment I	
I-5(c) Closure Letter of Credit	270.14(b)(15) ; 264.143(d); 264.151(d)	Requires letter of credit for 1 year equal to amount of closure.	Attachment I	
I-5(d) Closure Insurance	270.14(b)(15) ; 264.143(e); 264.151(e)	Provide copy of certificate of insurance, wording requirement found in 264.151(e).	Attachment I	
I-5(e) Financial Test and Corporate Guarantee for Closure	270.14(b)(15) ; 264.143(f); 264.151(f),(h)	Signed letter by owner/operator or chief financial officer as specified in 264.151(f),(h) of applicant financial statement. If a parent corporation is guaranteeing closure care, corporate guarantee must accompany.	Attachment I	
I-5(f) Use of Multiple Financial Mechanism	270.14(b)(15) ; 264.143(g)	Financial assurance instruments must meet requirements stated in 264.143 (a),(b),(c),(d) or (e) that include trust funds, surety bonds, letter of credit, and insurance, respectively.	Attachment I	
I-5(g) Use of Multiple Financial Mechanism for Multiple Facilities	270.14(b)(15) ; 264.143(h)	Provide financial assurance mechanism showing amount of funds assured.	Attachment I	
I-6 Post-Closure Cost Estimate	270.14(b)(16) ; 264.144	Estimate must be based on third party closing facility and may use on-site disposal if capacity will exist over life of facility. Estimate must be adjusted for annual inflation as stated in 264.142(b).	Attachment I	

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS**SECTION I. CLOSURE POST-CLOSURE PLANS AND FINANCIAL REQUIREMENTS**

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
I-7 Financial Assurance Mechanism for Post Closure Care	270.14(b)(16) ; 264.145; 264.151		N/A	
I-7a Post-Closure Trust Fund	270.14(b)(16) ; 264.145(a); 264.151(a)(1)	Provide copy of post-closure fund agreement. Wording requirements outlined in 264.151(a)(1).	N/A	
I-7b Surety Bond	270.14(b)(16) ; 264.145(b),(c) ; 264.151(b),(c)	264.145(b),(c) spells out requests for owner/operator for adjusting estimates, inflation, and reporting to regional administrator. 264.151(b),(c) outlines wording for bond agreement.	N/A	
I-7b(1) Surety Bond Guaranteeing Payment into a Post-Closure Trust Fund	270.14(b)(16) ; 264.145(b); 264.151(b)	Must provide bond or standby trust agreement before beginning final closure of the facility. Bond must guarantee owner/operator will fund a standby trust fund or provide financial assurance equal to penal sum.	N/A	
I-7b(2) Surety Bond Guaranteeing Performance of Closure	270.14(b)(16) ; 264.145(c); 264.151(c)	Guarantee owner/operator will perform closure required as stated in 246.151(c) and Subpart H.	N/A	
I-7(c) Post-Closure Letter of Credit	270.14(b)(16) ; 264.145(d); 264.151(d)	Requires letter of credit for 1 year equal to amount of post-closure cost.	N/A	
I-7(d) Post-Closure Insurance	270.14(b)(16) ; 264.145(e); 264.151(e)	Provide copy of certificate of insurance, wording requirement found in 264.151(e).	N/A	
I-7(e) Financial Test and Corporate Guarantee for Post-Closure Care	270.14(b)(16) ; 264.145(f); 264.151(f),(h)	Signed letter by owner/operator or chief financial officer as specified in 264.151(f),(h) of applicant financial statement. If parent corporation is guaranteeing post-closure care, corporate guarantee must accompany.	N/A	

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS				
SECTION I. CLOSURE POST-CLOSURE PLANS AND FINANCIAL REQUIREMENTS				
Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
I-7(f) Use of Multiple Financial Mechanism	270.14(b)(16) ; 264.145(g)	Provide copy of financial assurance mechanisms. Combined financial assurance must be at least equal to post-closure cost estimate.	N/A	
I-7(g) Use of Multiple Financial Mechanism for Multiple Facilities	270.14(b)(16) ; 264.145(h)	Provide copy of financial assurance mechanisms for more than one facility. Amount must be no less than sum of funds that would be available if separate mechanism had been established and maintained for each facility.	N/A	
I-8 Liability Requirements	270.14(b)(17) ; 264.147		Attachment I	
I-8a Coverage for Sudden Accidental Occurrences	270.14(b)(17) ; 264.147(a)	Coverage must be maintained for sudden accidental occurrences in the amount of \$1 million per occurrence with an annual agreement of at least \$2 million.	Attachment I	
I-8a(1) Endorsement of Certification	270.14(b)(17) ; 264.147(a)(1)	Submit original Hazardous Waste Facility Liability Endorsement wording pursuant to 264.151(i), or Certificate of Liability wording pursuant to 264.151(j).	N/A	
I-8a(2) Financial Test and Corporate Guarantee for Liability Coverage	270.14(b)(17) ; 264.147(a)(2), (f),(g); 264.151(f),(g)	Requires signed letter by owner or chief financial officer worded as outlined in 264.151(g) outlining applicant financial statement. 264.151(g) used if applicant is using financial test to cover cost for closure or post closure. Alternatively, owner/operator may submit corporate guarantee specified in 264.151(h)(2).	N/A	
I-8a(3) Use of Multiple Financial Mechanism	270.14(b)(17) ; 264.147(a)(3)	Submit items demonstrating liability coverage specified in I-8a(1) and I-8a(2). Amount of coverage must total at least minimum amount required by 264.147(a).	N/A	

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS**SECTION I. CLOSURE POST-CLOSURE PLANS AND FINANCIAL REQUIREMENTS**

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
I-8b Coverage for Nonsudden Accidental Occurrences	270.14(b)(17) ; 264.147(b)	For high risk storage facilities, surface impoundments, land disposal, land treatment facilities, liability coverage must be maintained in the amount of at least \$3 million per occurrence. Annual aggregate at least \$6 million.	Attachment I	
I-8b(1) Endorsement or Certification	270.14(b)(17) ; 264.147(b)(1)	Submit signed duplicate original of Hazardous Waste Facility Liability Endorsement.	Attachment I	
I-8b(2) Financial Test or Corporate Guarantee for Liability Coverage	270.14(b)(17) ; 264.147(b)(2) ; 264.151(f),(g)	Requires signed letter by owner or chief financial officer worded as outlined in 264.151(g) outlining applicant financial statement. 264.151(g) used if applicant is using financial test to cover cost for closure or post closure. Alternatively, owner/operator may submit corporate guarantee specified in 264.151(h)(2).	N/A	
I-8b(3) Use of Multiple Insurance Mechanism	270.14(b)(17) ; 264.147(b)(3)	Submit items demonstrating liability coverage specified in I-8a(1) and I-8a(2). Amount of coverage must total at least minimum amount required by 264.147(b).	N/A	
I-8c Requests for Variance	270.14(b)(17) ; 264.147(c)	Request for adjusted level of required liability must be supported by information which demonstrates 264.147(a) or (b) are not consistent with degree and duration of risk associated with treatment, storage, or disposal at facility or group of facilities.	N/A	
I-9 Use of State Required Mechanisms	270.14(b)(18)		N/A	
I-9a Use of State Required Mechanisms	270.14(b)(18) ; 264.149	When state has regulations equivalent or greater liability requirements for financial assurance for closure post-closure submit copy of state-required financial mechanism.	N/A	

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS				
SECTION I. CLOSURE POST-CLOSURE PLANS AND FINANCIAL REQUIREMENTS				
Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
I-9b State Assumption of Responsibility	270.14(b)(18) ; 264.150	If state assumes legal responsibility for compliance with closure, post-closure, or liability requirements there must be a letter submitted from state specifying assumption of responsibilities and amounts of liability.	N/A	

Notes:

^a Considerations in addition to the requirements presented in the regulations.

^b For each requirement, this column must indicate one of the following: NA for not applicable, IM for information missing, or the exact location of the information in the application.

^c If application is deficient in an area, prepare a comment describing the deficiency, attach it to the checklist, and reference the comment in this column.

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS					
SECTION J. SOLID WASTE MANAGEMENT UNITS					
Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c	
J-1	Characterize the Solid Waste Management Unit (SWMU)	270.14(d)(1)	Describe methodology used to determine that no existing or former SWMUs exist at facility if applicable.	See RFA	
J-2	Releases	270.14(d)(2)	Provide following information concerning releases: date of release; type, quantity, and nature of release; groundwater monitoring and other analytical data; physical evidence of stressed vegetation; historical evidence of releases; any state, local, or federal enforcement action that may address releases; any public citizen complaints that indicate a release; and any other information showing the migration of the release. Describe methodology used to determine that releases from SWMUs are not present.		

Notes:

- ^a Considerations in addition to the requirements presented in the regulations.
- ^b For each requirement, this column must indicate one of the following: NA for not applicable, IM for information missing, or the exact location of the information in the application.
- ^c If application is deficient in an area, prepare a comment describing the deficiency, attach it to the checklist, and reference the comment in this column.

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS				
SECTION K. OTHER FEDERAL LAWS				
Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See attached Comment Number^c
K-1 Other Federal Laws	270.14(b)(20), 270.3	Demonstrate compliance with requirements of applicable Federal laws such as the Wild and Scenic Rivers Act, National Historic Preservation Act of 1966, Endangered Species Act, Coastal Zone Management Act, and Fish and Wildlife Coordination Act.	Attachment K - Existing Permits	

Notes:

- ^a Considerations in addition to the requirements presented in the regulations.
- ^b For each requirement, this column must indicate one of the following: NA for not applicable, IM for information missing, or the exact location of the information in the application.
- ^c If application is deficient in an area, prepare a comment describing the deficiency, attach it to the checklist, and reference the comment in this column.

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS**SECTION L. PART B CERTIFICATION**

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
L-1 Part B Certification	270.11		Certification Page	

Notes:

- ^a Considerations in addition to the requirements presented in the regulations.
- ^b For each requirement, this column must indicate one of the following: NA for not applicable, IM for information missing, or the exact location of the information in the application.
- ^c If application is deficient in an area, prepare a comment describing the deficiency, attach it to the checklist, and reference the comment in this column.

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS

Section Not Applicable.

SECTION M. SUBPART AA PROCESS VENTS

Section and Requirement	Federal Regulation	Review Consideration ^a	Location in Application ^b	See Attached Comment Number ^c
M-1 Definition of Process Vent	270.14(a); 264.1030; 264.1031	A process vent is any open-ended pipe or stack that is vented to atmosphere either directly, through a vacuum-producing system, or through a tank.		
M-2 Applicability—Process Vents Associated with the Following Six Operations that Manage Hazardous Waste with Organic Concentrations of at Least 10 Parts per Million by Weight if these Operations are Conducted in; a Unit Subject to the Permitting Requirements of 270; a Unit (including a Hazardous Waste Recycling Unit) that is Not Exempt from Permitting Under 262.34(a) and is Located at a Hazardous Waste Management Facility Otherwise Subject to Permitting Requirements; and a Unit that is Exempt from Permitting Under 262.34(a)	270.14(a); 264.1030(b); 264.1031	Concentrations should be determined by a time-weighted average annually or when waste or process changes.		

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS					
SECTION M. SUBPART AA PROCESS VENTS					
	Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
M-2a	Distillation—a Batch or Continuous Operation Which Separates One or More Feed Stream(s) into Two or More Exit Streams, Each Exit Stream Having Component Concentrations Different from Those in the Feed Stream(s)	270.24(b)(3); 264.1030(b); 264.1031	Include process description.		
M-2b	Fractionation—a Distillation Operation or Method Used to Separate a Mixture of Several Volatile Components of Different Boiling Points in Successive Stages	270.24(b)(3); 264.1030(b); 264.1031	Include process description.		
M-2c	Thin-Film Evaporation—a Distillation Operation that Employs a Heating Surface Consisting of a Large Diameter Tube that May be Either Straight or Tapered, Horizontal or Vertical	270.24(b)(3); 264.1030(b); 264.1031	Include process description.		
M-2d	Solvent Extraction—an Operation or Method of Separation in Which a Solid or Solution Contacts a Liquid Solvent (The Two Being Mutually Insoluble) to Preferentially Dissolve and Transfer One or More Components into the Solvent	270.24(b)(3); 264.1030(b); 264.1031	Include process description.		

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS

SECTION M. SUBPART AA PROCESS VENTS

Section and Requirement	Federal Regulation	Review Consideration ^a	Location in Application ^b	See Attached Comment Number ^c
M-2e Air Stripping—a Desorption Operation Employed to Transfer One or More Volatile Components from a Liquid Mixture into a Gas (Air) Either with or Without the Application of Heat to the Liquid	270.24(b)(3); 264.1030(b); 264.1031	Include process description.		
M-2f Stream Stripping—a Distillation Operation in Which Vaporization of the Volatile Constituents of a Liquid Mixture Takes Place by the Introduction of Steam Directly into the Charge.	270.24(b)(3); 264.1030(b); 264.1031	Include process description.		
M-3a Reduce Total Organic Emission below 1.4 Kilogram per Hour (3 Pounds per Hour) and 2.8 Million Grams per Year (3.1 Tons per Year), <u>or</u>	270.24(b); 264.1032(a) (1),(c)	Engineering calculations or performance tests may be used to determine vent emissions and emissions reductions or total organic compound concentrations achieved by add-on control devices.		
M-3b Reduce Total Organic Emissions of 95 Percent by Weight with the Use of a Control Device	270.24(b); 264.1032(a) (2),(b)	Engineering calculations or performance tests may be used to determine vent emissions and emissions reductions or total organic compound concentrations achieved by add-on control devices.		

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS

SECTION M. SUBPART AA PROCESS VENTS

Section and Requirement	Federal Regulation	Review Consideration ^a	Location in Application ^b	See Attached Comment Number ^c
M-3c Reduce Emissions for Various Control Devices with Closed-vent Systems under the Following Operational Conditions:	270.24(b); 264.1032(a - b); 264.1033 (b - j)	Closed-vent systems are optional devices, but shall comply with regulations if they are used.		
M-3c(1) Control Device Involving Vapor Recovery (Condenser or Adsorber) Shall Recover at Least 95 Percent by Weight of the Organic Vapors	270.24(b); 264.1032(a) (1),(b)	A less than 95 percent recovery is permissible if control devices meet emission limits set in 264.1032(a)(1).		
M-3c(2) Enclosed Combustion Device (A Vapor Incinerator, Boiler, or Process Heater) Shall Recover at Least 95 Percent by Weight of Organic Emissions	270.24(d); 264.1033(c)	The device shall achieve 20 parts per million by weight or 1/2 second residence time at 760 °C.		
M-3c(3) A Flare Shall Operate under the Following Four Conditions: (1) No Visible Emissions, (2) a Flame Present at all Times, (3) an Acceptable Net Heating Value, and (4) Appropriate Exit Velocity	270.24(d); 264.1033(d)			
M-4 Inspection Readings Shall Be Conducted at Least Daily. Vent Stream Flow Information Shall be Provided at Least Hourly.	270.24(d); 264.1033(f) (1),(3)			

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS

SECTION M. SUBPART AA PROCESS VENTS

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
M-4a	Continuous Monitoring for the Following Control Devices:	270.24(d); 264.1033(f)(2)		
M-4a(1)	Thermal Vapor Incinerator (One Temperature Sensor).	270.24(d); 264.1033(f)(2)(i)	Sensor shall have accuracy of ± 1 percent $^{\circ}\text{C}$ or ± 0.5 $^{\circ}\text{C}$, whichever is greater.	
M-4a(2)	Catalytic Vapor Incinerator (Two Temperature Sensor)	270.24(d); 264.1033(f)(2)(i)	Sensor shall have accuracy of ± 1 percent $^{\circ}\text{C}$ or ± 0.5 $^{\circ}\text{C}$, whichever is greater.	
M-4a(3)	Flare (Heat Sensing Device)	264.1033(f)(2)(iii))		
M-4a(4)	Boiler or Process Heater with Heater Input Capacity Equal or Greater than 44 Megawatts (Recorder Which Indicates Good Combustion Practices)	270.24(d); 264.1033(f)(2)(v)		
M-4a(5)	Condenser (Device with Recorder to Measure the Concentration of Organic Compounds in the Condenser Exhaust Vent Stream or Temperature Monitoring Device Equipped with Recorder to Measure Temperature in the Condenser Exhaust Vent Stream)	270.24(d); 264.1033(f)(2)(vi))	Sensor shall have accuracy of ± 1 percent $^{\circ}\text{C}$ or ± 0.5 $^{\circ}\text{C}$, whichever is greater.	
M-4a(6)	Carbon Adsorption System (Device to Measure Organic Vapors or a Recorder that Verifies Predetermined Regeneration Cycle)	270.24(d); 264.1033(f)(2)(vi) i)		

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS

SECTION M. SUBPART AA PROCESS VENTS

Section and Requirement	Federal Regulation	Review Consideration ^a	Location in Application ^b	See Attached Comment Number ^c
M-4b Alternate Monitoring of Control Device	270.24(c); 264.1033(i)	Describe measurement of applicable monitoring parameters.		
M-4c Inspection of the Following Control Devices:	270.24(d); 264.1033(g - h)			
M-4c(1) Regenerable Carbon Adsorption System	270.24(d); 264.1033(g)	Carbon replacement schedule must be acceptable.		
M-4c(2) Nonregenerable Carbon Adsorption System	270.24(d); 264.1033(h)	Carbon shall be replaced when breakthrough is observed or on an acceptable schedule.		
M-5 Basic Design and Operation				
M-5a The Closed-Vent System Shall be Designed to Operate According to Either of the Following:	270.24(d); 264.1033(k)			
M-5a(1) With No Detectable Emissions	270.24(d); 264.1033(k)(1)	Emissions shall be less than 500 parts per million above background.		
M-5a(2) At a Pressure below Atmospheric Pressure	270.24(d); 264.1033(k)(2)	System shall be equipped with at least one pressure gauge or other measurement device that can be read from a readily accessible location to verify negative pressure is being maintained in system during operation.		

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS

SECTION M. SUBPART AA PROCESS VENTS

Section and Requirement	Federal Regulation	Review Consideration ^a	Location in Application ^b	See Attached Comment Number ^c
M-5b Owner/operator Shall Monitor and Inspect Each System	270.24(d); 264.1033(1)	The monitoring and inspection shall be done: (1) by date the system is subject to regulation, (2) annually, and (3) other times requested by the U.S. Environmental Protection Agency regional administrator. Various inspection and monitoring requirements apply depending upon the type of closed-vent system employed. All detected defects shall be repaired according to the schedule prescribed in 264.1033(1)(3).		
M-5c Closed-Vent System Shall be Operated at all Times When Emissions May be Vented to Them.	270.24(d); 264.1033(m)			
M-5d Carbon Adsorption System Used to Control Air Pollutant Emissions	270.24(d); 264.1033(n)	Owner/operator must document that all carbon that is a hazardous waste and removed from the control device is managed in one of these approved manners: 264.1033(n)(1), (2), or (3).		
M-6 Any Components of a Closed-Vent System that are Designated as Unsafe to Monitor are Exempt from the Monitoring Requirements of 1033(1)(1)(i)(B) if Certain Conditions are Met.	270.24(d); 264.1033(o)	Applies to system if its components are unsafe to monitor and it adheres to written plan that requires monitoring using the procedures in 264.1033(1)(1)(ii)(B) as frequently as practicable during safe-to-monitor times.		

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS				
SECTION M. SUBPART AA PROCESS VENTS				
Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
M-7a	Owner/operator Complies with Record Keeping Requirements	270.24(d); 264.1033; 264.1035	Depending on the type of control devices and closed vent systems used, various records must be maintained in the facility operating record.	
M-7b	Semiannual Report is Submitted According to Subpart AA Requirements	270.14(a); 264.1036	A semiannual report is only required if a control device operates outside the design specifications.	
M-7c	Implementation Schedule is Provided	270.24(a); 264.1033(a)(2)	A schedule shall be provided when facilities cannot install a closed-vent system and control device to comply with Part 264 on date facility is subject to requirements.	
M-7d	Performance Test Plan is Provided	270.24(c); 264.1035(b)(3)	A performance test plan shall be provided where owner/operator applies for permission to use control device other than thermal vapor incinerator, catalytic vapor incinerator, flare, boiler, process heater, condenser, or carbon adsorption system, and chooses to use test data to determine organic removal efficiency achieved by control device.	

Notes:

^a Considerations in addition to the requirements presented in the regulations.

^b For each requirement, this column must indicate one of the following: NA for not applicable, IM for information missing, or the exact location of the information in the application.

RCRA I.D. No.: AZR000527002

Facility Name: _____

° If application is deficient in an area, prepare a comment describing the deficiency, attach it to the checklist, and reference the comment in this column.

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS

Section Not Applicable.

SECTION N. SUBPART BB EQUIPMENT LEAKS

Section and Requirement	Federal Regulation	Review Consideration ^a	Location in Application ^b	See Attached Comment Number ^c
N-1a Applicability	270.14(a); 270.25; 264.1050(b),(d)	Except as otherwise specified, this subpart applies to equipment that contains or contacts hazardous waste with organic concentrations of at least 10 percent by weight that are managed in one of the following: if these operations are conducted in; a unit subject to the permitting requirements of 270; a unit (including a hazardous waste recycling unit) that is not exempt from permitting under 262.34(a) and is located at a hazardous waste management facility otherwise subject to permitting requirements; and a unit that is exempt from permitting under 262.34(a) such as a 90-day tank or container.		
N-1b Definition of Equipment	270.14(a); 270.25; 264.1031; 264.1051	Examples include: valve, pump, compressor, pressure relief device, sampling connection system, open-ended valve or line, or flange.		

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS

SECTION N. SUBPART BB EQUIPMENT LEAKS

Section and Requirement	Federal Regulation	Review Consideration ^a	Location in Application ^b	See Attached Comment Number ^c
N-1c Equipment in a Vacuum or Equipment that Contains or Contacts Hazardous Waste with an Organic Concentration of at Least 10 Percent by Weight for a Period of Less than 300 Hours per Calendar Year is Excluded from Requirements at 264.1052 to 264.1060.	270.14(a); 270.25; 264.1050(f)	Equipment shall be identified in a log in facility's operating record as required by 264.1064(g) in order to qualify for exclusion.		
N-2a Monthly Monitoring for Leaks	270.25(d); 264.1052(a) (1)			
N-2b Visual Inspection for Pump Seal Leakage on a Weekly Basis	270.25(d); 264.1052(a)(2)			
N-2c Leak Detection	270.25(d); 264.1052(b); 264.1063	Leak detected if: (1) leak detection instrument reads 10,000 parts per million (ppm) or greater, or (2) there are indications of liquid dripping from the pump seal.		
N-2d Leak Repair as Soon as Practicable	270.25(d); 264.1052(c); 264.1059	Repairs are to be made within 15 calendar days after detection. Repair extensions are allowed under conditions specified in 264.1059.		

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS

SECTION N. SUBPART BB EQUIPMENT LEAKS

Section and Requirement	Federal Regulation	Review Consideration ^a	Location in Application ^b	See Attached Comment Number ^c
N-2e Specific Exceptions to these Standards	270.25(d); 264.1052(d - f)	Exceptions to these standards are dual mechanical seal systems or no detectable emissions.		
N-3a Barrier Fluid Pressure Greater than the Compressor Stuffing Box Pressure	270.25(d); 264.1053(b) (1)			
N-3b Barrier Fluid System Connected by a Closed-Vent System to a Control Device as Described in Subpart AA	270.25(d); 264.1053(b) (2)			
N-3c No Detectable Atmospheric Emissions of Hazardous Contaminants from the Barrier System	270.25(d); 264.1053(b) (3)			
N-3d Sensors Checked Daily or an Audible Alarm Checked Monthly	270.25(d); 264.1053(d - c)			
N-3e Leak Detection	270.25(d); 264.1053(f)	A leak is detected if sensor indicates failure of: (1) seal system, or (2) barrier fluid system.		
N-3f Leak Repair as Soon as Practicable	270.25(d); 264.1053(g) (1); 264.1059	Repairs are to be made within 15 calendar days after detection. Repair extensions are allowed under conditions specified in 264.1059.		

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS

SECTION N. SUBPART BB EQUIPMENT LEAKS

Section and Requirement	Federal Regulation	Review Consideration ^a	Location in Application ^b	See Attached Comment Number ^c
N-3g Specific Exceptions to these Standards	270.25(d); 264.1053(h - i)	Exceptions to these standards are certain closed vent systems or no detectable emissions.		
N-4a Except During Pressure Releases, No Pressure Relief Device Shall Release Detectable Emissions	270.25(d); 264.1054(a)	Emissions shall be less than 500 ppm above background levels.		
N-4b Within 5 Calendar Days after a Pressure Release, No Detectable Emissions Shall Emanate from Pressure Released Device	270.25(d); 264.1054(b)	Emissions shall be less than 500 ppm above background levels.		
N-4c Specific Exceptions to These Standards	270.25(d); 264.1054(c)	Exceptions to these standards are certain closed vent systems.		
N-5a Each Sampling Connecting System Shall Be Equipped with a Closed-Purge, Closed Loop, or Closed-Vent System. Closed-Vent Systems and Control Devices are also Subject to 264.1033	270.25(d); 264.1055(a - b); 264.1060	Each closed-purge, closed-loop, or closed-vent system shall either: (1) return purged process fluid directly to process line, (2) collect and recycle purged process liquid, or (3) be designed and operated to capture and transport all purged process fluid to a waste management unit or control device that satisfies applicable requirements.		
N-5b Exemption for Qualified Sampling Systems	270.25(d); 264.1055(c)	In situ sampling systems and sampling systems without purges are exempt from requirements of 264.1055(a),(b).		

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS**SECTION N. SUBPART BB EQUIPMENT LEAKS**

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
N-6a Open-Ended Valve or Line	270.25(d); 264.1056(a), (c)	A double block or bleed system must comply with the open-ended valve or line requirements.		
N-6b Second Valve	270.25(d); 264.1056(b)	A second valve shall be operated such that primary valve shall be closed before second valve is opened.		
N-7 Monitoring Schedule Based on Detection of Leaks and Predetermined Schedule	270.25(d); 264.1057(a - e)	A reading of 10,000 ppm denotes a detected leak.		
N-7d Specific Exceptions to the Monitoring Schedule	270.25(d); 264.0157(f - h); 264.1061; 264.1062	Exceptions to schedule include unsafe-to-monitor valves, no detectable emissions, and difficult-to-monitor valves.		
N-8a Monitoring	270.25(d); 264.1058(a); 264.1063(b)	Monitoring is required within 5 days after leak is found by sight, sound, smell, or other detection method.		
N-8b Leak Detection	270.25(d); 264.1058(b)	A leak is detected if a leak detection instrument reads 10,000 ppm or greater.		

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS

SECTION N. SUBPART BB EQUIPMENT LEAKS

Section and Requirement	Federal Regulation	Review Consideration ^a	Location in Application ^b	See Attached Comment Number ^c
N-8c Leak Repair as Soon as Practicable	270.25(d); 264.1058(c); 264.1059	Repairs are to be made within 15 calendar days after detection. The first attempt at repair shall be made no later than 5 calendar days after each leak is detected. Repair extensions are allowed under conditions specified in 264.1059.		
N-8d Any Connector that is Inaccessible or is Ceramic or Ceramic-Lined is Exempt from the Monitoring Requirements of 264.1058(a) and 264.1064	270.25(d); 264.1058(e)	Examples of ceramic-lined connectors include porcelain, glass, or glass-lined connectors.		
N-9 Specific Allowances for Delay of Repair for Various Types of Equipment	270.25(d); 264.1059			
N-10 When Closed-Vent Systems and Control Devices are Used, they Must Comply with the Requirements in Subpart AA	270.25(e); 264.1033; 264.1060			
N-11 An Owner/Operator may Elect to Comply with this Alternative Monitoring Program	270.25(e); 264.1061	No greater than 2 percent of the valves are allowed to leak per monitoring period.		
N-12 An Owner/Operator may Elect to Comply with this Alternative Work Practice	270.25(e); 264.1062	Relief of monitoring frequency is allowed if less than 2 percent of the valves are leaking.		

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS				
SECTION N. SUBPART BB EQUIPMENT LEAKS				
Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
N-13	Owner Complies with Recordkeeping Requirements	270.25(a); 264.1064	Depending on the type of requirement, various records must be maintained in the facility operating record.	
N-13a	Semiannual Report	270.25(a); 264.1065	A semiannual report is only required if leaks from equipment have gone unrepaired or a control device operates outside the design specifications.	
N-13b	Implementation Schedule	270.25(b)	An implementation schedule shall be provided if facility cannot install closed-vent system and control device to comply with provisions of Part 264, Subpart BB on the effective date that facility becomes subject to provisions of Parts 264 and 265.	
N-13c	Performance Test Plan	270.25(c)	A performance test plan shall be provided if the owner/operator applies for permission to use a control device for other than a thermal vapor incinerator, flare, boiler, process heater, condenser, or carbon adsorption system and chooses to use test data to determine the organic removal efficiency achieved by the control device.	

Notes:

- ^a Considerations in addition to the requirements presented in the regulations.
- ^b For each requirement, this column must indicate one of the following: NA for not applicable, IM for information missing, or the exact location of the information in the application.
- ^c If application is deficient in an area, prepare a comment describing the deficiency, attach it to the checklist, and reference the comment in this column.

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS

Section Not Applicable.

SECTION O. SUBPART CC AIR EMISSION STANDARDS

Section and Requirement	Federal Regulation	Review Consideration ^a	Location in Application _b	See Attached Comment Number ^c
O-1 Standards Apply to All Facilities That Treat, Store, or Dispose of Hazardous Waste in Tanks, Surface Impoundments, or Containers Subject to 264, Subparts I, J, or K, Except as Provided Otherwise	270.14(a); 270.27; 264.1080 (a) - (d)	Exclusions from 264.1080(a) are listed at 264.1080(b) (e.g., a container that has a design capacity less than or equal to 0.1 cubic meters [m ³]).		
O-2 Following is a List of Units that are Exempt from the 264.1084-264.1087 Standards:	270.14(a); 270.27; 264.1082(c)			
O-2a A Tank, Surface Impoundment, or Container for Which All Hazardous Waste Entering the Unit Has an Average Volatile Organic Concentration at the Point of Waste Origination of less than 500 Parts per Million by Weight (ppmw)	270.14(a); 270.27; 264.1082(c)(1)	Waste determination procedures are specified at 264.1083.		
O-2b A Tank, Surface Impoundment, or Container for Which the Organic Content of all the Hazardous Waste Entering the Waste Management Unit has been Reduced by an Organic Destruction or Removal Process that Achieves Specified Criteria	270.14(a); 270.27; 264.1082(c)(2)	Waste determination procedures are specified at 265.1084(b)(2)-(b)(9).		

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS

SECTION O. SUBPART CC AIR EMISSION STANDARDS

Section and Requirement	Federal Regulation	Review Consideration ^a	Location in Application	See Attached Comment Number ^c
O-2c A Tank Used for Biological Treatment of Hazardous Waste that Destroys or Degrades the Organics Contained in the Hazardous Waste such that the Requirements of 264.1082(c)(2)(iv) are Met	270.14(a); 270.27; 264.1082(c)(3)	Waste determination procedures are specified at 264.1083(b) and 264.1083(a).		
O-2d A Tank, Surface Impoundment or Container for Which all Hazardous Waste Placed in the Unit Meets Applicable Organic Concentration Limits or has been Treated by Appropriate Treatment Technology	270.14(a); 270.27; 264.1082(c)(4)	Waste determination procedures are specified at Part 268.		
O-2e A Tank Located Inside an Enclosure Vented to a Control Device that is Used for Bulk Feed of Hazardous Waste to a Waste Incinerator that Meets Specified Criteria	270.14(a); 270.27; 264.1082(c)(5)	Design and operation of the control device and enclosure shall satisfy Part 61, Subpart FF; 52.741, Appendix B; and other conditions as specified.		
O-3 Several Waste Determination Procedures are Explained in Detail and Must be Followed in Order to Demonstrate the Various Subpart CC Exemptions and/or Control Requirements	270.14(a); 270.27; 264.1083; 265.1084	In general, an owner or operator need <u>not</u> undergo waste determination procedures unless they are pursuing an exemption from the Subpart CC regulations.		

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS**SECTION O. SUBPART CC AIR EMISSION STANDARDS**

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
O-4 Tanks that Satisfy the Conditions at 264.1084(b)(1)(i-iii) Can Use Tank Level 1 or Tank Level 2 Controls. Tanks that do not Satisfy Conditions Shall Use Tank Level 2 Controls	270.14(a); 270.27; 264.1084(b)(1), (2)			
O-5a The Conditions at 264.108(b)(1)(i-iii) Provide that Hazardous Waste in the Tank Shall:	270.14(a); 270.27; 264.1084(b)(1)			
O-5a(1) Have Maximum Organic Vapor Pressure Which is less than Maximum Organic Vapor Pressure Limit for Tank's Design Capacity Category	270.14(a); 270.27; 264.1084(b)(1) (i)			
O-5a(2) Not be Heated to Temperature Greater than Temperature at Which Maximum Organic Vapor Pressure of Waste is Determined for Purposes of Compliance	270.14(a); 270.27; 264.1084(b)(1) (ii)			
O-5a(3) Not be Treated Using a Waste Stabilization Process, as Defined in 265.1081	270.14(a); 270.27; 264.1084(b)(1) (iii)	A waste stabilization process includes mixing hazardous waste with binders or other materials, and curing resulting hazardous waste and binder mixture.		

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS				
SECTION O. SUBPART CC AIR EMISSION STANDARDS				
Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
O-5b Maximum Organic Vapor Pressure Determination	270.14(a); 270.27; 264.1084(c) (1)	Must be determined before first time waste placed in tank, and retested whenever changes could cause it to increase above the maximum vapor pressure limit [264.1084(b)(1)(i)].		
O-5b(1) Tank Level 1. Owner/Operator Shall Equip Tanks with Fixed Roof and Closure Devices as Needed	270.14(a); 270.27; 264.1084(c) (2), (3)	Fixed roof/closure devices shall form continuous barrier over entire waste in tank; contain no visible open spaces between roof section joints or between interface of roof edge and tank wall; contain openings with closure devices or closed-vent system; and be made of suitable materials.		
O-5b(2) Tank Level 2. Owner/Operator Shall Use One of the Following Tanks:	270.14(a); 270.27; 264.1084(d)			
O-5b(2)(i) Fixed Roof Tank Equipped with Internal Floating Roof	270.27(a)(1); 264.1084(d)(1) (e)	Internal floating roof shall be designed to float on liquid surface, except when supported by leg supports; be equipped with continuous seal between tank wall and floating roof edge; and meet other design specifications.		
O-5b(2)(ii) Tank Equipped with an External Floating Roof	270.27(a)(1); 264.1084(d)(2), (f)	External floating roof shall be designed to float on all liquid surface, except when supported by leg supports; be equipped with two continuous seals; and meet other design specifications.		

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS

SECTION O. SUBPART CC AIR EMISSION STANDARDS

Section and Requirement	Federal Regulation	Review Consideration ^a	Location in Application _b	See Attached Comment Number ^c
O-5b(3) Tank Vented Through Closed-Vent System to a Control Device	270.14(a); 270.27; 264.1084(d)(3), (g)	Fixed roof/closure devices shall form continuous barrier over entire liquid surface; be made of suitable materials; and satisfy 264.1087 standards.		
O-5c Pressure Tank	270.14(a); 270.27; 264.1084(d)(4), (h)	Tank shall be designed not to bend to atmosphere as result of compression of vapor headspace in tank, and be equipped with closure devices as needed.		
O-5d Tank Located Inside an Enclosure that is Vented Through a Closed-Vent System to an Enclosed Combustion Control Device	270.14(a); 270.27; 264.1084(d)(5), (1)	Tank shall be located in enclosure that is vented through closed vent system to enclosed combustion device, and enclosure shall be equipped with safety devices as needed.		
O-5e Tank Level 1. Owner/Operator Shall:	270.14(a); 270.27; 264.1084(c) (1),(3)			
O-5e(1) Determine Maximum Organic Vapor Pressure for Hazardous Waste Initially and Whenever Changes could Cause the Vapor Pressure to Increase Above the Maximum Organic Vapor Pressure Limit	270.14(a); 270.27; 264.1084(c)(1)	Maximum organic vapor pressure shall be determined using 264.1083(c) procedures.		

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS				
SECTION O. SUBPART CC AIR EMISSION STANDARDS				
Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application	See Attached Comment Number^c
O-5e(2)	Ensure that, Whenever Hazardous Waste is in Tank, the Fixed Roof is Installed with Each Closure Device Secured in Closed Position		Exceptions are listed at 264.1084(c)(3)(i-iii).	
O-5e(3)	Inspect the Air Emission Control Equipment	270.14(a); 270.27; 264.1084(c)(4)		
O-5f	Tank Level 2. Owner/Operators Shall Adhere to the Following Operating Procedures for Each Unit Type:	270.14(a); 270.27; 264.1084(e)(i)		
O-5f(1)	Fixed Roof Tank Equipped with Internal Floating Roof	270.14(a); 270.27; 264.1084(e)(2),(3)	When floating roof is resting on leg supports, filling, emptying, or refilling shall be continuous and completed as soon as practical; when roof is floating, automatic bleeder vents shall be set closed; and prior to filling, openings in roof shall be secured. Inspect the floating roof.	
O-5f(2)	Tank Equipped with an External Floating Roof	270.14(a); 270.27; 264.1084(f)(2),(3)	When floating roof is resting on leg supports, filling, emptying, or refilling shall be continuous and completed as soon as practical; when closure device is open for access, equipment and devices shall be closed and secured as specified; and seals shall provide a continuous and complete cover as specified. Inspect the floating roof.	

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS				
SECTION O. SUBPART CC AIR EMISSION STANDARDS				
Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application_b	See Attached Comment Number^c
O-5f(3) Tank Vented Through Closed-Vent System to a Control Device	270.14(a); 270.27; 264.1084(g) (2), (3)	When hazardous waste is in tank, fixed roof shall be installed with closure devices secured in closed position and vapor headspace underneath fixed roof vented to control device, except as specified. Inspect and monitor the air emission control equipment.		
O-5f(4) Pressure Tank	270.14(a); 270.27; 264.1084(h) (2), (3)	When hazardous waste is in tank, it shall be operated as closed system that does not vent to atmosphere, except to avoid an unsafe condition.		
O-5f(5) Tank Located Inside an Enclosure that is Vented Through a Closed-Vent System to an Enclosed Combustion Control Device	270.27(a)(3), 264.1084(i)	Enclosure shall be operated in accordance with 52.741, Appendix B, and comply with applicable closed-vent requirements. Safety devices may be operated as needed. Inspect and monitor the system and control device.		
O-5f(6) Shall be Conducted Using Continuous Hard-Piping or Another Closed System that Does Not Allow Exposure of Hazardous Waste to Environment	270.14(a); 270.27; 264.1084(j)(1)	Requirements do not apply under the conditions specified at 264.1084(j)(2).		
O-6a Owner/Operators Shall Install Either of the Following Controls:	270.14(a); 270.27; 264.1085(b)(d)			

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS				
SECTION O. SUBPART CC AIR EMISSION STANDARDS				
Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
O-6a(1) Floating Membrane Cover	270.27(a)(4); 264.1085 (b)(1), (c)(1)	Floating membrane cover shall float on liquid surface and form continuous barrier over entire liquid; be made of synthetic membrane material; contain no visible open spaces; and be equipped with closure devices and cover drains as needed.		
O-6a(2) Cover That Is Vented Through a Closed-Vent System to a Control Device	270.14(a); 270.27; 264.1085 (b)(2) and (d)(2)	Cover/closure devices shall form continuous barrier over entire liquid surface; be equipped with closure device; be made of suitable material; and be designed in compliance with 264.1087.		
O-6b Owner/Operators Shall Adhere to the Following Operating Procedures for Each Control Type:	270.14(a); 270.27; 264.1085 (c), (d)			
O-6b(1) Floating Membrane Cover	270.14(a); 270.27; 264.1085(c) (2), (3)	When hazardous waste is in surface impoundment, floating membrane cover shall float on liquid, and each closure device shall be secured in closed position, except as specified. Inspect the cover.		

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS

SECTION O. SUBPART CC AIR EMISSION STANDARDS

Section and Requirement	Federal Regulation	Review Consideration ^a	Location in Application ^b	See Attached Comment Number ^c
O-6b(2) Cover that is Vented Through a Closed-Vent System to a Control Device	270.14(a); 270.27; 264.1085(d) (2), (3)	When hazardous waste is in surface impoundment, cover shall be installed with each closure device secured in closed position and vapor headspace underneath the cover vented to control device, except as specified. Closed-vent system and control device shall be operated in accordance with 264.1087. Inspect and monitor the control device.		
O-7 Shall be Conducted Using Continuous Hard-Piping or Another Closed System	270.14(a); 270.27; 264.1085(c) (1)	Requirements do not apply under conditions specified at 264.1085(e)(2).		
O-8a Container Level 1 Standards Apply to:	270.14(a); 270.27; 264.1086(b)(1)			
O-8a(1) Container with Design Capacity Greater than 0.1 m ³ and less than or Equal to 0.46 m ³	270.14(a); 270.27; 264.1086(b)(1) (i)			
O-8a(2) Container with Design Capacity Greater than 0.46 m ³ that is not in Light Material Service	270.14(a); 270.27; 264.1086(b)(1) (ii)			

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS

SECTION O. SUBPART CC AIR EMISSION STANDARDS

Section and Requirement	Federal Regulation	Review Consideration ^a	Location in Application ^b	See Attached Comment Number ^c
O-8ab Container Level 2 Standards Apply to Container with a Design Capacity Greater than 0.46 m ³ that is in Light Material Service	270.14(a); 270.27; 264.1086(b)(1) (iii)			
O-8c Container Level 3 Standards Apply to Container with Design Capacity Greater than 0.1 m ³ that is Used for Stabilization	270.14(a); 270.27; 264.1086(b)(2)	Level 3 standards apply at those times during waste stabilization process when hazardous waste in container is exposed to atmosphere.		
O-9 Identify Each Container Area Subject to Subpart CC	270.27(a)(2)			
O-9a Container Level 1. A Container Using Level 1 Controls is Defined as One of the Following:	270.27(a)(2); 264.1086(c) (1)			
O-9a(1) Container that Meets Department of Transportation Regulations on Packaging	270.27(a)(2); 264.1086(c) (1)(i),(f)	Container shall meet Part 178 or Part 179 and be managed in accordance with Parts 107, 172, 173, and 180.		
O-9a(2) Container Equipped with Cover and Closure Devices	270.27(a)(2); 264.1086(c) (1)(ii),(2)	Container shall be equipped with covers and closure devices, as needed.		
O-9a(3) Open-Top Container Equipped with Organic-Vapor Suppressing Barrier	270.27(a)(2); 264.1086(c) (1)(iii),(2)	Container shall be equipped with covers and closure devices, as needed.		

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS				
SECTION O. SUBPART CC AIR EMISSION STANDARDS				
Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application_b	See Attached Comment Number^c
O-9b	Container Level 2. A Container Using Level 2 Controls is Defined as One of the Following:	270.27(a)(2); 264.1086 (d)(1)(f),(g)		
O-9b(1)	Container that Needs Department of Transportation (DOT) Regulations on Packaging	270.27(a)(2); 264.1086(d)(1) (i),(f)	Containers shall meet Part 178 or Part 179, and be managed in accordance with Parts 107, 172, 173, and 180.	
O-9b(2)	Container that Operates with No Detectable Organic Emissions	270.27(a)(2); 264.1086(d)(1) (ii),(g)	Owner/operator shall follow the procedures at 264.1086(g) and 265.1084(d) to determine no detectable organic emissions.	
O-9b(3)	Container that has been Demonstrated Within the Preceding 12 Months to be Vapor-Tight	270.27(a)(2); 264.1086(d)(1) (iii) and (h)	Owner/operator shall follow procedures at 264.1086(h) and Part 60, Appendix A, Method 27 to demonstrate container is vapor-tight.	
O-9c	Container Level 3. A Container Using Level 3 Controls is Defined as One of the Following:	270.27(a)(2); 264.1086(e) (1), (2)		
O-9c(1)	Container that is Vented Directly Through a Closed-Vent System to a Control Device	270.27(a)(2); 264.1086(e) (1)(i)	The closed-vent system and control device shall be designed in accordance with 264.1087. Safety devices may be installed as needed.	
O-9c(2)	Container that is Vented Inside an Enclosure Which is Exhausted Through a Closed-Vent System to a Control Device	270.27(a)(2); 270.27(a)(3); 264.1086(e) (1)(ii)	The container/enclosure must be designed in accordance with 52.741, Appendix B and 264.1087. Safety devices may be installed as needed.	

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS				
SECTION O. SUBPART CC AIR EMISSION STANDARDS				
Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
O-10a	Container Level 1. Owner/Operators Shall Install Covers and Closure Devices for the Container and Secure and Maintain Each Closure Device in Closed Position, Except as Specified	270.14(a); 270.27; 264.1086(c) (3), (4)	The closure device or cover may be opened for the purpose of adding or removing hazardous waste or for maintenance or to avoid unsafe conditions.	
O-10b	Container Level 2. Owner/Operator Shall Install All Covers and Closure Devices for the Container and Maintain and Secure Each Closure Device in Closed Position, Except as Specified	270.14(a); 270.27; 264.1086(d)(2), (3)	Transfer of hazardous waste in or out of container shall be conducted in such a manner as to minimize exposure to atmosphere, as practical. The closure device or cover may be opened for the purpose of adding or removing hazardous waste or for maintenance or to avoid unsafe conditions.	
O-10c	Container Level 3. Owner/Operators Shall Operate the System in Accordance with 52.741, Appendix B; 264.1087; and 265.1081, as Needed	270.14(a); 270.27; 264.1086(e) (3),(4), (5)		
O-11a	Standards Apply to Each Closed-Vent System and Control Device Used to Control Air Emissions under Part 264; Subpart CC	270.14(a); 270.27; 264.1087(a)		
O-11(b)	Closed-Vent Systems Shall:	270.27(a)(5); 264.1087(b)		
O-11b(1)	Route Gases, Vapors, and Fumes to Control Device	270.27(a); 264.1087(b)(1)		

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS**SECTION O. SUBPART CC AIR EMISSION STANDARDS**

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
O-11b(2) Be Designed and Operated in Accordance with 264.1033(k)	270.27(a); 264.1087(b)(2)	The Subpart AA standards for closed-vent systems must be satisfied.		
O-11b(3) Meet the Requirements for Bypass Devices, if Applicable	270.27(a); 264.1087(b)(3)	Each bypass device shall be equipped with either a flow indicator or a seal or locking device.		
O-12a The Control Device Shall be One of the Following:	270.27(a)(5); 264.1087(c)(1)			
O-12a(1) A Control Device Designed and Operated to Reduce Total Organic Content on Inlet Vapor Stream Vented to the Control Device by at Least 95 Percent by Weight	270.27(a)(5); 264.1087(c) (1)(i)	Owner/operator shall demonstrate compliance using either performance test or design analysis, except as specified.		
O-12a(2) An Enclosed Combustion Device	270.27(a)(5); 264.1087(c) (1)(ii)	Owner/operator shall demonstrate compliance using either performance test or design analysis, except as specified. Control device shall be designed and operated in accordance with 264.1033(c).		
O-12a(3) A Flare	270.27(a)(5); 264.1087(c) (1)(iii)	Owner/operator shall demonstrate compliance using either performance test or design analysis, except as specified.		

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS				
SECTION O. SUBPART CC AIR EMISSION STANDARDS				
Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application_b	See Attached Comment Number^c
O-12b Each Closed-Vent System and Control Device Shall Comply with the Operating Requirements of 264.1087(c)(2)	270.27(a)(5); 264.1087(c) (2)	Planned routine maintenance of control device shall not exceed 240 hours per year; system malfunctions shall be corrected as soon as practicable; and system shall be operated such that gases, vapors, or fumes are not actively vented to control device during planned maintenance or system malfunction, except as specified.		
O-12c A Carbon Adsorption System	270.27(a)(5); 264.1087(c) (3)	Carbon replacement and removal shall follow prescribed requirements in 264.1033(g), (h), and (n).		
O-12d Each Control Device Shall be Operated and Maintained in Accordance with 264.1033(j), Except for Certain Devices Identified (e.g., Flare)	270.27(a)(5); 264.1087(c) (4)	264.1033(j) requires the owner/operator to prepare documentation describing the control device's operation and to identify the process parameter(s) that indicate its proper operation and maintenance.		
O-12e The Owner/Operator Shall Demonstrate that a Control Device Achieves the Performance Requirements Using a Performance Test or Design Analysis, Except for Specific Devices Identified (e.g., flare)	270.27(a)(5); 264.1087(c) (5)	For performance test, owner/operator shall use the test specified at 264.103(c). For design analysis, owner/operator shall use an analysis that meets requirements specified at 264.1035(b)(4)(iii). In addition, the U.S. Environmental Protection Agency (EPA) prescribes unit-specific performance demonstration requirements for certain unit types at 264.1087(c)(5).		

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS

SECTION O. SUBPART CC AIR EMISSION STANDARDS

Section and Requirement	Federal Regulation	Review Consideration ^a	Location in Application ^b	See Attached Comment Number ^c
O-12f If Design Analysis is Not Sufficient, then a Performance Test is Required	270.27(a)(5); 264.1087(c) (6)	The EPA regional administrator shall determine if a performance test is required to demonstrate control device's performance.		
O-12h Inspect and Monitor the Control Device	270.27(a)(5); 264.1087(c) (7)	Control devices shall be inspected and monitored at least once a day.		
O-13 Each Tank, Surface Impoundment and Container Shall be Inspected, Monitored, and Repaired in Accordance with the 264 Subpart CC Requirements	270.27; 264.1088	Inspection, monitoring and repair requirements specific to each unit are located in the standards sections of the regulation 264.1084 through 264.1087. Owner/operator shall develop and implement written plan and schedule to perform inspections and monitoring required. The plan and schedule shall be incorporated into facility's inspection plan.		
O-14 Each Owner/Operator Shall Comply with the Recordkeeping Requirements Specified at 264.1089	270.27; 264.1089	Except as specified, records shall be maintained in facility's operating record for a minimum of 3 years. Various records are required depending on the type of unit and control device.		
O-14a Each of the Following Owner/Operators Shall Comply with the Reporting Requirements at 264.1090:	270.27; 264.1090			

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS				
SECTION O. SUBPART CC AIR EMISSION STANDARDS				
Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
O-14a(1) Each Owner/Operator Managing Hazardous Waste in a Tank, Surface Impoundment, or Container Exempted from Using Air Emission Controls under 264.1082(c)	270.27; 264.1090(a)	Owner/operator shall report to EPA each noncompliance identified under 264.1082(c).		
O-14a(2) Each Owner/operator Using Air Emission Controls on a Tank in Accordance with 264.1084(c)	270.27; 264.1090(b)	Owner/operator shall report to EPA each noncompliance identified under 264.1084(B).		
O-14a(3) Each Owner/operator Using a Control Device in Accordance with 264.1087	270.27; 264.1090 (c),(d)	Owner/operator shall submit semiannual written report to EPA, except as specified.		
O-14b Each Owner/Operator shall Provide an Emission Monitoring Plan	270.27(a)(6)	Applies to Method 21 and control device monitoring methods.		
O-14c Subpart CC Implementation Plan	270.27(a)(7)	Required when facility cannot comply with Subpart CC by date of permit issuance.		

Notes:

- ^a Considerations in addition to the requirements presented in the regulations.
- ^b For each requirement, this column must indicate one of the following: NA for not applicable, IM for information missing, or the exact location of the information in the application.
- ^c If application is deficient in an area, prepare a comment describing the deficiency, attach it to the checklist, and reference the comment in this column.

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS				
SECTION P. EXPOSURE INFORMATION				
Section and Requirement	Federal Regulation	Review Consideration ^a	Location in Application ^b	See Attached Comment Number ^c
P Information on the Potential for the Public to be Exposed to Releases. At a Minimum, this must include: C reasonably foreseeable potential releases C potential pathways of human exposure C potential magnitude and nature of exposure	270.10(j)	The federal requirement is for surface impoundments and land disposal units.		

Section Not Applicable.

Notes:

- ^a Considerations in addition to the requirements presented in the regulations.
- ^b For each requirement, this column must indicate one of the following: NA for not applicable, IM for information missing, or the exact location of the information in the application.
- ^c If application is deficient in an area, prepare a comment describing the deficiency, attach it to the checklist, and reference the comment in this column.

Public Meeting and Posting Documentation

**PUBLIC MEETING NOTIFICATION
PRE-APPLICATION MEETING
RCRA PART B FACILITY APPLICATION: ECOBAT SOLUTIONS**

This notification is being provided based on the requirements of the Arizona Department of Environmental Quality (ADEQ) and United States Environmental Protection Agency (40 CFR 124.31).

Meeting Date: March 21, 2024
Meeting Time: 6:00 PM (to end of Public Comment)
Location: Railtoun Hotel 777 N Pinal Avenue, Casa Grande, CA 85122
Phone: (520) 217-1029
Website: <https://www.choicehotels.com/arizona/casa-grande/railtoun-hotels/42604>

The purpose of this meeting is to discuss the submission of the Letter to the Arizona Department of Environmental Quality (ADEQ) for RCRA Part B pre-application for the proposed metal and alloying metals, lithium battery and lithium bearing materials.

The facility will receive and store as well as damaged to handling lithium ion battery, lithium metal and alloying metals bearing materials, lithium battery and lithium bearing materials. The waste will be purified, cast into, processed and stored. The stored material will be subject to various categories of testing and testing procedures, copper, and aluminum. These finished goods will be subject to inspection or other and stored subject to storage in a tank.

Should you require additional information or participate in the meeting, please contact the person listed below by the meeting date.

Eric Knowles, Plant Manager
Phone: (760) 514-8494 Email: eric.knowles@ecobat.com
1474 N. VIP Blvd. Casa Grande, AZ 85122

WE THE PEOPLE ...

have the right to know what's happening in our cities, towns and neighborhoods.

Casa Grande Valley Newspapers Inc. has transitioned to a new self-serve system to make it more convenient for you to place public notices with our publications: Casa Grande Dispatch, PinalCentral Dispatch, Tri-Valley Dispatch and Maricopa Monitor.

This improved process has been made possible through our new partnership with Column, a software company dedicated to making the publishing of public notices easier for newspapers and their customers.

To submit a public notice please visit casagrande.column.us/place

If you have any questions or concerns, please use the online chat box through Column, email us at publicnotices@pinalcentral.com or leave us a message at (520) 423-8602. We will get back to you as soon as possible.

Public notices are vital to our democracy. We value your business and look forward to continuing to serve Pinal County. To view a list of local notices please go to **PinalCentral.com**. There is also a database of all Arizona notices available at **www.arizonapublicnotices.com/**



Public Notices **Public Notices** **Public Notices** **Public Notices** **Public Notices** **Public Notices**

ARTICLES OF ORGANIZATION OF LIMITED LIABILITY COMPANY
 ENTITY INFORMATION
 ENTITY NAME: Djour Aesthetics llc
 ENTITY ID: 23640665
 ENTITY TYPE: Domestic LLC
 EFFECTIVE DATE: 02/08/2024
 CHARACTER OF BUSINESS: Other - Aesthetician
 MANAGEMENT STRUCTURE: Member-Owned
 PERIOD OF DURATION: Perpetual
 PROFESSIONAL SERVICES: N/A
 STATUTORY AGENT INFORMATION
 STATUTORY AGENT NAME: Endae'sha Reliford
 PHYSICAL ADDRESS: 10768 N Hualapai dr, Casa grande, AZ 85122
 MAILING ADDRESS: 10768 n Hualapai dr, Casa grande, Az 85122
 PRINCIPAL ADDRESS
 Att: Endae'sha Reliford , 10768 n Hualapai dr, Casa grande az 85122
 PRINCIPALS
 Member: Endae'sha Reliford - 10768 n Hualapai dr , Casa grande az 85122, USA - msreliford@yahoo.com
 Date of Taking Office: 02/08/2024
 ORGANIZERS
 Endae'sha Reliford : 10768 n Hualapai dr , Casa grande az 85122, USA, msreliford@yahoo.com
 SIGNATURES
 Organizer: Endae'sha Reliford - 02/08/2024
 Published 2/17/24, 2/20/24, 2/22/24

THERE IS A DEFENSE TO THE TRUSTEE SALE OR IF YOU HAVE AN OBJECTION TO THE TRUSTEE SALE, YOU MUST FILE AN ACTION AND OBTAIN A COURT ORDER PURSUANT TO RULE 65, ARIZONA RULES OF CIVIL PROCEDURE, STOPPING THE SALE NO LATER THAN 5:00 P.M. MOUNTAIN STANDARD TIME ON THE LAST BUSINESS DAY BEFORE THE SCHEDULED DATE OF THE SALE, OR YOU MAY HAVE WAIVED ANY DEFENSES OR OBJECTIONS TO THE SALE, UNLESS YOU OBTAIN AN ORDER, THE SALE WILL BE FINAL. Secured property is legally described as: Lot 128, FINAL PLAT OF PARCEL 2A AT RANCHO EL DORADO, recorded in Cabinet C, Slide 184, records of Pinal County, Arizona. PURPORTED STREET ADDRESS: 43703 W Colby Dr, Maricopa, AZ 85138 TAX PARCEL NUMBER(S): 512-20-12809 ORIGINAL PRINCIPAL BALANCE: \$151,276.00 Name and Address of Beneficiary: Nationstar Mortgage LLC 8950 Cypress Waters Blvd. Coppell, TX 75019 Name and Address of Original Trustor: Stephanie V Garcia, an unmarried woman 43703 W Colby Dr Maricopa, AZ 85138 The undersigned Trustee disclaims any liability for any incorrectness of the street address and other common designation, if any, shown herein. Said sale will be made in an "as is" condition, but without covenant or warranty, express or implied, regarding title, possession or encumbrances, to satisfy the indebtedness secured by said Deed of Trust, advances thereunder, with interest as provided therein, and the unpaid principal balance of the Note secured by said Deed of Trust with interest thereon as proved in said Note, plus fees, charges and expenses of the Trustee and of the trusts created by said Deed of Trust. Name and Address of Trustee: Christina Harper, Esq. 2999 N. 44th Street, Ste. 625 Phoenix, AZ 85018 Telephone: (877) 914-3498 Sales Line: (800) 280-2832 Dated: January 23, 2024 Christina Harper, Attorney at Law Successor Trustee The Successor Trustee herein qualifies as Trustee of the Trust Deed in the Trustee's capacity as a member of the Arizona State Bar as required by A.R.S Section 3-803 (a)(2). The Trustee's regulator is the Arizona State Bar. This firm is not a Debt Collector as that term is defined pursuant to the Fair Debt Collection Practices Act within this jurisdiction (See Mansour v. Cal-Western Reconveyance Corp., 618 F. Supp.2d 1178 (D. Ariz. 2009)). Should a subsequent determination be made that this firm is a Debt Collector as that term is defined within the Act, then you are notified that any information obtained will be used for the purpose of collecting a debt. Please be advised that if your personal liability for this debt has been modified or extinguished by a discharge in bankruptcy, this communication is provided solely in reference to the foreclosure on the Deed of Trust remaining on your property and is not an attempt to collect the discharged personal obligation. The notifications provided herein do not limit or detract from the effect of foreclosure upon the subject property. NOTICE: If the sale is set aside for any reason, the Purchaser at the sale shall be entitled only to a return of the deposit paid. The Purchaser shall not have further recourse against the Mortgagee or the Mortgagee's attorney, Christina Harper, Attorney at Law Successor Trustee A-4807929 01/30/2024, 02/06/2024, 02/13/2024, 02/20/2024 Published 1/30/24, 2/06/24, 2/13/24, 2/20/24

Morales, Wife and Husband as community property 6717 W Villa St. 13, Phoenix, AZ 85043 The undersigned Trustee disclaims any liability for any incorrectness of the street address and other common designation, if any, shown herein. Said sale will be made in an "as is" condition, but without covenant or warranty, express or implied, regarding title, possession or encumbrances, to satisfy the indebtedness secured by said Deed of Trust, advances thereunder, with interest as provided therein, and the unpaid principal balance of the Note secured by said Deed of Trust with interest thereon as proved in said Note, plus fees, charges and expenses of the Trustee and of the trusts created by said Deed of Trust. Name and Address of Trustee: Christina Harper, Esq. 2999 N. 44th Street, Ste. 625 Phoenix, AZ 85018 Telephone: (877) 914-3498 Sales Line: (800) 280-2832 Dated: January 23, 2024 Christina Harper, Attorney at Law Successor Trustee The Successor Trustee herein qualifies as Trustee of the Trust Deed in the Trustee's capacity as a member of the Arizona State Bar as required by A.R.S Section 3-803 (a)(2). The Trustee's regulator is the Arizona State Bar. This firm is not a Debt Collector as that term is defined pursuant to the Fair Debt Collection Practices Act within this jurisdiction (See Mansour v. Cal-Western Reconveyance Corp., 618 F. Supp.2d 1178 (D. Ariz. 2009)). Should a subsequent determination be made that this firm is a Debt Collector as that term is defined within the Act, then you are notified that any information obtained will be used for the purpose of collecting a debt. Please be advised that if your personal liability for this debt has been modified or extinguished by a discharge in bankruptcy, this communication is provided solely in reference to the foreclosure on the Deed of Trust remaining on your property and is not an attempt to collect the discharged personal obligation. The notifications provided herein do not limit or detract from the effect of foreclosure upon the subject property. NOTICE: If the sale is set aside for any reason, the Purchaser at the sale shall be entitled only to a return of the deposit paid. The Purchaser shall not have further recourse against the Mortgagee or the Mortgagee's attorney, A-4807929 01/30/2024, 02/06/2024, 02/13/2024, 02/20/2024 Published 1/30/24, 2/06/24, 2/13/24, 2/20/24

6. Consider the following requests by Upward Architects for Brake's Plus, located at 1436 E Florence Blvd for property zoned Planned Area Development, +/- .58 acres:
 a. Preliminary Re-Plat for the Lowe's Final Plat to add an additional lot (DSA-24-00019)
 b. Major Site Plan for a 4,897 sq. ft. building for a Brake's Plus automobile repair shop (DSA-24-00007). (Planner Jaclyn Sarnowski)
 7. Consider a request by Woods Associates, for a Major Site Plan for 193-unit, three story multi-family development, up to 35 ft tall and its associated site amenities, located at the southwest corner of O'Neil Dr and Center, zoned R-3, +/- 8.5 acres (DSA-23-00237). (Planner Jaclyn Sarnowski)
 8. Hold a public hearing and consider a request by Armando Guerra for a Conditional Use Permit and associated resolution to allow a 900 square foot accessory structure at the R-1/CR zoned property at 1348 E. Verona Trl . (DSA-24-00018). (Assisatn Planner Samuel E Leonard) Published 2/20/24

THE SALE NO LATER THAN 5:00 P.M. MOUNTAIN STANDARD TIME ON THE LAST BUSINESS DAY BEFORE THE SCHEDULED DATE OF THE SALE, OR YOU MAY HAVE WAIVED ANY DEFENSES OR OBJECTIONS TO THE SALE, UNLESS YOU OBTAIN AN ORDER, THE SALE WILL BE FINAL. Secured property is legally described as: Lot 51, Superstition Heights Unit 2, according to Cabinet B, Slide 137, records of Pinal County, Arizona. PURPORTED STREET ADDRESS: 1933 S Monterey Dr, Apache Junction, AZ 85120 TAX PARCEL NUMBER(S): 102-42-05104 ORIGINAL PRINCIPAL BALANCE: \$225,834.00 Name and Address of Beneficiary: U.S. BANK NATIONAL ASSOCIATION 2800 Tamarack Road Owensboro, KY 42301 Name and Address of Original Trustor: Daisy Picazo, an unmarried woman and Shannon Stone, an unmarried man 1933 S Monterey Dr Apache Junction, AZ 85120 The undersigned Trustee disclaims any liability for any incorrectness of the street address and other common designation, if any, shown herein. Said sale will be made in an "as is" condition, but without covenant or warranty, express or implied, regarding title, possession or encumbrances, to satisfy the indebtedness secured by said Deed of Trust, advances thereunder, with interest as provided therein, and the unpaid principal balance of the Note secured by said Deed of Trust with interest thereon as proved in said Note, plus fees, charges and expenses of the Trustee and of the trusts created by said Deed of Trust. Name and Address of Trustee: Christina Harper, Esq. 2999 N. 44th Street, Ste. 625 Phoenix, AZ 85018 Telephone: (877) 914-3498 Sales Line: (800) 280-2832 Dated: January 23, 2024 Christina Harper, Attorney at Law Successor Trustee The Successor Trustee herein

qualifies as Trustee of the Trust Deed in the Trustee's capacity as a member of the Arizona State Bar as required by A.R.S Section 33-803(a)(2). The Trustee's regulator is the Arizona State Bar. This firm is not a Debt Collector as that term is defined pursuant to the Fair Debt Collection Practices Act within this jurisdiction (See Mansour v. Cal-Western Reconveyance Corp., 618 F. Supp.2d 1178 (D. Ariz. 2009)). Should a subsequent determination be made that this firm is a Debt Collector as that term is defined within the Act, then you are notified that any information obtained will be used for the purpose of collecting a debt. Please be advised that if your personal liability for this debt has been modified or extinguished by a discharge in bankruptcy, this communication is provided solely in reference to the foreclosure on the Deed of Trust remaining on your property and is not an attempt to collect the discharged personal obligation. The notifications provided herein do not limit or detract from the effect of foreclosure upon the subject property. NOTICE: If the sale is set aside for any reason, the Purchaser at the sale shall be entitled only to a return of the deposit paid. The Purchaser shall not have further recourse against the Mortgagee or the Mortgagee's attorney, Christina Harper, Attorney at Law Successor Trustee A-4807900 01/30/2024, 02/06/2024, 02/13/2024, 02/20/2024 Published 1/30/24, 2/06/24, 2/13/24, 2/20/24

ARTICLES OF ORGANIZATION OF LIMITED LIABILITY COMPANY
 ENTITY INFORMATION
 ENTITY NAME: 7 Girls AZ Homes 1 LLC
 ENTITY ID: 23643007
 ENTITY TYPE: Domestic LLC
 EFFECTIVE DATE: 02/15/2024
 CHARACTER OF BUSINESS: Real Estate and Rental and Leasing
 MANAGEMENT STRUCTURE: Member-Owned
 PERIOD OF DURATION: Perpetual
 PROFESSIONAL SERVICES: N/A
 STATUTORY AGENT INFORMATION
 STATUTORY AGENT NAME: Lori Popkes
 PHYSICAL ADDRESS: 457 W Chestnut Tr, San Tan Valley, AZ 85143
 MAILING ADDRESS: Same, Same
 PRINCIPAL ADDRESS
 Att: Greg E. Popkes Living Trust Dated December 19, 2017, 457 W Chestnut Tr, San Tan Valley, AZ 85143
 PRINCIPALS
 Member: Greg E. Popkes Living Trust Dated December 19, 2017 - 457 W Chestnut Tr, San Tan Valley, AZ 85143, USA - katie@popkesinc.com
 Date of Taking Office: 02/15/2024
 ORGANIZERS
 Jordan Jacupke: 1920 Farnam Street, Omaha, NE 68102, USA, jordanjacupke@creighton.edu
 SIGNATURES
 Organizer: Jordan Jacupke - 02/15/2024
 Published 2/20/24, 2/22/24, 2/24/24

City of Casa Grande, Arizona
 Notice of Planning and Zoning Commission Meeting
 Notice is hereby given that the Planning and Zoning Commission will consider the following items at a regularly scheduled meeting on Thursday, March 7, 2024, at 6:00 P.M. in the City Council Chambers at City Hall, located at 510 E. Florence Blvd. to consider the following:
 1. Consider the following requests by Rick Engineering for 10.3 acres of property located at the NEC of McCartney Rd. & Palomino Pkwy, otherwise known as Parcel B within the McCartney Center PAD zone (Planner James Gagliardi):
 a. Major Site Plan allowing for the placement of a 201-unit multifamily development within three-story buildings up to 35 ft. tall and its associated site features. (DSA-23-00251)
 b. Final Landscape Plan associated with the site including perimeter and onsite landscaping amenities. (DSA-23-00257)
 2. Hold a public hearing and consider the following requests by Brian Greathouse, Burch & Cracchiolo, P.A. for 5.76 acres of property located at the SEC of McCartney Rd. & Tucker Rd. (Planner James Gagliardi):
 a. Public Hearing and consideration of a request for a Zone Change from UR (Urban Ranch) to QuikTrip Planned Area Development (PAD) to allow a convenience store/gas station use (DSA-23-00164)
 b. Consideration of a request for a Major Site Plan for a 7,318 sq. ft. convenience store and gas station including truck fueling (DSA-23-00165)
 3. Hold a public hearing and consider a request by Tiffini Sherrill for a Conditional Use Permit and associated resolution to allow a manufactured home upon a 3-acre single-family parcel within the RR (Rural Ranch) zone district, located at 937 S Roughcut Dr. (DSA-23-00266) (Planner James Gagliardi)
 4. Hold a public hearing and consider a request for a request by Wilderwood Property, LLC, for a Zone Change from B-4 (Community Services) to I-1 (Garden & Light industrial) upon approximately 40 acres, located at the NWC of Jimmie Kerr Blvd. & Sunland Gin Rd. (DSA-24-00021) (Planner James Gagliardi)
 5. Hold a public hearing and consider a request by Palmer Architects for a Zone Change from B-1 (Neighborhood Business) and R-3 (Multifamily residential) to Mary T Marketplace & Senior Residences Planned Area Development (PAD) to allow commercial and age-restricted multifamily uses at 12 du/ac. upon a 6.3-acre parcel, including a mixed-use structure located at the NEC of Cottonwood Ln. & Pearl Rd. (DSA-23-00146) (Planner James Gagliardi)

NOTICE OF TRUSTEE'S SALE Title No. 240017798 Trustee's Sale No. 172111 The following legally described trust property will be sold, pursuant to the power of sale under that certain Deed of Trust recorded on 07/08/2021 in Instrument No. 2021-085860, Book xx, Page xx, records of Pinal County, Arizona, at public auction to the highest bidder at the main entrance to the Superior Court Building, 971 Jason Lopez Circle, Building A, Florence, AZ 85132 on 04/25/2024 at 10:00 AM. NOTICE! IF YOU BELIEVE THERE IS A DEFENSE TO THE TRUSTEE SALE OR IF YOU HAVE AN OBJECTION TO THE TRUSTEE SALE, YOU MUST FILE AN ACTION AND OBTAIN A COURT ORDER PURSUANT TO RULE 65, ARIZONA RULES OF CIVIL PROCEDURE, STOPPING THE SALE NO LATER THAN 5:00 P.M. MOUNTAIN STANDARD TIME ON THE LAST BUSINESS DAY BEFORE THE SCHEDULED DATE OF THE SALE, OR YOU MAY HAVE WAIVED ANY DEFENSES OR OBJECTIONS TO THE SALE, UNLESS YOU OBTAIN AN ORDER, THE SALE WILL BE FINAL. Secured property is legally described as: Lot 15, of HEARTLAND UNIT 2, according to the plat of the record in the County Recorder of Pinal County, Arizona, recorded in Cabinet F, Slide 147. PURPORTED STREET ADDRESS: 268 N 23rd Street, Coolidge, AZ 85128 TAX PARCEL NUMBER(S): 209-38-01500 ORIGINAL PRINCIPAL BALANCE: \$289,655.00 Name and Address of Beneficiary: U.S. BANK NATIONAL ASSOCIATION 2800 Tamarack Road Owensboro, KY 42301 Name and Address of Original Trustor: Irene Martinez and Ramses Luz

NOTICE OF TRUSTEE'S SALE Title No. 240009781 Trustee's Sale No. 172043 The following legally described trust property will be sold, pursuant to the power of sale under that certain Deed of Trust recorded on 07/08/2019 in Instrument No. 2019-054385, Book xx, Page xx, records of Pinal County, Arizona, at public auction to the highest bidder at the main entrance to the Superior Court Building, 971 Jason Lopez Circle, Building A, Florence, AZ 85132 on 04/25/2024 at 10:00 AM. NOTICE! IF YOU BELIEVE THERE IS A DEFENSE TO THE TRUSTEE SALE OR IF YOU HAVE AN OBJECTION TO THE TRUSTEE SALE, YOU MUST FILE AN ACTION AND OBTAIN A COURT ORDER PURSUANT TO RULE 65, ARIZONA RULES OF CIVIL PROCEDURE, STOPPING

Person/Attorney Filing: Alex Schulz, Mailing Address: 2999 N. 44TH St., Suite 625, Phoenix, AZ 85018, Phone Number: (623) 777-3828, E-Mail Address: alex.schulz@mtglawfirm.com State Bar Number: 028480, Issuing State: AZ Attorneys for Plaintiff IN THE SUPERIOR COURT OF

Public Notices **Public Notices** **Public Notices**

**PUBLIC MEETING NOTIFICATION
 PRE-APPLICATION MEETING
 RCRA PART B FACILITY APPLICATION: ECOBAT SOLUTIONS**

This notification is being provided based on the requirements of the Arizona Department of Environmental Quality (ADEQ) and United States Environmental Protection Agency (40 CFR 124.31).

- Date, time, and location of the meeting:
 - Meeting Date: March 21, 2024
 - Meeting Time: 6:00 PM to end of Public Comment.
 - Location: Radisson Hotel
777 N Pinal Avenue, Casa Grande, AZ 85122
 - Phone: (520) 217-1029
 - Website: <https://www.choicehotels.com/arizona/casa-grande/radisson-hotels/az604>
- Purpose of the meeting:
 - The purpose of the meeting is to discuss the operations of the Ecobat Solutions Lithium Recycling facility. Topics will include facility location, proposed operations and the upcoming submittal to Arizona Department of Environmental Quality of a RCRA Part B permit application for the storage, treatment and recycling of spent lithium batteries and lithium-bearing materials.
- Facility description and proposed operations:
 - The facility will receive used intact as well as damaged or breached lithium-ion batteries, lithium-metal batteries and other lithium-bearing materials via truck delivery. The waste will be profiled, classified, pre-sorted and shredded. The shredded material will be separated into several categories of finished goods including black mass, copper, and aluminum. These finished goods will be packaged in supersacks or drums and stored onsite prior to shipping via truck.
- Special Meeting Access & Accommodations:
 - Should you require special accommodation to participate in the meeting, please contact the person listed below to make the necessary arrangements no later than March 18.
- For Additional information please contact:
 - Eric Knowles, Plant Manager
Phone: (760) 514-8494
Email: eric.knowles@ecobat.com
1474 N. VIP Blvd.
Casa Grande, AZ 85122

No. of publications: 1; date of publication: Feb. 20, 2024.

Public Notices	Public Notices	Public Notices	Public Notices	Public Notices	Public Notices
<p>THE STATE OF ARIZONA IN AND FOR THE COUNTY OF PINAL, LEGACY MORTGAGE ASSEST TRUST 2020-SL1, Plaintiff, THE HEIRS AND DEVISEES OF DECEDENT DALIA G. MARQUEZ, DECEASED; DEREK RAY GONZALES; JOHN DOES 1-20; JANE DOES 1 -20; DOE CORPORATIONS 1-20; DOE ENTITIES 1-20; AND DOE GOVERNMENTAL UNITS 1-20, Defendants. NO. S1100CV202300936, SUMMONS IN THE NAME OF THE STATE OF ARIZONA: TO: All Defendants named above. WARNING: THIS IS AN OFFICIAL DOCUMENT FROM THE COURT THAT AFFECTS YOUR RIGHTS. READ THIS SUMMONS CAREFULLY. IF YOU DO NOT UNDERSTAND IT, CONTACT AN ATTORNEY FOR LEGAL ADVICE. 1. A lawsuit has been filed against you. A copy of the lawsuit and other court papers were served on you with this Summons. 2. If you do not want a judgment taken against you without your input, you must file an Answer in writing with the Court, and you must pay the required filing fee. To file your Answer, take or send the papers to Clerk of the Superior Court, 971 Jason Lopez Circle Building A, Florence, AZ 85132 or electronically file your Answer through one of Arizona's approved electronic filing systems at http://www.azcourts.gov/efilin information. Mail a copy of the Answer to the other party, the Plaintiff, at the address listed on the top of this Summons. Note: If you do not file electronically you will not have electronic access to the documents in this case. 3. If this Summons and the other court papers were served on you within the State of Arizona, your Answer must be filed within TWENTY (20) CALENDAR DAYS from the date of service, not counting the day of service. If this Summons and the other court papers were served on you outside the State of Arizona, your Answer must be filed within THIRTY (30) CALENDAR DAYS from the date of service, not counting the day of service. Requests for reasonable accommodation for persons with disabilities must be made to the court by parties at least 3 working days in advance of a scheduled court proceeding. GIVEN under my hand and the Seal of the Superior Court of the State of Arizona in and for the County of PINAL SIGNED AND SEALED this date: January 19, 2024 Rebecca Padilla Clerk of Superior Court By: NIVILLAPANDO, Deputy Clerk. A copy of the pleading may be obtained by contacting Plaintiff's attorney at the contact information provided herein. Published 2/20/24, 2/27/24, 3/05/24, 3/12/24</p>	<p>ACTION AND OBTAIN A COURT ORDER PURSUANT TO RULE 65, ARIZONA RULES OF CIVIL PROCEDURE, STOPPING THE SALE NO LATER THAN 5:00 P.M. MOUNTAIN STANDARD TIME OF THE LAST BUSINESS DAY BEFORE THE SCHEDULED DATE OF THE SALE, OR YOU MAY HAVE WAIVED ANY DEFENSES OR OBJECTIONS TO THE SALE. UNLESS YOU OBTAIN AN ORDER, THE SALE WILL BE FINAL AND WILL OCCUR at public auction to the highest bidder at the below date, time and place. LOT 48, OF FINAL PLAT FOR PARCEL 21 AT CIRCLE CROSS RANCH, ACCORDING TO THE PLAT OF RECORD IN THE OFFICE OF THE COUNTY RECORDER OF PINAL COUNTY, ARIZONA, RECORDED IN CABINET G, SLIDE 6 AND AFFIDAVIT OF CORRECTION RECORDED AT FEE NO. 2006-071463; EXCEPTING THEREFROM ALL COAL, OIL, GAS, AND OTHER MINERAL DEPOSITS. AS RESERVED IN THE PATENT TO SAID LAND; EXCEPT ALL OIL, GAS PETROLEUM, NATURAL GAS, COAL, LIGNITE AND OTHER HYDROCARBONS BY WHATEVER NAME, URANIUM, METALS (INCLUDING, WITHOUT LIMITATION, COPPER) AND ALL MINERALS, GASES AND GEOTHERMAL SUBSTANCES AND RIGHTS BELOW A DEPTH OF 30 FEET, AS GRANTED IN DOCUMENT RECORDED AT FEE NO. 2018-012274, RECORDS OF PINAL COUNTY, ARIZONA. COUNTY ASSESSOR'S TAX PARCEL NUMBER: 210-81-73309 STREET ADDRESS OR IDENTIFIABLE LOCATION: 610 W BELMONT RED TRL SAN TAN VALLEY, AZ 85143 In accordance with A.R.S. § 33-808(B), the time of sale will be between 9 a.m. and 5 p.m. at a specific place on the Subject Real Property, at the County Courthouse, or at a specific place of business of the Trustee. Sale Date: 4/4/2024 Sale Time: 11:00 AM Sale Location: AT THE MAIN ENTRANCE TO THE SUPERIOR COURT BUILDING, 971 JASON LOPEZ CIRCLE, BLDG A, FLORENCE, AZ 85132 ACCORDING TO THE DEED OF TRUST OR UPON INFORMATION SUPPLIED BY THE BENEFICIARY, THE FOLLOWING INFORMATION IS PROVIDED PURSUANT TO A.R.S. SECTION 33-808(C): ORIGINAL TRUSTOR: ALVIN S GERARDO AND CAROLINA GERARDO 610 W BELMONT RED TRL SAN TAN VALLEY, AZ 85143 ORIGINAL PRINCIPAL BALANCE AS SHOWN ON DEED OF TRUST: \$449,328.00 CURRENT BENEFICIARY: Nationstar Mortgage LLC c/o NATIONSTAR MORTGAGE LLC D/B/A MR.COOPER 8950 Cypress Waters Blvd. Coppell, TX 75019 CURRENT TRUSTEE: Clear Recon Corp 3707 East Southern Avenue Mesa, AZ 85206 Phone: (866) 931-0036 Visit this Internet Web site: WWW.SERVICELINKAUCTION.COM Automated Sale Line: 1-866-539-4173 Dated: 12/20/2023 CLEAR RECON CORP Hamsa Uchi, Authorized Signatory for Trustee A notary public or other officer completing this certificate verifies only the identity of the individual who signed the</p>	<p>document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document. State of California) ss. County of San Diego) On DEC 20, 2023 before me, Christina Poeppel Notary Public, personally appeared Hamsa Uchi who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument. I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct. IN WITNESS WHEREOF I hereunto set my hand and official seal. Christina Poeppel, My Comm. Expires Aug 13, 2027 The successor trustee appointed herein qualifies as trustee of the Trust Deed in the trustee's capacity as an Escrow Agent required by ARS Section 33-803, Subsection (A). The name of the state or federal licensing or regulatory body or controlling agency of the trustee is: Arizona Department of Financial Institutions. Published 1/30/24, 2/06/24, 2/13/24, 2/20/24</p>	<p>Trustor JAKE TIMOTHY SIMMONS AND JENNIFER COLEEN SIMMONS, HUSBAND AND WIFE 4170 E SHAPINSAY DR, SAN TAN VALLEY, AZ 85140 Name and Address of the Beneficiary Nationstar Mortgage LLC c/o ServiceMac, LLC 9726 Old Bailes Road, Suite 200 Fort Mill, SC 29707 Name and Address of Trustee MTC Financial Inc. dba Trustee Corps 17100 Gillette Ave, Irvine, CA 92614 949-252-8300 TDD: 711 949.252.8300 Said sale will be made for cash (payable at time of sale), but without covenant or warranty, express or implied, regarding title, possession or encumbrances, to pay the remaining principal sum of the Note secured by said Trust Deed, which includes interest thereon as provided in said Note, advances, if any under the terms of said Trust Deed, interest on advances, if any, fees, charges and expenses of the Trustee and of the trust created by said Trust Deed. The Trustee will accept only cash or cashier's check for reinstatement or price bid payment. Reinstatement payment must be paid before five o'clock P.M. (5:00 P.M.) on the last day other than a Saturday or legal holiday before the date of sale. The purchaser at the sale, other than the Beneficiary to the extent of his credit bid, shall pay the price bid no later than five o'clock P.M. (5:00 P.M.) of the following day, other than a Saturday or legal holiday. If the Trustee is unable to convey title for any reason, the successful bidder's sole and exclusive remedy shall be the return of monies paid to the Trustee and the successful bidder shall have no further recourse. Conveyance of the property shall be without warranty, express or implied, and subject to all liens, claims or interest having a priority senior to the Deed of Trust. The Trustee shall not express an opinion as to the condition of title. DATE: January 5, 2024 MTC Financial Inc. dba Trustee Corps Rosenda Cardenas, Authorized Signatory Manner of Trustee qualification: Real Estate Broker, as required by ARS Section 33-803, Subsection A Name of Trustee's regulator: Arizona Department of Real Estate SALE INFORMATION CAN BE OBTAINED ONLINE AT www.Auction.com AUTOMATED SALES INFORMATION PLEASE CALL: Auction.com at 800.280.2832 Order Number 99615, Pub Dates: 2/6/2024, 2/13/2024, 2/20/2024, 2/27/2024, CASA GRANDE DISPATCH Published 2/06/24, 2/13/24, 2/20/24, 2/27/24</p>	<p>JENNIFER L PIMENTEL 10594 E SUNFLOWER LN FLORENCE, AZ 85132 ORIGINAL PRINCIPAL BALANCE AS SHOWN ON DEED OF TRUST: \$206,196.00 CURRENT BENEFICIARY: Nationstar Mortgage LLC c/o NATIONSTAR MORTGAGE LLC D/B/A MR.COOPER 8950 Cypress Waters Blvd. Coppell, TX 75019 CURRENT TRUSTEE: Clear Recon Corp 3707 East Southern Avenue Mesa, AZ 85206 Phone: (866) 931-0036 Visit this Internet Web site: WWW.SERVICELINKAUCTION.COM Automated Sale Line: 1-866-539-4173 Dated: 12/21/2023 CLEAR RECON CORP Hamsa Uchi, Authorized Signatory for Trustee A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document. State of California) ss. County of San Diego) On DEC 28, 2023 before me, Christina Poeppel Notary Public, personally appeared Hamsa Uchi who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument. I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct. IN WITNESS WHEREOF I hereunto set my hand and official seal. Christina Poeppel, My Comm. Expires Aug 13, 2027 The successor trustee appointed herein qualifies as trustee of the Trust Deed in the trustee's capacity as an Escrow Agent required by ARS Section 33-803, Subsection (A). The name of the state or federal licensing or regulatory body or controlling agency of the trustee is: Arizona Department of Financial Institutions. Published 2/06/24, 2/13/24, 2/20/24, 2/27/24</p>	<p>CLEAR RECON CORP Hamsa Uchi, Authorized Signatory for Trustee A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document. State of California) ss. County of San Diego) On JAN 22, 2024 before me, Christina Poeppel Notary Public, personally appeared Hamsa Uchi who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument. I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct. IN WITNESS WHEREOF I hereunto set my hand and official seal. Christina Poeppel, My Comm. Expires Aug 13, 2027 The successor trustee appointed herein qualifies as trustee of the Trust Deed in the trustee's capacity as an Escrow Agent required by ARS Section 33-803, Subsection (A). The name of the state or federal licensing or regulatory body or controlling agency of the trustee is: Arizona Department of Financial Institutions. Published 2/13/24, 2/20/24, 2/27/24, 3/05/24</p>
<p>TS#: 119003-AZ Order #: 230572425-AZ-VOI NOTICE OF TRUSTEE'S SALE The following legally described trust property will be sold, pursuant to the power of Sale under that certain Deed of Trust dated 2/17/2022 and recorded on 2/17/2022, as Instrument No. 2022-019644, in the office of the County Recorder of Pinal County, Arizona, NOTICE! IF YOU BELIEVE THERE IS A DEFENSE TO THE TRUSTEE SALE OR IF YOU HAVE AN OBJECTION TO THE TRUSTEE SALE, YOU MUST FILE AN ACTION AND OBTAIN A COURT ORDER PURSUANT TO RULE 65, ARIZONA RULES OF CIVIL PROCEDURE, STOPPING THE SALE NO LATER THAN 5:00 P.M. MOUNTAIN STANDARD TIME OF THE LAST BUSINESS DAY BEFORE THE SCHEDULED DATE OF THE SALE, OR YOU MAY HAVE WAIVED ANY DEFENSES OR OBJECTIONS TO THE SALE. UNLESS YOU OBTAIN AN ORDER, THE SALE WILL BE FINAL AND WILL OCCUR at public auction to the highest bidder at the below date, time and place. LOT 26, OF TORTOSA-NW PARCEL 7, ACCORDING TO THE PLAT OF RECORD IN THE OFFICE OF THE COUNTY RECORDER OF PINAL COUNTY, ARIZONA, RECORDED IN CABINET E, SLIDE 94 AND CERTIFICATES OF CORRECTION RECORDED IN RECORDING NO. 2005-12593 AND IN RECORDING NO. 2005-62197, BOTH OF OFFICIAL RECORDS. COUNTY ASSESSOR'S TAX PARCEL NUMBER: 502-52-43709 STREET ADDRESS OR IDENTIFIABLE LOCATION: 36253 W VELAZQUEZ DR MARICOPA, AZ 85138 In accordance with A.R.S. § 33-808(B), the time of sale will be between 9 a.m. and 5 p.m. at a specific place on the Subject Real Property, at the County Courthouse, or at a specific place of business of the Trustee. Sale Date: 5/9/2024 Sale Time: 10:00 AM Sale Location: AT THE MAIN ENTRANCE TO THE SUPERIOR COURT BUILDING, COURT OF ARIZONA IN PINAL COUNTY, 971 JASON LOPEZ CIRCLE, BLDG. A, FLORENCE, AZ 85132 ACCORDING TO THE DEED OF TRUST OR UPON INFORMATION SUPPLIED BY THE BENEFICIARY, THE FOLLOWING INFORMATION IS PROVIDED PURSUANT TO A.R.S. SECTION 33-808(C): ORIGINAL TRUSTOR: KYANTI PALMER 36253 W VELAZQUEZ DR MARICOPA, AZ 85138 ORIGINAL PRINCIPAL BALANCE AS SHOWN ON DEED OF TRUST: \$193,431.00 CURRENT BENEFICIARY: AMERIHOME MORTGAGE COMPANY, LLC c/o Cenlar FSB P.O.BOX 77410 EWING, NJ 08618 CURRENT TRUSTEE: Clear Recon Corp 3707 East Southern Avenue Mesa, AZ 85206 Phone: (866) 931-0036 Visit this Internet Web site: WWW.AUCTION.COM Automated Sale Line: (800) 280-2832 Dated: 1/22/2024</p>	<p>TS No. AZ09000050-23-1 APN 109-30-3660 FKA 109-30-366 TO No. AZ-004023 NOTICE OF TRUSTEE'S SALE The following legally described trust property will be sold, pursuant to the power of sale under that certain Deed of Trust dated April 24, 2021 and recorded on April 26, 2021 as Instrument No. 2021-051714 of official records in the Office of the Recorder of Pinal County, Arizona, NOTICE! IF YOU BELIEVE THERE IS A DEFENSE TO THE TRUSTEE SALE OR IF YOU HAVE AN OBJECTION TO THE TRUSTEE SALE, YOU MUST FILE AN ACTION AND OBTAIN A COURT ORDER PURSUANT TO RULE 65, ARIZONA RULES OF CIVIL PROCEDURE, STOPPING THE SALE NO LATER THAN 5:00 P.M. MOUNTAIN STANDARD TIME ON THE LAST BUSINESS DAY BEFORE THE SCHEDULED DATE OF THE SALE, OR YOU MAY HAVE WAIVED ANY DEFENSES OR OBJECTIONS TO THE SALE. UNLESS YOU OBTAIN AN ORDER, THE SALE WILL BE FINAL AND WILL OCCUR at public auction to the highest bidder at the Main Entrance to the Superior Court Building, Pinal County Courthouse, 971 Jason Lopez Circle, Bldg. A, Florence, AZ 85132 on April 11, 2024 at 10:00 AM on said day. The street address and other common designation, if any, of the real property described above is purported to be: 4170 E SHAPINSAY DR, SAN TAN VALLEY, AZ 85140 LOT 70, CASTLEGATE PARCEL 5, ACCORDING TO THE PLAT OF RECORD IN THE OFFICE OF THE COUNTY RECORDER OF PINAL COUNTY, ARIZONA, RECORDED IN CABINET E, SLIDE 75. APN: 109-30-3660 FKA 109-30-366 Original Principal Balance \$188,000.00 Name and Address of original</p>	<p>TS No. AZ07000004-24-1 APN 200-43-15202 FKA 200-43-1520 TO No. 3000285 NOTICE OF TRUSTEE'S SALE The following legally described trust property will be sold, pursuant to the power of sale under that certain Deed of Trust dated October 30, 2020 and recorded on October 30, 2020 as Instrument No. 2020-112163 of official records in the Office of the Recorder of Pinal County, Arizona, NOTICE! IF YOU BELIEVE THERE IS A DEFENSE TO THE TRUSTEE SALE OR IF YOU HAVE AN OBJECTION TO THE TRUSTEE SALE, YOU MUST FILE AN ACTION AND OBTAIN A COURT ORDER PURSUANT TO RULE 65, ARIZONA RULES OF CIVIL PROCEDURE, STOPPING THE SALE NO LATER THAN 5:00 P.M. MOUNTAIN STANDARD TIME ON THE LAST BUSINESS DAY BEFORE THE SCHEDULED DATE OF THE SALE, OR YOU MAY HAVE WAIVED ANY DEFENSES OR OBJECTIONS TO THE SALE. UNLESS YOU OBTAIN AN ORDER, THE SALE WILL BE FINAL AND WILL OCCUR at public auction to the highest bidder at the main entrance to the Superior Court Building, 971 Jason Lopez Circle, Building A, Florence, AZ 85132 on April 25, 2024 at 11:00 AM on said day. The street address and other common designation, if any, of the real property described above is purported to be: 554 W 11TH STREET, FLORENCE, AZ 85132 LOT 95, VILLA ADELAIDA, ACCORDING TO THE PLAT OF RECORD IN THE OFFICE OF THE COUNTY RECORDER OF PINAL COUNTY, ARIZONA, RECORDED IN CABINET B OF MAPS, SLIDE 26. APN: 200-43-15202 FKA 200-43-1520 Original Principal Balance \$169,856.00 Name and Address of original Trustor ROBERT LUCAS, SINGLE MAN 504 W 11TH STREET, FLORENCE, AZ 85132 Name and Address of the Beneficiary FREEDOM MORTGAGE CORPORATION c/o Freedom Mortgage Corporation 951 Yamato Road, Suite 175 Boca Raton, FL 33431 Name and Address of Trustee MTC Financial Inc. dba Trustee Corps 17100 Gillette Ave, Irvine, CA 92614 949-252-8300 TDD: 711 949.252.8300 Said sale will be made for cash (payable at time of sale), but without covenant or warranty, express or implied, regarding title, possession or encumbrances, to pay the remaining principal sum of the Note secured by said Trust Deed, which includes interest thereon as provided in said Note, advances, if any under the terms of said Trust Deed, interest on advances, if any, fees, charges and expenses of the Trustee and of the trust created by said Trust Deed. The Trustee will accept only cash or cashier's check for reinstatement or price bid payment. Reinstatement payment must be paid before five o'clock P.M. (5:00 P.M.) on the last day other than a Saturday or legal holiday before the date of sale. The purchaser at the sale, other than the Beneficiary to the extent of his credit bid, shall pay the price bid no later than five o'clock P.M. (5:00 P.M.) of the following day, other than a Saturday or legal holiday. If the Trustee is unable to convey title for any reason, the successful bidder's sole and exclusive remedy shall be the return of monies paid to the Trustee and the successful bidder shall have no further recourse. Conveyance of the property shall be without warranty, express or implied, and subject to all liens, claims or interest having a priority senior to the Deed of Trust. The Trustee shall not express an opinion as to the condition of title. DATE: January 5, 2024 MTC Financial Inc. dba Trustee Corps Rosenda Cardenas, Authorized Signatory Manner of Trustee qualification: Real Estate Broker, as required by ARS Section 33-803, Subsection A Name of Trustee's regulator: Arizona Department of Real Estate SALE INFORMATION CAN BE OBTAINED ONLINE AT www.Auction.com AUTOMATED SALES INFORMATION PLEASE CALL: Auction.com at 800.280.2832 Order Number 99615, Pub Dates: 2/6/2024, 2/13/2024, 2/20/2024, 2/27/2024, CASA GRANDE DISPATCH Published 2/06/24, 2/13/24, 2/20/24, 2/27/24</p>	<p>TS#: 120286-AZ Order #: 240020599-AZ-VOI NOTICE OF TRUSTEE'S SALE The following legally described trust property will be sold, pursuant to the power of Sale under that certain Deed of Trust dated 8/18/2017 and recorded on 8/18/2017, as Instrument No. 2017-059902, in the office of the County Recorder of Pinal County, Arizona, NOTICE! IF YOU BELIEVE THERE IS A DEFENSE TO THE TRUSTEE SALE OR IF YOU HAVE AN OBJECTION TO THE TRUSTEE SALE, YOU MUST FILE AN ACTION AND OBTAIN A COURT ORDER PURSUANT TO RULE 65, ARIZONA RULES OF CIVIL PROCEDURE, STOPPING THE SALE NO LATER THAN 5:00 P.M. MOUNTAIN STANDARD TIME OF THE LAST BUSINESS DAY BEFORE THE SCHEDULED DATE OF THE SALE, OR YOU MAY HAVE WAIVED ANY DEFENSES OR OBJECTIONS TO THE SALE. UNLESS YOU OBTAIN AN ORDER, THE SALE WILL BE FINAL AND WILL OCCUR at public auction to the highest bidder at the below date, time and place. LOT 26, OF TORTOSA-NW PARCEL 7, ACCORDING TO THE PLAT OF RECORD IN THE OFFICE OF THE COUNTY RECORDER OF PINAL COUNTY, ARIZONA, RECORDED IN CABINET E, SLIDE 94 AND CERTIFICATES OF CORRECTION RECORDED IN RECORDING NO. 2005-12593 AND IN RECORDING NO. 2005-62197, BOTH OF OFFICIAL RECORDS. COUNTY ASSESSOR'S TAX PARCEL NUMBER: 502-52-43709 STREET ADDRESS OR IDENTIFIABLE LOCATION: 36253 W VELAZQUEZ DR MARICOPA, AZ 85138 In accordance with A.R.S. § 33-808(B), the time of sale will be between 9 a.m. and 5 p.m. at a specific place on the Subject Real Property, at the County Courthouse, or at a specific place of business of the Trustee. Sale Date: 5/9/2024 Sale Time: 10:00 AM Sale Location: AT THE MAIN ENTRANCE TO THE SUPERIOR COURT BUILDING, COURT OF ARIZONA IN PINAL COUNTY, 971 JASON LOPEZ CIRCLE, BLDG. A, FLORENCE, AZ 85132 ACCORDING TO THE DEED OF TRUST OR UPON INFORMATION SUPPLIED BY THE BENEFICIARY, THE FOLLOWING INFORMATION IS PROVIDED PURSUANT TO A.R.S. SECTION 33-808(C): ORIGINAL TRUSTOR: KYANTI PALMER 36253 W VELAZQUEZ DR MARICOPA, AZ 85138 ORIGINAL PRINCIPAL BALANCE AS SHOWN ON DEED OF TRUST: \$193,431.00 CURRENT BENEFICIARY: AMERIHOME MORTGAGE COMPANY, LLC c/o Cenlar FSB P.O.BOX 77410 EWING, NJ 08618 CURRENT TRUSTEE: Clear Recon Corp 3707 East Southern Avenue Mesa, AZ 85206 Phone: (866) 931-0036 Visit this Internet Web site: WWW.AUCTION.COM Automated Sale Line: (800) 280-2832 Dated: 1/22/2024</p>	<p>TS No. AZ07000004-24-1 APN 200-43-15202 FKA 200-43-1520 TO No. 3000285 NOTICE OF TRUSTEE'S SALE The following legally described trust property will be sold, pursuant to the power of sale under that certain Deed of Trust dated October 30, 2020 and recorded on October 30, 2020 as Instrument No. 2020-112163 of official records in the Office of the Recorder of Pinal County, Arizona, NOTICE! IF YOU BELIEVE THERE IS A DEFENSE TO THE TRUSTEE SALE OR IF YOU HAVE AN OBJECTION TO THE TRUSTEE SALE, YOU MUST FILE AN ACTION AND OBTAIN A COURT ORDER PURSUANT TO RULE 65, ARIZONA RULES OF CIVIL PROCEDURE, STOPPING THE SALE NO LATER THAN 5:00 P.M. MOUNTAIN STANDARD TIME ON THE LAST BUSINESS DAY BEFORE THE SCHEDULED DATE OF THE SALE, OR YOU MAY HAVE WAIVED ANY DEFENSES OR OBJECTIONS TO THE SALE. UNLESS YOU OBTAIN AN ORDER, THE SALE WILL BE FINAL AND WILL OCCUR at public auction to the highest bidder at the main entrance to the Superior Court Building, 971 Jason Lopez Circle, Building A, Florence, AZ 85132 on April 25, 2024 at 11:00 AM on said day. The street address and other common designation, if any, of the real property described above is purported to be: 554 W 11TH STREET, FLORENCE, AZ 85132 LOT 95, VILLA ADELAIDA, ACCORDING TO THE PLAT OF RECORD IN THE OFFICE OF THE COUNTY RECORDER OF PINAL COUNTY, ARIZONA, RECORDED IN CABINET B OF MAPS, SLIDE 26. APN: 200-43-15202 FKA 200-43-1520 Original Principal Balance \$169,856.00 Name and Address of original Trustor ROBERT LUCAS, SINGLE MAN 504 W 11TH STREET, FLORENCE, AZ 85132 Name and Address of the Beneficiary FREEDOM MORTGAGE CORPORATION c/o Freedom Mortgage Corporation 951 Yamato Road, Suite 175 Boca Raton, FL 33431 Name and Address of Trustee MTC Financial Inc. dba Trustee Corps 17100 Gillette Ave, Irvine, CA 92614 949-252-8300 TDD: 711 949.252.8300 Said sale will be made for cash (payable at time of sale), but without covenant or warranty, express or implied, regarding title, possession or encumbrances, to pay the remaining principal sum of the Note secured by said Trust Deed, which includes interest thereon as provided in said Note, advances, if any under the terms of said Trust Deed, interest on advances, if any, fees, charges and expenses of the Trustee and of the trust created by said Trust Deed. The Trustee will accept only cash or cashier's check for reinstatement or price bid payment. Reinstatement payment must be paid before five o'clock P.M. (5:00 P.M.) on the last day other than a Saturday or legal holiday before the date of sale. The purchaser at the sale, other than the Beneficiary to the extent of his credit bid, shall pay the price bid no later than five o'clock P.M. (5:00 P.M.) of the following day, other than a Saturday or legal holiday. If the Trustee is unable to convey title for any reason, the successful bidder's sole and exclusive remedy shall be the return of monies paid to the Trustee and the successful bidder shall have no further recourse. Conveyance of the property shall be without warranty, express or implied, and subject to all liens, claims or interest having a priority senior to the Deed of Trust. The Trustee shall not express an opinion as to the condition of title. DATE: January 5, 2024 MTC Financial Inc. dba Trustee Corps Rosenda Cardenas, Authorized Signatory Manner of Trustee qualification: Real Estate Broker, as required by ARS Section 33-803, Subsection A Name of Trustee's regulator: Arizona Department of Real Estate SALE INFORMATION CAN BE OBTAINED ONLINE AT www.Auction.com AUTOMATED SALES INFORMATION PLEASE CALL: Auction.com at 800.280.2832 Order Number 99615, Pub Dates: 2/6/2024, 2/13/2024, 2/20/2024, 2/27/2024, CASA GRANDE DISPATCH Published 2/06/24, 2/13/24, 2/20/24, 2/27/24</p>	

Public Notices **Public Notices** **Public Notices**

**NOTIFICACIÓN DE REUNIÓN PÚBLICA
REUNIÓN PREVIA A LA SOLICITUD
SOLICITUD DE INSTALACIÓN RCRA PARTE B: ECOBAT SOLUTIONS**

Esta notificación se proporciona en base a los requisitos del Departamento de Calidad Ambiental de Arizona (ADEQ) y la Agencia de Protección Ambiental de los Estados Unidos (40 CFR 124.31).

- Fecha, hora y lugar de la reunión:
 - Fecha de la reunión: 21 de marzo, 2024
 - Hora: 6:00 PM hasta el final del periodo de comentarios públicos.
 - Lugar: Radisson Hotel 777 N Pinal Avenue, Casa Grande, AZ 85122
 - Teléfono: (520) 217-1029
 - Página web: <https://www.choicehotels.com/arizona/casa-grande/radisson-hotels/az604>
- Propósito de la reunión:
 - El propósito de la reunión es discutir las operaciones de la instalación de Reciclaje de Litio de Ecobat Solutions. Los temas incluirán la ubicación de las instalaciones, las operaciones propuestas y la próxima presentación al Departamento de Calidad Ambiental de Arizona de una solicitud de permiso RCRA Parte B para el almacenamiento, tratamiento y reciclaje de baterías de litio gastadas y materiales que contienen litio.
- Descripción de la instalación y operaciones propuestas:
 - La instalación recibirá baterías de iones de litio, baterías de metal de litio y otros materiales que contienen litio usadas, intactas o dañadas o rotas, mediante entrega por camión. Los residuos serán perfilados, clasificados, preseleccionados y triturados. El material triturado se separará en varias categorías de productos terminados, entre ellos masa negra, cobre y aluminio. Estos productos terminados se empaquetarán en supersacos o tambores y se almacenarán en el sitio antes de enviarlos por camión.
- Acceso y alojamiento especiales para reuniones:
 - Si necesita alojamiento especial para participar en la reunión, comuníquese con la persona que figura a continuación para hacer los arreglos necesarios a más tardar el 18 de marzo.
- Para más información por favor contacte:
 - Eric Knowles, Gerente de la Planta Teléfono (760) 514-8494 Email: eric.knowles@ecobat.com 1474 N. VIP Blvd. Casa Grande, AZ 85122

No. of publications: 1; date of publication: Feb. 20, 2024.

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PinalCentral.com

Legals continued on page 8B



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HON. TERESA MARTINEZ
HOUSE WING
1700 W WASHINGTON ST
PHOENIX AZ 85007-2812

HON. CRAIG MCFARLAND
CITY OF CASA GRANDE
510 E FLORENCE BLVD
CASA GRANDE AZ 85122-4100

DICK POWELL
CITY OF CASA GRANDE
510 E FLORENCE BLVD
CASA GRANDE AZ 85122-4100

MATT HERMAN
CITY OF CASA GRANDE
510 E FLORENCE BLVD
CASA GRANDE AZ 85122-4100

LISA NAVARRO FITZGIBBONS
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510 E FLORENCE BLVD
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DONNA MCBRIDE
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CASA GRANDE AZ 85122-4100

JEFF LAVENDER
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510 E FLORENCE BLVD
CASA GRANDE AZ 85122-4100

LARRY RAINS
CITY OF CASA GRANDE
510 E FLORENCE BLVD
CASA GRANDE AZ 85122-4100

CHRIS REIMUS
PINAL COUNTY
PO BOX 2945
FLORENCE AZ 85132-3055

BOB & PAT MOORE
35855 S GOLF COURSE DR
TUCSON AZ 85739-1683

DANIEL SEIDEN
AZ CHAMBER OF COMMERCE & INDUSTRY
3200 N CENTRAL AVE STE 1125
PHOENIX AZ 85012-3015

DANIEL J. ADELMAN
CENTER FOR LAW IN THE PUBLIC INTEREST
352 E CAMELBACK RD STE 200
PHOENIX AZ 85012-1603

STEVE BRITTLE
DON'T WASTE ARIZONA, INC.
2934 W NORTHVIEW AVE
PHOENIX AZ 85051-7543

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2202 W MEDTRONIC WAY STE 108
TEMPE AZ 85281-5107

CHRIS S. LEASON
GALLAGHER & KENNEDY
2575 E CAMELBACK RD STE 1100
PHOENIX AZ 85016-9254

BRENT BILLINGSLEY
PINAL COUNTY
PO BOX 2973
FLORENCE AZ 85132-3056

LINTON PROPERTIES V LLC
PO BOX 10503
CASA GRANDE AZ 85130-0077

CASA GRANDE APP INC
120 NE 179TH ST
NORTH MIAMI BEACH FL 33162-1002

77 BAR INC
PO BOX 397
RILLITO AZ 85654-0397

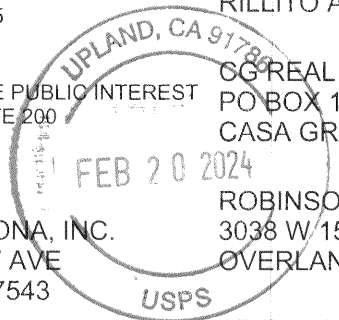
CG REAL ESTATE INVESTORS LLLP
PO BOX 11244
CASA GRANDE AZ 85130-0149

ROBINSON FARMS INC
3038 W 157TH CT
OVERLAND PARK KS 66224-3631

ARIZONA WATER COMPANY
PO BOX 29098
PHOENIX AZ 85038-9098

ARIZONA PUBLIC SERVICES
PO BOX 53933 MS 3200
PHOENIX AZ 85072-3933

SAN CARLOS IRRIGATION DISTRICT
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COOLIDGE AZ 85128-0004



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ROBERT BARGER
STATE OF ARIZONA
1110 W WASHINGTON ST STE 100
PHOENIX AZ 85007-2957

JEFF SERDY
PINAL COUNTY
PO BOX 827
FLORENCE AZ 85132-3016

JEFFREY MCCLURE
PINAL COUNTY
PO BOX 827
FLORENCE AZ 85132-3016

MAHFOUZ "MIKE" ZABANEH
U.S. EPA, REGION IX, FACILITIES MGT
75 HAWTHORNE ST # WST-4 MC
SAN FRANCISCO CA 94105-3920

SHARON LIN
U.S. EPA, REGION IX, LAND DIV
75 HAWTHORNE ST
SAN FRANCISCO CA 94105-3920

SCOTT DIBIASE
PINAL COUNTY
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FLORENCE AZ 85132-3020

LEO LEW
PINAL COUNTY
PO BOX 827
FLORENCE AZ 85132-3016

MERISSA MENDOZA
PINAL COUNTY
PO BOX 2945
FLORENCE AZ 85132-3055

SIERRA CLUB, GRAND CANYON CHAPTER
514 W ROOSEVELT ST
PHOENIX AZ 85003-1328

FLOR SANDOVAL
SONORA ENVIRONMENTAL RESEARCH
INSTITUTE
PO BOX 65782
TUCSON AZ 85728-5782

STANDORI 5 LLC
5676 PENFIELD AVE
WOODLAND HILLS CA 91367-6901

SUNWEST GOLF & RECLAMATION INC
PO BOX 12070
CASA GRANDE AZ 85130-0559

NATINA PRODUCTS LLC
1555 N V I P BLVD
CASA GRANDE AZ 85122-3007

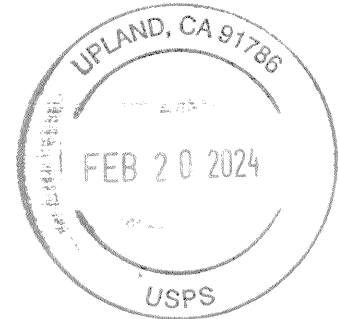
MAE BELLE ENTERPRISES LLC
4057 N TOBASCO RD
CASA GRANDE AZ 85194-8403

ROOFING SPECIALISTS INC
PO BOX 11903
CASA GRANDE AZ 85130-0529

WELLINGTON ROBERT TR
PO BOX 11027
CASA GRANDE AZ 85130-0130

COX
PO BOX 78071
PHOENIX AZ 85062-8071

CITY OF CASA GRANDE
510 E FLORENCE BLVD
CASA GRANDE AZ 85122-4100



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KEVIN CAVANAUGH
PINAL COUNTY
PO BOX 827
FLORENCE AZ 85132-3016

MIKE GOODMAN
PINAL COUNTY
PO BOX 827
FLORENCE AZ 85132-3016

STEPHEN Q MILLER
PINAL COUNTY
PO BOX 827
FLORENCE AZ 85132-3016

HON. THOMAS SHOPE
ARIZONA STATE SENATE
1700 W WASHINGTON ST SENATE WING
PHOENIX AZ 85007-2812

HON. PATRICIA CONTRERAS
HOUSE WING
1700 W WASHINGTON ST
PHOENIX AZ 85007-2812

RAYMOND SUAZO
BUREAU OF LAND MANAGEMENT
1 N CENTRAL AVE STE 800
PHOENIX AZ 85004-4427

LESLIE MEYERS
U.S. BUREAU OF RECLAMATION
6150 W THUNDERBIRD RD
GLENDALE AZ 85306-4001

CARRIE MARR
U.S. FISH & WILDLIFE SERVICE
9828 N 31ST AVE # C3
PHOENIX AZ 85051-2517

MOYERS PROPERTIES LLC
PO BOX 401865
HESPERIA CA 92340-1865

SUNBELT CEMENT INC
PO BOX 2883
WEST PALM BEACH FL 33402-2883

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44254 W BAILEY DR
MARICOPA AZ 85138-6403

NATINA PRODUCTS LLC
1555 N V I P BLVD
CASA GRANDE AZ 85122-3007

ECOBAT SOLUTIONS ARIZONA INC
433 LAS COLINAS BLVD E STE 900
IRVING TX 75039-5513

LINTON PROPERTIES VI LLC
PO BOX 10503
CASA GRANDE AZ 85130-0077

LINTON PROPERTIES VI LLC
PO BOX 10503
CASA GRANDE AZ 85130-0077

LINTON IAN A & KAREN
PO BOX 10503
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JAMES LEENHOUTS
U.S. GEOLOGICAL SURVEY
520 N PARK AVE STE 221
TUCSON AZ 85719-5075

MAE BELLE ENTERPRISES LLC
4057 N TOBASCO RD
CASA GRANDE AZ 85194-8403

THE HONORABLE KYRSTEN SINEMA IDEEN JACKSON M
UNITED STATES SENATE
825B&C HART SENATE OFC
WASHINGTON DC 20510-0001

2424 N SANDSTONE PL
CASA GRANDE AZ 85122-6267

THE HONORABLE MARK KELLY
UNITED STATES SENATE
B40D DIRKSEN SENATE OFC
WASHINGTON DC 20510-0001

ALC-ACQUISITION LAND HOLDINGS LLC
11811 N TATUM BLVD STE 1060
PHOENIX AZ 85028-1618

TY E GRAY
ARIZONA GAME & FISH DEPT.
5000 W CAREFREE HWY
PHOENIX AZ 85086-5000

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PO BOX 240
DODGEVILLE WI 53533-0240

DAVID TENNEY
STATE OF ARIZONA
1110 W WASHINGTON ST STE 100
PHOENIX AZ 85007-2957

SUNWEST GOLF & RECLAMATION INC
PO BOX 12070
CASA GRANDE AZ 85130-0559

KATHRYN LEONARD
SHPO, ARIZONA STATE PARKS
1100 W WASHINGTON ST
PHOENIX AZ 85007-2935

ALC ACQUISITION LAND HOLDINGS LLC
11811 N TATUM BLVD STE 1060
PHOENIX AZ 85028-1618

TOM BUSCHATZKE
AZ DEPT. OF WATER RESOURCES
1110 W WASHINGTON ST STE 310
PHOENIX AZ 85007-2954

ROX RENT A CAN LLC
PO BOX 11190
CASA GRANDE AZ 85130-0148

LAURA MALONE
ADEQ - WASTE PROGRAMS DIVISION
1110 W WASHINGTON ST 6TH FL
PHOENIX AZ 85007-2952

1441 N VIP BLVD LLC
4110 TAPO CANYON RD
SIMI VALLEY CA 93063-7173



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COUNTY OF BROWN } SS.

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PB ENVIRONMENTAL CONSULTING LLC
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HUNTINGTON BEACH, CA 92648-5697

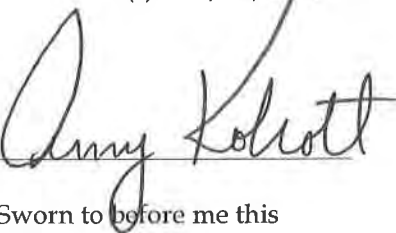
I, being first duly sworn, upon oath deposes and says: That I am the legal clerk of the Arizona Republic, a newspaper of general circulation in the counties of Maricopa, Coconino, Pima and Pinal, in the State of Arizona, published weekly at Phoenix, Arizona, and that the copy hereto attached is a true copy of the advertisement published in the said paper on the dates indicated.

Publication: LaVoz TVyMas

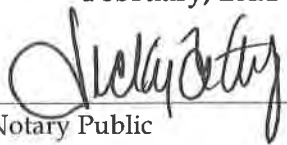
Ad number: GCI1135916

PO Field: PUBLIC MEETING

Published Date(s): 02/23/2024


Sworn to before me this

23rd day of
February, 2024


Notary Public
My Commission Expires on 9/9/25

VICKY FELTY
Notary Public
State of Wisconsin

**PUBLIC MEETING NOTIFICATION
PRE-APPLICATION MEETING
RCRA PART B FACILITY APPLICATION: ECOBAT SOLUTIONS**

This notification is being provided based on the requirements of the Arizona Department of Environmental Quality (ADEQ) and United States Environmental Protection Agency (40 CFR 124.31).

- Date, time, and location of the meeting:
 - Meeting Date: March 21, 2024
 - Meeting Time: 6:00 PM to end of Public Comment.
 - Location: Radisson Hotel
777 N Pinal Avenue, Casa Grande, AZ 85122
 - Phone: (520) 217-1029
 - Website: <https://www.choicehotels.com/arizona/casa-grande/radisson-hotels/az604>
- Purpose of the meeting:
 - The purpose of the meeting is to discuss the operations of the Ecobat Solutions Lithium Recycling facility. Topics will include facility location, proposed operations and the upcoming submittal to Arizona Department of Environmental Quality of a RCRA Part B permit application for the storage, treatment and recycling of spent lithium batteries and lithium-bearing materials.
- Facility description and proposed operations:
 - The facility will receive used intact as well as damaged or breached lithium-ion batteries, lithium-metal batteries and other lithium-bearing materials via truck delivery. The waste will be profiled, classified, pre-sorted and shredded. The shredded material will be separated into several categories of finished goods including black mass, copper, and aluminum. These finished goods will be packaged in supersacks or drums and stored onsite prior to shipping via truck.
- Special Meeting Access & Accommodations:
 - Should you require special accommodation to participate in the meeting, please contact the person listed below to make the necessary arrangements no later than March 18.
- For Additional information please contact:
 - Eric Knowles, Plant Manager
Phone: (760) 514-8494
Email: eric.knowles@ecobat.com
1474 N. VIP Blvd.
Casa Grande, AZ 85122

THE ARIZONA REPUBLIC

PO Box 194, Phoenix, Arizona 85001-0194
Phone 1-602-444-7315 Fax 1-877-943-0443

STATE OF WISCONSIN }
COUNTY OF BROWN } SS.

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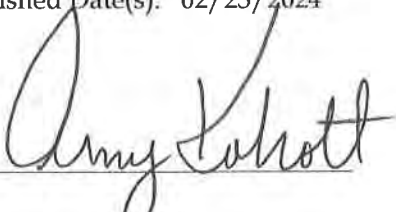
I, being first duly sworn, upon oath deposes and says: That I am the legal clerk of the Arizona Republic, a newspaper of general circulation in the counties of Maricopa, Coconino, Pima and Pinal, in the State of Arizona, published weekly at Phoenix, Arizona, and that the copy hereto attached is a true copy of the advertisement published in the said paper on the dates indicated.

Publication: LaVoz TVyMas

Ad number: GCI1135917

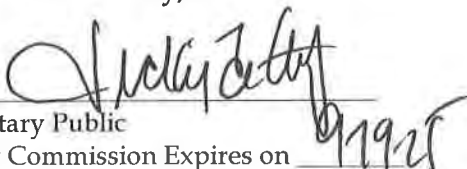
PO Field: PUBLIC MEETING

Published Date(s): 02/23/2024



Sworn to before me this

23rd day of
February, 2024



Notary Public
My Commission Expires on 9/19/25

VICKY FELTY
Notary Public
State of Wisconsin

**NOTIFICACIÓN DE REUNIÓN PÚBLICA
REUNIÓN PREVIA A LA SOLICITUD
SOLICITUD DE INSTALACIÓN RCRA PARTE B: ECOBAT SOLUTIONS**

Esta notificación se proporciona en base a los requisitos del Departamento de Calidad Ambiental de Arizona (ADEQ) y la Agencia de Protección Ambiental de los Estados Unidos (40 CFR 124.31).

- Fecha, hora y lugar de la reunión:
 - Fecha de la reunión: 21 de marzo, 2024
 - Hora: 6:00 PM hasta el final del periodo de comentarios públicos.
 - Lugar: Radisson Hotel
777 N Pinal Avenue, Casa Grande, AZ 85122
 - Teléfono: (520) 217-1029
 - Página web: <https://www.choicehotels.com/arizona/casa-grande/radisson-hotels/az604>
- Propósito de la reunión:
 - El propósito de la reunión es discutir las operaciones de la instalación de Reciclaje de Litio de Ecobat Solutions. Los temas incluirán la ubicación de las instalaciones, las operaciones propuestas y la próxima presentación al Departamento de Calidad Ambiental de Arizona de una solicitud de permiso RCRA Parte B para el almacenamiento, tratamiento y reciclaje de baterías de litio gastadas y materiales que contienen litio.
- Descripción de la instalación y operaciones propuestas:
 - La instalación recibirá baterías de iones de litio, baterías de metal de litio y otros materiales que contienen litio usadas, intactas o dañadas o rotas, mediante entrega por camión. Los residuos serán perfilados, clasificados, preseleccionados y triturados. El material triturado se separará en varias categorías de productos terminados, entre ellos masa negra, cobre y aluminio. Estos productos terminados se empaquetarán en supersacos o tambores y se almacenarán en el sitio antes de enviarlos por camión.
- Acceso y alojamiento especiales para reuniones:
 - Si necesita alojamiento especial para participar en la reunión, comuníquese con la persona que figura a continuación para hacer los arreglos necesarios a más tardar el 18 de marzo.
- Para más información por favor contacte:
 - Eric Knowles, Gerente de la Planta
Teléfono: (760) 514-8494
Email: eric.knowles@ecobat.com
1474 N. VIP Blvd.
Casa Grande, AZ 85122

**CASA GRANDE VALLEY
NEWSPAPERS INC**
200 W. 2ND ST.
CASA GRANDE AZ 85122

(520) 836-7461
Fax (520) 836-2944

1 Memo Bill Period 03/2024		2 Advertiser/Client Name PB ENVIRONMENTAL CONSULTING, L	
23 Total Amount Due 274.45		*Unapplied Amount	3 Terms of Payment
21 Current Net Amount Due .00	22 30 Days .00	60 Days .00	Over 90 Days .00
4 Page Number 1	5 Memo Bill Date 03/11/24	6 Billed Account Number 22722	7 Advertiser/Client Number ZOE C. 22722

Advertising Memo Bill

8 Billed Account Name and Address PB ENVIRONMENTAL CONSULTING, LLC PO BOX 10006 WESTMINSTER CA 92685		Amount Paid: Comments: Ad #: 191406
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Please Return Upper Portion With Payment

10 Date	11 Newspaper Reference	12 13 14 Description-Other Comments/Charges	15 SAU Size 16 Billed Units	17 Times Run 18 Rate	19 Gross Amount	20 Net Amount
02/20/24	191406 PCG AZTPT MISC	RCRA PART B ENGLISH 02/20 CGCG CGIT AZ TPT TAX AFFIDAVIT FEE	3.0X10.50 31.50	1 264.60 4.85 5.00	264.60	274.45



PAID

Statement of Account - Aging of Past Due Amounts

21 Current Net Amount Due 0.00	22 30 Days 0.00	60 Days 0.00	Over 90 Days 0.00	*Unapplied Amount	23 Total Amount Due 274.45
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CASA GRANDE VALLEY NEWSPAPERS INC.

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* UNAPPLIED AMOUNTS ARE INCLUDED IN TOTAL AMOUNT DUE

24 Invoice 191406	25 Advertiser Information 1 Billing Period 03/2024	6 Billed Account Number 22722	7 Advertiser/Client Number 22722	2 Advertiser/Client Name PB ENVIRONMENTAL CONSUL
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Affidavit of Publication

STATE OF ARIZONA

COUNTY OF PINAL

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ss.

Kara K. Cooper, first being duly sworn deposes and says: That he/she is a native born citizen of the United States of America, over 21 years of age, that I am an agent and/or publisher of the Casa Grande Dispatch, a newspaper published at Casa Grande, Pinal County, Arizona, Tuesday, Thursday, and Saturday of each week; that a notice, a full, true and complete printed copy of which is hereunto attached, was printed in the regular edition of said newspaper, and not in a supplement thereto, for ONE issue. The publication thereof having been on the following date:

02/20/2024

CASA GRANDE DISPATCH

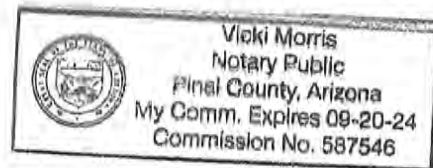
By *Kara K. Cooper*
agent and/or publisher of the Casa Grande Dispatch

Sworn to before me this 12th

day of Mar. A.D., 2024

Vicki Morris

Notary Public in and for the County
of Pinal, State of Arizona



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200 W. 2ND ST.
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8 Billed Account Name and Address PB ENVIRONMENTAL CONSULTING, LLC PO BOX 10006 WESTMINSTER CA 92685		Amount Paid: Comments: Ad #: 191407
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10 Date	11 Newspaper Reference	12 13 14 Description-Other Comments/Charges	15 SAU Size 16 Billed Units	17 Times Run 18 Rate	19 Gross Amount	20 Net Amount
02/20/24	191407 PCG AZTPT MISC	RCRA PART B SPANISH 02/20 CGCG CGIT AZ TPT TAX AFFIDAVIT FEE	3.0X10.50 31.50	1 264.60 4.85 5.00	264.60	274.45



Statement of Account - Aging of Past Due Amounts

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1 Billing Period 03/2024	6 Billed Account Number 22722	7 Advertiser/Client Number 22722	2 Advertiser/Client Name PB ENVIRONMENTAL CONSUL		

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day of Mar. A.D., 2024

Vicki Morris

Notary Public in and for the County
of Pinal, State of Arizona



In the Matter of:

Public Meeting

Reporter's Transcript of Proceedings

March 21, 2024



**GRIFFIN GROUP
INTERNATIONAL**

3200 East Camelback Road, Suite 177
Phoenix, Arizona 85018

PUBLIC MEETING

In the Matter of:)
)
)
Ecobat Lithium Battery Recycling)
Casa Grande RCRA Part B Permit)
Pre-Application Public Meeting)
_____)

REPORTER'S TRANSCRIPT OF PROCEEDINGS

Casa Grande, Arizona
March 21, 2024
6:13 p.m.

REPORTED BY:
TERESA A. WATSON, RMR
Certified Reporter
Certificate No. 50876

PREPARED FOR:
ASCII/Condensed

(Certified Copy)



1 THE PUBLIC MEETING was taken at 6:13 p.m., on
2 Thursday, March 21, 2024, at the Radisson Hotel Casa Grande,
3 777 North Pinal Avenue, Casa Grande, Arizona, before TERESA A.
4 WATSON, Registered Merit Reporter, and a Certified Reporter in
5 and for the State of Arizona, County of Maricopa, pursuant to
6 the Rules of Civil Procedure.

7

8 PARTICIPANTS:

- 9 Mr. Eric Knowles, Plant Manager
- 10 Mr. Brett Horton, VP Operations and Technical
- 11 Mr. Mike Buckantz, Environmental Technical Support
- 12 Mr. Mark Hoffman, Environmental Director
- 13 Ms. Jennifer Fieber, Associates Environmental, Consultant

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P R O C E E D I N G S

1
2
3 MR. BUCKANTZ: Well, thank you for coming this
4 evening. I'm Mike Buckantz with Ecobat, and we have some others
5 in the room that Eric will introduce. We're here to talk about
6 our lithium battery recycling facility that's going up here in
7 Casa Grande, and it's just now recently become operational. The
8 purpose of the plant is, as the name suggests, to recycle
9 lithium batteries.

10 There's a growing population of lithium batteries
11 out there in everything from, you know, lawn mowers to laptops,
12 and certainly in electrical vehicles, and as those batteries
13 become an increasing portion of the battery population, they're
14 going to need to be recycled, and we are trying to fill the need
15 for those recycling services so that we can take those
16 batteries, as Eric will explain, shred them, separate them into
17 some of their material components.

18 Then we'll turn around and sell to manufacturers,
19 who will most likely turn them back into a lithium battery. And
20 that process will be a lot more effective from an environmental
21 standpoint to -- and especially in the sense of not having to
22 mine lithium material to make batteries in the future, similar
23 to the way lead acid batteries are a closed-loop recycling
24 system.

25 We're here tonight because in order to store



1 batteries at our facility, we need to get a -- what's called a
2 Part B permit from these gentlemen here from the Arizona
3 Department of Environmental Quality. One of the requirements to
4 obtain that permit is to have a pre-application meeting. This
5 meeting was noticed in several different ways, including two
6 different newspapers, and in English and in Spanish, and on the
7 radio.

8 And we're glad that you guys are here, and we're
9 also glad that we're clearly not -- not a particular -- not a
10 particularly controversial source. Otherwise, people would be
11 beating down our doors. So we feel pretty good about that.

12 Before I turn it over to Eric, I will let you
13 guys know that we are transcribing the meeting today. So when
14 the time comes at the end for questions -- and we'll be taking
15 questions. We'll provide those responses in the application
16 document that we'll submit to ADEQ. So please, only one speaker
17 at a time, and if you do ask a question at the end, please state
18 your name and affiliation, and make your comment or ask your
19 question, and then we'll be sure to record that. So Teresa here
20 can get that all done for us.

21 And we appreciate your time this evening, and
22 hopefully we'll make good use of it. And with that, Eric
23 Knowles, who is the plant manager here for the lithium facility.

24 MR. KNOWLES: Thanks, Mike.

25 So here's a little overview of the agenda



1 tonight. So we'll -- we'll start by introducing the staff.
2 We'll discuss the operations of the Ecobat Solutions Recycling
3 Facility. We'll talk about location, operations. We'll talk
4 about the RCRA Part B permit application process and the
5 operations that are subject to the permit requirements. So this
6 will be covered in the slide.

7 Safety, environmental protection features that we
8 have, other facility and environmental permits, and then public
9 participation will be at the end. So there will be some links
10 at the end that I'll -- that I'll put down that you can jot down
11 and/or take a picture of, and then we'll have a public comment
12 period, so...

13 So I am Eric Knowles. I'm the plant manager for
14 our facility here in Casa Grande. We have Mark Hoffman in the
15 back. He's our environmental director. I have Mike Buckantz
16 who was just up there. He's our technical support,
17 environmental. And Jennifer Fieber, she's in the back. She's
18 an associate environmental consultant. We have Brett Horton,
19 our VP of Operations. So he's here to support us, also.

20 So here's a site location. This is an aerial
21 view. We're on 1474 North VIP Boulevard. Approximately 10
22 acres on the site there. It's kind of hard to see, but we've
23 got the storage areas outlined that we'll be talking about here.

24 Here's a -- here's a picture of the front.
25 There's the pre-application meeting sign that we posted out



1 front there for everybody to -- to either email or call, make
2 comments and let them know of this meeting date here, so...

3 So here's the general concept that we'll be --
4 that we'll be going through. The first stage will be
5 collection. So there's a process to collect the different
6 batteries. So we're trying to recycle lithium-ion batteries.
7 We will take those batteries, and then depending on what type of
8 batteries they are, we could potentially need to discharge or
9 dismantle them based on what state they come in.

10 So if -- if they are a larger ESS module, we
11 might have to break it down a little bit to get it through the
12 process. If they come in fully charged, we might need to
13 discharge that battery to put it back into the grid. We could
14 even potentially use that on site. So we would discharge,
15 diagnose, dismantle, if needed, and then after that point, we
16 can take those batteries and we can run them through the
17 shredding process. And that's where we would begin to break
18 them down and then reprocess or refine the minerals out of those
19 batteries.

20 After we crush the batteries, we shred them.
21 They will go through a separations process where we will take
22 the black mass out of the batteries, and we'll put it in a bag.
23 We'll take the copper, the aluminum and the plastics, and those
24 are all payables or streams that we'll have that we can sell
25 back to the market.



1 The dark circle or dark square there is where we
2 will live at our site. Eventually, we can take that black mass
3 off, we can go to hydromet, they can process it further, get it
4 down to the base minerals there, and then put it back into
5 the -- into the battery life cycle, so...

6 So some of the features that we -- that we have
7 at our processing facility is we use inert gas. So we're going
8 to use nitrogen, and we're going to shred under water -- or not
9 under water -- with water, to mitigate the risk of potential
10 thermal runaway. So the nitrogen will make the environment that
11 the batteries are getting -- getting shredded inert so that the
12 fire risk is reduced. The water helps with that, also.

13 It's a closed-loop water system, so at this point
14 we're water negative. We're actually adding -- having to add
15 water into the system to keep the process going. So we won't
16 be -- we won't be bleeding any water into the wastewater system.
17 It will be -- it will be a process where we'll actually use
18 water in small quantities, not very much.

19 We have emissions control. So we have wet
20 scrubbers on the shredding system, and we have -- we have a
21 baghouse on the separation system. So we'll collect any of the
22 VOC emissions, and we'll be able to get any of the particulates
23 out of the shredding system using the baghouse.

24 The operation is indoors. So we're going to run
25 indoors. It's -- when the plant is running, there's very little



1 noise that you can hear outside of the building. You actually
2 have to walk through the door, walk into the building to
3 understand if the plant's running or not.

4 And other than that, there's very -- there's
5 very -- there's no dust, hardly any dust that comes out of
6 the -- out of the process either, so environmentally friendly.
7 It's good.

8 Here's a few examples of some of the -- some of
9 the devices that we'll have. We'll have -- we'll have
10 containers that are similar to those, those orange containers
11 there that we'll store batteries in, and that's part of this
12 process, is getting approved to be able to store batteries on
13 the site.

14 When the batteries come in, they'll go through a
15 really extensive process of inspection when they arrive on site,
16 and then they will get put into the appropriate storage area,
17 depending on the state at which they arrive and the type of
18 battery they are. So we take a thermal camera, we will -- we
19 will inspect them to check and monitor the temperature and make
20 sure that they're okay. Anything that's questionable, we'll
21 probably run right through the process immediately. If it's
22 not -- if it's -- if it's in a good state, we can move it to the
23 appropriate storage area and get it ready for processing when
24 the time comes.

25 We have thermal cameras that are in the -- in



1 the -- in the building that are -- that are positioned and
2 pointing at these storage areas. So we have 24-hour coverage of
3 the storage areas, and we have a monitoring system that will --
4 that will notify us if those -- if we have any thermal event in
5 those storage areas. So if it's 10:00 p.m., nobody's in the
6 building and I have a -- have a fire that's happening, the
7 camera will pick it up, and it will notify me first, and then I
8 can react, and we can -- we can move in. In addition to that,
9 we will have a detailed monitoring process where we inspect
10 these areas every day. We log them and we track those
11 temperatures, so...

12 Here's a few other examples of -- these are our
13 facilities in the UK and in Germany of what the site will look
14 like. So batteries -- batteries come in. This is a device in
15 the upper left that we can -- actually have -- say Lucid's
16 having an EV battery that's getting ready to run away. We can
17 take that device. We can run over there. We can put it in
18 there. We can seal it up. We can bring it back to our
19 facility, and we can process it, and we can transport it safely
20 over the road.

21 The building in the middle, they run batteries in
22 there, and that's where they're going to store them and keep
23 them -- keep them out of the weather. Yeah.

24 Bottom right there, it's a team of people
25 actually dismantling some EVs there. That's the EV required to



1 perform that work, so...

2 MR. HOFFMAN: And I note on those boxes, they
3 have certain requirements in Europe. They have -- they're a
4 little bit of ahead of us, as they legislate a lot in Europe.
5 So to move a battery that could be damaged or have a thermal
6 issue, you have to have a certain certification, and so the box
7 that's on the top left actually is certified in Europe. It's
8 not certified here because there isn't a certification
9 necessarily required. I think we'll see the legislation go that
10 direction, but it is a really valuable service that we offer, in
11 Europe especially, from a community perspective.

12 If there's ever a hot battery or if somebody ever
13 calls, the ability to kind of remove that from the public and
14 bring it to an area where we're able to handle that battery,
15 because once they start getting hot, unless you submerge them
16 under water, they typically don't -- you know, they typically
17 don't reverse.

18 MAYOR MCFARLAND: I'm sorry. This is Mayor Craig
19 McFarland. I was going to hold my questions, but since you're
20 on this piece about Lucid, we've had a couple Lucid fires, and
21 so what's to keep you from having one of those devices at Lucid?

22 MR, HOFFMAN: So we're commercially in
23 conversations with Lucid, and we are continuing to interact with
24 them.

25 MAYOR MCFARLAND: And the fire department?



1 MR. KNOWLES: Yeah. So we're working with the
2 fire marshal right now, also, and we're going to partner with
3 his HAZMAT team to actually do some controlled burns and
4 understand what those lithium fires and how to react and what's
5 effective in that process. So we've actually purchased a couple
6 F500 fire extinguishers, which are lithium specific, and we're
7 going to go through some training with the fire department and
8 those batteries, and we will probably invite Lucid to that
9 event, also.

10 MAYOR MCFARLAND: Okay. That would be great.

11 MR. KNOWLES: So we can build those bridges
12 there.

13 MAYOR MCFARLAND: If we could all communicate,
14 that would be great.

15 MR. KNOWLES: Yeah. Yeah. We've been -- with
16 Ryan Pass, so the fire marshal, we've been -- I've been in
17 contact with him quite often, so...

18 MAYOR MCFARLAND: Okay. Well, you have my card,
19 too, so if you need some help in that area, let me know.

20 MR, HOFFMAN: Will do.

21 MR. KNOWLES: So here's a rendering of what the
22 plant looks like. So it's basically -- this is -- this is a
23 shaker table. So we could dump the batteries on the front of
24 the -- front of this -- front of the process here. It will
25 shake. It will feed these conveyor belts that go into



1 shredders.

2 So we have the first stage of shredding where we
3 cut it down to one-inch shred, and then we have a second stage
4 of shredding where we cut it down into 5/8ths-inch shred, and
5 then it will move down the conveyor. It will split off, and at
6 that point we're just starting to try to liberate the different
7 oils from the batteries so that we can separate them in the
8 shredding -- in the separations process.

9 So this is -- this is a rendering over here on
10 the right of the separations process. So, basically, we're just
11 using vacuum or suction. So we're pulling the dried shred
12 through the process, and we're screening out the black mass at
13 the first stage, and then we start to remove the metals by
14 density. So the heaviers come out first, and then so we'll get
15 the copper out, then we'll get the aluminum, then we'll get the
16 plastic out, and they'll all each go into their individual bags.
17 Then we'll check those bags for quality. We'll give them an
18 asseting, and we'll find a customer for them and put them back
19 on the market, so...

20 So final products. So they're packaged and
21 shipped in SuperSacks. They placed on the pallets, and they'll
22 go loaded on trucks. Not a very complicated process.

23 So some details about the RCRA Part B. The
24 future storage of the spent lithium-ion batteries and lithium
25 coating -- containing materials are subject to hazardous waste



1 permitting provisions and necessitates the submittal of a RCRA
2 Part B permit application.

3 So we have three hazardous waste management units
4 that we're proposing. They're going to consist -- one of them's
5 going to consist of a concrete pad that houses four containers.
6 So two of the containers are designated to receive normal-risk
7 materials. These are typically intact batteries that display no
8 damage, bulging or other signs or stress after arrival at the
9 facility after the initial inspection. So normal batteries,
10 we're just going to put them in these containers. We're going
11 to reprocess them later.

12 Two containers are -- another two containers are
13 going to be designed and designated to receive at-risk material.
14 So normally, any at-risk materials will be immediately
15 processed. So if we identify that there's a battery that's at
16 risk in the -- and the process is running, what we would
17 typically do is take that battery and just go run it through the
18 process and eliminate the risk.

19 If we're not running the process or it's not the
20 right time or the conditions aren't right, we have two
21 containers that we can put these batteries in, and they're
22 equipped with a submerging system, a fire suppression system, an
23 air-conditioning system, and they're fully contained. The fire
24 department will come up. They have a fire department
25 connection. They can flood the containers, and we can recycle



1 that water that they put in there back into the process later.

2 So they are -- they're very nice units.

3 This is a -- this is what one of the normal-risk
4 containers look like. So those are -- those are fire doors
5 there. So they're going to -- they're going to typically be
6 open. So they will -- they will stay open. They'll have a
7 fusible link inside of them. If the fusible link -- if there's
8 a fire, it will separate, and the door will shut, containing the
9 fire inside the unit. With that, it also has fire suppression
10 added to it, and it has -- yeah, just fire suppression.

11 This is the at-risk unit. So it's enclosed. It
12 has thermal imaging cameras in it. It has fire monitoring. So
13 it's hooked up to the fire system at the fire -- if the fire
14 system is engaged, it will send a notice to the fire department,
15 and they'll be able to respond. It has the fire department
16 connections where they can hook up. We have a -- we have a fire
17 hydrant right next to it, and then it is built inside a
18 containment. So all that water that goes into the unit will
19 then go into a sump. Then we can recapture that water, put it
20 in a tank and use it in the process.

21 So they're positioned in kind of the back corner
22 of the property. So we had two choices. We had a lumber yard
23 on the one side, and we have a paver, concrete paver plant on
24 the other side. We chose to put those storage units on the side
25 closer to the concrete pavers.



1 MAYOR MCFARLAND: That's good. It's less
2 flammable.

3 MR. KNOWLES: Yeah. And as well, the outdoor
4 units, they are -- they are going to be monitored by cameras,
5 and they'll have thermal imaging out there, also.

6 So our building fire mitigation is equipped with
7 laser smoke detection, flame detection, and visual/thermal
8 cameras with alert systems. We're monitored 24/7. We have a
9 sprinkler system activated by the detection systems. We have an
10 array of extinguishers. We have CO2, foam and Lithex.

11 We have inbound staging. Each container must be
12 checked for temperature using a thermal gun. Each battery
13 container in this area must be monitored periodically. So we
14 have a -- we have a route that the operators are going to take.
15 They're going to -- they're going to check. They're going to
16 log. They're going to make sure that they're good.

17 So during these checks, if we find something
18 that's out of range or it's getting ready to react, we're going
19 to -- we're going to act accordingly. And we have a tagging
20 system that we can make sure that we know what is -- needs to be
21 moved or needs further treatment.

22 MAYOR MCFARLAND: That's all directly connected
23 to the city fire department?

24 MR. KNOWLES: Yes.

25 MAYOR MCFARLAND: There's a direct connection --



1 MR. KNOWLES: Yes.

2 MAYOR MCFARLAND: -- with you guys?

3 MR. KNOWLES: Yeah. So the monitoring system,
4 anything that happens, it gets reported to the fire department.

5 So at-risk materials and HWMU1, materials at risk
6 of thermal runaway will be immediately processed, placed into a
7 water bath or be stored in an at-risk storage area. Batteries
8 identified as thermal runaway will be recorded, and the material
9 will be isolated away from other containers. If the temperature
10 increases from the last measurement, the material will be
11 re-evaluated and relocated as necessary.

12 The normal-risk materials, they're exhibiting
13 normal temperatures that is not intended to be processed in the
14 shift it is received. It will be stored at the normal-risk area
15 or in an exterior storage area. Batteries identified as thermal
16 runaway will be recorded and the material will be isolated away
17 from other containers, and then if the temperature increases
18 from the last measurement, the material will be re-evaluated and
19 relocated as necessary.

20 So we have -- on the storage areas, 2 and 3
21 outdoor storage areas. Material exhibiting normal temperatures
22 is not intended to be processed in the shift it is received. It
23 will be stored in the normal-risk storage area or in one of the
24 outdoor storage areas. Batteries identified as thermal runaway
25 will be recorded and the material will be isolated away from the



1 containers. Thermal cameras will be used to identify abnormal
2 temperatures. If abnormal temperature changes are observed,
3 material will be immediately processed and relocated to at-risk
4 storage areas.

5 So we -- some of the permits that we -- we have a
6 conditional use permit. There's the permit number. The City of
7 Casa Grande issuing on February 2nd, 2023. We have a valid air
8 permit. The number. Pinal County Air Quality Control District,
9 November 2nd, '23.

10 So we have established a website where members of
11 the public can access documents related to this application
12 process. There it is there. Additional documents will be added
13 throughout the initial permitting process and during future
14 permit modifications as necessary.

15 Today's the pre-application meeting. After the
16 application is submitted to and reviewed by Arizona Department
17 of Environmental Quality, a draft permit will be released for
18 review, and a public meeting will be held.

19 So how does ADEQ monitor hazardous waste
20 recycling facilities? ADEQ is concerned with health and safety
21 issues involving hazardous waste management in Arizona. Under
22 the RCRA, along with state statutes and codes, ADEQ has the
23 authority to monitor and direct businesses that may generate,
24 transport or dispose of hazardous waste in Arizona. The Waste
25 Programs Division implements state and federal hazardous waste



1 laws pursuant to the delegation from the EPA.

2 The Division is responsible for effectively
3 implementing standards for the safe generation, management,
4 treatment, storage, and disposal of hazardous waste. Specific
5 responsibilities include: Inspection and compliance.
6 Conducting routine follow-up and initial compliance inspections,
7 responding to public complaints and other agency referrals to
8 ensure the hazardous wastes are safely managed and properly
9 disposed.

10 Permits and plan review. Permitting facilities
11 that treat, store or dispose of hazard waste and reviewing
12 require plans and monitoring reports.

13 Outreach and compliance assistance. Educating
14 and reaching out to the regulated community and the general
15 public. ADEQ has performed a RCRA facility assessment to
16 document the condition of the site prior to the initiation of
17 the lithium recycling activities. Once finalized, the RFA will
18 be placed on the Ecobat documents website.

19 We're at public comment period.

20 MR. BUCKANTZ: All right. So if you have any
21 comments or questions that you'd like us to record so that they
22 get included as part of the application, please take care of
23 those at this time. And as I said at the beginning, please
24 state your name and affiliation for the record.

25 MR. SHAFFER: My name is Randy Shaffer, with the



1 City of Casa Grande Public Works.

2 On that closed-loop system, in an emergency,
3 where would the water in that environment with the chemicals and
4 all that have to discharge to?

5 MR. KNOWLES: There is a -- there's a containment
6 and a sump that it goes to, and it stays -- it stays inside the
7 container.

8 MR. SHAFFER: And then the -- for my -- just so
9 I'm clarifying and understanding, on the boxes, they have AC for
10 the heat, so to mitigate the explosion risk on that?

11 MR. KNOWLES: Uh-huh.

12 MR. SHAFFER: Okay.

13 MAYOR MCFARLAND: So my name is Craig McFarland,
14 Mayor of the City of Casa Grande. So I look at it from a couple
15 different perspectives. I'm just curious as to -- I'm going to
16 have several questions, so I'll ask one question at a time.

17 What is your -- what is your potential water use?
18 How much?

19 MR. KNOWLES: I don't think we have an exact
20 number yet, but it's very minimal.

21 MAYOR MCFARLAND: Just if you happen to have a
22 fire or something, can you recycle that --

23 MR. KNOWLES: Yeah. If we have a fire and we
24 have to use any water that we use in these storage units, we'll
25 be recycling --



1 MAYOR MCFARLAND: Recycled. Okay.

2 MR. KNOWLES: -- through the process.

3 MAYOR MCFARLAND: Okay. Other than that, it's
4 not a whole lot of water?

5 MR. KNOWLES: No.

6 MAYOR MCFARLAND: Okay. And then transportation.
7 So right now we're dealing with a lot of new TSMC chemical
8 companies coming into town, and Lucid is here, a lot of truck
9 traffic. So I'm trying to work with our local industry. And
10 let me preface. I support what you guys are doing. Okay? So
11 I'm not here to not support it. I'm here to support what you're
12 doing. I'm just trying to -- trying to understand so that I can
13 help mitigate issues that might come up that I get challenged
14 with, especially when it comes to transportation of hazardous
15 materials.

16 So we -- so we have a lot of that coming, and so
17 as that approaches, I'm trying to put together a plan, a
18 transportation plan, and you guys might be helpful in putting
19 that together, because we just spent \$10 million on Thornton
20 Road expansion, between us and the County, to build this nice,
21 new five-lane road down to I-8. When Wal-Mart came in, they
22 said, oh, yeah. We're going to go down to I-8, and we're going
23 to go around town. Well, that didn't happen. Okay? So the
24 truckers go where the truckers will go, unless we tell them
25 where they need to go.



1 MR. KNOWLES: Yeah.

2 MAYOR MCFARLAND: And so I want to try and build
3 a plan that you guys are part of, and that between the chemical
4 companies and the import -- I'm not worried about the export of
5 your product. I'm worried about the import of your product.

6 MR. KNOWLES: Yeah.

7 MAYOR MCFARLAND: All right. So the product
8 coming into the city. That's the most unstable part. And so
9 can we work together to make sure we have a good transportation
10 plan that is followed and managed and, quite frankly, it's going
11 to have to be demanded of the truckers. If you have to pay them
12 a premium to come down I-8 and up Thornton, whatever it is,
13 because a lot of times they're paid, you know, to get there
14 quickly, and so we need to make sure we -- because we need to be
15 able to tell our public, hey, we have safe routes of
16 transportation of this hazardous material, and it's not going
17 down Cottonwood to Pinal and through the major part of my city.
18 Okay? Where my citizens live. And so I want to be able to tell
19 them that we have this plan and that we're going to be putting
20 that together.

21 That's probably my biggest concern, and you guys
22 are just one piece of it. But again, I want to support all of
23 my -- all of our industry. I want to support your process,
24 because I think it's important, and I think it -- you know, in
25 the future, it is going to be, you know, the future of recycling



1 for lithium batteries. And lithium batteries are not going
2 away.

3 So that being said, I'll let you answer that
4 question, and then I just have one more question.

5 MR. BUCKANTZ: Mr. Mayor, I'll take that one.

6 You're definitely speaking to the choir on this
7 one. In fact, one of the requirements that that ADEQ has in
8 this application is for us to develop a traffic pattern and to
9 educate the truckers on that traffic pattern, with an emphasis
10 on avoiding places like schools, hospitals, what I think of as
11 sensitive receptors and we can certainly share our thoughts and
12 accommodate your thoughts into that before we submit this
13 application. And I'll suggest we find a time to get together to
14 go over that so we can find a mutually-agreeable traffic pattern
15 so that we only have do that one time in the context of this
16 permit application.

17 MAYOR MCFARLAND: Yeah. And I would love to sit
18 down with NRS, too. NRS is a logistics transportation -- high-
19 end chemical transportation company. They're building a new
20 depot right next to Kohler, and that depot isn't too far from
21 where you guys are at. And so between all of us, we could come
22 up with a real plan, and we'd be happy to mark that route, and
23 then with your help, we could, you know, make sure that the
24 truckers use that route. That's the key is to really make sure
25 that it gets used.



1 You know, like I said, we just spent a lot of
2 money on Thornton interchange, and we're spending another about
3 5 million on the northern piece that takes it all the way up to
4 Cottonwood, which then would incorporate where you guys would
5 come out on VIP and the Gila River Highway -- or the 84,
6 Highway 84, and then come south to Thornton, because Thornton
7 is -- should be our truck route. That should be our truck route
8 exiting our industrial park.

9 MR. BUCKANTZ: Well, we'll reach out and try to
10 schedule something in the very near future, because we're
11 getting to a point where we're hoping to submit this
12 application --

13 MAYOR MCFARLAND: Yeah, and I don't want to slow
14 you guys down.

15 MR. BUCKANTZ: -- in the relatively near future,
16 but it's a timely discussion, and we can certainly get with you
17 probably in the month of April to see what will work best.

18 MAYOR MCFARLAND: All right. That will be great.
19 You have my cell phone number and my email, so...

20 MR. BAER: (Inaudible.)

21 COURT REPORTER: I'm sorry. I can't hear you
22 back here.

23 MR. BAER: The RCRA Part Bs do require
24 transportation management plans, which he already covered. So
25 no. Absolutely a valid concern, and that's something the



1 Department does consider.

2 MAYOR MCFARLAND: Well, especially since we're
3 starting to develop all these TSMC suppliers. I mean, we have
4 high-end hydrogen peroxide. We've got all kinds of different
5 chemicals that are being produced or going to be produced here
6 in Casa Grande, and I'm trying to get ahead of it so that before
7 it's manufactured, before we're there, before it's coming into
8 Cottonwood and up my -- you know, Pinal Avenue, which is right
9 in the heart of our town, we -- let's -- we have a conversation.

10 I want to include the industry. I want the
11 industry to be part of the solution, not to be a part of the
12 problem, and so I'm trying -- like I said, I'm trying to make
13 sure we're collaborating and working together on it. I'm not
14 here against it. I'm here to help make sure we can make it
15 happen.

16 MR. BUCKANTZ: Very well.

17 MAYOR MCFARLAND: So that's my goal. I'm very
18 pro business, very pro, you know, industrial development. We've
19 done a lot of it here in Casa Grande over the last eight years
20 of my mayorship. So it's important to me that we make sure we
21 can continue it and make sure that it happens.

22 My only last other concern is in your process,
23 are you thinking of forward -- and you probably are -- as these
24 EVs and the EV batteries, which are massive, are not -- are
25 different than your computer batteries, right?



1 MR. KNOWLES: Uh-huh. Yeah.

2 MAYOR MCFARLAND: They're massive. And so as
3 they come offline, is your system -- is your system prepared to
4 handle that kind of -- this is just -- this is a personal
5 question now from me. Is it prepared to handle that? Because I
6 think that's going to be important down the road. It's kind of
7 like I tried to get our gas stations to put in charging
8 stations, because I think, you know, they're behind the eight --
9 you know, they're way behind in terms of anticipating this
10 electric vehicle push that's coming and being able to charge
11 America, if you will. Pardon the use of somebody else's name.
12 But how can we make sure that the batteries as they come offline
13 and come off...

14 MR. KNOWLES: Yeah. We're looking at a
15 multi-phased approach to this.

16 MAYOR MCFARLAND: Because it has to be a
17 different process. I mean, these things are massive compared to
18 what you guys are processing today.

19 MR. KNOWLES: Yeah. We have the advantage, too,
20 with Germany and the UK of actually being a little bit ahead of
21 us, too, to learn how to process those, but yeah, we do have a
22 plan in place to scale up and handle bigger and better things.

23 MAYOR MCFARLAND: Okay. Again, that was just
24 my -- that's a personal question, so...

25 MR. KNOWLES: Yeah.



1 MAYOR MCFARLAND: Okay. Yeah. I appreciate it.
2 So thank you. Thank you.

3 MR. BUCKANTZ: Thank you.

4 MR. BAER: Terry Baer, ADEQ.

5 What is your planned hours of operation? Are
6 they going to be, like, a Monday through Friday, one shift? Are
7 you going to be kind of 24/7?

8 MR. KNOWLES: I guess it's what the market
9 dictates and what's available to us. Right now, it's going to
10 be Monday through Friday, eight hours. We could add a second
11 shift. We could add a third shift if there's enough out there
12 to work, so...

13 MR. BAER: So along that line, with the
14 transportation management, what is the expectation if a load
15 tries to deliver after hours? Is it they have to wait and come
16 back or is there going to be a staging?

17 MR. KNOWLES: Yeah, we probably have
18 shipping/receiving day shift only. If we did run a second or a
19 third shift, it would probably just be the production.

20 MR. BAER: So the only reason I bring it up is
21 because we have seen that's where the most risk tends to be, is
22 it's loads that you're going to receive before you have a chance
23 to inspect them.

24 MR. KNOWLES: Uh-huh.

25 MR. BAER: You know, so let's say a trailer is



1 showing up on a Saturday, and you're not going to put eyes on it
2 until Monday morning.

3 MR. KNOWLES: Yeah.

4 MR. BAER: So just something that we have seen
5 for the Department that is something to be aware of as you kind
6 of move forward in developing that.

7 MR. KNOWLES: Yeah, definitely.

8 MR. BUCKANTZ: And, Terry, our other facilities
9 that process other types of batteries here in the United States,
10 this is an issue that we recognized, and basically, we do it on
11 an appointment basis. People can't just come and show up.

12 MR. BAER: Okay.

13 MR. BUCKANTZ: They have to make an appointment
14 and schedule inbound trucks.

15 MR. BAER: That's really good.

16 MAYOR MCFARLAND: Mike, but can you guys help
17 them manage that a little bit? Because I see Terry's point is
18 that the trucker picks up a load, and he leaves, and he's
19 delayed or he doesn't get here in time, and then it sits across
20 from Wal-Mart in a dirt lot waiting for you guys to open, and
21 then something ignites and we have a small disaster on our
22 hands.

23 MR. BUCKANTZ: Well, I don't think that I could
24 promise you that we can control what a trucker, especially an
25 independent trucker, is doing with their truck. What we can



1 manage and what we will manage is when they're -- when they're
2 scheduled to arrive at our facility and, you know, basically
3 make it inefficient or uncomfortable for them to schedule their
4 time such that they're not arriving just on time.

5 MR. BAER: I mean, you mentioned about having the
6 cameras, the thermal cameras, and I'm just -- is it possible to
7 have a staging area for, like, loads during off hours that may
8 be on camera. Again, and the Mayor's point, I mean, then that
9 way you don't have to worry about --

10 MAYOR MCFARLAND: That's not a bad idea.

11 MR. BAER: -- someone parking on the side of
12 Pinal Avenue or, you know, something like that. Like I said --

13 MAYOR MCFARLAND: Still thermal, even inside a
14 truck.

15 MR. BUCKANTZ: And, Terry, I think that that's a
16 discussion we would like to have with you guys --

17 MR. BAER: Sure.

18 MR. BUCKANTZ: -- about what you guys think is a
19 reasonable amount of time for staging. We do have a truck bay
20 that can hold, I think, five, six --

21 MR. HORTON: Eight.

22 MR. BUCKANTZ: -- eight trucks -- thank you,
23 Brett -- at a time that, you know, we could certainly consider
24 having thermal cameras pointing in that direction, and so as we
25 go through this process, I think we should engage you guys in a



1 discussion as to how you would like to see that managed and
2 whether you would allow us to use that as a staging area for off
3 hours or --

4 MR. BAER: Okay.

5 MR. BUCKANTZ: -- unscheduled deliveries.

6 MR. BAER: Yeah. Absolutely. I mean, the
7 Department wants to work with you guys as to what's effective.
8 And so, again, glad to -- the Mayor mentioned Lucid, but Nikola
9 is over in Eloy as well, and unfortunately, the Department has
10 been involved with several fires at that facility, and right now
11 the plan is is just pull the vehicle off to the side and just
12 kind of let it burn, you know, until it kind of burns out. So
13 that's generally when we see the public, you know, get
14 concerned.

15 So glad to have you guys here. Glad to see these
16 boxes from the UK, because obviously this is not something that
17 I've heard of any consideration in any of the fires that the
18 Department has been involved in. So it's a step in the right
19 approach for where I think the industry is going.

20 MAYOR MCFARLAND: Yeah. And again, we're here in
21 support. We want to make sure we're all together. Appreciate
22 the State being here, too, and you guys at Ecobat and, you know,
23 the City being here as well. So it's important, I think, for
24 all of us to make sure we're communicating and make sure --
25 because this is obviously kind of new territory, I think.



1 You know, recycling is not new, but recycling,
2 you know, these kinds of batteries and then especially the size
3 of -- that are coming. I mean, you guys are just scratching the
4 surface, because if we go -- if GM goes 35 percent or 50 percent
5 or 60 percent of electric vehicles, the wave is coming. So --

6 MR. BUCKANTZ: We certainly hope so.

7 MAYOR MCFARLAND: We need -- and that's the
8 biggest concern I hear from people with electric battery --
9 electric vehicles is what do we do with the batteries. That is
10 the single biggest concern that I hear from my constituents when
11 I talk to them about EV and where we're going with EV. So, you
12 know, it's in our face here. I mean, we -- we've got 2,500
13 employees working for an electric vehicle company that builds a
14 nice car, but it has a giant battery in it. It's a giant
15 battery.

16 MR. KNOWLES: Yeah.

17 MAYOR MCFARLAND: It's three-quarters of the
18 weight of the car.

19 MR. BAER: The other question I had is I love the
20 process diagram. I believe that's the first time I've seen it.
21 Is there any waste generation coming out of that -- let me kind
22 of caveat that a little bit. So typically, outside of the EV
23 vehicles, most lithium cells are typically taped or packed in
24 baggies, stuff like that. Is -- does your process address that?
25 Does that all become waste as a part of the shredding? I just



1 wasn't sure how you handle that.

2 MR. HORTON: So Brett Horton.

3 So most of the -- like, if you look at the bulk
4 packaging, like, what would be around the batteries, the drums,
5 metal, plastic, and so most of those will be returned or will be
6 recycled. If they're overly damaged, then that will be a waste,
7 and it will be normal shipping waste. If a 5 -- you know,
8 50-gallon drum is damaged to a point where it can no longer
9 (inaudible).

10 The material attached to the battery will either
11 be removed during the dismantling process or will go through the
12 process. The material that comes off of either of those process
13 is segregated between plastic, aluminum, steel, and so we've
14 reached out to a couple of the large scrap metal recyclers for
15 those -- for what you would call the secondary products.

16 MR. BAER: Uh-huh.

17 MR. HORTON: So we're working through how none of
18 our streams will be waste streams. Now, some of the current
19 light plastic, it's a mixed light plastic, we haven't found an
20 avenue for. So right now, we have -- we have 5 percent of what
21 comes out of our product that we're still looking for where
22 we -- where that can go into our recycling, but we're assuming
23 that either one will be a waste stream, because it's a mixed
24 light plastic, and we haven't found anyone that's interested in
25 that stream, but we continue to reach out and put that product



1 as available to hope to find someone that is interested.

2 MR. BAER: And that was where my curiosity was,
3 is typically, you know, most of these are LDPEs, you know,
4 low-density polyethylene.

5 MR. HORTON: Yeah.

6 MR. BAER: And so, one, they're really bad for
7 shredders, because they tend to clog up the system --

8 MR. HORTON: Yeah. Extremely quick.

9 MR. BAER: Yeah. So the question was is, like,
10 can we move it forward or if it shredded, then you have to
11 characterize it and see if it's characteristic for anything
12 obviously being mixed with the black mass and everything else.
13 So that's what I'm trying to understand --

14 MR. HORTON: So it goes all the way through our
15 process, so -- and we work to downsize that really effectively,
16 and then with the different separation equipment, we separate
17 that from all of the metals.

18 MR. BAER: Okay.

19 MR. HORTON: But then that is -- that is an
20 outlet stream of a finely shredded light, light plastic.

21 MR. BAER: Yeah. Okay.

22 MR. HORTON: As an outlet stream.

23 MR. BAER: Thank you.

24 MR. BUCKANTZ: Any others?

25 ADEQ, with your permission, if you're comfortable



1 with it, we'll call the meeting closed.

2 MR. BAER: I believe so.

3 MR. BUCKANTZ: Then thank you very much. Good
4 night.

5 MR. KNOWLES: Thank you all for coming.

6 (Public meeting concluded at 6:57 p.m.)

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**PART B
APPLICATION**

ATTACHMENT A

**SECTION A.
PART A GENERAL INFORMATION**



RCRA Application Checklist Section A
Ecobat Solutions Arizona, Inc.

General Information
40 CFR 270.13
270.14(b)(1), (10), (11), (19)

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APPENDICES

A-1	-	Acronyms and Definitions
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1. INTRODUCTION

This Operating Permit application for the Facility has been prepared to satisfy RCRA permitting requirements to operate a hazardous waste storage and recycling facility as defined in RCRA, 40 CFR 264.10. The application consists of two components as defined in 40 CFR 270; Part A, the EPA's RCRA Subtitle C Site Identification Form, and Part B, Facility information requirements identified in 40 CFR 270.14 through 270.28 and described in detail in the ADEQ's Automated RCRA Checklist (2023).

A list of acronyms and definition of terms used throughout Part B of the application is provided in Appendix A-1.

This section provides general information under Part B of the application.

2. DESCRIPTION OF ACTIVITIES REQUIRING PERMITTING

The Facility will accept lithium-ion batteries and lithium-containing materials and recycle them. The storage of the batteries prior to processing is subject to regulation under RCRA, 40 CFR Parts 239 through 282 and require a hazardous waste permit. The RCRA hazardous waste management program is administered in Arizona by the ADEQ under delegation from the EPA. Specific parts of RCRA applicable to the activities to be conducted at the Facility include the following:

- Part 260 Hazardous Waste Management System: General
- Part 261 Identification and Listing of Hazardous Waste
- Part 264 Standards for Owners and Operators of Hazardous Waste Treatment, Storage and Disposal Facilities
- Part 270 Hazardous Waste Permit Program

Specifically, the storage of spent lithium-ion batteries and lithium-containing materials is subject to the Part 270 requirements and necessitates the submittal of this permit application.

3. FACILITY CONTACT INFORMATION

Facility contact information is as follows:

Facility Address	Ecobat Solutions Arizona, Inc. 1474 N. VIP Boulevard Casa Grande, AZ 85122
On Site Telephone	(760) 514-8494
Owner Contact:	Mark Hoffman
Phone:	(845) 239-3060
Email:	Mark.Hoffman@ecobat.com



Primary Contact Eric Knowles
Plant Manager
(760) 514-8494
Eric.knowles@ecobat.com

Alternate Contact Mike Buckantz
Manager, Environmental, Technical Support
(714) 625-7020
mbuckantz@pbenviro.com

Refer to Figure 2 for a topographic map.

4. SIC CODES

The facility is a lithium-ion battery and lithium-containing materials recycling facility. The Standard Industrial Classification (SIC) codes that best define the activities to be conducted and the Facility are:

SIC Code	Description
3691	Storage Batteries
3692	Battery Manufacturing

The NAICS codes that best define the activities to be conducted at the Facility are:

NAICS Code	Description
335910	Battery Manufacturing
335911	Storage Battery Manufacturing

Note: SIC and NAICS codes are related to battery manufacturing. This is a battery recycling facility.

5. OWNER/OPERATOR CONTACT INFORMATION

Owner/Operator contact information is as follows:

Owner: Ecobat Solutions Arizona, Inc.
2121 Pearl Street, Suite 1400
Dallas, TX 75201

Primary Contact: Mark Hoffman
Phone: (845) 239-3060
Email: Mark.Hoffman@ecobat.com



Operator: Ecobat Solutions Arizona
1474 N. VIP Boulevard
Casa Grande, AZ 85122

On Site Telephone
Primary Contact: Eric Knowles
Plant Manager
(760) 514-8494
Eric.Knowles@ecobat.com

Alternate Contact: Mike Buckantz
Manager, Environmental, Technical Support
(714) 625-7020

The facility is privately owned.

6. FACILITY STATUS

This is a new operation. This submittal is the initial RCRA permit application for the Site.

7. DESCRIPTION OF PROCESSES TO BE USED FOR TREATING, STORING, AND DISPOSING OF HAZARDOUS WASTE

The facility will receive used intact as well as damaged or breached lithium-ion batteries, lithium-metal batteries and other lithium-bearing materials from battery manufacturers, brokers, scrap collectors, scrap yards, retail and wholesale companies that sell electronics, tools and vehicles equipped with lithium-ion batteries. The waste will be profiled, classified, pre-sorted and shredded. The shredded material will be separated into several categories of finished goods including multiple grades of black mass, copper, and aluminum. Black mass grade depends on moisture content, cobalt and nickel content and percent carbon and percent contaminants. These finished goods will be packaged in supersacks or drums and stored onsite prior to shipping. The plant is designed to process 4 tons per hour, 96 tons per day, 35,040 tons per year.

There are five Solid Waste Management Units at the facility:

SMWU 1 refers to the concrete pad area along the central portion of the south wall of the main warehouse building and designated as “Inbound Staging”. Li ion battery materials will initially be delivered and located from the loading dock area.

SWMU 2 refers to the concrete pad area inside the southeast corner of the main warehouse building and defined as “Disassembly and Discharge” for Li-Ion battery components. This process area will be used to store and manually remove packaging, battery covers, housings, etc. prior to final processing and sorting of materials.

SWMU 3 refers to the concrete pad area inside the southwest corner of the main warehouse building and designated as “Finished Goods Staging”. This is where the processed, sorted, and final bagged Li-ion battery materials are staged prior to off-site transport.

SWMUs 4 refers to the Normal-Risk and At-Risk component enclosure(s). This area is further defined as HWMU1 and discussed in detail in the following section.

SWMU 5 refers to the uncovered outdoor storage area defined as HWMU2 and HWMU3 and discussed further in the following sections.

There are three Hazardous Waste Management Units at the facility which are used to store batteries.

HWMU1 consists of a concrete pad that houses four containers. Two containers are designated as At-Risk Storage as described below:

- 8’4” H × 22’ L × 10’W with Three 60” W × 80” H Double Door with 36” Active Leaf.
- Fire Rated Walls, Intertek Tested & FM Approved 4 Hour fire-resistive construction with protected opening (or equivalent).
- Fire Rated Roof, Intertek Tested & FM Approved for 3 Hours (or equivalent).
- Audible and Visual notification of a fire or release of the dry chemical extinguishing system. Total flooding Dry Chemical Fire Suppression System with automatic and manual release.
- A 3” diameter Fire Department Connection that supplies the fire sprinkler system within the unit. This will allow for the Casa Grande Fire Department to introduce cooling water to the container if it is determined to be required.
- **Explosion-proof air conditioning unit. Maintaining consistent temperature within the unit may help reduce the potential for thermal runaway**
- Energy-sensing fire detectors (per fire alarm drawings).
- Electrically classified equipment rated for Class I Division 2 hazardous environments.
- Internal Containment Capacity: 824 Gallons.
- Weight: 18,400 Pounds.
- Storage of 12 pallet slots in each container. There are up to 4 drums per pallet. Each pallet can hold up to 3,520 pounds, so the capacity of the two At-Risk Storage Units is approximately 84,480 pounds.

Two containers are considered Normal-Risk Storage as described below:

- 41'-4" L × 9'-4" W × 13'-8" H), Int. 40'-0" L × 8'-6" W × 11'-6" H. Six overhead doors (11'-6" × 11'-0" H).
- UL490 design, FM Approved 4 hours resistive construction with protected openings (or equivalent).
- Total flooding dry chemical system with automatic and manual release.
- Continuous mechanical exhaust with emergency shutdown controls.
- Heat Sensor. Controller shuts down the fan if the dry chemical fire suppression is deployed. Fire suppression is deployed by fusible link.
- Horn/Strobe exterior mounted notification of a fire or release of the dry chemical extinguishing system.
- Electrically classified equipment rated for Class I Division 1 hazardous environments.
- Internal Containment; Water pressure tested and protected with chemical resistant coating, meeting EPA CFR, Part 264.175.
- Internal Containment Capacity: 128 Gallons.
- Storage of 36 pallet slots in each building. There are up to 4 drums per pallet. Each pallet can hold up to 3,520 pounds, so the capacity of the two Normal Risk Storage Units is approximately 253,440 pounds.

HWMU2 consists of outdoor uncovered storage at the Northeast portion of the property. The total square footage for HWMU2 is 17,300 square feet. This area is equipped with thermal imaging cameras connected to the security network or alternative technology that performs the same function. The security system will send automated alerts by email and text message to responsible persons. This area is used for storing drums of scrap batteries on pallets. There are up to 4 drums per pallet. In this area the batteries will be stored in concrete wall-separated "bays" that are 20-ft in width and depth (400 ft² per bay), 9-ft tall (8-ft height of storage), with a drive aisle a minimum of 10-feet. The area can store up to 360 pallets, stored at least one foot below the height of the bay. Each pallet can hold up to 3,520 pounds, so the capacity of HWMU2 is approximately 1,267,200 pounds. The facility may receive larger batteries that do not fit into drums. Large batteries may be stored in wooden crates, manufacturer storage containers or directly on pallets.

HWMU3 consists of outdoor uncovered storage east of the main building. The total square footage for HWMU3 is 5,625 square feet. This area is equipped with thermal imaging cameras connected to the security network or alternative technology that performs the same function. The security system will send automated alerts by email and text message to responsible persons. This area is used for storing drums of scrap batteries on pallets. There are up to 4 drums per pallet. In this area the batteries will be stored in a similar manner to HWMU2, with concrete walls separating 400 ft² storage bays, and a 10-ft wide drive aisle. The area can store up to 120 pallets, stored at least one foot below the height of the bay. Each pallet can hold up to 3,520 pounds, so the capacity of HWMU3 is approximately 422,400 pounds. The facility may receive larger batteries that do not fit into drums. Large batteries may be stored in wooden crates, manufacturer storage containers or directly on pallets.

8. SPECIFICATION OF HAZARDOUS WASTE

An estimate of annual hazardous waste quantities stored and processed at the Facility is provided below.

8.1 Acceptable Wastes

The waste streams accepted at the facility will be lithium-ion batteries and other lithium-containing materials suitable for recycling.

Waste Stream	Characterization
Lithium-Ion Batteries	D001, D002, D003, Universal Waste

8.2 Wastes Generated On-Site

The following wastes are generated on-site and are not subject to permitting requirements. These wastes are managed in accordance with hazardous waste requirements.

Waste Stream	Characterization	Quantity/Frequency
Non-Lithium-Ion Batteries	D002, D006, D008	TBD
Other Potential Wastes	D001, D003, D004, D005, D007, D009, D010, D011, D039, D040, F001, F002, F003, F005	TBD
Black Mass	D004, D005, D006, D007, D008, D010	Waste stream is non-hazardous, but there is the potential for contaminants to enter the system and change characterization
Waste and Debris from Maintenance Activities	--	None – Infrequent
Used Oil	--	1,000 Gallons
Waste Antifreeze	--	None – Infrequent
Miscellaneous Rinse Water	--	None – Infrequent
Universal Waste or Hazardous Waste – Lamps	D009	150 Pounds – Universal

The quantities of these materials to be handled each year will vary and is not strictly production based.



9. LISTING OF PERMITS

Conditional Use Permit

Permit Number: DSA-22-00275

Issuing Entity: City of Casa Grande

Date Issued: February 2, 2023

Air Permit

Permit Number: C31426.000

Issuing Entity: Pinal County Air Quality Control District

Date Issued: November 2, 2023

APPENDIX A-1
ACRONYMS AND DEFINITION

AAC	Arizona Administrative Code
ADEQ	Arizona Department of Environmental Quality
ADHS	Arizona Department of Health Services
ASTM	America Society for Testing and Materials
CAA	Clean Air Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CP	Contingency Plan
CSAP	Closure Sampling and Analysis Plan
DEA	Drug Enforcement Agency
DEUR	Declaration of Environmental Use Restriction
DOT	Department of Transportation
DQO	Data Quality Objectives
EPA	United States Environmental Protection Agency
EPCRA	Emergency Planning and Community Right-to-Know Act
Facility	Ecobat Solutions Arizona, Inc.
Facility Manager	The Facility Manager Includes the Designated Responsible Person On-Site
FEMA	Federal Emergency Management Agency
FID	Flame Ionization Detector
Generator	A facility, by site, whose act or process produces hazardous waste or whose act first causes a hazardous waste to become subject to regulation. A generator can be the facility or their authorized representative.
HWMU	Hazardous Waste Management Unit
LDR	Land Disposal Restrictions
LQG	Large Quantity Generator
LQM	Laboratory Quality Manual
mg/L	Milligrams Per Liter
NAICS	North American Industrial Classification System
NRSRL	Non-Residential Soil Remediation Level
OSHA	Occupational Safety and Health Act
OVA	Organic Vapor Analyzer
PCB	Polychlorinated Biphenyl
PID	Photo-Ionization Detector
PPE	Personal Protective Equipment
PPM	Parts Per Million
SQG	Small Quantity Generator
QA	Quality Assurance
QC	Quality Control
RCRA	Resource Conservation and Recovery Act
RSRL	Residential Soil Remediation Level
SARA	Superfund Amendments and Reauthorization Act
SIC	Standard Industrial Classification
SVOC	Semi-Volatile Organic Compound

SWMU	Solid Waste Management Unit
TSCA	Toxic Substances Control Act
UTL	Upper Tolerance Limit
VOC	Volatile Organic Compound
VSQG	Very Small Quantity Generator
WAP	Waste Analysis Plan
WPS	Waste Profile Sheet

ATTACHMENT B

SECTION B.
FACILITY DESCRIPTION



RCRA Application Checklist Section B
Ecobat Solutions Arizona, Inc.

Facility Description
40 CFR 270.13
40 CFR 270.14(b)(2), (3), (9)

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- B-2 Surrounding Topography
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- B-3 Vicinity Hazards Map
- B-4 FEMA Floodplain Map
- B-5 Traffic Routes and Avoidance Areas



1. GENERAL DESCRIPTION

Ecobat Solutions Arizona, Inc. (Ecobat) intends to construct a complete lithium-ion battery recycling facility. The Property is approximately 9.55 acres and is located in Pinal County, Arizona, at 1474 N. VIP Boulevard, Casa Grande, AZ. Refer to Figure B-1 for the site location map. The property is bounded on the north and south by industrial facilities, on the east by Union Pacific railroad tracks and on the west by VIP Boulevard. The property is located on the Casa Grande West USGS 7.5' topography map.

The Assessor Parcel Number for the site is 503-46-0430. Please refer to Figure B-1 for a Vicinity Map.

This facility is designed to process four tons per hour of raw materials. Storage of spent lithium batteries and other lithium containing materials will be necessary for occasions when materials cannot be processed immediately upon arrival at the facility. Storage will also be necessary for at-risk batteries prior to processing and other non-conforming materials. The raw materials will first be shredded and pre-sorted, after which the shred will be separated into several categories of finished goods including multiple grades of black mass, copper, and aluminum. Black mass grade depends on moisture content, cobalt and nickel content and percent carbon and percent contaminants. These finished goods will be packaged in supersacks and stored on-site prior to shipping. Plastic will also be produced and stored on-site prior to shipping off-site as a waste material or shipped off-site for recycling. Plastic may be processed on-site at a later date to create a commercial product.

Raw material will be transported via truck to the Ecobat facility to be processed. Trucks will arrive at the property and back into a dedicated truck unloading dock. Trailers of incoming batteries and other materials may be staged for up to 72 hours prior to unloading. The material will be offloaded at the existing exterior docks outside the main warehouse building using fork trucks and transported into the building through an at-grade overhead door. The material will be inspected and removed from the shipping pallet or container. The packaging waste material will be collected and consolidated to be returned to the shipper or otherwise recycled or disposed.

Incoming spent batteries will be inspected to confirm battery type and format, identify damage or defect, and determine dismantling requirements. Non-conforming batteries such as lead-acid batteries or other batteries not appropriate for processing at Ecobat will be properly labeled and segregated for transfer to an appropriate recycling or disposal facility. The time it takes to dismantle lithium-ion batteries will vary according to the type, size and complexity of the battery. Lithium-ion batteries that need to be de-energized will take additional time to process. Lithium-ion batteries that are being de-energized or dismantled will be considered to be in-process.

Ecobat initially intends to process the incoming batteries on a just-in-time basis, with no long-term on-site storage of batteries. In subsequent phases of the project, and with appropriate permitting, Ecobat intends to operate a storage facility for incoming waste batteries utilizing dedicated containers and outdoor storage areas to be located on the property for "Normal-risk" materials. In addition to these Normal-risk storage locations, Ecobat will utilize engineered containerized storage systems for safe storage of damaged or defective batteries onsite ("At-risk" materials), if they cannot be processed at the time of inspection.

The containers are installed on existing exterior concrete pads. The existing concrete pads have been resurfaced and upgraded to accommodate the storage containers, but no new impervious surface is planned for these containers at this time. The “At-Risk” containers are located within a new concrete containment area.

The facility will operate a shredding system which will shred up to four tons of lithium-containing materials per hour. The shredding system will be designed to accept a variety of lithium-ion batteries including post-consumer (power tools, laptops, etc.) and electric vehicle modules and battery production scrap. The shredding system will consist of a pre-shredding line and two shredding lines designed to quickly separate input materials and reduce them to a suitable output size for further separations. The shredding system is designed with nitrogen blanketing and a water spray system which are enclosed via air-locks to provide an inert atmosphere to mitigate the risk of fires from shredding batteries. The shredding systems are equipped with a water reclaim and recycle system that provides a level of treatment and filtration of the water for reuse in the shredding process. This is a closed-loop system. If wastewater is generated by the process it will be pumped into totes and hauled away for disposal. Other routinely generated wastes, as described in application, will be accumulated and properly disposed.

Maintenance and repair activities for the shredding process will be supported by forklifts and a scissor lift. When needed, a small carry deck crane will be rented.

The facility will also operate a separation system which will accept shredded product from the shredding system. The separation system is sized appropriately to accept the output from the shredding system. At each stage of separation, the products will be separated via air density tables and sent to a loadout/bagging station equipped with a surge hopper and a weigh scale. The product will be deposited into super sacks for onsite storage prior to leaving the facility.

The process equipment will also include an air pollution control system comprised of process ventilation systems, solvent vapor scrubber collection systems and a dust collection baghouse. This system is further described in Section 4. The currently proposed lithium-ion recycling system will occupy approximately 40% of the main processing area. It is anticipated that future use of the site could include additional production lines for the Li-ion recycling equipment and/or installation and operation of equipment for processing plastic from batteries. The plastic processing equipment would likely include equipment for shredding, separation of polymer types and extrusion into pellets. The finished product would be plastic pellets shipped out in supersacks or in bulk trailers.

2. TOPOGRAPHIC MAP

A topographic map of the area within 1,000 feet of the Facility is provided in Figure B-2. Regional topographic maps show a slight grade to the Northwest.

Note that for the purposes of 40 CFR §270.14(b)(19), there are no 100-year floodplains, surface waters, drainage barriers or flood control structures within 1,000 feet of the Facility and therefore none are shown on Figure B-2. Run-on is not anticipated from Off-Site areas due to topography and existing berms. Run-off will remain onsite where it is directed to the loading dock with existing drywells.



3. FACILITY LOCATION INFORMATION

The facility is located at 1474 N. VIP Boulevard in Pinal County, Arizona at Latitude 32°53'23" and longitude -111°47'5.3". The legal description of the property is:

The portion of the East half of the West half of Section 24, Township 6 South, Range 5 East of the Gila and Salt River Base and Meridian, Pinal County, Arizona, more particularly described as follows:

BEGINNING at a point on the East boundary of the East half of the West half of said Section 24, from whence the North Quarter corner bears North 00 degrees 38 minutes West, a distance of 1277.88 feet;

THENCE South 00 degrees, 38 minutes East, along the East boundary of the East half of the West half of said Section 24, a distance of 495.00 feet;

THENCE South 89 degrees 35 minutes West, a distance of 840.00 feet;

THENCE North 00 degrees 38 minutes West, a distance of 495.00 feet;

THENCE South 89 degrees 35 minutes East, a distance of 840.00 feet to the POINT OF BEGINNING.

The Property is zoned I-2 General Industrial with a General Plan Designation of Manufacturing/Industry.

Surrounding Land Use and Zoning

Direction	General Plan Designation	Existing Zoning	Current Uses
North	Manufacturing/Industry	I-1 (Garden and Light Industrial)	Artistic Pavers
South	Manufacturing/Industry	I-1 (Garden and Light Industrial)	Alliance Lumber
East	Manufacturing/Industry	I-2 (General Industrial)	Rail Cement Plant
West	Manufacturing/Industry	I-1 (Garden and Light Industrial)	Auto Repair Undeveloped Office Building

There are no injection or withdrawal wells onsite.

3.1 Seismic Requirements

Pinal County is not listed in Appendix VI of 40 CFR Part 264, therefore, the facility does not need to demonstrate compliance with the seismic standard.

40 CFR 270.14(b)(11)(i) and (ii) are not applicable to the facility.

3.2 Flood Plain Requirements

The Ecobat facility is not located in a 100-year flood plain nor is such present in the vicinity.

Figure B-3 illustrates the location of active faults and flood hazard areas in the broader vicinity of the Facility. The FEMA floodplain map showing the Facility site is not located in a flood hazard area is provided in Figure B-4.

3.3 Drywells

The Ecobat facility has two drywells located in the loading dock.

3.4 Wind Patterns

A wind rose diagram for the facility is presented in Figure B-2.

4. TRAFFIC PATTERNS

The main traffic routes to the Facility are from Interstate 10 and Interstate 8 to State Route 84, 287 or S Thompson Road. State Route 84 intersects VIP Boulevard. State Route 287 turns into 84. Refer to Figure B-5 for traffic routes.

At full capacity the facility will receive about 5 trucks per day of scrap batteries, will ship 5 trucks a day of product and an estimated 1 shipment of waste and receive 1 shipment of supplies per day. There will be approximately 10 to 15 employee vehicles.

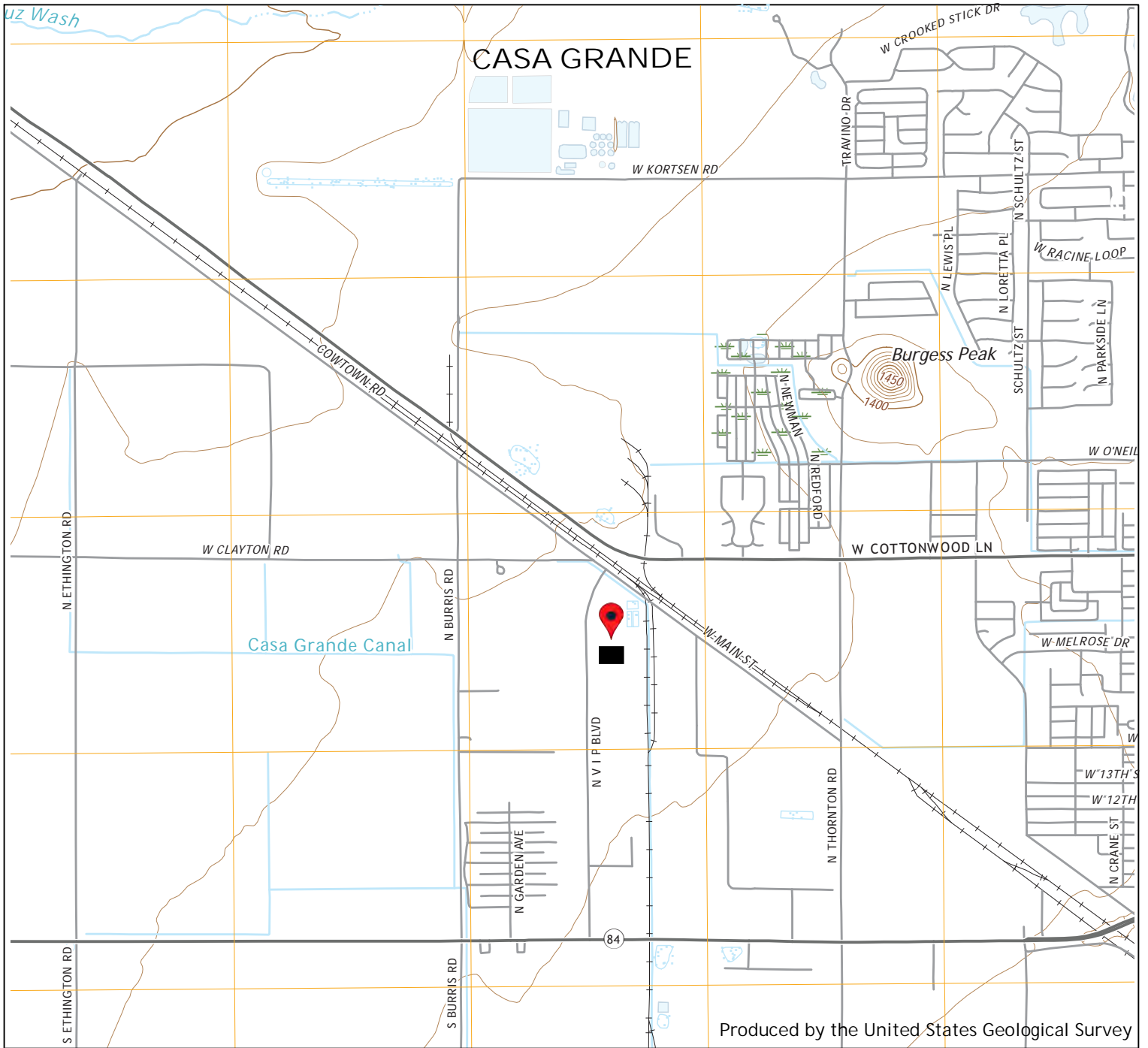
Based on the current zoning and/or uses of the property and its vicinity, streets along the planned access route will support the vehicles anticipated to enter and exit the Facility.

No vehicle control signals exist in the facility, but a traffic route has been established. Traffic Control signs are utilized on internal roads.

4.1 Learning Site Avoidance Areas

Three learning sites have been identified within a 2-mile radius of the facility as shown in Figure B-5. The Alice S. Paul Learning Center is located approximately 1.52 miles southeast of the facility. Casa Grande Middle School is located approximately 1.68 miles east of the facility and Saguaro Elementary School is located 1.81 miles east of the facility. In-bound and out-bound transporters of hazardous waste will be notified in advance to avoid routing adjacent to these learning sites by providing them a copy of the route map shown in Figure B-5.

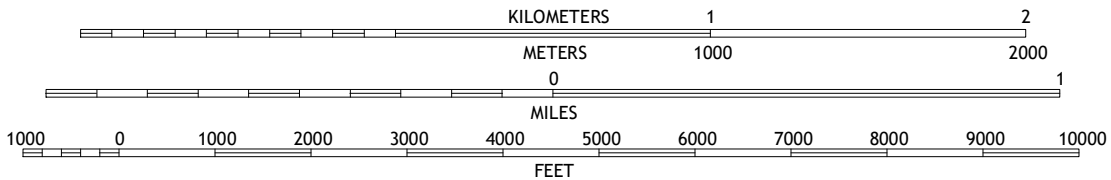
Figures



Produced by the United States Geological Survey

Legend

SCALE 1:24 000



ROAD CLASSIFICATION

- Expressway
- Secondary Hwy
- Ramp
- Interstate Route
- US Route
- Local Connector
- Local Road
- 4WD
- State Route



 associates environmental	Associates Environmental 18141 Beach Boulevard, Suite 200 Huntington Beach, CA 92648 (949) 352-4941 Fax (714) 362-9085		
	Description Ecobat Solutions Arizona, Inc. Figure B-1 - Site Location Map		
Job No.	Drawing Date	Drawn By:	Drawing
433-147	06-06-2024	MO	2.0



Legend	
	Property Boundary
	HWMU: Hazardous Waste Management Unit
	1370 Elevation Contour
	Registered Well (Location Approximate)

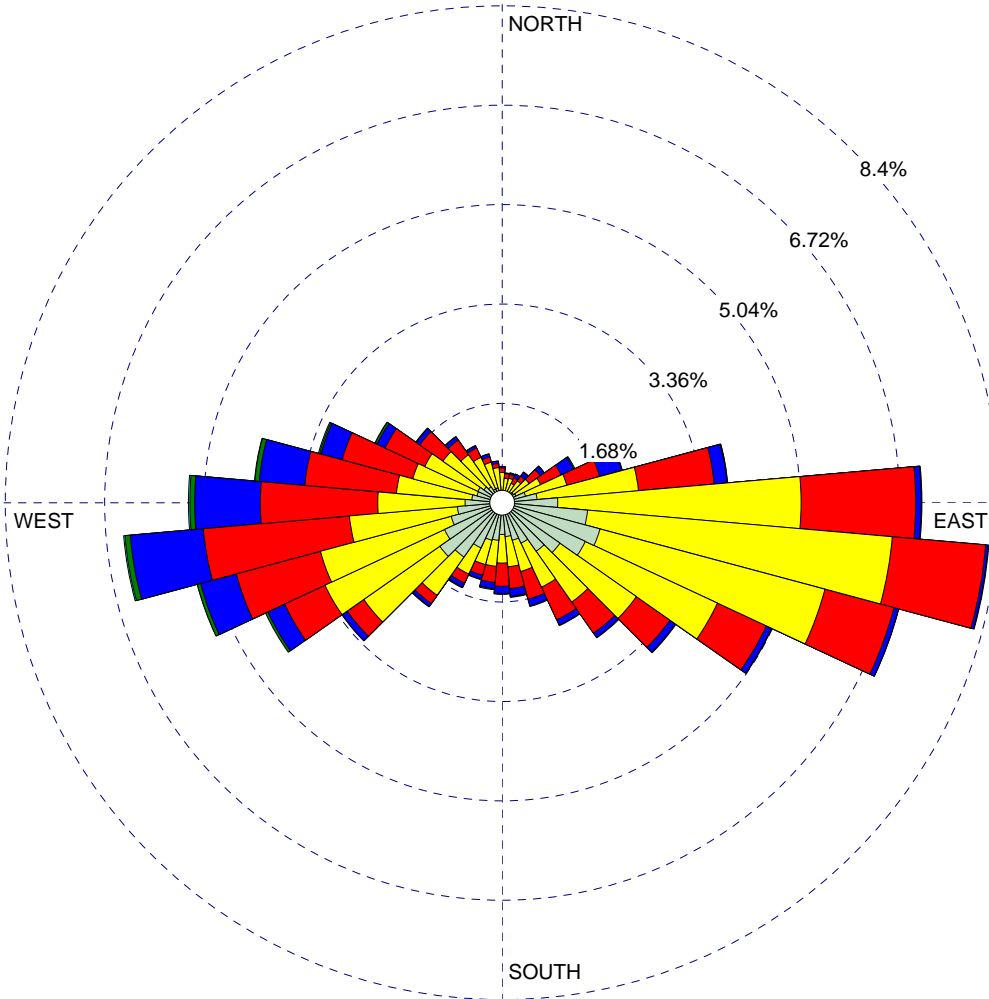
		Associates Environmental 18141 Beach Boulevard, Suite 200 Huntington Beach, CA 92648 (949) 352-4941 Fax (714) 362-9085	
		Description Ecobat Solutions Arizona, Inc. 1474 North V.I.P. Blvd. Casa Grande, Arizona 85122	
Secondary Description Figure B-2 - Surrounding Topography		Scale	
Job No.: 433-147	Drawing Date: 12-07-2023	Drawn By: MO	Drawing Version: 1.0

WIND ROSE PLOT:

Station #23183 - PHOENIX/SKY HARBOR INT'L ARPT, AZ

DISPLAY:

**Wind Speed
Direction (blowing from)**



WIND SPEED
(m/s)

- >= 11.10
- 8.80 - 11.10
- 5.70 - 8.80
- 3.60 - 5.70
- 2.10 - 3.60
- 0.50 - 2.10
- Calms: 0.87%

COMMENTS:

DATA PERIOD:

**Start Date: 1/1/2017 - 00:00
End Date: 12/31/2021 - 23:59**

COMPANY NAME:

Ecobat Solutions Arizona, Inc.

MODELER:

Figure B-2a - Wind Rose

CALM WINDS:

0.87%

TOTAL COUNT:

43613 hrs.

AVG. WIND SPEED:

3.23 m/s

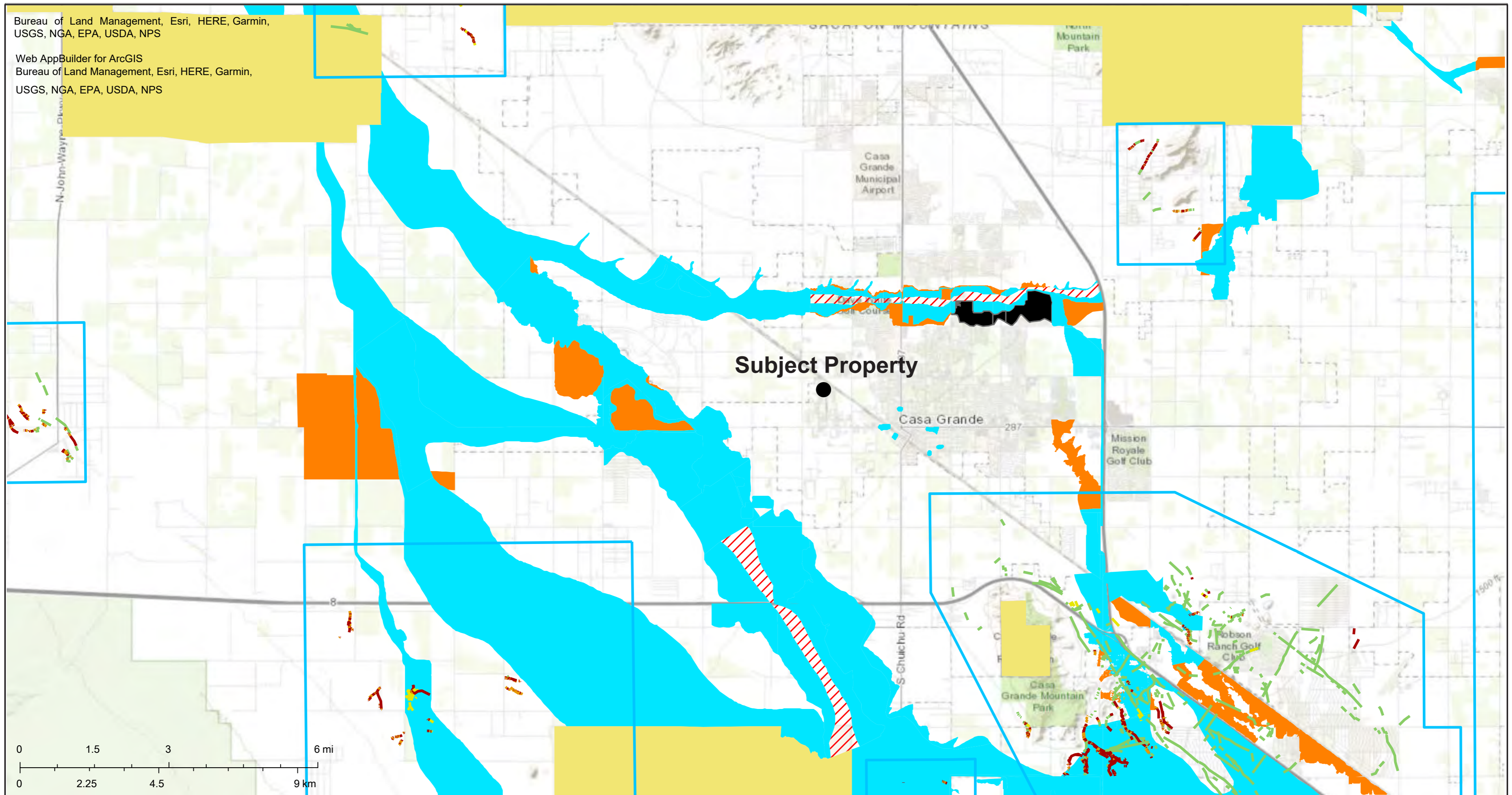
DATE:

9/14/2023

PROJECT NO.:

Bureau of Land Management, Esri, HERE, Garmin,
USGS, NGA, EPA, USDA, NPS

Web AppBuilder for ArcGIS
Bureau of Land Management, Esri, HERE, Garmin,
USGS, NGA, EPA, USDA, NPS



Legend

- | | |
|--|--|
| <p>AZGS Mapped Earth Fissures</p> <ul style="list-style-type: none"> AZGS Fissure Study Areas Continuous Discontinuous Reported Unsurveyed | <p>NFHL - Flood Hazard Zones</p> <ul style="list-style-type: none"> 1% Annual Chance Flood Hazard Regulatory Floodway Area of Undetermined Flood Hazard Area with Reduced Risk Due to Levee |
|--|--|



 <p>associates environmental</p>	<p>Associates Environmental 18141 Beach Boulevard, Suite 200 Huntington Beach, CA 92648 (949) 352-4941 Fax (714) 362-9085</p>		
	<p>Description Ecobat Solutions Arizona, Inc. 1474 North V.I.P. Blvd. Casa Grande, Arizona 85122</p>		<p>Scale</p>
<p>Secondary Description Figure B-3 - Vicinity Hazards</p>	<p>Job No.: 433-147</p>	<p>Drawing Date: 12-07-2023</p>	<p>Drawn By: MO</p>
		<p>Drawing Version: 1.0</p>	

National Flood Hazard Layer FIRMette



111°47'24"W 32°53'38"N



Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS		Without Base Flood Elevation (BFE) Zone A, V, A99
		With BFE or Depth Zone AE, AO, AH, VE, AR
		Regulatory Floodway
OTHER AREAS OF FLOOD HAZARD		0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
		Future Conditions 1% Annual Chance Flood Hazard Zone X
		Area with Reduced Flood Risk due to Levee. See Notes. Zone X
		Area with Flood Risk due to Levee Zone D
OTHER AREAS		NO SCREEN Area of Minimal Flood Hazard Zone X
		Effective LOMRs
		Area of Undetermined Flood Hazard Zone D
GENERAL STRUCTURES		Channel, Culvert, or Storm Sewer
		Levee, Dike, or Floodwall
OTHER FEATURES		20.2 Cross Sections with 1% Annual Chance Water Surface Elevation
		17.5 Coastal Transect
		Base Flood Elevation Line (BFE)
		Limit of Study
		Jurisdiction Boundary
		Coastal Transect Baseline
MAP PANELS		Digital Data Available
		No Digital Data Available
		Unmapped
		The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 5/23/2023 at 11:28 AM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

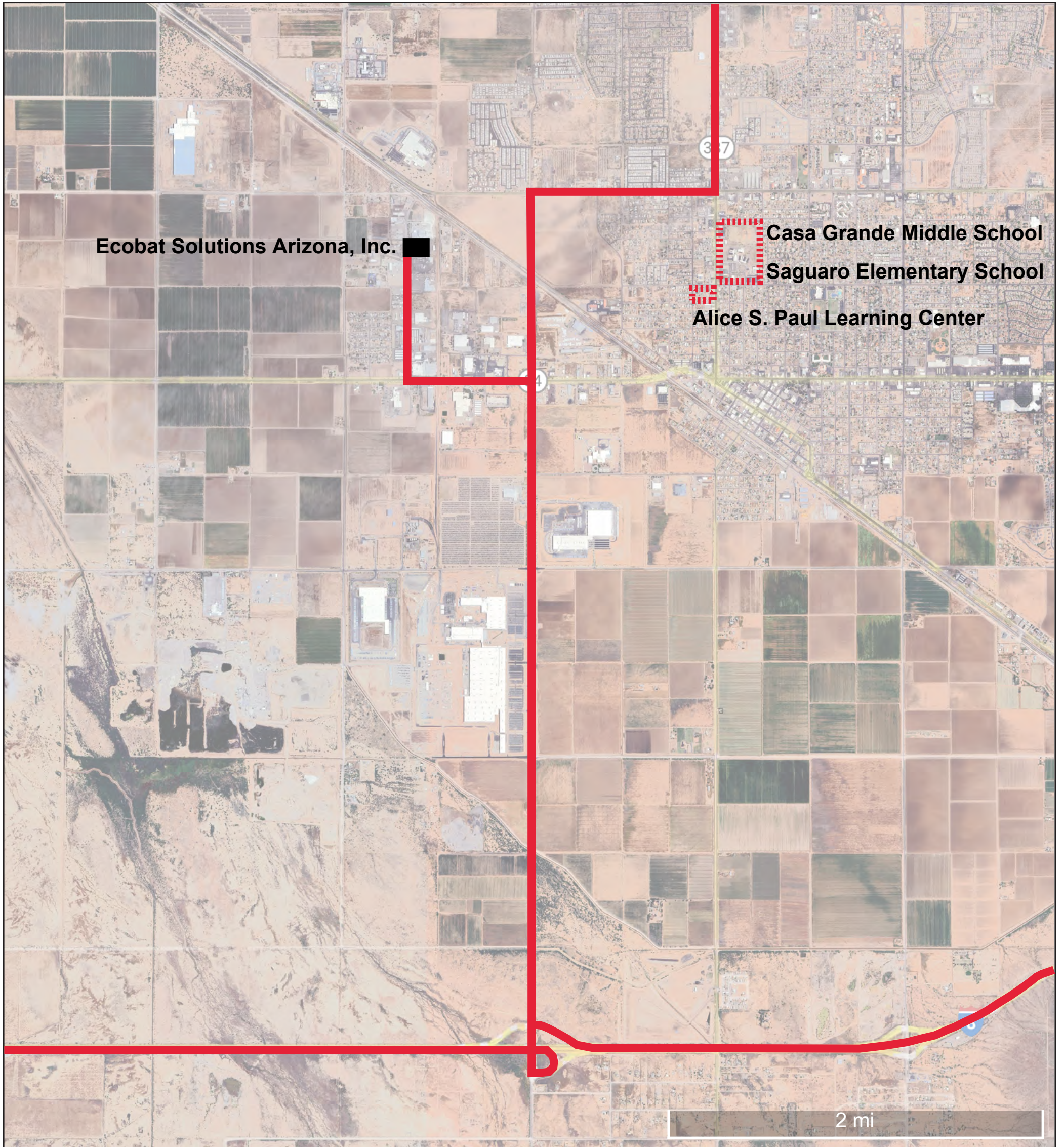
Legend

Property Boundary



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Description		Ecobat Solutions Arizona, Inc. 1474 North V.I.P. Blvd. Casa Grande, Arizona 85122	
Secondary Description		Figure B-4 - FEMA Flood Plan	
Job No.:	Drawing Date:	Drawn By:	Drawing Version:
433-147	12-07-2023	MO	1.0



Legend

- Principal Traffic Route
- - - - - Traffic Avoidance Area



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 (949) 352-4941 Fax (714) 362-9085

Description			
Ecobat Solutions Arizona, Inc. Figure B-5 - Traffic Route and Avoidance Areas			
Job No.	Drawing Date	Drawn By:	Drawing
433-147	02-14-2024	MO	2.0

ATTACHMENT C

SECTION C
WASTE CHARACTERISTICS/WASTE ANALYSIS PLAN



RCRA Application Checklist Section C
Waste Characteristics
Waste Analysis Plan

40 CFR 270.14(b)(2), (3), (9)
R18-8-270.A

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1.0 WASTE CHARACTERISTICS

1.1 Chemical and Physical Analysis

Lithium-ion batteries are accepted from off-site sources for recycling.

Due to the regulatory status of the majority of Ecobat's raw materials, detailed chemical and physical analyses of representative samples of these raw materials are generally not required.

1.2 Containerized Waste

Details regarding the management of wastes in containers are provided in the Container Management Plan.

1.3 Waste in Tank Systems

Not applicable.

1.4 Waste in Piles

Not applicable.

1.5 Landfilled Wastes

Not applicable.

1.6 Wastes Incinerated and Waters Used in Performance Tests

Not applicable.

1.7 Wastes to be Land Treated

Not applicable.

1.8 Wastes in Miscellaneous Treatment Units

Not applicable.

1.9 Wastes in Boilers and Industrial Furnaces

Not applicable.

1.10 Wastes on Drip Pads

Not applicable.

2.0 WASTE ANALYSIS PLAN

2.1 Waste Analysis Plan Regulations and Guidance

The purpose of this Waste Analysis Plan (WAP) is to provide descriptions of the waste analysis procedures utilized by Ecobat Solutions Arizona, Inc. (Ecobat) to ensure compliance with 40 CFR 264.13(b) and AAC Title 18-8 in support of the RCRA Part B application. Included in this document are descriptions of each hazardous waste stream received at the facility including a description of the process of waste characterization. Also included in this document are descriptions of each hazardous waste stream generated at the facility including detailed waste characterizations and descriptions of the processes that generate the waste. Elements of the Waste Analysis Plan include the parameters to be analyzed for, the method for analyzing each parameter, the preservation method and the holding time. The Waste Analysis Plan summarizes the categories of acceptable materials for Ecobat to receive, a determination of whether the material is a solid and hazardous waste and whether Ecobat is authorized to process the material in the lithium recycling system. The Waste Analysis Plan also identifies authorized storage areas for each waste stream received.

Unless otherwise noted, the methods for analyzing each parameter are derived from the document entitled, “Test Methods for Evaluating Solid Waste, United States Environmental Protection Agency (SW-846)”. The rationale for choosing the parameters to be analyzed is based on past laboratory analyses of the waste stream, knowledge of the constituents of the waste stream and the processes that generate the waste stream.

2.2 Waste Analysis Plan Purpose

The purpose of this WAP is to describe the methods, procedures, and equipment that will be used to perform the inspection, testing, analysis, handling, storage, and recordkeeping of hazardous waste accepted at the Facility. A copy of this WAP will be kept on file at the Facility and will be made available for inspection.

The WAP documents the procedures the Facility will implement to safely process waste accepted at the Facility including the application of generator knowledge, inspection and physical testing and chemical analysis, when required, as identified below.

1. The Facility will apply generator knowledge provided with the profile including data developed under part 40 CFR 261 and existing published or documented data on the hazardous waste or on hazardous waste generated from similar processes (40 CFR 264.13(a)(2)). Instances where generator knowledge might be required to support the waste profile include wastes with unknown constituents (abandoned waste, etc.), and profiles where the chemical composition description includes trade names or where the Safety Data Sheet (SDS) or chemical composition is listed. Profiles supported by generator knowledge that are inadequate to determine whether the waste is a listed or characteristic hazardous waste must be supported with analytical data from a representative sample of the waste consistent with 40 CFR 261.62.11(d)(2).
2. Waste physical testing involves identifying and verifying the physical characteristics and composition of a waste by performing a physical analysis of a representative sample of the waste.
3. Waste chemical analysis involves identifying and performing various laboratory analyses of a representative sample of the waste.

3.0 FACILITY INFORMATION

3.1 Facility Location

Ecobat Solutions Arizona, Inc. (Ecobat) is located at 1474 N. VIP Boulevard, Casa Grande, AZ. Refer to Figure C-1 for the site location map. The facility intends to accept spent lithium-ion batteries and other lithium containing materials from off-site generators and will generate hazardous waste from the process of recycling the batteries.

3.2 Facility Operations

The facility will process spent lithium-ion batteries and other lithium containing materials. The raw materials will first be shredded and pre-sorted, after which the shred will be separated into several categories of finished goods including multiple grades of black mass, copper, and aluminum. Black mass grade depends on moisture content, cobalt and nickel content and percent carbon and percent contaminants. These finished goods will be packaged in supersacks and stored on-site prior to shipping. Plastic will also be recovered and stored on-site prior to shipping off-site as a waste material or for recycling.

3.3 Facility Description

The facility consists of a 9.55 acre fenced/walled lot with a 55,000 square-foot main building and a 7,500 square foot warehouse and a 961 square foot manufacturing building. Refer to Figure C-2 for a site plan of the facility.

3.4 Hazardous Waste Management Units

There are three designated HWMUs at the facility. HWMU1 consists of a concrete pad that houses four containers, HWMU2 consists of outdoor uncovered storage at the Northeast portion of the property, HWMU3 consists of outdoor uncovered storage east of the main building. The facility is designed, constructed, maintained and operated to minimize the possibility of a fire, explosion, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water which could threaten human health or the environment.

Ecobat has developed an inspection program for the Facility HWMUs that provides for discovery, investigation, and repair/remediation of hazards to prevent harm to human health and the environment. The program is integrated with the normal course of duties carried out by Facility personnel so possible issues are identified and resolved quickly and efficiently. All employees are responsible for reporting or correcting (if appropriate) any non-conforming issue upon discovery.

3.5 Employee Health and Safety Training

Refer to Section 5.4.4.

4.0 ACCEPTABLE WASTE

The waste streams accepted at the facility will be lithium-ion batteries and other lithium-containing materials suitable for recycling.

Waste Stream	Waste Code	Analysis Required	Sample Procedure	Management Unit
Lithium-Ion Batteries	D001, D002, D003, Universal Waste	Visual	Industry Knowledge	HWMU1, HWMU2, HWMU3
Other Lithium Containing Material	D001, D002, D003, Universal Waste	Visual	Industry Knowledge, Profile Based on Generator Knowledge, Analytical performed by Generator	HWMU1, HWMU2, HWMU3

5.0 IDENTIFICATION OF HAZARDOUS WASTES ON-SITE

5.1 Waste Accepted

Lithium-Ion Batteries

Because lithium-ion batteries are manufactured products with a readily identifiable form, it is unnecessary to require that the batteries (Acceptable Materials) be subject to Waste Analysis requirements.

Other Lithium Containing Material

The requirements for this material will be determined on a case-by-case basis. In general, the generator will create a profile based on generator knowledge and shall certify that the waste is non-hazardous based on the production process. The generator may perform analysis which would include TCLP or other tests based on generator knowledge.

5.2 Waste Generated On-Site

The following wastes are generated on-site and are not subject to permitting requirements. These wastes are managed in accordance with hazardous waste requirements.

Waste Stream	Waste Codes
Non-Lithium-Ion Batteries	D002, D006, D008
Other Potential Wastes	D001, D003, D004, D005, D007, D009, D010, D011, D039, D040, F001, F002, F003, F005
Waste Water	Solvents
Waste and Debris from Maintenance Activities	--
Used Oil	--
Waste Antifreeze	--
Miscellaneous Rinse Water	--
Universal Waste or Hazardous Waste – Lamps	D009

5.3 Waste Analysis Parameters

5.3.1 Criteria and Rationale for Parameter Selection

Lithium Ion Batteries

Because lithium-ion batteries are manufactured products with a readily identifiable form, it is unnecessary to require that the batteries (Acceptable Materials) be subject to Waste Analysis requirements. Ecobat may use SDS's to evaluate the lithium chemistries for optimization of chemistry types fed in batches.

Other Lithium Containing Material

The requirements for this material will be determined on a case-by-case basis. In general, the generator will create a profile based on generator knowledge and shall certify that the waste is non-hazardous based on the production process. Ecobat personnel will review the information provided by the supplier and may request additional analytical data for materials not received from battery industries. The generator may perform analysis which would include TCLP or other tests based on generator knowledge of the material.

A hazardous waste determination is performed on all wastes generated on-site unless Ecobat has generator knowledge of the specific waste stream (i.e., SDS for unused materials, historical data). If the material is a solid waste and is not excluded from regulation, the determination is based upon either of the following:

- i. Analytical testing of the waste for appropriate characteristics; or
- ii. Applying knowledge of the hazardous characteristic of the waste in light of the materials or the process used.

Ecobat makes a new hazardous waste determination on generated wastes whenever it has reason to believe that the process or operation generating the waste has changed to ensure that any hazardous or solid wastes will be stored, transported, treated, or disposed in accordance with all applicable state and federal regulations.

5.3.2 Special Parameter Selection Requirements

The following table represents the analyses used for waste characterization of non-routine waste streams generated by the facility and/or analyses used for profile renewals of routine waste streams. Ecobat will use other test methods as appropriate.

Analytical Method Number and Reference			
Analyses	Frequency	Analysis Methods	Reference
Total Metals	Once Every 3 Years	6010D	SW-846 Test Methods for Evaluation of Solid Wastes
Total Mercury	Once Every 3 Years	7470	SW-846 Test Methods for Evaluation of Solid Wastes
TCLP Metals	Once Every 3 Years	6010D	SW-846 Test Methods for Evaluation of Solid Wastes
TCLP VOC	Once Every 3 Years	8260	SW-846 Test Methods for Evaluation of Solid Wastes
TCLP SVOC	Once Every 3 Years	8270	SW-846 Test Methods for Evaluation of Solid Wastes
Reactivity	Once Every 3 Years	9014/9034	SW-846 Test Methods for Evaluation of Solid Wastes
Flashpoint	Once Every 3 Years	1010A	SW-846 Test Methods for Evaluation of Solid Wastes
Corrosivity	Once Every 3 Years	9040C	SW-846 Test Methods for Evaluation of Solid Wastes
Corrosivity as pH	Once Every 3 Years	9040C/9045D	SW-846 Test Methods for Evaluation of Solid Wastes

5.4 Sampling Procedures

5.4.1 Sampling Strategies and Equipment

The majority of waste streams generated at Ecobat will be known and the facility will have knowledge of these waste streams. Other materials are typically contractor materials that are unused or off-spec and remain on-site. Ecobat will rely on SDS data for these materials. In the atypical instance where Ecobat does not know what the contents of a container are, Ecobat will rely on a third-party company specializing in this type of material characterization and disposal. In the atypical situation where Ecobat conducts sampling of an unknown material, sampling and analysis decisions are developed on a case-by-case basis. Materials generated onsite will be analyzed whenever Ecobat does not have the knowledge to adequately characterize a waste based on the materials or processes used. The fundamental goal of all field sampling activities is to collect samples that are representative of the water, soil or waste from which they were collected. Ecobat uses quality-certified environmental sampling containers (PTFE, plastic or glass) and performs sample collection using clean latex (or equivalent) gloves to reduce the possible introduction of sample contamination through field collection activities. Personnel conducting the sampling will wear the appropriate personal protective equipment.

The sampling strategy for containers such as drums and roll-offs can vary according to (1) the number of containers to be sampled and (2) access to the containers. If the waste is contained in several containers, a subset of individual containers will be randomly selected for sampling. The subset will consist of sampling at least 30% of the containers. This is done either by assigning each container a number and then randomly choosing a set of numbers for sampling, or by choosing the containers that are most accessible.

Containers of hazardous wastes will be sampled differently depending on the waste material. Solid material with no liquids will be randomly scraped with a sampling knife, trowel, spatula or if dense in composition (e.g., brick, concrete), will be broken using a rock hammer. Alternatively, the material may be sampled by driving an auger into the material, retrieving an appropriate amount, and placing the sample on an appropriate sample dish or container. If the material contains liquids, such as sludges or wastewater, the surface of the drum area will be divided into eight equal areas. Using a sample thief or trier (depending on the consistency of the material) the material is then sampled along the entire vertical length of the container and an appropriate amount of the waste is transferred to an appropriate sample dish or container. If the material is all liquid, a coliwasa will be used instead of a thief or trier.

Generally, one sample from a container is sufficient. Access to a container can affect the number of samples that can be taken from the container and the location within the container from which samples can be taken. Ideally, several samples should be taken from locations displaced both vertically and horizontally throughout the waste to form one composite sample. The number of samples required for reliable sampling can vary depending on the distribution of the waste components in the container. At a minimum with an unknown waste, a sufficient number and distribution of samples should be taken to address any possible vertical anomalies in the waste. This is because contained wastes have a much greater tendency to be non-randomly heterogeneous in a vertical rather than a horizontal direction due to (1) settling of solids and the denser phases of liquids and (2) variation in the content of the waste as it enters the container. Roll-offs and open headed steel drums (of which the entire top can be removed) generally do not restrict access to the waste and therefore do not limit sampling.

Typical analytical tests include pH and the Toxicity Characteristic Leaching Procedure (TCLP) Method 1311, as published in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846, incorporated herein by reference. The selection of waste analysis parameters is based on three criteria:

1. Waste Identification
2. Identification of incompatible/inappropriate wastes (using SDS)
3. Land Disposal Restriction considerations

Identification of incompatible/inappropriate wastes will be based on generator knowledge and/or the SDS of the material.

5.4.2 Sample Preservation and Storage

As outlined in SW-846, Chapter 3 “Inorganic Analytes”, sample preservation is not required for the typical analytical tests used at Ecobat (pH and the Toxicity Characteristic Leaching Procedure (TCLP) Method 1311).

5.4.3 Sampling QA/QC Procedures

Sample Handling and Control - Chain of Custody

Chain of Custody (COC) records will be used to trace possession of the sample from sample collection to analysis. Samples are considered to be in the sampler’s custody if they are 1) in the sampler’s physical possession 2) in view of the sampler after taking possession, 3) secured by the sampler. When the sample is delivered to the laboratory, lab personnel will sign the COC form. The Chain of Custody form will be returned with the analysis results report.

Sample Handling and Control -Labeling and Seals

Sample labels will be affixed to each sample taken, or the information will be written on the collection bottle.

5.4.4 Health and Safety Protocols

Ecobat’s staff receives annual training and is familiar with the hazards associated with waste materials, common routes of exposure, appropriate PPE, material handling and safety procedures. Personnel conducting the sampling will wear the appropriate personal protective equipment based on this training.

5.5 Laboratory Testing and Analytical Methods

5.5.1 Selected Laboratory

Samples will be analyzed by a State of Arizona certified laboratory. The laboratory chosen by Ecobat will use EPA approved procedures as set forth in 40 C.F.R. Part 261, Subpart C and as specified in Test Methods for evaluating Solid Wastes, Chemical / Physical Methods (SW-846) and Wastewater).

5.5.2 Laboratory Quality Assurance/Quality Control Plan

The laboratory will have in place a Laboratory Quality Assurance/Quality Control (QA/QC) Plan meeting all applicable federal and state requirements. Laboratory Quality Assurance/Quality Control (QA/QC) plans may vary slightly depending on the laboratory chosen to perform analysis.

5.5.3 Selecting Testing and Analytic Methods

The following table represents the predominant waste streams anticipated by the facility and the preferred analytical methods.

Waste Stream	Waste Codes	Analysis Required	Sample Procedure
Non-Lithium-Ion Batteries	D002, D006, D008	Visual, Corrosive, Toxic	Industry Knowledge
Other Potential Wastes	D001, D003, D004, D005, D007, D009, D010, D011, D039, D040, F001, F002, F003, F005	Ignitability, Reactivity, TCLP, VOC,	Grab
Waste Water	Solvents	VOC, SVOC	Grab
Waste and Debris from Maintenance Activities	--	TCLP or Generator Knowledge	Grab
Used Oil	--	--	--
Waste Antifreeze	--	--	N/A
Miscellaneous Rinse Water	--	TCLP or Generator Knowledge	Grab
Universal Waste or Hazardous Waste – Lamps	D009	--	--

5.6 Waste Re-Evaluation Frequencies

5.6.1 Frequency of Review

Each waste stream, including incoming materials and wastes generated on-site, shall be reviewed once every three years unless changes in production processes or raw material will require new sampling to ensure material is compatible with the process. At that time Ecobat will decide based on past data whether to request additional analysis from the generator.

5.6.2 Methods and Frequency of Re-Characterization

The methods and frequency of re-characterization are described in Section 5.3.1.

5.6.3 Procedures for a Suspected Change of Waste Characteristics

Any container of waste material that displays an unusual characteristic will be segregated from the other feed materials. Additional analyses may be performed according to the unusual characteristics detected.

5.6.4 Additional Requirements for Wastes Generated Off-Site

Generators are required to forward all analyses of their waste streams accepted by Ecobat for reclamation.

5.7 Additional Requirements for Ignitable, Reactive or Incompatible Wastes

Refer to the Fire Prevention Plan in Attachment J of the RCRA Permit application for precautions to prevent reaction of ignitable waste. The wastes are separated and protected from sources of ignition or reaction including but not limited to: open flames, smoking, cutting and welding, hot surfaces, frictional heat, sparks (static, electrical, or mechanical), spontaneous ignition (e.g., from heat-producing chemical reactions), and radiant heat. Smoking and open flames are confined to specially designated locations. "No Smoking" signs are conspicuously placed wherever there is a hazard from ignitable or reactive waste.

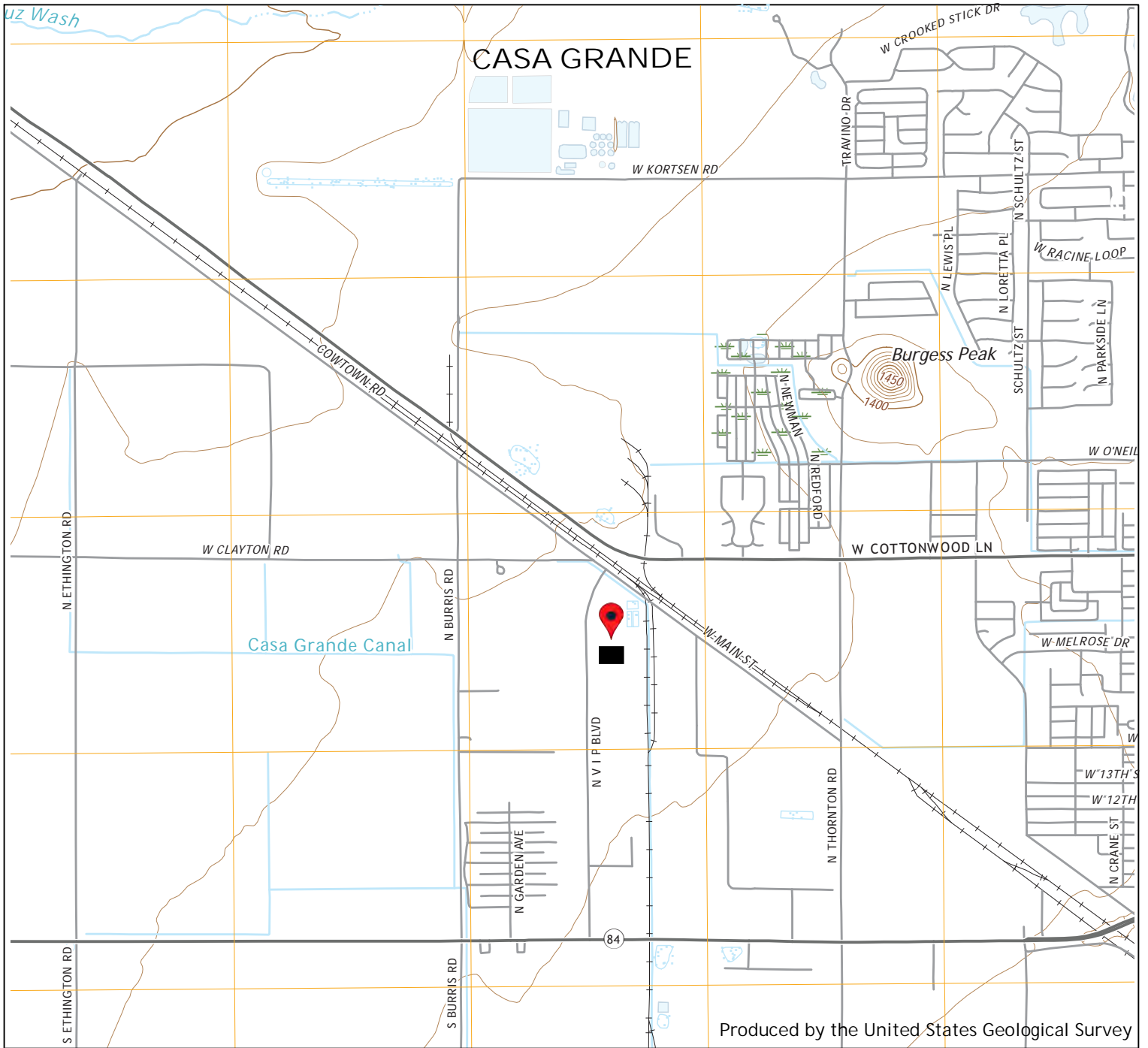
5.8 Additional Requirements for BIF Facilities

Not Applicable.

5.9 Waste Analysis Requirements Pertaining to Land Disposal Restrictions

Not Applicable.

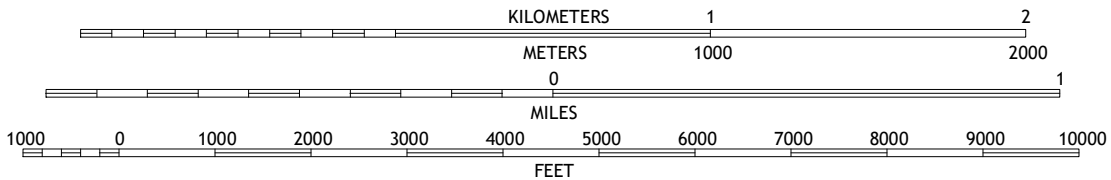
Figures



Produced by the United States Geological Survey

Legend

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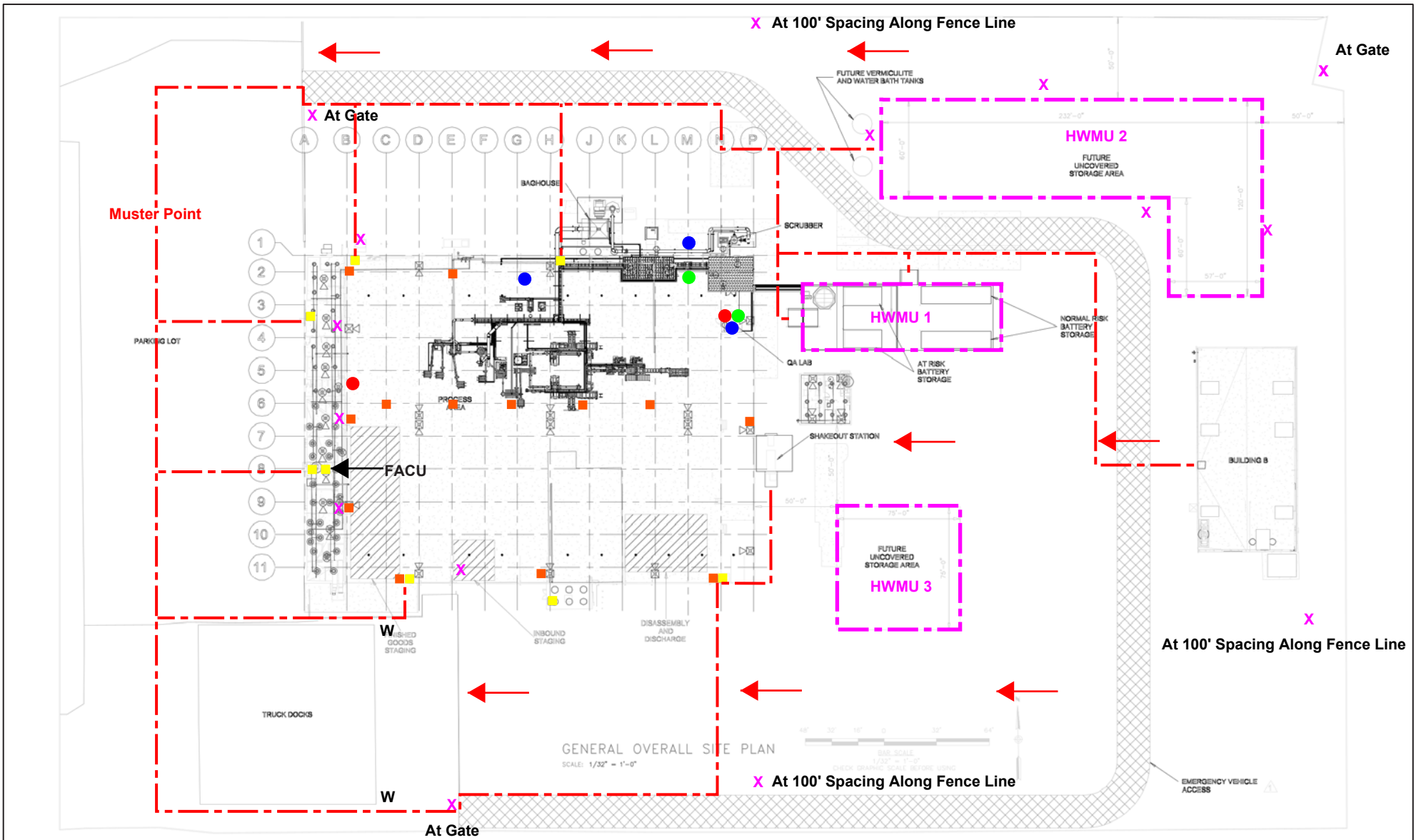


ROAD CLASSIFICATION

- Expressway
- Secondary Hwy
- Ramp
- Interstate Route
- US Route
- Local Connector
- Local Road
- 4WD
- State Route



 <small>associates environmental</small>	Associates Environmental 18141 Beach Boulevard, Suite 200 Huntington Beach, CA 92648 (949) 352-4941 Fax (714) 362-9085		
	Description Ecobat Solutions Arizona, Inc. Figure C-1 - Site Location Map		
Job No.	Drawing Date	Drawn By:	Drawing
433-147	06-06-2024	MO	2.0



- Legend**
- Direction of Flow
 - HWMU: Hazardous Waste Management
 - Unit Emergency Exit Route
 - Fire Pull Station
 - Fire Extinguisher
 - First Aid Kit
 - Spill Kit
 - Shower + Eyewash
 - Warning Sign
 - Dry Well Location



 associates environmental		Associates Environmental 18141 Beach Boulevard, Suite 200 Huntington Beach, CA 92648 (949) 352-4941 Fax (714) 362-9085	
		Description Ecobat Solutions Arizona, Inc. 1474 North V.I.P. Blvd. Casa Grande, Arizona 85122	
Secondary Description Figure C-2 - Site Map		Scale	
Job No.: 433-147	Drawing Date: 07-12-2024	Drawn By: MO	Drawing Version: 1.0

ATTACHEMENT D

**SECTION D
PROCESS INFORMATION – CONTAINERS**



RCRA Application Checklist Section D
Process Information
Container Management Plan
[R18-8-270.A (40 CFR 270.15)]

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D-3 Containment

1.0 INTRODUCTION

This section describes container management practices (Container Management Plan) and is a component of the hazardous waste permit for the Ecobat Solutions Arizona (Ecobat) Facility. A list of all acronyms and a definition of key terms used in this description is provided with General Information provided in Attachment A of the RCRA Part B permit.

Containerized wastes accepted at the Facility may be staged, consolidated and/or stored in designated areas for up to 72 hours prior to being placed into the permitted storage unit or directly into the recycling process. The facility includes three HWMUs where waste batteries may be stored for longer durations. These units are described as follows:

- HWMU1 consists of a concrete pad that houses 4 containers.
- HWMU2 consists of outdoor uncovered storage at the Northeast portion of the property. This area is equipped with thermal imaging cameras connected to the security network or alternative technology that performs the same function. The total area occupied by HWMU2 is 17,300 square feet.
- HWMU3 consists of outdoor uncovered storage east of the main building. The total area occupied by HWMU3 is 5,625 square feet. This area is equipped with thermal imaging cameras connected to the security network or alternative technology that performs the same function.

The waste management units are constructed and maintained to isolate incompatible hazardous wastes from wastes routinely processed at the Facility. Smoking or open flames are allowed only in designated areas that are so marked. Any work involving open flames (i.e. welding) must be performed under a safe work permit (“hot work” permit) consistent with OSHA standards for welding, cutting, and brazing.

Hazardous wastes accepted at the Facility will be tracked through the entire receiving, storage, staging, consolidation, and off-site shipping series of activities using the Ecobat management system. The management system will be capable at any time of producing an inventory of all hazardous wastes on-site at the time of the report.

2.0 CONTAINERS

2.1 Container Description

Ecobat receives intact spent lithium-ion batteries as well as other containerized lithium-bearing wastes and materials for recycling. Those materials that cannot be immediately offloaded for processing are placed in one of the Battery Storage Areas (HWMU1, HWMU2 and HWMU3). The spent lithium-ion batteries are stored in HWMU1, HWMU2 or HWMU3 and are maintained in the containers used for transport. All containers located in HWMU2 and HWMU3 are placed to ensure that all stored materials are easily accessible for staff and emergency equipment during business hours, inspections, and emergencies.

Batteries enter the plant stacked on pallets and secured by strapping, plastic wrap or other means. Batteries may also enter the plant packaged in DOT approved drums or other types of DOT approved containers.

Retrograde materials from battery manufacturers may include intact out of specification batteries stored in drums and stacked on pallets and secured by strapping plastic wrap or other means. There are up to four drums per pallet. Retrograde materials may also be received in bulk DOT approved totes or drums. The facility may receive larger batteries that do not fit into drums. Large batteries (e.g., >26 lbs) may be stored in wooden crates, manufacturer storage containers or directly on pallets.

Certain bulk containers may be constructed of heavy-duty polyethylene plastic, or corrugated fiber. These containers are of sufficient structural strength to prevent damage during transport, handling and storage. Fifty-five-gallon drums are DOT-approved for the transportation and storage of hazardous wastes. It is expected that all wastes stored in containers are compatible with the materials of construction.

Hazardous waste or Universal Waste labels present on incoming drums are retained on the drums for identification. Not all waste requires a hazardous waste label for shipping, such as retrograde materials and other wastes not categorized as hazardous wastes. All wastes are identified by one of the following:

- Hazardous Waste Label
- Non-Hazardous Waste Label
- Universal Waste Label
- Visual Identification

All materials received are labeled with the date of receipt within 24 hours of being placed in the Battery Storage Area at HWMU1, HWMU2, or HWMU3. Batteries that are palletized and stretch-wrapped or banded together will be considered a single container for purposes of labeling. Stored materials, including any Hazardous or Universal Waste will be labeled within 24 hours or prior to placement in any Battery Storage Area.

Spent batteries that are not intended for processing at the facility (e.g. lead-acid batteries) are at times inadvertently intermingled with incoming spent lithium batteries. These non-conforming batteries cannot be recycled at the facility. Non-conforming batteries are segregated out of the plant feed stream for transfer to an appropriate recycling facility. If broken or damaged, these batteries will be packaged/re-packaged to prevent leakage and may be managed as a RCRA hazardous waste or managed under 40 CFR 266.80 (Subpart G – Spent Lead-Acid Batteries Being Reclaimed).

Non-conforming batteries are collected and stored in a designated area of HWMU2 or HWMU3. This location is greater than 50 feet from the nearest property line. Damaged non-conforming batteries will be transferred off-site to proper disposal facilities as soon as practicable. All non-conforming batteries will be labeled prior to placement in HWMU2 or HWMU3. Intact non-conforming batteries will be managed in the same manner as damaged non-conforming batteries but may be labeled and handled as universal wastes or managed under 40 CFR 266.80 (Subpart G – Spent Lead-Acid Batteries Being Reclaimed).

Ecobat does not receive wastes that are incompatible with each other. Similarly, wastes generated on-site typically are not incompatible with each other. In the event an incompatible waste is generated, it will be placed into a clean waste container and segregated within the Battery Storage Area from other incompatible materials. The waste will be properly characterized, and arrangements will be made to expedite the proper disposal of the waste off-site.

2.2 Container Management Practices

Containers are stored closed and are inspected to ensure they stay closed under the inspection schedule for the storage unit. Containers are not to be opened while in the storage unit except to add or remove wastes or test temperature. Containers are removed and delivered to the manufacturing processing area. Items in the storage area will be evaluated during storage and prior to transport for stability and will not be stored or transported in an unstable condition. Batteries received for on-site reclamation may be staged in designated areas for up to 72 hours prior to being placed into the permitted storage unit or processed directly; batteries received but destined for transfer to another facility (e.g., industrial batteries) will be properly labeled and placed in HWMU2 or HWMU3. Manifested wastes shall be placed in the permitted storage unit or processed immediately upon receipt. Listed below are general storage guidelines:

1. General Stacking and Storage Guidelines

- a. No containers will be stacked if it is not designed to be stacked or cannot safely support the load of container(s).
- b. No container shall extend into the aisle that would create a safety concern or inhibit inspection of the container.
- c. All containers must be stacked in a stable condition to prevent the container from falling off the pallet.
- d. All materials stored within the stacked containers must be compatible.

2. Conditions for Storage and Stacking of Containers

There are three Hazardous Waste Management Units at the facility which are used to store batteries.

HWMU1 consists of a concrete pad that houses four containers. Two containers are designated as At-Risk Storage as described below:

- 8'4" H × 22' L × 10'W with Three 60" W × 80" H Double Door with 36" Active Leaf.
- Fire Rated Walls, Intertek Tested & FM Approved 4 Hour fire-resistive construction with protected opening (or equivalent).
- Fire Rated Roof, Intertek Tested & FM Approved for 3 Hours (or equivalent).
- Audible and Visual notification of a fire or release of the dry chemical extinguishing system. Total flooding Dry Chemical Fire Suppression System with automatic and manual release.
- A 3" diameter Fire Department Connection that supplies the fire sprinkler system within the unit. This will allow for the Casa Grande Fire Department to introduce cooling water to the container if it is determined to be required.
- Explosion-proof air conditioning unit. Maintaining consistent temperature within the unit may help reduce the potential for thermal runaway
- Energy-sensing fire detectors (per fire alarm drawings).
- Electrically classified equipment rated for Class I Division 2 hazardous environments.
- Internal Containment Capacity: 824 Gallons.
- Weight: 18,400 Pounds.
- Storage of 12 pallet slots in each container. There are up to 4 drums per pallet. Each pallet can hold up to 3,520 pounds, so the capacity of the two At-Risk Storage Units is approximately 84,480 pounds.

Two containers are considered Normal-Risk Storage as described below:

- 41'-4" L × 9'-4" W × 13'-8" H), Int. 40'-0" L × 8'-6" W × 11'-6" H. Six overhead doors (11'-6" × 11'-0" H).
- UL490 design, FM Approved 4 hours resistive construction with protected openings (or equivalent).
- Total flooding dry chemical system with automatic and manual release.
- Continuous mechanical exhaust with emergency shutdown controls.
- Heat Sensor. Controller shuts down the fan if the dry chemical fire suppression is deployed. Fire suppression is deployed by fusible link.
- Horn/Strobe exterior mounted notification of a fire or release of the dry chemical extinguishing system.
- Electrically classified equipment rated for Class I Division 1 hazardous environments.
- Internal Containment; Water pressure tested and protected with chemical resistant coating, meeting EPA CFR, Part 264.175.
- Internal Containment Capacity: 128 Gallons.
- Storage of 36 pallet slots in each building. There are up to 4 drums per pallet. Each pallet can hold up to 3,520 pounds, so the capacity of the two Normal Risk Storage Units is approximately 253,440 pounds.

HWMU2 consists of outdoor uncovered storage at the Northeast portion of the property. The total square footage for HWMU2 is 17,300 square feet. This area is equipped with thermal imaging cameras connected to the security network or alternative technology that performs the same function. The security system will send automated alerts by email and text message to responsible persons. This area is used for storing drums of scrap batteries on pallets. There are up to 4 drums per pallet. In this area the batteries will be stored in concrete wall-separated "bays" that are 20-ft in width and depth (400 ft² per bay), 9-ft tall (8-ft height of storage), with a drive aisle a minimum of 10-feet. The area can store up to 360 pallets, stored at least one foot below the height of the bay. Each pallet can hold up to 3,520 pounds, so the capacity of HWMU2 is approximately 1,267,200 pounds. The facility may receive larger batteries that do not fit into drums. Large batteries may be stored in wooden crates, manufacturer storage containers or directly on pallets.

HWMU3 consists of outdoor uncovered storage east of the main building. The total square footage for HWMU3 is 5,625 square feet. This area is equipped with thermal imaging cameras connected to the security network or alternative technology that performs the same function. The security system will send automated alerts by email and text message to responsible persons. This area is used for storing drums of scrap batteries on pallets. There are up to 4 drums per pallet. In this area the batteries will be stored in a similar manner to HWMU2, with concrete walls separating 400 ft² storage bays, and a 10-ft wide drive aisle. The area can store up to 120 pallets, stored at least one foot below the height of the bay. Each pallet can hold up to 3,520 pounds, so the capacity of HWMU3 is approximately 422,400 pounds. The facility may receive larger batteries that do not fit into drums. Large batteries may be stored in wooden crates, manufacturer storage containers or directly on pallets.

3.0 SECONDARY CONTAINMENT

3.1 Containment System Design and Operation

Hazardous wastes are stored in three designated areas at the Facility: HWMU1, HWMU2, and HWMU3.

HWMU1 has been designed by a structural engineer and consists of a 160' × 40' concrete pad. The area consists of two At-Risk Containers and two Normal-Risk Containers. The at-risk area is also curbed and sloped towards a sump. The contained portion is 40 ft L × 58 ft W × 1 ft H. The contained portion is sloped towards a sump that is connected through above grade piping to a 15,000-gallon water storage tank. In the event of a thermal runaway event, water from the fire water system will be pumped into the enclosure(s) to fully submerge the at-risk components. The water collected in the enclosure(s) will be pumped to the 15,000-gallon storage tank via the sump connection. The storage tank is equipped with piping to direct the water inside the building for re-use in the production process. If the water cannot be re-used in the process, it will be evaluated for proper disposal. Refer to Figure D-3, Containment Plan.

3.2 Requirements for the Base or Liner to Contain Liquids

HWMU1 is a minimum of 1' thick of new concrete. The at-risk area is equipped with a berm and sump to contain any spills, rain, or water from firefighting activities.

3.3 Containment System Drainage

HWMU1 - Waste containers are located outdoors on an engineered concrete pad. The At-Risk section is engineered with a slope and perimeter berm to provide secondary containment.

3.4 Containment System Capacity

The contained portion of HWMU1 is 40 ft L × 58 ft W × 1 H. The area is sloped towards a sump that is connected through above grade piping to a 15,000-gallon water storage tank. In the event of a thermal runaway event, water from the fire water system will be pumped into the enclosure(s) to fully submerge the at-risk components. The water collected in the enclosure(s) will be pumped to the 15,000-gallon storage tank via the sump connection and evaluated for proper disposal.

3.5 Control of Run-On

HWMU1 is on an elevated pad to prevent run-on.

HWMU2 and HWMU3 are graded to prevent storm water run-on.

Run-on from off-site properties is not anticipated onsite due to existing grade and berms. Run-off remains on-site.

3.6 Removal of Liquids

There is only one (1) liquid associated with the container storage area, battery electrolyte. This is an organic liquid comprised of dimethyl carbonate and other organic solvents. The potential for spillage is limited to small volumes contained in individual battery cells. The batteries are stored in drums in the staging area.

Liquids from unanticipated leaks, spills, or precipitation will collect in the sump area of the At-Risk section of HWMU1. Accumulated liquids in these areas will be removed as soon as practicable following detection by pumps, vacuums, absorbents, or other methods by HAZWOPER-certified operations personnel. Removal of accumulated liquids in secondary containment will be noted in the inspection log and described on the weekly inspection reports to detail information on the contents of the accumulated liquid and estimated quantity. The inspection log is located in the Security and Inspection Plan.

For leaks and spills, Ecobat will follow the emergency actions and procedures for identifying leaked or spilled material, assessing the hazards, and controlling the leak or spill as detailed in the Contingency Plan. Leaked or spilled liquids will be transferred to drums or totes located within the HWMU where the leak or spill occurred. The liquids will be transferred using a vacuum pump designated for use in pumping hazardous waste. Spilled or leaked material that cannot be transferred to a primary container will be cleaned from the HWMU as described in the control plan for leaks and spills in the Contingency Plan.

4.0 TANKS

Not applicable.

5.0 WASTE PILES

Not applicable.

6.0 SURFACE IMPOUNDMENTS

Not applicable.

7.0 INCINERATORS

Not applicable.

8.0 LANDFILLS

Not applicable.

9.0 LAND TREATMENT

Not applicable.

10.0 MISCELLANEOUS TREATMENT

Not applicable.

11.0 BOILERS/INDUSTRIAL FURNACES

Not applicable.

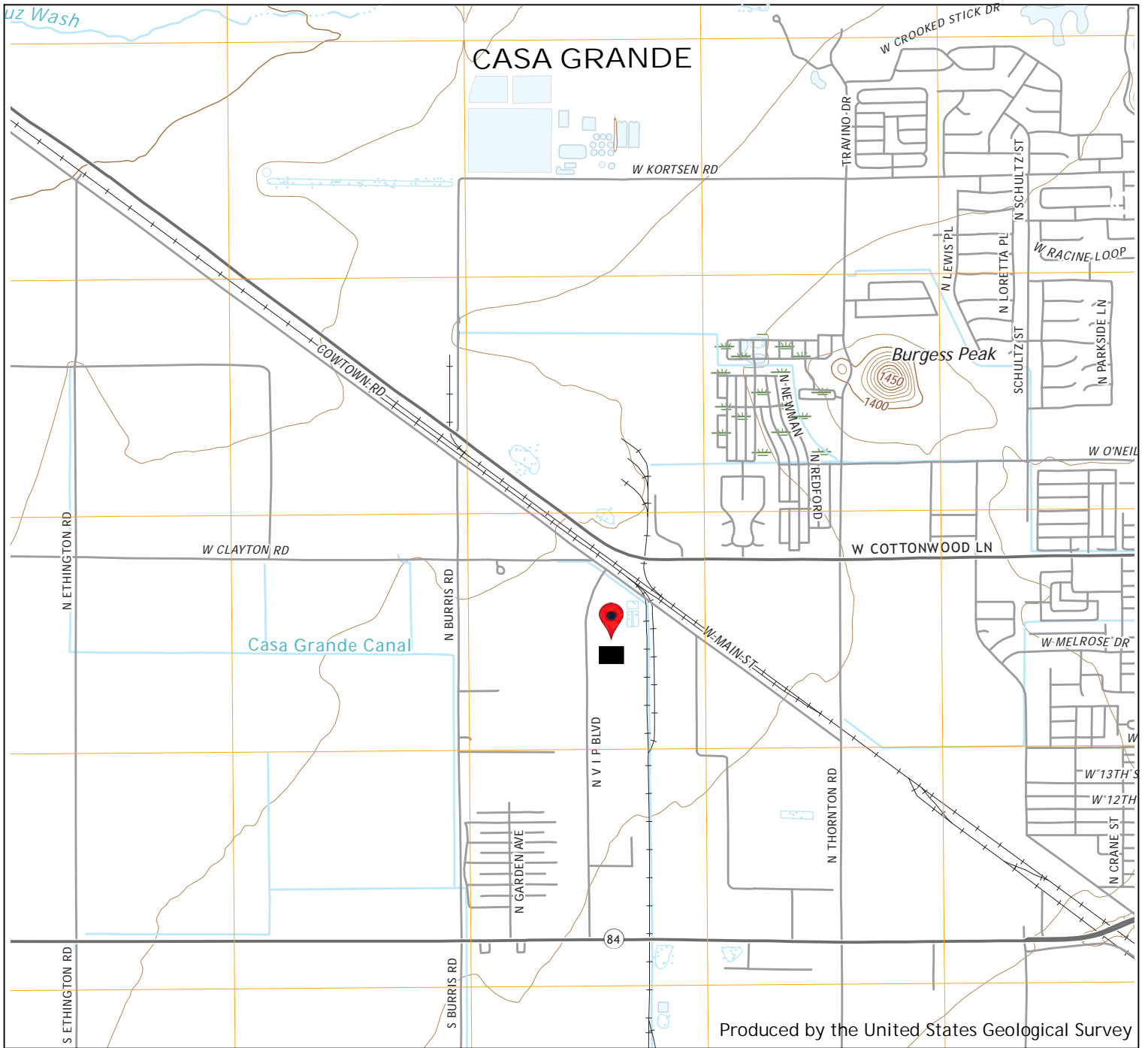
12.0 CONTAINMENT BUILDINGS

Not applicable.

13.0 DRIP PADS

Not applicable.

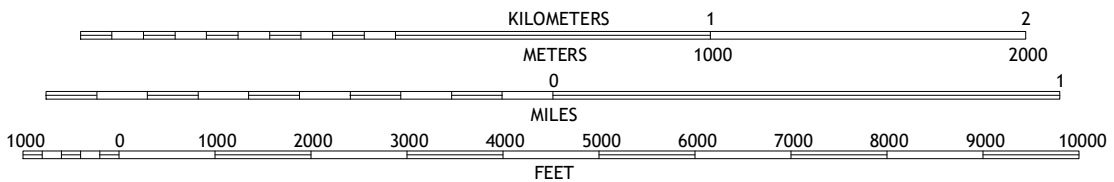
FIGURES



Produced by the United States Geological Survey

Legend

SCALE 1:24 000

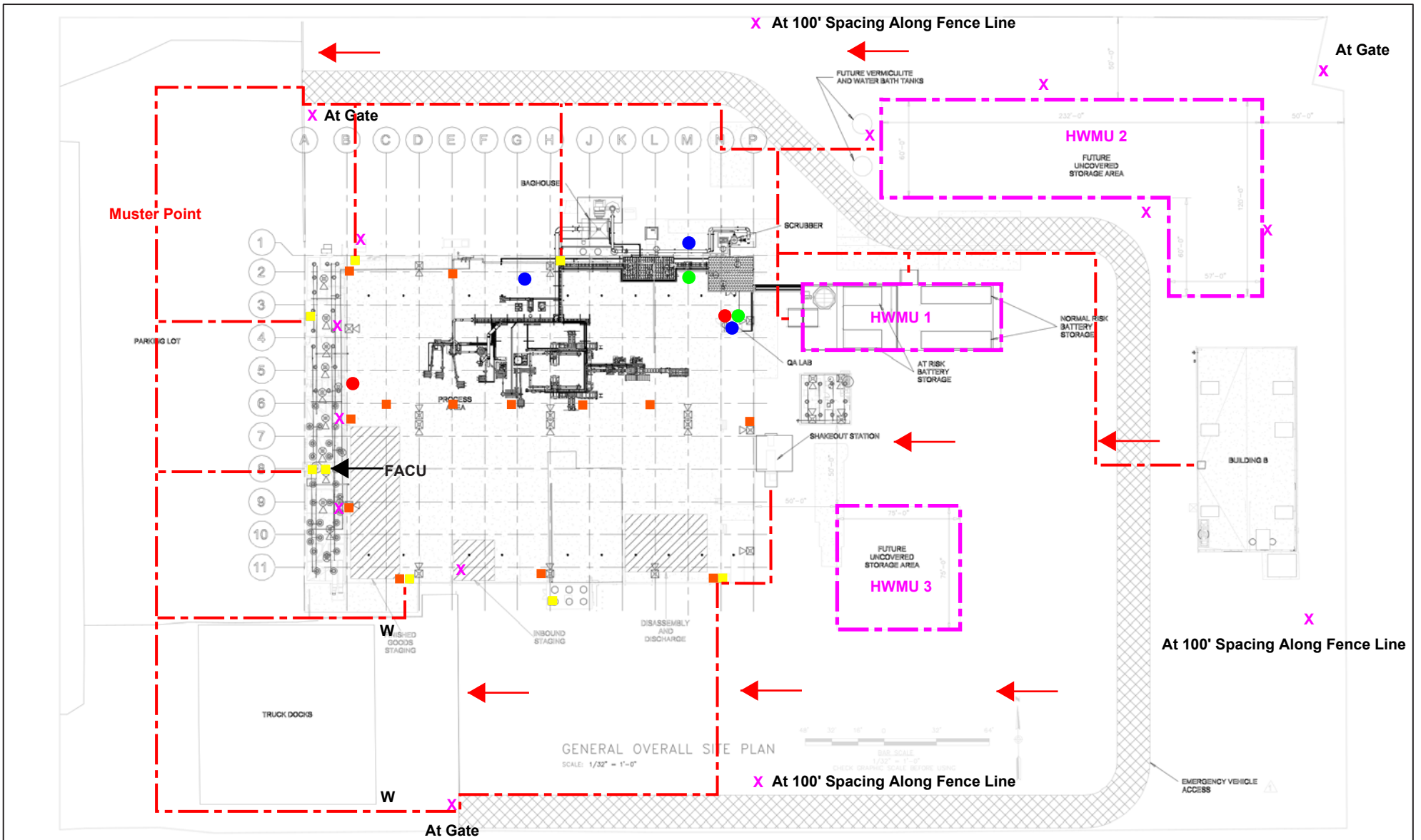


ROAD CLASSIFICATION

- Expressway
- Secondary Hwy
- Ramp
- Interstate Route
- US Route
- Local Connector
- Local Road
- 4WD
- State Route



 <small>associates environmental</small>	Associates Environmental 18141 Beach Boulevard, Suite 200 Huntington Beach, CA 92648 (949) 352-4941 Fax (714) 362-9085		
	Description Ecobat Solutions Arizona, Inc. Figure D-1 - Site Location Map		
Job No. 433-147	Drawing Date 06-06-2024	Drawn By: MO	Drawing 2.0



Legend Direction of Flow HWMU: Hazardous Waste Management Unit Emergency Exit Route Fire Pull Station Fire Extinguisher First Aid Kit Spill Kit Shower + Eyewash Warning Sign Dry Well Location		Associates Environmental 18141 Beach Boulevard, Suite 200 Huntington Beach, CA 92648 (949) 352-4941 Fax (714) 362-9085	
		Description Ecobat Solutions Arizona, Inc. 1474 North V.I.P. Blvd. Casa Grande, Arizona 85122	
Secondary Description Figure D-2 - Site Map		Scale	
Job No.: 433-147	Drawing Date: 07-12-2024	Drawn By: MO	Drawing Version: 1.0



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ISSUE FOR CONSTRUCTION

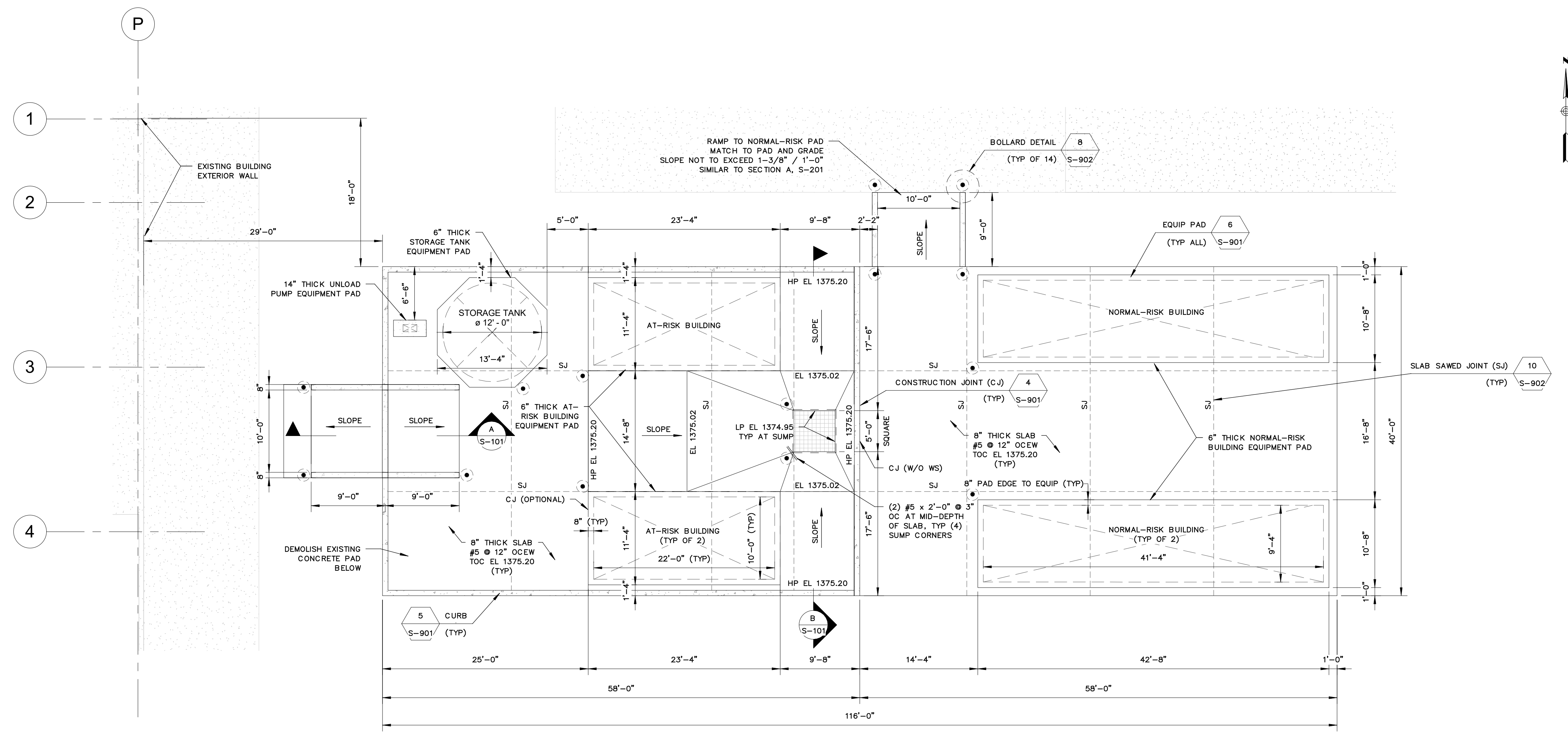
CLIENT INFO:
ECOBAT
1474 NORTH VIP BOULEVARD
CASA GRANDE ARIZONA

ARIZONA LITHIUM BATTERY
RECYCLING

0	7/14/2023	ISSUE FOR CONSTRUCTION
REV	MM/DD/YY	DESCRIPTION
JOB NO:	234543.01	
DATE:	JULY 2023	
SCALE:	As indicated	
DESIGNED BY:	TJS/IMM	
DRAWN BY:	MMM	
CHECKED BY:	TJS	
FILENAME:		

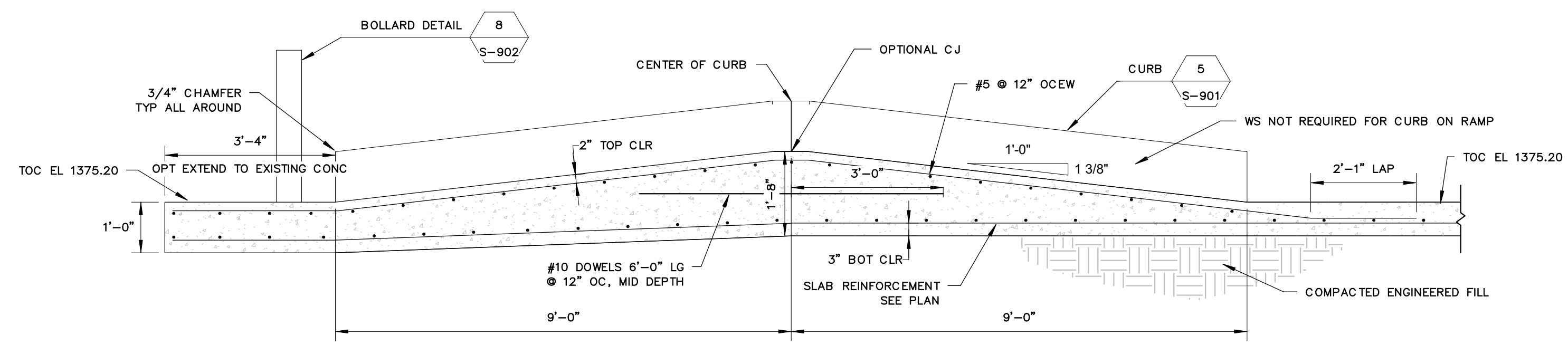
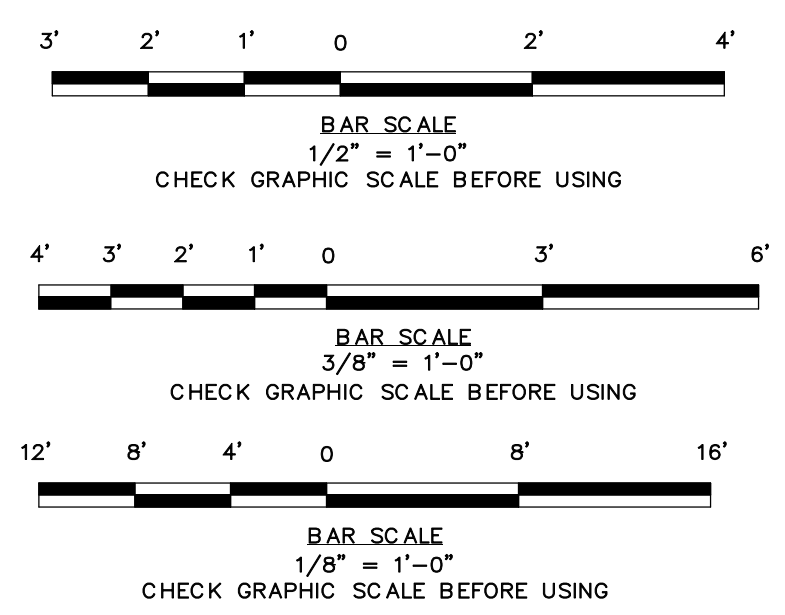
**STRUCTURAL
CONCRETE PLANS AND
SECTIONS**

DRAWING NO:
S-101
SHEET: 7 OF 15



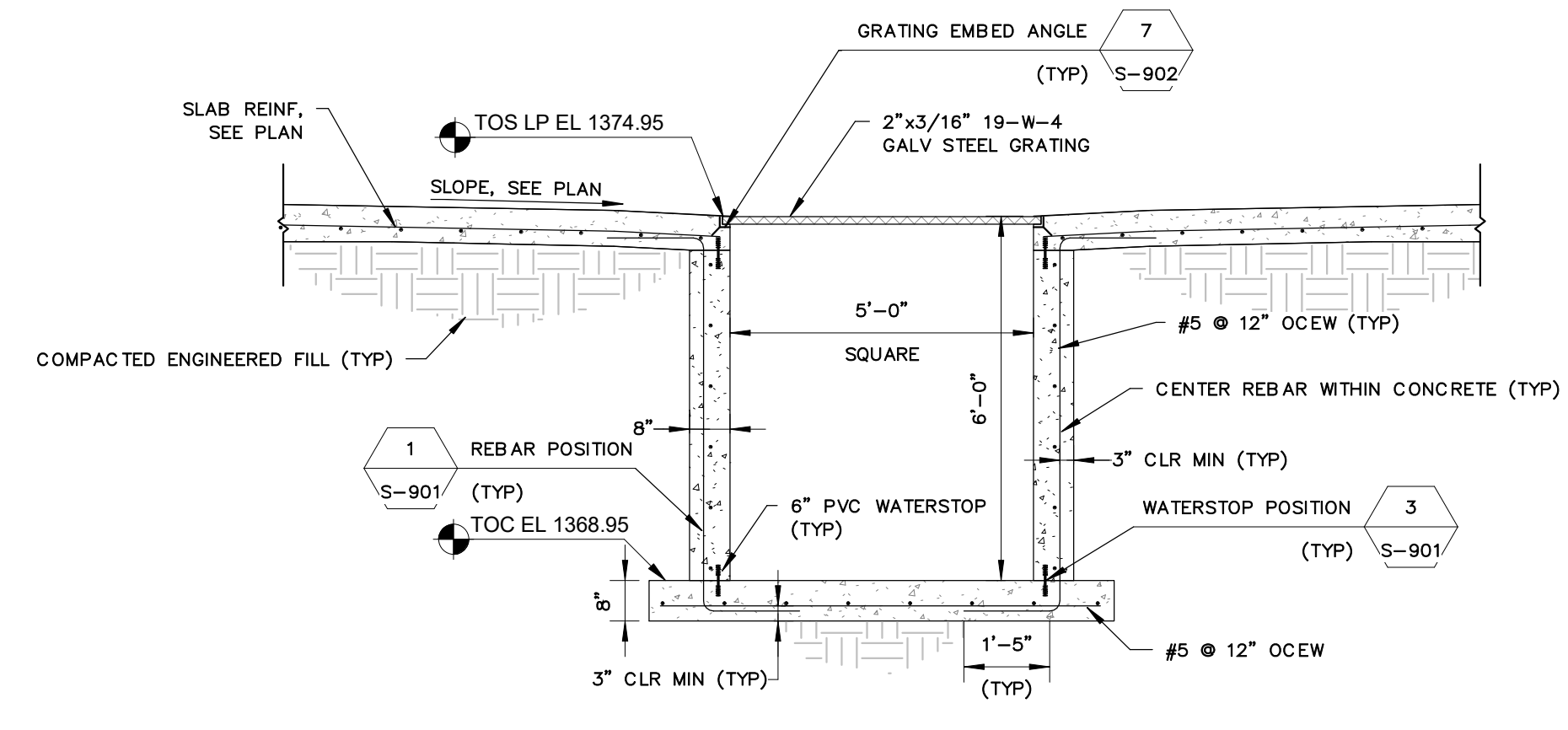
STRUCTURAL CONCRETE PLAN - AT RISK AREA

SCALE: 1/8" = 1'-0"



RAMP SECTION A

SCALE: 1/2" = 1'-0"



SUMP SECTION B

SCALE: 3/8" = 1'-0"

**Figure D-3
Containment**

C:_RevisStandards_Revit Local Files\2022-23454301-S-Ecobat-Structures_Scalese@woodardcurran.com.rvt 7/14/2023 5:11:24 PM

ATTACHMENT E

**SECTION E.
GROUNDWATER MONITORING**

RCRA Application Checklist Section E
Ecobat Solutions Arizona, Inc.

Groundwater Monitoring
40 CFR 270.14(c)

|

NOT APPLICABLE

ATTACHMENT F

PROCEDURES TO PREVENT HAZARDS



RCRA Application Checklist Section F

Procedures to Prevent Hazards
(Security and Inspection Plan)
[40 CFR 270.14(b)(4),(5), (8), and (9)]



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1.0 INTRODUCTION

The Security and Inspection Plan (SIP) was developed by Ecobat Solutions Arizona, Inc. (the “Facility” or “Ecobat”) in support of their RCRA Part B permit application. This SIP provides a description of the equipment and procedures in place to prevent unknowing or unauthorized entry of persons onto active portions of the hazardous waste management areas along with inspection procedures to identify and prevent system malfunction, equipment deterioration and human error.

When changes in the Facility, operations, or equipment occur, the Operations Manager or designee will revise the inspection schedules and/or criteria contained in this SIP.

2.0 SECURITY

Ecobat has developed security provisions to minimize the potential for unauthorized contact with and exposure to the wastes stored and processed at the Facility. The Facility is not open to the public and entry to active waste management areas is limited to employees, waste transportation personnel, oversight agency representatives and escorted visitors. The Site Plan provided in Figure F-2 illustrates the hazardous waste management units, property lines, security fences, entry gates, and the location of warning signs.

Security Procedures and Equipment

Multiple measures of security are used at the Facility during operating and non-operating hours. These measures include perimeter fencing, limited access, lighting, security cameras, signage, and building alarms.

The perimeter of the entire Facility is delineated with a five to six-foot high block wall or chain-link fence topped with barb wire mounted on 45-degree angle arms. Access to the Facility is limited to two metal truck gates and one chain link rail gate. The gates are kept locked when the Facility is closed such that the entire Facility is surrounded by a barrier fence. The perimeter fence and access gates are kept free of trees that may take root and that could compromise the fence or its foundations.

Signage posted at the Facility entrance will identify the Facility, operating hours, and direct all entrants to report to the main building for checking into the Facility. All visitors or other entrants will be required to sign in and be presented with the safety and security procedures for the Facility. Any on-site visitors are accompanied at all times by Facility personnel. Visitors are required to sign out upon leaving the Facility.

Overhead lights are located on the building. Light sensors control the operation of the overhead lighting at the Facility, so it is illuminated from dusk until dawn. The planned operating hours at the Facility are up to 24 hours per day, seven days per week. In the event of an evacuation, facility personnel will control access to the Facility as described in the Evacuation Plan which is included as a part of the Contingency Plan.

2.1 24-Hour Surveillance System

During Phase One operations, which will typically consist of a single, 8-hour shift each operating day, the facility will use on-site staff to control access to all areas of the facility and to monitor the facility through the use of on-site cameras. During unstaffed periods, specified plant personnel are alerted via email and phone messaging if an alarm is activated. When the facility begins continuous operations facility personnel will control access to the facility and monitor the facility through the use of cameras and will be alerted via email and phone messaging if an alarm is activated.

2.2 Barrier

A five to six-foot chain link or block wall fence surrounds the Facility.

2.3 Mean to Control Entry

There are two metal truck gates and one chain link rail gate. Entry to active portions of the Facility is controlled. The gates are closed when not in use and are monitored 24-hours a day via security cameras.

Visitors, including drivers, contractors, vendors, oversight agency representatives and other non-facility personnel are required to sign in at front office. Visitors must provide their name, business affiliation, reason for visit, the employee they are visiting, and date and time of entry and exit. Each visitor will then be provided with a temporary visitor's badge to be displayed at all times. All visitors to the Facility are recorded in the visitor logbook or software system prior to entry. An escort is provided for the visitor while they are at the Facility unless the visitor receives site specific training and is given authorization for unescorted access. At the end of each visit, visitors are required to sign out. The sign-in process is repeated for each subsequent day of the visit, if applicable.

Unauthorized access to the Facility is prevented by facility personnel. Entrance and exit gates are continuously monitored may be closed and locked, if necessary.

2.4 Warning Signs

The plant gates have signs which read:

"DANGER - UNAUTHORIZED PERSONNEL KEEP OUT" in English and Spanish. The Normal-Risk and At-Risk container signs (one sign on every side of the Container) read *"HAZARDOUS WASTE STORAGE AREA- DANGER – UNAUTHORIZED PERSONNEL KEEP OUT"*. The lettering on the signs is greater than or equal to 2 (two) inches in height, which provides readability from at least 25 feet. This same language and signage is present on the perimeter of each outdoor storage area.

2.5 Waiver

No waiver is requested at this time. Procedures to prevent unauthorized access are already in place and implemented.

2.6 Injury to Intruder

No waiver is requested at this time. Procedures to prevent unauthorized access are already in place and implemented.

2.7 Violation Caused by Intruder

No waiver is requested at this time. Procedures to prevent unauthorized access are already in place and implemented.

3.0 INSPECTION

Ecobat has developed an inspection program for the Facility that provides for discovery, investigation, and repair/remediation of hazards to prevent harm to human health and the environment. The program is integrated with the normal course of duties carried out by Facility personnel so possible issues are identified and resolved quickly and efficiently. All employees are responsible for reporting or correcting (if appropriate) any non-conforming issue upon discovery. Non-emergency issues discovered by Facility personnel may not be recorded on a formalized Inspection Report if the issue can be corrected before a formalized inspection is completed.

3.1 General Inspection Requirements

This SIP is intended to provide a mechanism to identify and prevent system malfunctions, equipment deterioration, and human errors which, if allowed to continue without correction or preventive action, may lead to a release of hazardous waste constituents to the environment or create a threat to human health. The performance of periodic and effective inspections is essential if such events are to be prevented. To this end, Ecobat has developed procedures for performing inspections so that substandard conditions and practices are identified, and appropriate actions are taken in a timely manner.

The SIP is implemented by qualified individuals assigned with the responsibility to detect any unsafe conditions at the Facility and prevent adverse consequences. The designated individuals have the training and authority to: (1) implement the required inspections, (2) perform necessary evaluations and hazard assessments, and (3) recommend appropriate response actions.

Inspections are performed according to pre-determined schedules (“Inspection Schedules”) based on engineering knowledge and operational experience with the systems and processes involved. Each inspection item has the content and frequency necessary to alert facility personnel prior to development of a serious problem. A trained inspector assesses each item noting any potential malfunction/deterioration of equipment or operator error through regular observation of the processes and procedures. The timing and level of response is determined by the nature and seriousness of the problem identified – with protection of personnel and the prevention of adverse environmental impact being of paramount concern.

If inspections reveal that non-emergency maintenance and repair is needed, the issue will be addressed as soon as possible to preclude further issues and reduce the need for emergency repairs.

If an inspection reveals an issue that is considered an imminent hazard, remedial action will be taken immediately in accordance with the procedures outlined in the Contingency Plan. In the event of an uncontrolled release of hazardous waste, all efforts will be directed toward containment. Facility inspection records may change based on changes in regulations, changes in operations at the Facility, or following modification of the facility hazardous waste permit.

The records may be maintained and stored electronically. Hard copies of the inspection records will be maintained for a minimum of 3 years from the date of the inspection.

3.1.1 Types of Problems and Inspection Frequency

The inspection schedule for items that may pose a hazard at the Facility is shown in the table below:

Inspection Schedule

Item	Parameters/Types of Problems that May Occur	Frequency*
Safety and Spill Response Equipment and supplies	Functionality of equipment. Out of stock or insufficient supply.	Weekly
Access controls (entrance gate, entrance lighting, perimeter fencing)	Lightbulbs out, evidence of digging or burrowing under access controls, damage to the support posts, fencing materials, or barbed wire security on access controls.	Weekly
Monitoring and Laboratory Equipment	TBD	Quarterly
Fire suppression system	Gauges and seals on control valves.	Weekly
	Check testing dates of extinguishers and inspect for damage, low charge, missing pins or need for replacement.	Monthly
	Inspect water flow alarm devices, supervisory signal devices, valve supervisory alarm devices, control valves, hydraulic nameplates, signage, hand-wheels, and fire department connections.	Quarterly
	Check testing dates of extinguishers. Pressure test the backflow prevention valve, sprinkler heads, pipes and fittings, spare sprinklers, control valves, the main drain, perform a partial trip test and internal inspection for all dry valves, test waterflow alarms.	Annually
Security Equipment and Devices	Functionality and malfunction of surveillance equipment. Integrity and breaches of perimeter fencing. Loss or damage to warning signs. Functionality of entry gate. Lighting.	Monthly
Containment	Deterioration of or damage to sealants and joint compound. Cracks in concrete containment system. Presence of standing liquids or wastes outside of containers. Lighting. Run-on and run-off for HWMUs.	Daily
Containers	Container Condition: Leaking, Bulging, Rusting, Dents, Other deterioration, Improper or damaged labeling Improper stacking, Aisle Space.	Daily

* Weekly is defined as once per calendar week (Monday through Sunday).

Specific Equipment Inspection Schedule

Item	Specific Items	Parameters/ Types of Problems that May Occur	Frequency*
Incoming Material	Incoming Material, Every Container	Each container must be checked for temperature using a thermal monitor and must be recorded on Form QF88. Each battery container in this area must be monitored for its temperature and must be recorded on Form QF57. Time interval for these Temperature checks is described in the form SM17. During checks if the temperature was found to be out of specification per SM17, follow Process SM15.	As material is received.
At Risk Storage Area	Batteries	Form QF94 will be used to record the container data. Batteries identified as thermal runaway per SM15 will be recorded on Form QF93 and the material must be isolated away from other containers	2 hour intervals during operating hours.
Normal Risk Storage Area	Batteries	Form QF57 will be used to record the container data. Batteries identified as thermal runaway per SM15 will be recorded on Form QF93 and the material must be isolated away from other containers.	8 hour intervals during operating hours.
Normal Risk -Outdoor Storage	Batteries	Form QF57 will be used to record the container data. Batteries identified as thermal runaway per SM15 will be recorded on Form QF93 and the material must be isolated away from other containers.	8 hour intervals during operating hours.
Dunk Tanks	Tank	Fill out form QF A1 when used. Check for sufficient water level.	As needed. Daily.
Unloading Areas	Area Pavement/Concrete	Cracks; standing water; unclean pavement/concrete	Daily (when in use), otherwise weekly.
Mobile Equipment	Forklifts, front end loaders, manlifts, skid steer, backhoe, etc.	Mechanical malfunctions	Daily (when in use).

* Weekly is defined as once per calendar week (Monday through Sunday).



Monitoring Equipment Inspection Schedule

Monitoring Devices	
O2 Monitor – Mechanical Room	Annually

The Forms identified in the inspection schedule will be completed by Ecobat staff or an authorized representative. Refer to Appendix F-1 for inspection forms and B for Standard Work Instructions (SM Forms).

3.2 Parameters/Types of Problems

The Inspection Schedules identify the parameters of the inspection or specific types of problems to look for during the inspection (e.g., leaks, deterioration, readings out of specified range, missing items or materials, inoperative equipment, etc.).

3.3 Frequency of Inspection

The Inspection Schedules include inspection frequency that is based on the rate of possible deterioration of equipment and the probability of an environmental or human health incident if the deterioration, malfunction, or operator error goes undetected between inspections. Areas subject to spills, such as loading and unloading areas, are to be inspected daily when in use. This daily inspection is performed by personnel working in these areas and is not documented.

3.4 Specific Process Inspection Requirements

Written inspection procedures have been prepared and implemented for each of the following areas:

Inbound Staging

Each container must be checked for the temperature using thermal gun and must be recorded on Form QF88. Additionally, each battery container in this area must be monitored for its temperature and must be recorded on Form QF57. Time interval for these Temperature checks is described in the form SM17. During checks if the temperature was found to be out of specification per SM17. Follow Process SM15 to isolate the battery container and move it to the appropriate location for further monitoring. Battery containers will be receiving a tag to identify what storage location it must be moved to for further processing.

HWMU1 – At Risk

Material at risk of thermal runaway will be immediately processed, placed into a water bath or will be stored in the at Risk Storage area. Form QF94 will be used to record the container data. Batteries Identified as thermal runaway per SM15 will be recorded on Form QF93 and the material must be isolated away from other containers. During QF93 temperature monitoring if the temperature has increased from the last measurement, contact Supervisor or Plant Manager for next steps.

HWMU1 – Normal Risk

Material exhibiting normal temperatures that is not intended to be processed within the shift it is received will be stored in the Normal Risk Storage area, or in the exterior storage area. Form QF57 will be used to record the container data. Batteries identified as thermal runaway per SM15 will be recorded on Form QF93 and the material must be isolated away from other containers. During QF93 temperature monitoring if the temperature has increased from the last measurement, contact Supervisor or Plant Manager for next steps.

HWMU2 – Exterior Storage

Material exhibiting normal temperatures that is not intended to be processed within the shift it is received will be stored in the Normal Risk Storage area, or in the exterior storage area. Form QF57 will be used to record the container data. Batteries identified as thermal runaway per SM15 will be recorded on QF93 form and the material must be isolated away from other containers. During QF93 temperature monitoring if the temperature has increased from the last measurement, contact Supervisor or Plant Manager for next steps.

HWMU3 – Exterior Storage

Material exhibiting normal temperatures that is not intended to be processed within the shift it is received will be stored in the Normal Risk Storage area, or in the exterior storage area. Form QF57 will be used to record the container data. Batteries identified as thermal runaway per SM15 will be recorded on Form QF93 and the material must be isolated away from other containers. During QF93 temperature monitoring if the temperature has increased from the last measurement, contact Supervisor or Plant Manager for next steps.

Annually, or at the frequency required by the local fire marshal/department, a comprehensive inspection of all fire suppression systems is conducted by an independent inspector according to the manufacturer's and the local fire department standards and per National Fire Protection Act (NFPA) Standards.

General Container Inspections Procedure

Container inspection documents may be kept in either paper or electronic format. The records will document the date of inspection, inspector, and if the inspection items are acceptable or unacceptable. The inspection documents will also list the date that corrective actions were completed for elements that were unacceptable. The results of the inspections are retained for a minimum of three years.

Potential issues associated with containers to be stored and processed at the Facility include the following:

- Damaged and deteriorated containers;
- Leaking or open containers;
- Spills and releases during loading, unloading, and transport within the Facility;
- Improper handling, stacking, or placement of containers; and
- Failure and/or deterioration of secondary containment system or structure.

The containers and the battery storage areas are inspected daily as part of the day-to-day operations conducted at the Facility. The inspections are tracked on an inspection log and documented on inspection report forms. Should any issue be discovered during the inspection, the issue is noted on the inspection log and the inspection report. The issue remains as an open item on the inspection log until resolved with any repairs or remedial work completed. Repair and remedial work are documented on supplemental inspection reports. The Facility database is updated should any waste be removed from a damaged container and placed in another container or consolidated with other wastes in a larger container.

Hazardous Waste Loading/Unloading Areas

Areas subject to spills, such as loading and unloading areas, are indirectly inspected by employees during routine operations (on a daily basis when in use). These daily inspections are visual inspections and are not formally documented. Ecobat has a spill reporting procedure that requires all employees to immediately report the release of any quantity of a hazardous substance or petroleum to facility management.

3.4.1 Environmental Monitoring Systems Inspections

Environmental Monitoring Systems Inspections (EMSIs) are performed to ensure proper operation of the environmental monitoring systems in use at the Facility. The Environmental Monitoring Personnel perform regular inspections of environmental monitoring equipment as outlined below:

Air Pollution Control System Tests

Air pollution control system tests are performed as required by Ecobat's Pinal County Air Quality Control District Permit.

3.4.2 Security Inspections

General facility security inspections are indirectly performed as a part of routine management audits to assess the overall integrity and maintenance of the Facility's security devices: perimeter fence, gates, locks, and warning signs. These audits are not formally documented; however, deficiencies are corrected as soon as practicable.

3.4.3 Emergency Equipment Inspection

The Emergency Coordinator (or his designee) will perform an inspection of emergency response equipment maintained at the Facility as outlined in the Emergency and Safety Equipment Inspection Schedule. This equipment will be inspected to ensure that the equipment is available, accessible, and maintained.

3.4.4 Assess, Correct, Train (A.C.T.) Procedures

When an inspection indicates equipment malfunction or deterioration, or any other condition of concern, the following actions are taken as appropriate:

1. Assess the situation.
2. Determine the action needed in response to the situation, including immediate responses, if necessary.
3. Establish the time frame within which the responses must occur. For minor discrepancies, the Plant Manager or Production Supervisor is notified and the situation remedied as soon as possible. For remedies that require maintenance personnel, a Work Order (WO) is prepared. For emergency or near-emergency situations, prompt verbal reports shall be made to the Plant Manager, to be followed later with written reports.
4. Determine if training is required to prevent future reoccurrence and schedule any appropriate training.
5. Follow-up to verify that the situation has been resolved.

3.4.5 Work Order System

Ecobat uses work orders to correct deficiencies that cannot be addressed by production staff (i.e., requires maintenance personnel). Preventive maintenance inspections are printed spreadsheet forms. The following is a description of how the WO process works.

A WO can be initiated by authorized employees at the Facility. The WO is written by the operator/supervisor/manager of the responsible department and given to the Plant Manager who will assign someone to schedule the work and make any necessary arrangements. The status of the WO is indicated as “open” or “pending” until the WO is completed. WO’s are reviewed in weekly meetings between the maintenance department and originator of the WO. If the WO is considered high priority, the supervisor of the reporting department will communicate with maintenance directly to expedite the completion of work. WO’s are assigned priority during the weekly meetings and scheduled accordingly. The completed WOs are maintained for a minimum of three (3) years.

Preventative Maintenance and Inspections (PM’s) performed by maintenance personnel are also tracked by a PM spreadsheet and are based on a routine schedule. The completion rate for these PM’s are reported on a weekly basis to management.

4.0 REMEDIAL ACTION

When inspections reveal problems or potential problems, they are documented on the Hazardous Waste Weekly Inspection Form in (Appendix F-1) and submitted to the facility management for review and corrective actions. Where a hazard is imminent or has already occurred, remedial action will be taken immediately. If an emergency situation is discovered, then the Emergency Coordinator will be notified and the Contingency Plan will be followed.

4.1 Inspection Documentation

Ecobat will record and maintain documentation of the weekly inspections in either paper or electronic format. The records will document the date of inspection, the inspector, and if the inspection items are acceptable or unacceptable. The results of the inspections are retained for a minimum of three (3) years.

All inspection log forms must contain the following information:

- a. the inspector’s name;
- b. date of the inspection;
- c. items inspected;
- d. inspection parameters;
- e. procedures, structures, and/or equipment inspected;
- f. notation of any observations and/or problems; and
- g. date on which the corrective action was completed.

The Hazardous Waste Weekly Inspection Checklist and Emergency and Safety Equipment Inspection Checklist can be modified as necessary to account for changes to the Facility.

Records Retention

Inspection records are maintained in the operating record. The inspection records must be retained on-site for a minimum period of three (3) years.

5.0 PREPAREDNESS AND PREVENTION REQUIREMENTS

The Facility has developed a hazard prevention program to address unanticipated issues that may occur at the site. The program includes equipment, procedures, and arrangements with subcontractors and public emergency response agencies to address issues that may impact human health and the environment.

5.1 Equipment Requirements

The Facility maintains various types of equipment that may be used if an imminent danger or emergency condition exists. This equipment includes internal and external communication systems; fire suppression equipment; monitoring and testing equipment; equipment for spill control; small amounts of emergency medical supplies; and Personal Protection Equipment (PPE).

5.1.1. Internal Communications

Internal communications will be via an alarm system for immediate notifications and a voice communication system for issuing instructions. The initial notification to on-site personnel will be by an alarm system, which monitors for fire and security. Alarm system panels are located at strategic locations so that the Facility Manager and/or the Emergency Coordinator (EC) can identify where and what triggered the alarm. The alarm system is electrically operated and is equipped with a battery back-up to ensure operation during power outage.

There are seven manual alarm devices (pull stations) located inside of the building. The alarms will sound an audible warning signal to employees inside and outside the buildings. All employees are trained in the activation process for the manual alarms.

During Phase One operations, which will typically consist of a single, 8-hour shift each operating day, the facility will use on-site staff to control access to all areas of the facility and to monitor the facility through the use of on-site cameras. During unstaffed periods, specified plant personnel are alerted via email and phone messaging if an alarm is activated. When the facility begins continuous operations facility personnel will control access to the facility and monitor the facility through the use of cameras and will be alerted via email and phone messaging if an alarm is activated.

Internal telephone and radio systems allow communication throughout the Facility for use in notifying employees of a potential or existing emergency. This will be used in conjunction with the alarm system. Because of the relatively small size of the Facility, voice is “capable of providing immediate emergency instruction (voice or signal) to facility personnel” as required at 40 CFR §264.32(a). All Facility personnel involved with hazardous waste operations are equipped with a radio that can transmit and receive signals at all locations within the Facility. The Facility Manager and EC are equipped with cellular phones and can be reached at any time during operating hours. Total plant evacuation is initiated only by an emergency coordinator or the activation of the alarm system. Internal communications concerning all emergency conditions will follow the facility’s Contingency Plan.

5.1.2. External Communications

The Facility has land-line telephones and cellular phones issued to the Facility Manager and the EC for use in communicating to entities outside the Facility. These Facility telephones will be used to contact local and state agencies or other entities of emergency conditions. The telephones are located in the office and the laboratory areas within the main building. Emergency phone numbers are posted near the telephone at the exits of the main building.

The Facility will annually submit an inventory report to the Pinal County Emergency Planning Committee as required by EPCRA. The inventory report will include information on the chemicals used, transported, or stored at the Facility over the previous year and must be submitted by March 1 of the following year. The inventory report may be submitted electronically by email to the Pinal County Emergency Planning Director. Emergency Equipment.

The Facility maintains various types of emergency equipment including equipment for spill control, small amounts of emergency medical supplies, and PPE, as listed in the Contingency Plan. Emergency equipment includes, but is not limited to, the following:

1. Portable fire extinguishers. The location of the fire extinguishers is listed on the site map. Each is marked by red panels painted on the wall, column, post or other fixture where the fire extinguisher is located. Extinguishers are inspected on a monthly basis, with annual testing and maintenance performed by an outside contractor. The records are maintained in the Facility office by the EC or designee. The facility maintains two types of fire extinguishers:
 - a. Class A,B,C – Multi-purpose extinguishers
 - b. Class D – Reactive Metal fires (may be used on lithium fires)
 - c. F-500 (Water with F-500 Additive) – lithium battery fires

Each time an extinguisher is removed from service for maintenance or recharging, an alternate extinguisher is installed in its place. All employees are trained in the use of extinguishers.

2. Fire extinguisher systems. The at-risk storage building and normal risk storage buildings have built in automatic deploying fire extinguisher systems. The systems are checked on a monthly basis with annual testing and maintenance performed by an outside contractor. The records are maintained in the Facility office by the EC or designee.
3. Fire suppression water. An eight-inch CLDI Pipe runs from the fire department connection throughout the facility. The processing building is equipped with a fire sprinkler system.
4. Spill response material. Spill kits are maintained and located at multiple locations throughout the Facility including but not limited to (1) the loading dock, 2) in the staging area (specially equipped for the material stored in these areas), and 3) the quarantine area. The equipment is inventoried and maintained by the EC or designee.
5. First Aid Kits (including burn kits and AED)
6. Eyewash/Showers
7. Alarm system which notifies the Emergency Coordinators to summon immediate emergency assistance.

5.1.3. Fire and Water Control

An 8” CLDI pressurized water line runs from the Fire Department connection to and throughout the facility. The main building is equipped with an automatic sprinkler system that was installed in 2023. Fire line connections are provided on the line to service the HWMUs with fire suppression water. The fire suppression system is inspected quarterly by trained personnel and tested annually by an outside contractor. Fire suppression system testing records are maintained in the Facility office.

In addition to the fire suppression system and the main building sprinkler system, the Facility is protected by conventional ABC fire extinguishers located in the main building and at various other locations on the site. In addition the at risk storage building and normal risk storage buildings have built in automatic deploying fire extinguisher systems. Fire extinguisher locations are shown on Figure F-2.

The Facility is a no-smoking facility except in designated areas where signage indicates smoking is permitted. Ecobat requires a “Safe Work” permit for all welding or other “hot work” that may generate sparks or other sources of ignition. Safe Work permitted activities are only allowed in designated locations on the site and these areas are so marked.

5.1.4. Testing and Maintenance of Equipment

As part of the Facility inspection program, emergency response equipment will be inspected on a monthly basis. These inspections ensure the emergency response equipment will function and ample emergency response supplies will be on hand when needed. In addition to checking the inventory of emergency response supplies, this inspection includes a check of equipment functionality and of testing dates for fire extinguishers and the Facility fire suppression system. Ecobat has contracts with suppliers to provide annual inspections and testing of fire extinguishers and the Facility fire suppression system. As the testing date approaches, the Facility Manager will be notified to assure the supplier inspection takes place.

The security and alarm systems are inspected on a monthly basis. These inspections include the perimeter fencing and warning signs; the entrance gate and lighting; Facility lighting; the surveillance system and motion sensors; the fire alarm system, the communication system, and building doors and locks. These inspections will include testing of the functionality of each item to assure they will work when needed.

5.1.5. Access to Communication or Alarm System

All Facility personnel involved with hazardous waste operations are equipped with a radio that can transmit and receive signals at all locations within the Facility. The Facility Manager and EC are equipped with cellular phones and can be reached at any time during operating hours.

Manual alarm devices (pull stations) are located inside the main building. All employees are trained in the activation process for the manual alarms.

5.2 Aisle Space Requirement

The batteries will be stored in concrete wall-separated “bays” that are 20-ft in width and depth (400 ft² per bay), 9-ft tall (8-ft height of storage), with a drive aisle a minimum of 10-feet. Aisle widths are maintained to allow for access by personnel, emergency equipment, and spill control equipment. All HWMUs have no obstructions around their perimeter, allowing for access for container inspections, fire protection, and spill control from all four sides of each management unit.

5.3 Documentation of Outside Response Arrangements

Arrangements have been made with outside entities to provide assistance in response efforts should an emergency be beyond the capabilities of on-site resources.

5.3.1. Police and Fire Departments

The Facility is located within the jurisdiction of the Pinal County and the City of Casa Grande, which will provide municipal services for the Facility and its vicinity. The applicable local authority for emergency response at the Facility is the Casa Grande Fire Department which will respond from one of its stations in or near the City of Casa Grande. The Fire Department would generally respond to all fire, release, explosion, medical (paramedic), or other emergency events which require that outside assistance be brought to the site.

The Pinal County Sheriff's Department will provide additional municipal services, such as traffic and pedestrian control that may be required during an emergency event. A copy of a letter from Ecobat to emergency responders is included in the Contingency Plan.

5.3.2. Emergency Response Teams

No arrangements with other emergency response entities (such as State emergency response teams, emergency response contractors, or equipment suppliers) are necessary due to the relatively small size of the Facility and the nature of hazardous waste management activities conducted at the Facility. Such arrangements are not deemed necessary in addition to on-site and Casa Grande Fire Department capabilities. However, that does not preclude the utilization of a private emergency response contractor, if judged to be necessary and appropriate for quick response and ability to effectively handle an unexpected situation.

5.3.3. Local Hospitals

Banner Casa Grande Medical Center at 1800 E. Florence Boulevard has been contacted and familiarized with the properties of hazardous waste handled at the facility and the types of injuries or illnesses which could result from fires, explosions, or releases on site. If new activities change the types and/or severity of potential injuries, the EC will provide the hospital with additional information regarding the new activities.

Copies of the letter to Banner Casa Grande Medical Center providing notification of Facility activities are included in the Contingency Plan.

5.3.4. Document Agreement Refusal

Ecobat has not received any refusal for arrangements to familiarize police, fire departments, and emergency response teams with the layout of the facility, properties of hazardous waste handled at the facility and associated hazards, places where facility personnel would normally be working, entrances to and roads inside the facility, and possible evacuation routes, or to familiarize local hospitals with the properties of hazardous waste handled at the facility and the types of injuries or illnesses which could result from fires, explosions, or releases at the facility.

6.0 PREVENTION PROCEDURES, STRUCTURES, AND EQUIPMENT

Trucks delivering lithium-bearing materials will arrive at the truck unloading dock. Incoming containers are unloaded from transport vehicles using forklifts or hand conveyance equipment and transported to the Inbound Staging area where they will be inspected. Once the batteries are inspected they are moved from the Inbound Staging area to the appropriate area within HWMU1, HWMU2, or HWMU3 for storage. Energized batteries will be moved to the Disassembly and Discharge area. Lithium-ion batteries that arrive in drums packed with vermiculite (or a similar packing material) will be moved to the shakeout station where the batteries will be placed in process by dumping them on a vibrating screen that will be used to separate the batteries from the vermiculite which will be collected and sent back to manufacturers or shippers for reuse. Employees are trained in the proper techniques for moving containers to ensure that the containers are handled in a manner that would not cause the container to rupture or leak. Employees are also trained to identify non-conforming materials or batteries showing signs of risk so that those at-risk batteries can be processed immediately or stored in the at-risk storage containers if immediate processing is not possible.

6.1 Unloading Procedures

Possible hazards in loading and unloading containers include puncturing containers; tipping containers during transfer; releases from equipment used to transfer from one container to another; and placing a container in an area with incompatible wastes.

Waste batteries typically arrive at Ecobat via tractor trailer. A loading dock is available to offload the batteries directly from the trailer into the Inbound Staging area.

While, for the reasons discussed more fully below, it is uncommon for leaking batteries or other liquid waste to be present in arriving trailers, and even if leaking occurs the leak is small in volume and will be contained in the truck trailer. Ecobat conducts periodic inspections to the concrete/asphalt in truck unloading area for evidence of cracks or other defects compromising the containment in these areas. All loading and unloading activities will be supervised by Facility personnel. Spills will be contained with absorbent material and free liquids will be pumped into containers. All resulting materials from cleanup, including waste, waste absorbent, and PPE, will be containerized and disposed with similar and compatible material generated at the Facility.

Ecobat does at times receive non-conforming batteries. Although Ecobat does not intentionally receive such, they are contained in some in-coming loads. Facility personnel are trained to look for these wastes that are non-conforming with our process, but because of the way that batteries are packed for shipment they are often not found until the pallet is unpacked. Typically, non-lithium batteries are discovered when the batteries have been removed from their container prior to placing onto the shaker station that separates the batteries from the vermiculite or other packing material inside the container. They are manually removed from the container and placed into closed containers. Nickel Cadmium batteries are marked "Universal Waste – Battery(ies)," or "Waste Battery(ies)" or "Used Battery(ies)." Lead acid batteries are marked as "Lead Acid Batteries Managed under 266.80". These batteries are stored in the normal risk storage area for no longer than one year from the date of initial accumulation. Non-lithium batteries are shipped off-site for recycling or treatment. Facility personnel receive training in the proper handling and emergency procedures related to such batteries.

Staging of Batteries – Ecobat intends to process the incoming batteries on a just-in-time basis initially, with no long-term onsite storage of batteries. In subsequent phases of the project, and with appropriate permitting, Ecobat intends to operate a storage facility for incoming waste batteries utilizing dedicated outdoor storage areas on the property or dedicated “normal risk” containers located on the property. In addition to the dedicated outdoor storage area and dedicated normal risk containers, Ecobat will utilize engineered containerized storage systems for safe storage of damaged or defective batteries onsite (“At-risk” materials), if they cannot be processed at the time of inspection

Raw material will be transported via truck to the Ecobat facility to be processed. Trucks will arrive at the property and back into a dedicated truck unloading dock. Trailers of incoming batteries and other materials may be staged for up to 72 hours prior to unloading. Arriving trailers are inspected upon arrival, and then routinely inspected during any staging period for any sign of leaking or spilled liquids from the staged trailers.

Because incoming trailers are inspected for evidence of leaking batteries, discharges from these trailers are not anticipated, and if they occur, would likely involve only a small volume of released liquids. The facility will have spill kits readily available. The area is inspected daily for evidence of cracks or other defects compromising the containment in this area.

Loading of Outgoing Material –

The finished product is loaded into supersacks and shipped off-site via trucks. All product is in solid form.

6.2 Run-Off Prevention

The hazardous waste storage and processing activities at the Facility are conducted in otherwise contained areas. The Facility is located in a relatively flat area of Pinal County and has been graded to drain to low areas in the interior portions of the site and to drywells in the loading dock. A perimeter berm contains stormwater runoff on site. All HWMUs are constructed above grade to prevent stormwater from running into the containment area. This will mitigate the run-off of hazardous waste from the Facility. General drainage features for the site are shown in Figure F-2.

6.3 Protection of Water Supplies

Batteries are stored in HWMU1, HWMU2 or HWMU3 only. During inspection of these areas, spills or leaks of liquid wastes will be identified quickly and will be immediately cleaned up to prevent migration of wastes onto the concrete or underlying soils. By preventing the migration of hazardous waste constituents into site soils, the possibility of impacting a water supply is negligible.

Procedures followed at the Facility are designed to minimize the impact of a spill in the HWMU areas. Containers and containment areas are inspected daily so such a release could be addressed quickly to control the extent of the release. Facility personnel will immediately contain such a release and begin efforts to containerize any free liquids as soon as practical. Following removal of the waste material, remedial activities will begin in accordance with the procedures outline in the Contingency Plan.

6.4 Equipment and Power Failure

A power failure will not significantly affect waste processing activities at the Facility. Equipment used to load, unload, and transport containers within the Facility are either fueled by propane gas (such as the forklifts) or are manually operated. Should a power failure occur, waste processing activities will be limited to those which can be conducted using non-electrical equipment.

There is 30 to 40 minutes of UPS power for video surveillance, thermal image cameras and servers.

6.5 Personal Protection Procedures

The Facility has implemented a personnel protection program to prevent undue exposure of personnel to hazardous waste using engineering controls and administrative measures. Engineering controls include the use of PPE; requiring the use of DOT approved containers; use of specialized drum handling equipment; and providing safety showers and eyewash units at strategic locations throughout the Facility. Administrative measures include training for hazardous waste operators and restrictions on Facility access.

PPE is to be used during all waste processing activities conducted at the Facility. PPE is to include safety glasses with side shields or face shields, hard hats, steel-toed boots; individual respiratory protection devices; chemically resistant gloves; and coveralls and/or aprons. Additional PPE maintained at the Facility includes supplied air respirators and full body protective suits that are acid and solvent resistant.

All visitors must sign in at the main building office and wear a hard hat and safety glasses and be accompanied by a Facility employee if entering the yard or any management unit.

6.6 Procedures to Minimize Releases to the Atmosphere

Ecobat operates in accordance with Permit C31426.000 issued by Pinal County Air Pollution Control District.

The risk of release to atmosphere from HWMU1, HWMU2 and HWMU3 is controlled as follows:

- All containers within the Storage Area are closed at all times. No transfer of materials from container to container takes place in the Battery Storage Area.

7.0 PREVENTION OF REACTION OF IGNITABLE, REACTIVE, AND INCOMPATIBLE WASTE

Ecobat uses a combination of engineering controls and administration procedures at the Facility to classify and properly isolate ignitable and reactive wastes during storage and processing.

7.1 General Precautions of Handling Ignitable or Reactive Waste and Mixing of Incompatible Waste

All waste accepted at the Facility are inspected prior to acceptance. If the batteries are not immediately processed they will be directed to the appropriate storage area. If non-lithium batteries are unintentionally received they will be quarantined and stored separately.

7.2 Precautions to Prevent Ignition or Reaction of Ignitable or Reactive Wastes

There are three designated Hazardous Waste Management Units (HWMU) at the Facility.

HWMU1 consists of a concrete pad that houses four containers. Two containers are designated as At-Risk Storage as described below:

- 8'4" H × 22' L × 10' W with Three 60" W × 80" H Double Door with 36" Active Leaf.
- Fire Rated Walls, Intertek Tested & FM Approved 4 Hour fire-resistive construction with protected opening (or equivalent).
- Fire Rated Roof, Intertek Tested & FM Approved for 3 Hours (or equivalent).
- Audible and Visual notification of a fire or release of the dry chemical extinguishing system. Total flooding Dry Chemical Fire Suppression System with automatic and manual release.
- A 3" diameter Fire Department Connection that supplies the fire sprinkler system within the unit. This will allow for the Casa Grande Fire Department to introduce cooling water to the container if it is determined to be required.
- Explosion-proof air conditioning unit. Maintaining consistent temperature within the unit may help reduce the potential for thermal runaway
- Energy-sensing fire detectors (per fire alarm drawings).
- Electrically classified equipment rated for Class I Division 2 hazardous environments.
- Internal Containment Capacity: 824 Gallons.
- Weight: 18,400 Pounds.
- Storage of 12 pallet slots in each container. There are up to 4 drums per pallet. Each pallet can hold up to 3,520 pounds, so the capacity of the two At-Risk Storage Units is approximately 84,480 pounds.

Two containers are considered Normal-Risk Storage as described below:

- 41'-4" L × 9'-4" W × 13'-8" H, Int. 40'-0" L × 8'-6" W × 11'-6" H. Six overhead doors (11'-6" × 11'-0" H).
- UL490 design, FM Approved 4 hours resistive construction with protected openings (or equivalent).
- Total flooding dry chemical system with automatic and manual release.
- Continuous mechanical exhaust with emergency shutdown controls.
- Heat Sensor. Controller shuts down the fan if the dry chemical fire suppression is deployed. Fire suppression is deployed by fusible link.
- Horn/Strobe exterior mounted notification of a fire or release of the dry chemical extinguishing system.
- Electrically classified equipment rated for Class I Division 1 hazardous environments.
- Internal Containment; Water pressure tested and protected with chemical resistant coating, meeting EPA CFR, Part 264.175.
- Internal Containment Capacity: 128 Gallons.
- Storage of 36 pallet slots in each building. There are up to 4 drums per pallet. Each pallet can hold up to 3,520 pounds, so the capacity of the two Normal Risk Storage Units is approximately 253,440 pounds.

HWMU2 consists of outdoor uncovered storage at the Northeast portion of the property. The total square footage for HWMU2 is 17,300 square feet. This area is equipped with thermal imaging cameras connected to the security network or alternative technology that performs the same function. The security system will send automated alerts by email and text message to responsible persons. This area is used for storing drums of scrap batteries on pallets. There are up to 4 drums per pallet. In this area the batteries will be stored in concrete wall-separated "bays" that are 20-ft in width and depth (400 ft² per bay), 9-ft tall (8-ft height of storage), with a drive aisle a minimum of 10-feet. The area can store up to 360 pallets, stored at least one foot below the height of the bay. Each pallet can hold up to 3,520 pounds, so the capacity of HWMU2 is approximately 1,267,200 pounds. The facility may receive larger batteries that do not fit into drums. Large batteries may be stored in wooden crates, manufacturer storage containers or directly on pallets.

HWMU3 consists of outdoor uncovered storage east of the main building. The total square footage for HWMU3 is 5,625 square feet. This area is equipped with thermal imaging cameras connected to the security network or alternative technology that performs the same function. The security system will send automated alerts by email and text message to responsible persons. This area is used for storing drums of scrap batteries on pallets. There are up to 4 drums per pallet. In this area the batteries will be stored in a similar manner to HWMU2, with concrete walls separating 400 ft² storage bays, and a 10-ft wide drive aisle. The area can store up to 120 pallets, stored at least one foot below the height of the bay. Each pallet can hold up to 3,520 pounds, so the capacity of HWMU3 is approximately 422,400 pounds. The facility may receive larger batteries that do not fit into drums. Large batteries may be stored in wooden crates, manufacturer storage containers or directly on pallets.

The Facility is a no smoking facility except in designated areas where signage indicates smoking is permitted. Ecobat requires a "Safe Work" permit for all welding or other "hot work" that may generate sparks or other sources of ignition. Safe Work permitted activities are only allowed in designated locations on the site and these areas are so marked.

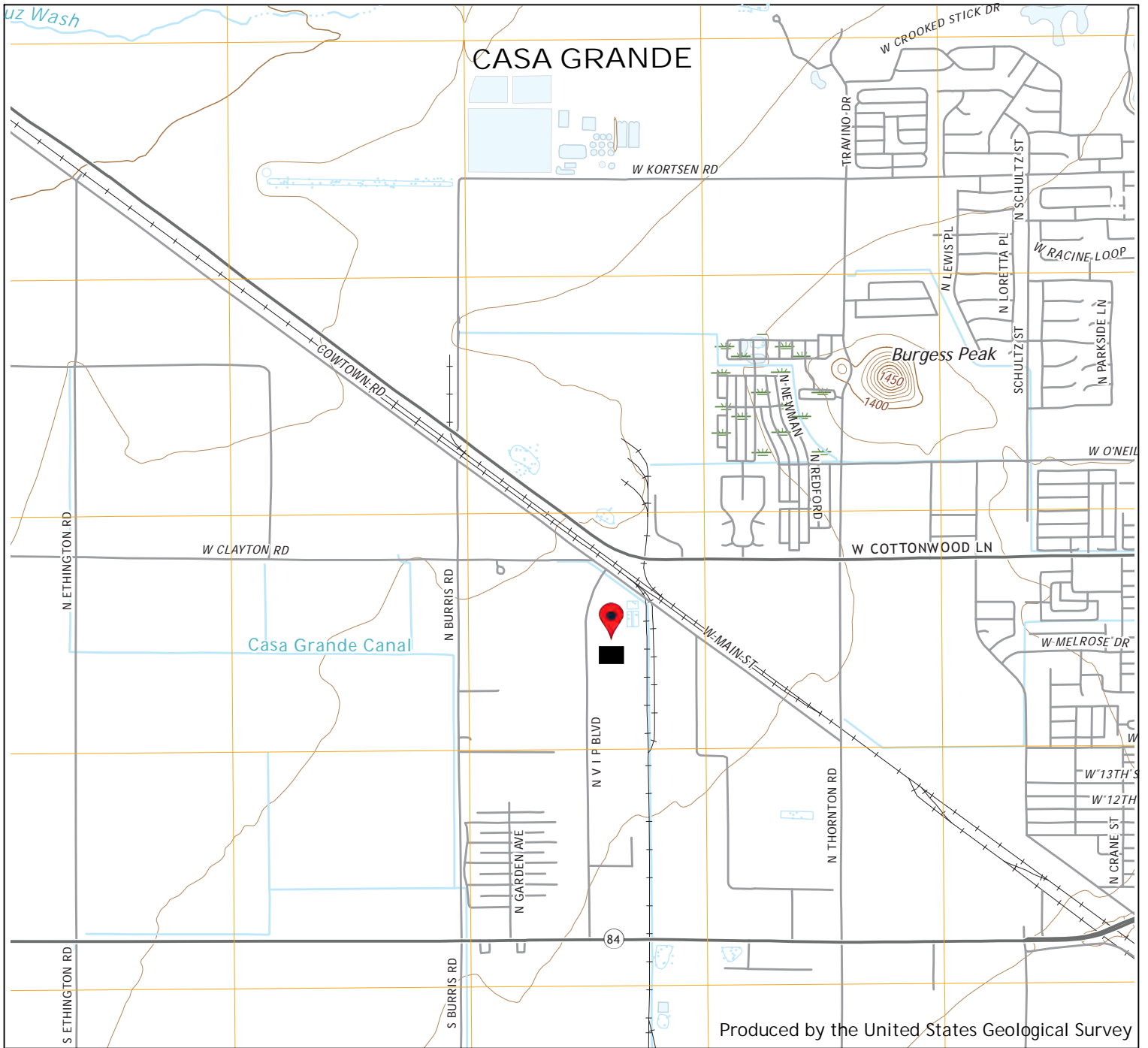
7.3 Documentation of Adequacy of Procedures

Equipment and operating practices will follow NFPA standards for the transfer of ignitable wastes, including NFPA 69 *Standard on Explosion Prevention Systems*, NFPA 430 *Code for the Storage of Liquid and Solid Oxidizers*, NFPA 484 *Standard for Combustible Metals*, NFPA 654 *Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Particulate Solids*, and NFPA 30 *Flammable and Combustible Liquids Code*. The Training Manager will be responsible for incorporating relevant materials in these standards in personnel training for methods of materials consolidation and bulking techniques. A copy of these standards will be maintained at the Facility in the administrative office area.

8.0 GLOSSARY

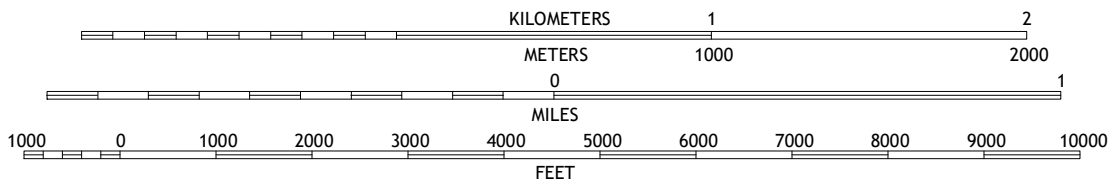
<u>Term</u>	<u>Definition</u>
A.C.T.	Assess, Correct, Train
CCTV	Closed Circuit Television
CP	Contingency Plan
EMSI	Environmental Monitoring System Inspection
HWMU	Hazardous Waste Management Unit
ICP	Integrated Contingency Plan
NFPA	National Fire Protection Act
OSHA	Occupational Safety and Health Administration
PM PPE	Preventative Maintenance Personal Protective Equipment
QA/QC	Quality Assurance/Quality Control
SIP	Security and Inspection Plan
SWCI	Surface Water Control Inspection
WO	Work Order

FIGURES



Legend

SCALE 1:24 000

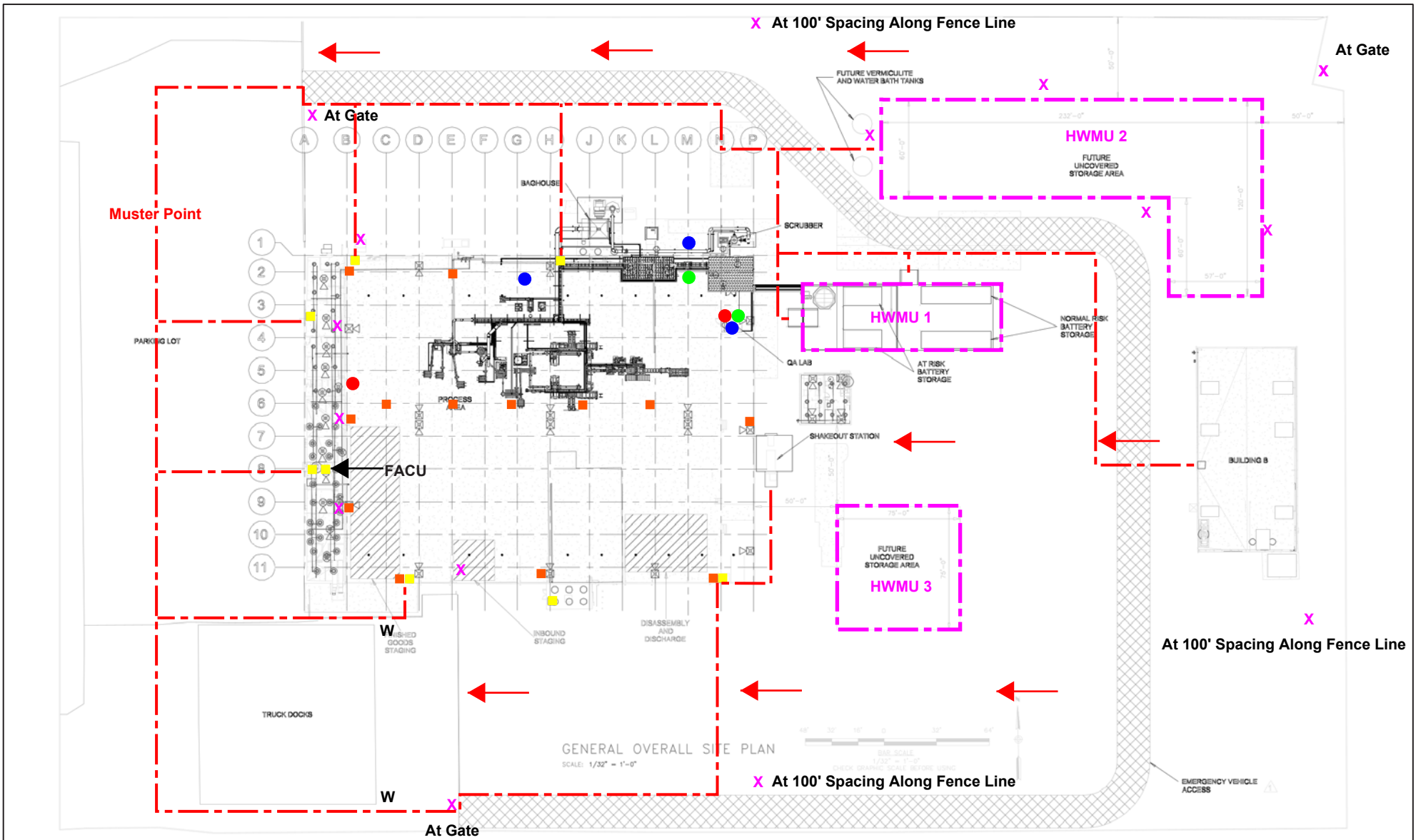


ROAD CLASSIFICATION

- Expressway
- Secondary Hwy
- Ramp
- Local Connector
- Local Road
- 4WD
- Interstate Route
- US Route
- State Route



 associates environmental	Associates Environmental 18141 Beach Boulevard, Suite 200 Huntington Beach, CA 92648 (949) 352-4941 Fax (714) 362-9085		
	Description Ecobat Solutions Arizona, Inc. Figure F-1 - Site Location Map		
Job No.	Drawing Date	Drawn By:	Drawing
433-147	06-06-2024	MO	2.0



Legend Direction of Flow HWMU: Hazardous Waste Management Unit Emergency Exit Route Fire Pull Station Fire Extinguisher		First Aid Kit Spill Kit Shower + Eyewash Warning Sign Dry Well Location		 N	 associates environmental	Associates Environmental 18141 Beach Boulevard, Suite 200 Huntington Beach, CA 92648 (949) 352-4941 Fax (714) 362-9085		
Description Ecobat Solutions Arizona, Inc. 1474 North V.I.P. Blvd. Casa Grande, Arizona 85122		Secondary Description Figure F-2 - Site Map				Scale		
Job No.: 433-147	Drawing Date: 07-12-2024	Drawn By: MO	Drawing Version: 1.0					

APPENDIX F-1

**Ecobat Solutions Arizona
Daily Inspection Report**

INSPECTOR NAME: _____

DATE OF INSPECTION _____

TIME OF INSPECTION _____

ITEMS INSPECTED:

HWMU1-At Risk	Containers	<input type="checkbox"/>	Containment berms	<input type="checkbox"/>	Containment surface	<input type="checkbox"/>
	Labels	<input type="checkbox"/>	Aisle Space	<input type="checkbox"/>	Spills/Leaks	<input type="checkbox"/>
	Shade structure	<input type="checkbox"/>				

HWMU1-Normal Risk	Containers	<input type="checkbox"/>	Containment berms	<input type="checkbox"/>	Containment surface	<input type="checkbox"/>
	Labels	<input type="checkbox"/>	Aisle Space	<input type="checkbox"/>	Spills/Leaks	<input type="checkbox"/>

HWMU2/3	Containers	<input type="checkbox"/>	Containment berms	<input type="checkbox"/>	Containment surface	<input type="checkbox"/>
	Labels	<input type="checkbox"/>	Aisle Space	<input type="checkbox"/>	Spills/Leaks	<input type="checkbox"/>
	Pallets	<input type="checkbox"/>				

ISSUES IDENTIFIED

REPAIRS AND/OR REMEDIAL WORK PERFORMED

FINAL REPAIR/RESOLUTION OF OUTSTANDING ISSUE

INSPECTOR SIGNATURE _____

Ecobat Solutions Arizona
Weekly/Monthly Inspection Report

INSPECTION TYPE: Weekly Monthly DATE OF INSPECTION _____
INSPECTOR NAME: _____ TIME OF INSPECTION _____

ITEMS INSPECTED WEEKLY:

EQUIPMENT	PPE	<input type="checkbox"/>	Fire Extinguishers ¹	<input type="checkbox"/>	Eye Wash ¹	<input type="checkbox"/>
	Pumps	<input type="checkbox"/>	Hoses	<input type="checkbox"/>	Forklifts	<input type="checkbox"/>
	Monitoring Equipment	<input type="checkbox"/>	Decon Equipment	<input type="checkbox"/>	Overpacks	<input type="checkbox"/>
	Lab Equipment	<input type="checkbox"/>	Safety showers ¹	<input type="checkbox"/>		
SUPPLIES	Respirator Cartridges	<input type="checkbox"/>	Gloves	<input type="checkbox"/>	Tyvek Suits	<input type="checkbox"/>
	Containment Supplies	<input type="checkbox"/>	First Aid Supplies ¹	<input type="checkbox"/>	Decon Supplies	<input type="checkbox"/>
	Lab Supplies	<input type="checkbox"/>	Spill Response Kits ¹	<input type="checkbox"/>		
COMMUNICATIONS	Radios	<input type="checkbox"/>	Telephones	<input type="checkbox"/>		
FIRE SUPPRESSION	Gauges/seals	<input type="checkbox"/>	Extinguishers	<input type="checkbox"/>		
SITE ACCESS	Entry Gate	<input type="checkbox"/>	Gate lighting	<input type="checkbox"/>	Fencing	<input type="checkbox"/>

ITEMS INSPECTED MONTHLY:

SECURITY	Surveillance System	<input type="checkbox"/>	Warning Signs	<input type="checkbox"/>	Yard Lighting	<input type="checkbox"/>
	Radios	<input type="checkbox"/>	Motion Sensors	<input type="checkbox"/>	Gate Camera	<input type="checkbox"/>

Note 1: Complete details on Safety and Response Equipment Checklist

ISSUES IDENTIFIED

REPAIRS AND/OR REMEDIAL WORK PERFORMED

FINAL REPAIR/RESOLUTION OF OUTSTANDING ISSUE

INSPECTOR SIGNATURE _____

**Quarterly Inspection
Report**

INSPECTOR NAME: _____

DATE OF INSPECTION _____

TIME OF INSPECTION _____

ITEMS INSPECTED:

COMMENTS:

EQUIPMENT PID Monitor
 FID Monitor
 Lab Equipment
 Lab Supplies

<input type="checkbox"/>	_____
<input type="checkbox"/>	_____
<input type="checkbox"/>	_____
<input type="checkbox"/>	_____

FIRE SUPPRESSION Water flow alarms
 Supervisory signals
 Control valves
 Hydraulic nameplates
 Signage
 Hand wheels
 Fire Dept. connections

<input type="checkbox"/>	_____
<input type="checkbox"/>	_____
<input type="checkbox"/>	_____
<input type="checkbox"/>	_____
<input type="checkbox"/>	_____
<input type="checkbox"/>	_____
<input type="checkbox"/>	_____

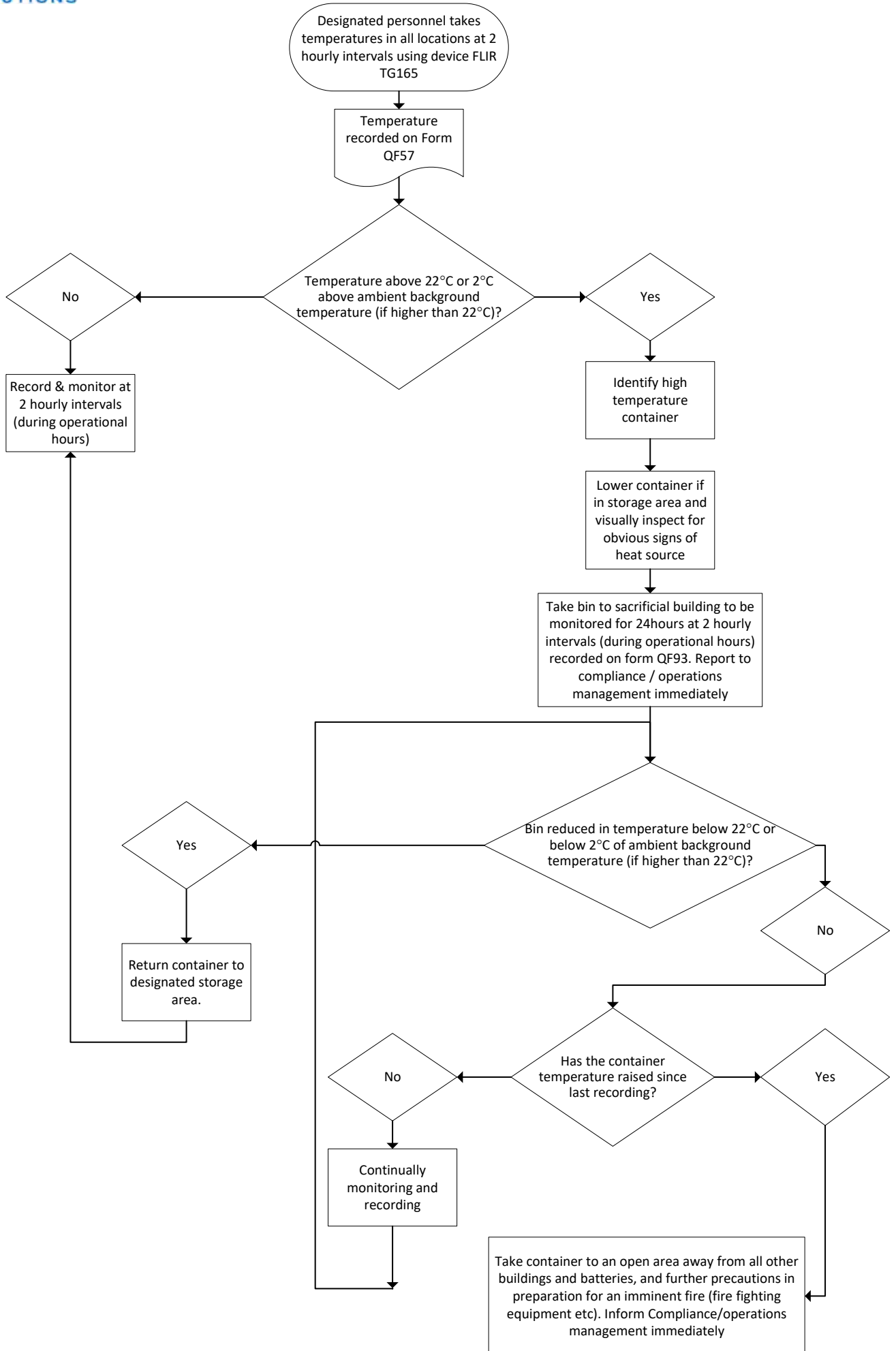
ISSUES IDENTIFIED

REPAIRS AND/OR REMEDIAL WORK PERFORMED

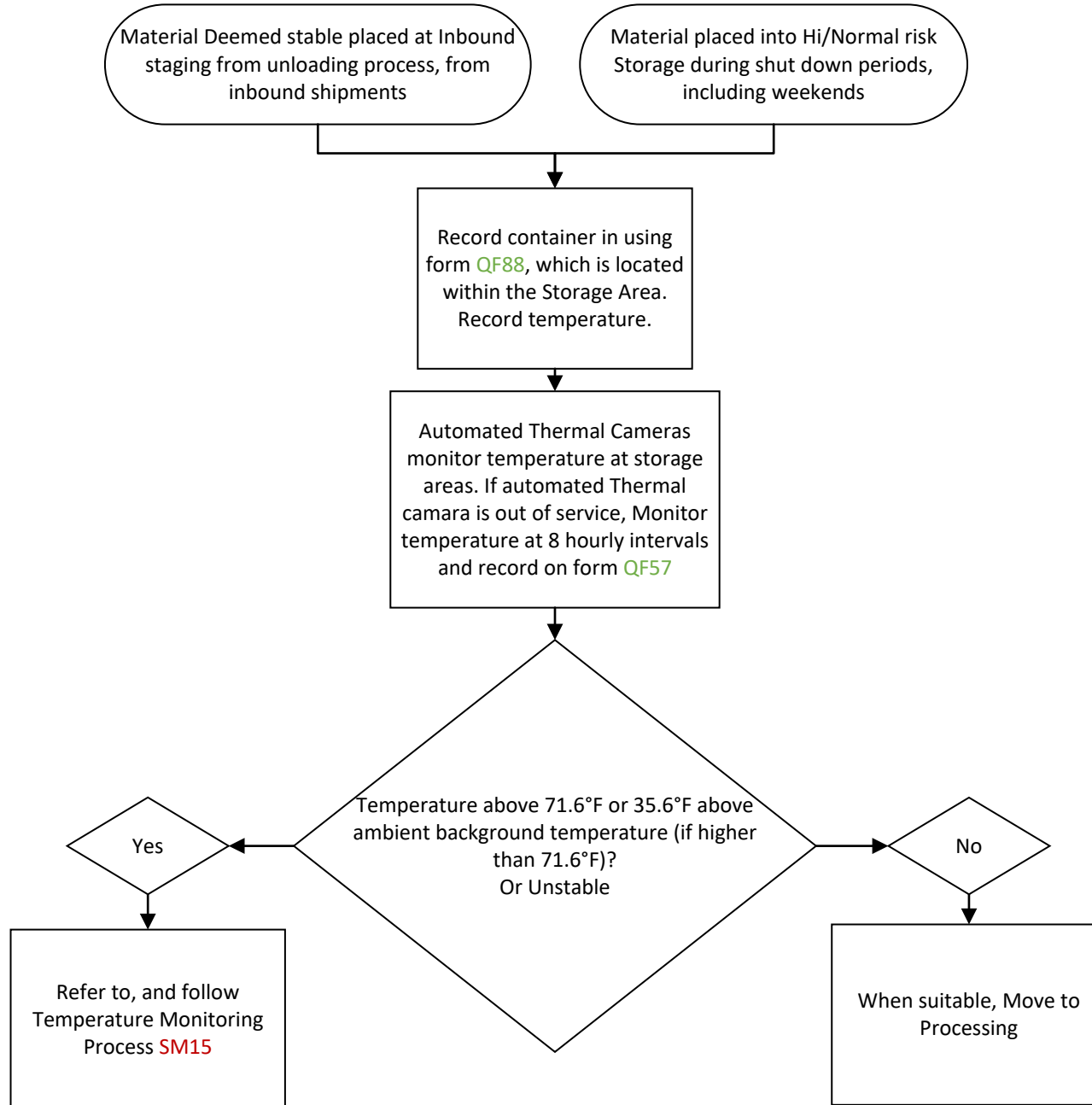
FINAL REPAIR/RESOLUTION OF OUTSTANDING ISSUE

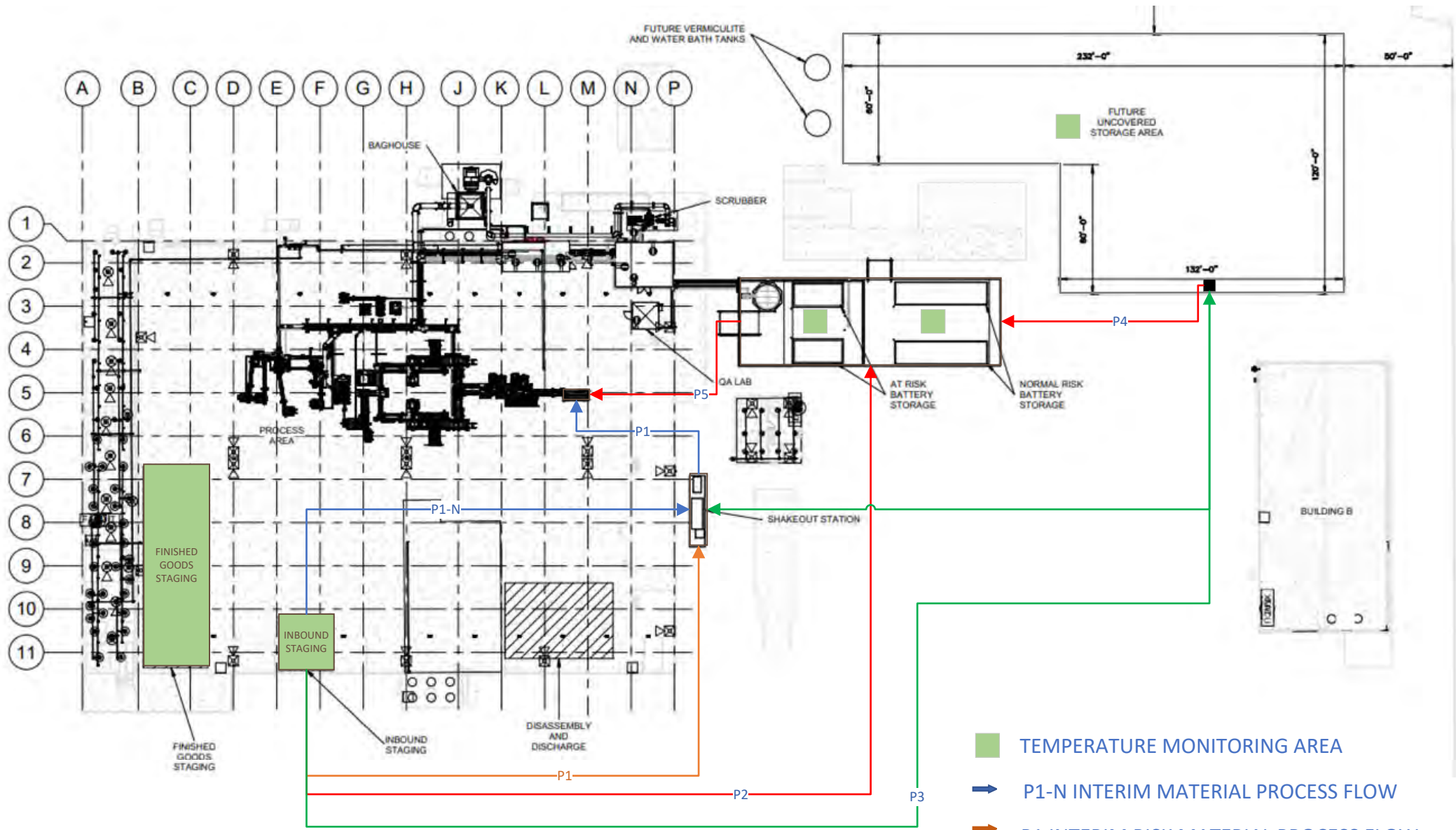
INSPECTOR SIGNATURE: _____

APPENDIX F-2



Material Handling Procedure _Incoming Batteries & shutdown periods





- TEMPERATURE MONITORING AREA
- P1-N INTERIM MATERIAL PROCESS FLOW
- P1 INTERIM RISK MATERIAL PROCESS FLOW
- P2 P4 P5 AT RISK MATERIAL PROCESS FLOW
- P3 REGULAR MATERIAL PROCESS FLOW

SM17 DWG 1

ATTACHMENT G
CONTINGENCY PLAN



RCRA Application Checklist Section G
Contingency Plan
(Emergency Preparedness Plan)
270.14(b)(7); 264(d)



Ecobat Solutions Arizona, Inc. Emergency Coordinators	
Primary	Eric Knowles
Cell Phone	(760) 514-8494
Office	
Office Address	1474 N. VIP Blvd, Casa Grande, AZ
Alternate	Wesley Poorman
Cell	(602) 206-3120
Office	
Office Address	1474 N. VIP Blvd, Casa Grande, AZ
Secondary Alternate	Ivan Ojeda-Carranza
Cell	(706) 927-6262
Office	
Office Address	1474 N. VIP Blvd, Casa Grande, AZ

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- G-2 Preparedness and Prevention Information
- G-3 Fire Prevention Drawings

1.0 INTRODUCTION

1.1 Contingency Plan Regulations

This Contingency Plan (CP) for the Ecobat Solutions Arizona (Ecobat) Facility has been prepared in support of the Ecobat RCRA Part B permit application. This CP was developed in accordance with the requirements of 40 CFR 264 Subpart D in support of the Ecobat RCRA Part B permit application. A list of acronyms and a definition of key terms used in this description is provided with the General Information provided in Appendix A-1 of Attachment A of the RCRA Part B permit application.

1.2 Contingency Plan Purpose

This CP describes the methods, procedures, and equipment that will be used to respond to fires, explosions, or unplanned releases of hazardous wastes or hazardous waste constituents at the Facility and to document the response efforts. The plan includes an Evacuation Plan should conditions at the facility require evacuation of all or part of the Facility.

The CP will also serve as an employee training manual and handbook for prevention of and response to emergency situations at the facility and documentation of emergency responses for regulatory compliance. A copy of this CP (final permitted version) will be kept on file at the Facility and will be made available for inspection upon request. A copy of this CP will also be issued to local agencies as indicated in Section 10.0.

1.3 Contingency Plan Requirements

This CP identifies and describes the following requirements:

- The actions to be taken in response to fires, explosions, natural disasters, or unplanned sudden or non-sudden releases of hazardous wastes or hazardous waste constituents to the air, soil, or surface water at the Facility;
- Arrangements made with local governmental agencies (police, fire, state and local emergency response teams) and other entities (hospitals, contractors) to coordinate emergency response actions;
- Names, addresses, and phone numbers for all persons qualified to act as emergency coordinators, including primary and alternate emergency coordinators;
- A list of emergency equipment at the facility and their location and capabilities (Section 6.0);
- An Evacuation Plan with a map of evacuation routes (Figure G-2); and
- A map to the nearest hospital (Figure G-3).

1.4 Amendments to the Plan

The plan will be reviewed and amended, if necessary, annually or when any of the following occur:

- The Facility permit is revised;
- A major change in material usage, production, or storage; or changes in Facility design or construction which may materially increase the potential for fires, explosions, or releases of hazardous waste or hazardous waste constituents, or changes in the responses necessary in the event of an emergency;
- The plan fails in an emergency;
- A major change in the amount or changes in the types of materials received, generated, or stored at the Facility;
- A change in the Facility emergency coordinators; or
- A substantial change in the emergency equipment at the Facility.

If no amendment to the plan is necessary based on the annual review, it will be documented in the Record of Plan Revision. Revisions to the plan will be distributed to those individuals and groups listed in section 10.0. Each revision will bear the date of revision. The updated pages will be inserted in the proper location within the plan and the obsolete pages will be discarded. The holder of the plan is to record the receipt of each revision in the Record of Plan Revisions.

2.0 FACILITY INFORMATION

2.1 General Facility Information

Facility Name:	Ecobat Solutions Arizona, Inc.
Primary Industrial Activity:	Lithium Battery Recycling NAICS Code(s): 335910, 335911
Owner/Operator:	Ecobat Solutions Arizona, Inc.
Physical Location:	1474 N. VIP Boulevard Casa Grande, AZ 85122
Latitude/Longitude:	32°53'23"N, -111°47'5.3"W
Mailing Address:	1474 N. VIP Boulevard Casa Grande, AZ 85122
Primary Emergency Coordinator:	Eric Knowles Plant Manager (760) 514-8494 Eric.Knowles@ecobat.com
Alternate Emergency Coordinator:	Wesley Poorman Production Supervisor (602) 206-3120 Wesley.Poorman@ecobat.com

2.2 Facility Location

The facility is a complete lithium-ion battery recycling facility located at 1474 N. VIP Boulevard, Casa Grande, AZ at Latitude 32°53'23"N and Longitude -111°47'5.3"W. A site location map is included as Figure G-1. The Facility intends to accept and store lithium batteries and lithium-containing materials from off-site generators and will generate hazardous waste from the process of handling of the batteries.

2.3 Facility Operations

This facility is designed to process four tons per hour of raw materials. Storage of spent lithium batteries and other lithium-containing materials will be necessary for occasions when materials cannot be processed immediately upon arrival at the facility and for at-risk batteries and non-conforming materials. The raw materials will first be shredded and pre-sorted, after which the shred will be separated into several categories of finished goods including multiple sizes of black mass, copper, and aluminum. Black mass grade depends on moisture content, cobalt and nickel content and percent carbon and percent contaminants. These finished goods will be packaged in supersacks and stored on-site prior to shipping.

Raw material will be transported via truck to the Ecobat facility to be processed. Trucks will enter and exit the property using a dedicated truck drive aisle that is separated from the employee vehicle entrance. The material will be offloaded at existing exterior docks outside the main warehouse building and transported into the building through an at-grade overhead door. The material will be inspected and removed from the shipping pallet or container. The packaging waste material will be collected and consolidated to be returned to the shipper or otherwise recycled or disposed.

Incoming spent batteries will be inspected to confirm battery type and format, identify damage or defect, and determine dismantling requirements.

Non-conforming batteries such as lead-acid batteries or other batteries not appropriate for processing at Ecobat will be properly labeled and segregated for transfer to an appropriate recycling or disposal facility. The time it takes to dismantle lithium-ion batteries will vary according to the type, size and complexity of the battery. Lithium-ion batteries that need to be de-energized will take additional time to process. Lithium-ion batteries that are being de-energized or dismantled will be considered to be in-process.

Large-format batteries too large to fit into the process equipment shall be dismantled to module or cell size utilizing internally developed procedures.

Ecobat intends to operate a storage facility for incoming waste batteries and lithium-containing materials utilizing dedicated containers and outdoor storage areas to be located on the property for “Normal-risk” materials. In addition to these Normal-risk storage locations, Ecobat will utilize engineered containerized storage systems for safe storage of damaged or defective batteries onsite (“At-risk” materials), if they cannot be processed at the time of inspection.

The containers are installed on existing exterior concrete pads. The existing concrete pads have been resurfaced and upgraded to accommodate the storage containers, but no new impervious surface is planned for these containers at this time. The “At-Risk” containers are located within a new concrete containment area.

The facility will operate a shredding system which will shred up to four tons of lithium-containing materials per hour. The shredding system will be designed to accept a variety of lithium-ion batteries including post-consumer (power tools, laptops, etc.), electric vehicle modules and battery production scrap. The shredding system will consist of a pre-shredding line and two shredding lines designed to quickly separate input materials and reduce them to a suitable output size for further separations. The shredding system is designed with nitrogen blanketing and a water spray system which are enclosed via air-locks to provide an inert atmosphere to mitigate the risk of fires from shredding batteries. The shredding systems are equipped with a water reclaim and recycle system that provides a level of treatment and filtration of the water for reuse in the shredding process. This is a closed-loop system. If wastewater is generated by the process it will be pumped into totes and hauled away for disposal. Other routinely generated wastes, as described in application, will be accumulated and properly disposed.

Maintenance and repair activities for the shredding process will be supported by forklifts and a scissor lift. When needed, a small carry deck crane will be rented.

The facility will also operate a separation system which will accept shredded product from the shredding system. The separation system is sized appropriately to accept the output from the shredding system. At each stage of separation, the products will be separated via air density tables and sent to a loadout/bagging station equipped with a surge hopper and a weigh scale. The product will be deposited into super sacks for onsite storage prior to leaving the facility.

The process equipment will also include an air pollution control system comprised of process ventilation systems, solvent vapor scrubber collection systems and a dust collection baghouse. This system is further described in Section 4. The currently proposed lithium-ion recycling system will occupy approximately 40% of the main processing area. It is anticipated that future use of the site could include additional production lines for the Li-ion recycling equipment and/or installation and operation of equipment for processing plastic from batteries. The plastic processing equipment would likely include equipment for shredding, separation of polymer types and extrusion into pellets. The finished product would be plastic pellets shipped out in supersacks or in bulk trailers.

Normal plant procedures require employees and visitors to wear appropriate personal protective equipment. A hazard assessment has been completed for every job function and appropriate personal protective equipment will be issued to each employee. With proper use of these protective devices and adherence to plant hygiene procedures, employees can complete a working career without suffering adverse health effects.

The risk of suffering adverse health effects from short-term exposure to the plant environment (such as would be experienced by emergency response personnel) is small. However, Ecobat's management strongly recommends that all outside personnel entering the premises in response to an emergency utilize appropriate protective equipment. Such equipment should include:

1. Head and eye/face protection. Protective equipment meeting the specifications of ANSI Standards Z89.1 and Z87.1 will be acceptable.
2. Hand protection. Protective equipment meeting the requirements of the manufacturer's guidelines and/or chemical resistance charts will be acceptable.
3. Foot protection. Shoes/boots with steel toes and metatarsal guards, meeting the specifications of ANSI Standard Z41, are acceptable. Rubber boots are recommended.
4. Protective outer garments. To avoid inadvertent removal of contaminated clothing from the premises, all exposed clothing should be washed or vacuumed prior to departure.

2.4 Facility Description

The Facility consists of a 9.55-acre fenced lot with a main building, two smaller buildings, and battery storage areas. The main building is a metal-frame structure which houses the processing system. Two other buildings are located onsite, the larger building is for miscellaneous storage, the smaller building is vacant. One concrete pad is equipped with 4 containers for battery storage. This area will be further described as Hazardous Waste Management Unit 1.

A site plan of the Facility is provided in Figure G-2. The following information is included in the diagram:

1. Location and construction of each building and structure on the premises.
2. Location and capacity of each HWMU.
3. Designated storage and staging areas.
4. Location of each shut-off valve on pipelines carrying water, process nitrogen gas, or hazardous materials.
5. Location and description of fire protection equipment: hydrants and portable extinguishers.
6. Location and description of all spill equipment.

2.5 Hazardous Waste Management Units

There are three designated Hazardous Waste Management Units (HWMU) at the Facility.

HWMU1 consists of a concrete pad that houses four containers. Two containers are designated as At-Risk Storage as described below:

- 8'4" H × 22' L × 10'W with Three 60" W × 80" H Double Door with 36" Active Leaf.
- Fire Rated Walls, Intertek Tested & FM Approved 4 Hour fire-resistive construction with protected opening (or equivalent).
- Fire Rated Roof, Intertek Tested & FM Approved for 3 Hours (or equivalent).
- Audible and Visual notification of a fire or release of the dry chemical extinguishing system. Total flooding Dry Chemical Fire Suppression System with automatic and manual release.

- A 3” diameter Fire Department Connection that supplies the fire sprinkler system within the unit. This will allow for the Casa Grande Fire Department to introduce cooling water to the container if it is determined to be required.
- Explosion-proof air conditioning unit. Maintaining consistent temperature within the unit may help reduce the potential for thermal runaway
- Energy-sensing fire detectors (per fire alarm drawings).
- Electrically classified equipment rated for Class I Division 2 hazardous environments.
- Internal Containment Capacity: 824 Gallons.
- Weight: 18,400 Pounds.
- Storage of 12 pallet slots in each container. There are up to 4 drums per pallet. Each pallet can hold up to 3,520 pounds, so the capacity of the two At-Risk Storage Units is approximately 84,480 pounds.

Two containers are considered Normal-Risk Storage as described below:

- 41’-4” L × 9’-4” W × 13’-8” H), Int. 40’-0” L × 8’-6” W × 11’-6” H. Six overhead doors (11’-6” × 11’-0” H).
- UL490 design, FM Approved 4 hours resistive construction with protected openings (or equivalent).
- Total flooding dry chemical system with automatic and manual release.
- Continuous mechanical exhaust with emergency shutdown controls.
- Heat Sensor. Controller shuts down the fan if the dry chemical fire suppression is deployed. Fire suppression is deployed by fusible link.
- Horn/Strobe exterior mounted notification of a fire or release of the dry chemical extinguishing system.
- Electrically classified equipment rated for Class I Division 1 hazardous environments.
- Internal Containment; Water pressure tested and protected with chemical resistant coating, meeting EPA CFR, Part 264.175.
- Internal Containment Capacity: 128 Gallons.
- Storage of 36 pallet slots in each building. There are up to 4 drums per pallet. Each pallet can hold up to 3,520 pounds, so the capacity of the two Normal Risk Storage Units is approximately 253,440 pounds.

HWMU2 consists of outdoor uncovered storage at the Northeast portion of the property. The total square footage for HWMU2 is 17,300 square feet. This area is equipped with thermal imaging cameras connected to the security network or alternative technology that performs the same function. The security system will send automated alerts by email and text message to responsible persons. This area is used for storing drums of scrap batteries on pallets. There are up to 4 drums per pallet. In this area the batteries will be stored in concrete wall-separated “bays” that are 20-ft in width and depth (400 ft² per bay), 9-ft tall (8-ft height of storage), with a drive aisle a minimum of 10-feet. The area can store up to 360 pallets, stored at least one foot below the height of the bay. Each pallet can hold up to 3,520 pounds, so the capacity of HWMU2 is approximately 1,267,200 pounds. The facility may receive larger batteries that do not fit into drums. Large batteries may be stored in wooden crates, manufacturer storage containers or directly on pallets.

HWMU3 consists of outdoor uncovered storage east of the main building. The total square footage for HWMU3 is 5,625 square feet. This area is equipped with thermal imaging cameras connected to the security network or alternative technology that performs the same function. The security system will send automated alerts by email and text message to responsible persons. This area is used for storing drums of scrap batteries on pallets. There are up to 4 drums per pallet. In this area the batteries will be stored in a similar manner to HWMU2, with concrete walls separating 400 ft² storage bays, and a 10-ft wide drive aisle. The area can store up to 120 pallets, stored at least one foot below the height of the bay. Each pallet can hold up to 3,520 pounds, so the capacity of HWMU3 is approximately 422,400 pounds. The facility may receive larger batteries that do not fit into drums. Large batteries may be stored in wooden crates, manufacturer storage containers or directly on pallets.

The Facility is constructed and maintained to take precautions to prevent adverse reactions of the received hazardous wastes such as:

1. Generating extreme heat or pressure, fire or explosions, or violent reactions;
2. Producing uncontrolled mists, fumes, dusts, or gases in sufficient quantities to threaten human health or the environment;
3. Producing uncontrolled flammable fumes or gases in sufficient quantities to pose a risk of fire or explosions; or
4. Damaging the structural integrity of any storage container or the Facility.

During the waste acceptance process, the Facility will inspect incoming loads, and will review relevant data (such as profile sheets, LDRs, manifests, and laboratory results) and examine the batteries to determine if they are acceptable.

Once the load has been approved, material is transferred for immediate processing or to the appropriate HWMU.

2.6 Hazardous Materials

The potentially hazardous materials listed below are present in various locations on the premises.

- Lithium Ion Batteries
- Process Water
- Packaging Material (Drums, Skids, Vermiculite)
- Steel and Aluminum
- Copper, Aluminum, Ferrous Compounds
- Black Mass
- Plastics Recovered from Batteries
- Nitrogen gas
- Sodium Hydroxide (Drums, Totes)
- Propane cylinders (forklifts)
- Lithium Metal Batteries (as non-conforming)
- Lead Acid Batteries (as non-conforming) Nickel-Cadmium Batteries (as non-conforming)

2.7 Sources of Ignition

Sources of ignition include welding and cutting operations; electrical switches, or other equipment; mobile equipment; and moving machinery which could generate sparks by friction. None of these sources are permitted in storage areas for materials having a flammability classification of "2" or higher, unless adequate protective measures are taken, in accordance with the facilities "Hot Work Permit Program."

The lithium battery shredding operation is a potential source of ignition. Ecobat has mitigated the potential for ignition through the use of inert gas and submersion in water. The crushing operation is located such that no flammable materials are in proximity to the operation.

2.8 Housekeeping

Routine housekeeping efforts will prevent dangerous accumulations of combustible or flammable materials. Trash containers are emptied on a daily basis. Oil or solvent-soaked rags are stored in covered containers pending cleaning or disposal. Accumulations of dried grass or weeds around storage areas, flammable gas or liquid dispensing stations, compressed gas storage areas, etc. are not permitted.

3.0 EMERGENCY RESPONSE COORDINATORS

3.1 Emergency Coordinators

In the event of an emergency, at least one person from the following list of Emergency Coordinators (ECs) should be contacted immediately. The EC is to act on behalf of Ecobat in the initiation of procedures described in this CP and has the authority to commit the resources of Ecobat in addressing emergency conditions at the Facility. In the event of an emergency requiring evacuation of local areas, the EC will be available to assist local authorities in determining which areas to be evacuated.

Ecobat Solutions of Arizona Emergency Coordinators	
Primary	Eric Knowles
Cell	(760) 514-8494
Office	
Office Address	1474 N. VIP Blvd, Casa Grande, AZ
Alternate	Wesley Poorman
Cell	(602) 206-3120
Office	
Office Address	1474 N. VIP Blvd, Casa Grande, AZ
Secondary Alternate	Ivan Ojeda-Carranza
Cell	(706) 927-6262
Office	
Office Address	1474 N. VIP Blvd, Casa Grande, AZ

3.2 Emergency Coordinator Responsibilities

The Emergency Coordinator's (EC's) purpose during an emergency condition at the Facility is to minimize potential hazards to human health or the environment from fires, reactions, explosions, releases, or other contamination that may occur as a result of a release of hazardous waste or hazardous waste constituents to the air, water, and/or soil. During an emergency, the EC's priority is to:

- Ensure human health and safety,
- Minimize actual and potential adverse effects to the environment; and
- Minimize and/or prevent damage to private and public property.

The EC will either be on-site at the Facility or on-call at all times. If the Primary EC is not available, he/she shall designate an Alternate EC. The EC's responsibilities include coordinating all emergency response measures during both operating and non-operating hours, including weekends and holidays. The EC will have a cellular telephone to communicate with on-site personnel while traveling to the facility in an emergency.

The EC will be thoroughly familiar with all aspects of the CP, all operations and activities conducted at the Facility, the location and characteristics of hazardous waste handled at the Facility, and the location of all records at the facility.

The EC is responsible for implementing this CP when there is an imminent or actual fire, explosion, or release at the Facility which could threaten human health or the environment. These responsibilities include:

- Directing Facility personnel during and following an emergency;
- Reporting a fire or other emergency locally;
- Requesting assistance from off-site emergency response teams and/or hire commercial contractors to assist with an emergency;
- Purchasing equipment or services required for an emergency condition; and
- Directing Facility operations and activities during an emergency condition.

3.3 Emergency Spokesperson

Should it become necessary to have an Emergency Spokesperson for Ecobat, the EC will notify the appropriate Ecobat personnel. If an Emergency Spokesperson is necessary, that individual will be available at any given time and, as such, will be responsible for coordinating communications with the community as necessary to implement this CP.

4.0 IMPLEMENTATION

The CP will be implemented in the event an emergency situation consisting of an imminent or actual incident involving fire, explosion, or unplanned release of hazardous waste or hazardous waste constituents that threatens the security of the Facility or the safety of its personnel, or which may threaten human health or the environment outside the Facility occurs. The CP must be implemented whenever there is a fire, explosion, or release of hazardous waste or hazardous waste constituents which could threaten human health or the environment. Such conditions are considered emergencies for the purposes of this CP. An employee identifying a situation that they believe poses an emergency condition will immediately notify the EC noted in this plan. If the EC is not available, the employee will notify the first available Alternate EC. In the event of an emergency, any employee can activate the nearest internal alarm and immediately report the incident to 911 if warranted.

The EC or closest supervisor will immediately evacuate personnel from the affected area of the Facility according to the Facility Evacuation Plan. The emergency evacuation muster point is shown on the evacuation maps and will be equipped with a sign.

5.0 EMERGENCY ACTION PROCEDURES

In the event of an emergency, the EC will immediately assess the situation. If it is determined that an actual or imminent emergency exists, the CP will be implemented.

5.1. Notifications

The initial notification to on-site personnel will be by an alarm system. The alarm system monitors for fire and security. System panels are located in the main office lobby. The alarm system is electrically operated and is equipped with a battery backup to ensure operation during power outage.

There are seven manual alarm devices (pull stations) located inside the building. Refer to site map for locations.

The alarms will sound an audible warning signal to employees inside and outside the buildings. There are additional alarms located in strategic areas around the site. All employees are trained in the activation process for the manual alarms.

The EC will assign employees to assist if persons require evacuation assistance.

5.1.1 Internal Notifications

Internal phone and radio systems allow communication throughout the Facility for use in notifying employees of an emergency. This will be used in conjunction with the alarm system. Because of the relatively small size of the Facility, voice is "capable of providing immediate emergency instruction (voice or signal) to facility personnel" as required at 40 CFR §264.32(a). The Facility also has a landline telephone for use in contacting local and state agencies of emergency conditions if necessary. Emergency phone numbers are posted near the telephone at the exits of the Facility building.

5.1.2 External Notifications

Arrangements have been made with outside entities to provide assistance in response efforts should an emergency be beyond the capabilities of on-site resources.

The facility is located within the jurisdiction of Pinal County and the City of Casa Grande, which will provide municipal services for the Facility and its vicinity. The applicable local authority for emergency response at the Facility is the Casa Grande Fire Department. The emergency coordinator will call 911 in the event of a fire or other emergency. The Casa Grande Fire Department would generally respond to all fire, release, explosion, medical (paramedic), or other emergency events which required that outside assistance be brought to the site. The Pinal County Sheriff will provide additional municipal services, such as traffic and pedestrian control that may be required during an emergency event.

No arrangements with other emergency response entities (such as State emergency response teams, emergency response contractors, or equipment suppliers) are necessary due to the size of the Facility and the nature of hazardous waste management activities conducted at the Facility. Such arrangements are not deemed necessary in addition to on-site and Casa Grande Fire Department capabilities. However, that does not preclude the utilization of a private emergency response contractor, if judged to be necessary and appropriate for quick response and ability to effectively handle many different situations.

The current emergency medical contractor for the facility is the Banner Casa Grande Medical Center. Ecobat has contacted and familiarized the facility with the properties of hazardous waste handled at the facility and the types of injuries or illnesses which could result from fires, explosions, or releases on site. A map showing the location of the Medical Center is provided in Figure G-3. The Medical Center’s role will be to provide medical response for the types of injuries or illnesses which could result from fires, explosions, or sudden or non-sudden releases on the Facility. If the emergency medical contractor is changed in the future, the new contractor will also be familiarized with the waste properties and possible injuries or illnesses. Emergency notifications that may be required are shown in the following table.

Emergency Telephone Numbers		
Type of Emergency	Organization	Phone
Injury/Illness	Ambulance	911
	Banner Casa Grande Medical Center 1800 E. Florence Boulevard Casa Grande, AZ 85122 15 Minutes	(520) 381-6300
Fire/Explosion	Casa Grande Fire Department Station 501	911/ (520) 421-8777
	Pinal County Sheriff’s Office	911/ (520) 866-7149
	Arizona Public Safety (Highway Patrol 24-hour)	(520) 746-4500
Hazardous Material Emergency		
Spill Release or Other Emergency	Primary Emergency Coordinator:	Eric Knowles (760) 514-8494
	Alternate Emergency Coordinator	Wesley Poorman (602) 206-3120
Any Spill or Release of a Reportable Quantity	National Response Center	(800) 424-8802
	ADEQ	(800) 234-5677
	Pinal County Local Emergency Planning Committee	(520) 866-6684
	AZERC (Chris Nutter)	(602) 771-4065
	USEPA Region 9	(800) 300-2193
Other Contacts		
Corporate Transportation or Spill Center Contacts.		Mark Hoffman (845) 673-2225 Spill Center (800) 456-9038

Telephone notification to ADEQ and the National Response Center 24-hour number must be provided at the earliest practical moment in the event of any release of a reportable quantity of hazardous substances that escapes containment or reaches off-site surface waters for a release of oil or petroleum product that reaches surface waters, or for a release of more than 120 gallons of petroleum products, including oils or fuels.

5.2 Identification of Hazardous Materials

The initial response to an emergency is to stop work activities in the affected area(s). This stop work order will be directed by the EC, or if the EC has not reached the area, by the on-site personnel who first observed the emergency and sounded an alarm. All personnel will have full authority to stop work activities in the event of a potential or actual emergency condition.

Following a stop work order, the EC will immediately identify hazardous wastes that are or may be impacted in order to determine the type of response that will be implemented. Should the emergency condition involve releases of hazardous waste or hazardous waste constituents, the EC will identify the character, source, amount and extent of the release. The initial identification method may consist of physical (color, odor, appearance) and visual (location, source) observations to describe the material released. The EC or designee may inquire of individuals that were working in the area of the emergency when it was first reported to gain information on the waste materials that may be impacted. The EC will also consider the type of container, information provided on the manifest and profile, or other information to identify the waste involved.

The types of materials handled at the Facility lend themselves to easy physical and visual identification. In addition, waste materials are handled and stored in specific areas within the Facility to aid in identifying the general type of material released. If, for some reason, the released material cannot be readily identified, the material will be isolated and sampled for characterization purposes.

Safety Data Sheets for the chemicals found at the facility are maintained on network computers and accessible from all computers.

5.3 Hazard Assessment

Following identification of the hazardous waste involved in the emergency condition, the EC will assess potential hazards to human health or the environment. The initial step in the assessment will be how to contain any fire or releases that have occurred. The assessment will consider both direct and indirect effects of the event, including the effects of any toxic, irritating, or asphyxiating gases that may be generated, and the effects of any hazardous surface water run-off from water or chemical agents used to control fire and heat-induced explosions. The assessment will also consider the potential for off-site impacts resulting from the emergency or from the response to the emergency.

If the EC determines that the Facility has had a release, fire, or explosion which could threaten human health or the environment outside the Facility, the EC will proceed with the appropriate actions called for in Section 5.4 of this CP.

The assessment will include classifying emergencies as Level 1, 2, or 3 according to the general guidelines in Table 5.2 below. Level 1 emergencies are considered small releases that require response but do not pose an imminent threat to human health and the environment. Level 2 emergencies are more substantial releases that require response and pose an imminent threat to human health and the environment. Level 3 emergencies are serious hazards that require evacuation of the Facility and the support of county, state, or federal responders.

The level of classification of an emergency will be assessed at the time of identification. The classification can be changed at any time due to changes in spill parameters, personal injury, or other factors. Table 5.2 summarizes conditions for classifying emergencies.

Emergency Classification	
Level 1	<ul style="list-style-type: none"> • The quantity of released materials is below the Reportable Quantity (RQ) • The material involved is a solid material that cannot blow away from the spill site • Emergency medical personnel are not needed • Outside response personnel are not required (i.e. fire, police, or emergency responders)
Level 2	<ul style="list-style-type: none"> • The quantity of release materials exceeds the RQ • The release involves an unknown material • The work area where the release occurred needs assistance • More than one work area is involved or jeopardized by the incident • Discharge to the environment and off-site areas is inevitable • Discharge is continuous • Injury is associated with the release • Two or more incompatible materials are involved • Flammable materials are involved • Discharge to a drain or sewer is a risk • PCB-contaminated materials are involved • The fire or the amount of released material is spreading
Level 3	<ul style="list-style-type: none"> • A large area of the Facility is impacted such that the event poses an extreme threat to human life and the environment • The type and quantity of hazardous waste involved poses a hazard for generating a toxic/corrosive vapor cloud or causing a fire or an explosion that cannot be controlled with control procedures identified in Section 5.4 • The event requires large scale evacuation of the Facility or of adjoining properties • The event requires resources of county, state, or federal agencies

5.4 Control Procedures

The control procedures described in this subsection are designed to effect safe and appropriate responses to fire, explosion, and unplanned release events which may occur as a result of activities and operations conducted at the Facility. When an emergency condition becomes known, all facility personnel are to initiate their designated responsibilities (e.g., equipment shutdown, close containers, etc.) and evacuate the facility by going to a pre-designated area to assist the EC. Only the EC can announce “all clear” for re-entry of personnel and operations to resume.

Response tasks to be undertaken in the event of an emergency are:

1. Stop work activities in the affected area;
2. Identify the emergency condition;
3. Take immediate life-saving and/or environmental protection measures as necessary;
4. Complete internal facility notifications and evacuate facility area(s) if necessary;
5. Assess the situation and classify the emergency;
6. Complete the external notifications and evacuate neighboring area(s) if necessary;
7. Implement the appropriate control procedures as described below;
8. Implement remediation measures; and
9. Complete post-incident evaluation and reporting.

5.4.1 Level 1 Response Procedures

A Level 1 emergency will be contained, cleaned up, and remediated in accordance with this plan under the direction of the EC. Personnel will conduct the following procedures:

1. Restrict access to the area and maintain security.
2. Don appropriate Personal Protective Equipment (PPE) (refer to profiles and SDS).
3. If a spill has occurred:
 - a. Isolate release and, if possible, safely stop the release at its source.
 - b. Encircle the release with absorbent material.
 - c. Using absorbent socks or other containment materials, prevent the spill from reaching on-site and off-site storm drains, drainage channels or waterways.
 - d. Clean up the released materials and collect the chemical residue at the direction of the EC.
 - e. Ensure that all contaminated materials are transported and disposed in accordance with Department of Transportation (DOT), federal, and state regulations. Do not wash released materials into a storm drain or sewer system or place them in a dumpster.

4. If a minor fire has occurred:
 - a. Extinguish fire with appropriate fire extinguishing material.
 - b. The EC must confirm fire is completely out.
 - c. Confirm no secondary emergencies have arisen from the fire.
 - d. Clean up the impacted area and collect burned and fire extinguishing material.
 - e. Appropriately dispose of contaminated material under the direction of the EC. Do not wash released materials into a storm drain or sewer system.

5.4.2 Level 2 Response Procedures

A Level 2 emergency requires a more coordinated effort by the Facility to address a release or potential release. The EC should initiate the following activities:

1. Evacuate personnel and areas, as appropriate.
2. Restrict unauthorized access to the area where the fire, explosion, or spill has occurred.
3. If a RQ has been exceeded, the EC will notify off-site organizations and follow up with a written report.
4. Under no circumstances will anyone but the EC initiate any response actions for Level 2 responses. The EC is responsible for the following measures:
 - a. Assess the identity of the hazardous materials releases, the severity of the spill, the quantity released, the cause of the spill, and the source of the discharge.
 - b. Establish an isolation perimeter.
 - c. Implement appropriate actions to stop the release if the discharge is continuous.
 - d. Implement appropriate actions to contain the spill and prevent released materials from leaving the site.
 - e. Ensure that all contaminated materials are transported and disposed in accordance with DOT, state, and federal regulations.
5. A Level 2 spill that poses a threat to human health and safety and degradation to the environment and property may require the following response procedures:
 - a. Evacuate off-site area and personnel, as appropriate.
 - b. Notify state and local officials.
 - c. Utilize contract assistance as appropriate.
 - d. Implement appropriate actions to contain the spill and prevent released materials from leaving the site.
 - e. Repair or clear drainage structures.
 - f. Prepare a written report.
 - g. Additional monitoring and remediation.

6. A Level 2 fire response
 - a. Attempt to isolate fire. Close doors where applicable. Shut off blowers and conveyors as appropriate.
 - b. Trained employees douse with water or portable extinguishers to fire and surrounding area until fire department arrives.
 - c. Attempt to remove all combustible materials from the fire area.

5.4.3 Level 3 Response Procedures

The EC will implement the following for a Level 3 emergency:

1. Evacuate personnel and areas as appropriate.
2. Notify state and local officials.
3. Request additional resources or assistance from off-site agencies or organizations as necessary.
4. Evaluate the need for and extent of any site remediation necessary as a result of the release.
5. Utilize contract assistance as appropriate.
6. Repair or clear drainage structures.
7. Prepare a written report.
8. Additional monitoring and remediation.

5.5 Prevention of Recurrence of the Spread of Fires, Explosions, or Releases

Should an emergency condition occur at the Facility, all personnel are to safely and effectively contain the condition to the impacted area and minimize the potential for the emergency to grow and affect other areas and materials at the Facility. For a fire condition, personnel are to take appropriate measures necessary to prevent the spread of the fire by shutting down any processes that may be adding additional material to the fire. Ensure that response media such as water, dry chemical fire extinguisher propellant, or foam fire extinguisher propellant are compatible with burning material by checking the effectiveness of a small amount of the response media against a small portion of the fire. Apply the response media to the base of the fire. The first priority is to apply response media to that portion of the fire which may expand to neighboring waste or property. Using forklifts or other equipment, move any waste and/or property that can be safely moved out of the area or out of the actual or potential path of the fire.

If an explosion has occurred, mitigate the area by spraying an appropriate fire suppressant on the effected materials, and using forklifts or other equipment to move waste or other materials away of the impacted area. Check the area to identify the cause of the explosion and observe nearby areas and note the presence of any flammable materials that need to be moved to prevent further explosions. If the fire involves leaking gas or flammable liquid, attempt to stop the flow by closing the appropriate control valve. Main Control shut off valves are located as follows:

1. Natural Gas - The main gas meter and shutoff valve are on the south side of the building just to the east of the small outcrop building.

If a release has occurred, shut down processes that may be part of the release. Ensure that response media such as clay sorbent, vermiculite, foam fire extinguisher propellant, or water are compatible with released material by checking the effectiveness of a small amount of the response media against a small portion of the release. The first priority is containing the release from impacting neighboring waste or property by creating a dike of sorbent material in front of and around the released material to stop and contain the spill. If necessary, use on-site soil to dike the areas around the release. Using forklifts or other equipment, move any waste and/or property that can be safely moved out of the area or out of the actual or potential path of the release.

Good housekeeping will be practiced in order to maintain a clean and safe environment in order to prevent possible spill and safety hazards. Practices including scheduled cleanup times, maintaining well organized work areas, and proper training and education for the employees. During an emergency event, good housekeeping is essential to preventing the spread of the emergency to other areas of the facility.

5.6 Monitor for Leaks, Pressure Buildup, Gas Generation, or Ruptures

During an emergency event, the EC and designee will utilize Facility personnel to monitor other areas of the Facility to ensure no other leaks or emergency conditions are being created by pressure buildup, gas generation or rupturing. Personnel assigned to monitor other areas should be cautious to prevent exposure to potentially hazardous conditions. Should the emergency be large enough that other areas could be affected; the EC should inform local authorities of areas of concern and actions taken to prevent potential hazards from boiling liquids.

5.7 Storage, Treatment, and Disposal of Released Material

Following an emergency event, the EC will make sure that all recovered waste is stored in a proper location pending removal for off-site disposal. Materials contaminated as part of the emergency response actions, including water used to stop fires, are also to be removed from the Facility and transported to an appropriate authorized disposal facility. Contaminated materials are to be disposed of in accordance with all applicable Local, State and Federal regulations.

Following clean-up operations, the recovered materials will be disposed as follows:

1. Liquid products will be collected and stored in an appropriate waste management unit prior to disposal.
2. Absorbent materials and similar clean-up materials will be collected into appropriately-sized drums or containers, labeled, and stored in an appropriate waste management unit pending off-site disposal.
3. Hazardous wastes will be collected into appropriate and compatible containers, labeled, and disposed in accordance with federal and state regulations. Absorbent and clean-up materials used in containing hazardous wastes releases are considered hazardous waste and shall be treated as such.

Upon completion of clean-up procedures, the following activities will be conducted:

1. The impacted area will be inspected by the EC or designee, and incompatible materials will be isolated from the spill scene until the affected area is entirely cleaned up.
2. Upon final clean up, the EC will verify that all emergency response equipment is clean and fit for immediate use in the event of another spill.
3. The EC will notify ADEQ that the previous two requirements have been met after a release of hazardous waste prior to resuming operations at the Facility.

5.8 Incompatible Waste

During and following an emergency event involving fire, explosion, or releases of hazardous waste, the EC will ensure that incompatible materials if present near the impacted area are moved and isolated until response actions are complete. Incompatible materials are not to be stored together in the same area.

5.9 Post-Emergency Equipment Maintenance

Following an emergency event, all affected areas will be decontaminated. The decontamination process may vary due to the nature of the hazardous waste constituents involved in the release and type of material contaminated.

All equipment utilized during an emergency event is either decontaminated following the completion of response activities or properly disposed. Decontamination procedures for various pieces of emergency equipment are as follows:

- Tools – All tools used during clean-up should be wiped clean, washed with an appropriate cleaning solution, rinsed with clean water, and allowed to air dry. The contaminated rags and cleaning solution should be discarded along with the other waste.

- Respirators – Certain parts of contaminated respirators, such as the harness assembly and leather or cloth components are difficult to decontaminate. If grossly contaminated, they may have to be discarded. Rubber components can be soaked in soap and water and scrubbed with a brush. Respirators must be maintained according to manufacturer’s recommendations. Persons responsible for decontaminating respirators should be thoroughly trained in respirator maintenance.
- Sanitizing of Personnel Protective Equipment (PPE) – Reusable protective clothing and other personal articles must be decontaminated and sanitized prior to being reused. The inside of hard hats, clothing, and other PPE becomes soiled by body oils and perspiration. If practical, protective clothing should be machine washed after a thorough decontamination; otherwise it must be cleaned by hand or disposed of properly.
- Sampling and monitoring equipment – All sampling and monitoring equipment should be wiped clean using an appropriate spray cleaning solution. Sampling equipment should be rinsed following washing and be allowed to air dry.

Following decontamination, all tools, sampling equipment, and other equipment used in emergency response actions shall be returned to their assigned storage area. Any equipment that is damaged shall be repaired or replaced prior to placing it in storage. The EC or designee shall inventory PPE and other disposable supplies and restock as necessary.

5.10 Notification of Federal, State and Local Authorities before Resuming Operations

At the conclusion of an emergency event involving fire, explosion, or release of hazardous waste, the EC shall conduct a post-incident evaluation of the incident and response(s) along with involved Facility personnel. The intent of the evaluation is to determine methods to improve responses (such as via additional equipment and/or training). The CP will subsequently be amended, as necessary.

In addition, the EC will prepare an incident report and report the emergency event to ADEQ within 15 days of the incident. Spill and release reporting requirements are provided in Section 9.0.

If the EC determines that the Facility has had a release, fire, or explosion which could threaten human health or the environment outside the facility, they will report their findings immediately to the local fire authority, the local police, and ADEQ. If their assessment indicates that evacuation of the local off-site areas may be advisable, they will attempt to immediately notify the appropriate local authorities and will be available to help appropriate officials decide whether local areas should be evacuated. The Emergency Spokesperson will be notified to assist in the external communications. Should the EC need to notify the National Response Center (NRC) at (800) 424-8802, the following information will be required:

1. Name and telephone number of person making the report
2. Name and address of facility
3. Time, duration, and type of incident
4. Name and quantity of materials(s) involved, to the extent known
5. The extent of injuries, if any
6. The possible hazards to human health or the environment, outside the facility
7. The names and telephone numbers of the person or persons to be contacted for further information

Following completion of the response actions and before operations are resumed in the affected area(s) of the Facility, the EC or designee will notify the ADEQ and appropriate local fire and police authorities that the facility is in compliance with paragraph (h) of 40 CFR Section 264.56.

6.0 SPILL AND EMERGENCY RESPONSE EQUIPMENT

The Facility maintains various types of emergency equipment including equipment for spill control, small amounts of emergency medical supplies, and Personal Protection Equipment (PPE). The Facility is equipped with the following emergency equipment:

1. Portable fire extinguishers. The location of the fire extinguishers is listed on the site map. Each is marked by red panels painted on the wall, column, post or other fixture where the fire extinguisher is located. Extinguishers are inspected on a monthly basis, with annual testing and maintenance performed by an outside contractor. The records are maintained in the Facility office by the EC or designee. The facility maintains two types of fire extinguishers:
 - a. Class A, B, C – Multi-purpose extinguishers
 - b. Class D – Reactive Metal fires (may be used on lithium fires)
 - c. F-500 (Water with F-500 Additive) – lithium battery fires

Each time an extinguisher is removed from service for maintenance or recharging, an alternate extinguisher is installed in its place. All employees are trained in the use of extinguishers.

2. Fire extinguisher systems. The at-risk storage building and normal-risk storage buildings have built in automatic deploying fire extinguisher systems. The systems are checked on a monthly basis with annual testing and maintenance performed by an outside contractor. The records are maintained in the Facility office by the EC or designee.
3. Fire suppression water. An eight-inch CLDI Pipe runs from the fire department connection throughout the facility. The processing building is equipped with a fire sprinkler system.
4. Spill response material. Spill kits are maintained and located at multiple locations throughout the Facility including but not limited to (1) the loading dock, 2) in the staging area (specially equipped for the material stored in these areas), and 3) the quarantine area. The equipment is inventoried and maintained by the EC or designee.
5. First Aid Kits (including burn kits and AED)
6. Eyewash / Showers
7. Alarm system which notifies the Emergency Coordinators to summon immediate emergency assistance.

The maintenance manager will ensure all inspections and maintenance are scheduled accordingly.

The Fire Prevention drawings approved by the Fire Department are included in Appendix G-3. Also refer to Attachment J of the RCRA Permit Application for a copy of the Fire Prevention Plan.

Oil and chemical spill containment and control equipment is located in the main building and in various areas throughout the Facility. The containment and control equipment including booms and absorbent are also located in various locations throughout the Facility. Additional equipment is located in the storage building. In the unlikely event that heavy equipment is needed to contain or control a spill or release, the facility has plenty of soil from unpaved areas on the Facility available for containment of needed. Available spill response equipment is as follows:

Emergency Equipment		
Item/Description	Capability	Storage Area
Gloves -Cotton liner gloves -Leather palm -Neoprene Chemical -Neoprene Surgical	Protect Hands	Safety Department
Coveralls -Cotton -Tyvek	Skin Protection	Safety Department
Boots -Chemical resistant neoprene	Foot Protection	
Goggles/Face Shields	Eye Protection	
Hard Hats	Head Protection	
Respirators	Respiratory Protection	
Fire Extinguishers	Fire Protection	
First Aid Kit / Burn Kit / AED		
Shovels		
Spill Kits		
Absorbents		
Sweep brooms and dust pans		
Telephone		
Decontamination Equipment		
Item/Description	Capability	Storage Area
Eye Wash Station	Flushing eyes, face/head wash	QA Lab
Shower	Wash contaminants from skin and clothing	Process Area, Scrubber Area
HV PPE Kits	Protection during high voltage emergency response	
O ₂ Monitors	O ₂ monitoring to ensure the nitrogen system does not create an oxygen deficient atmosphere	Mechanical Room
Personal O ₂ Monitoring	For operators working the shredding equipment	
Multi-Gas Detector	For Use during Confined Space Entry	

7.0 COORDINATION REQUIREMENTS

Arrangements have been made with the various local authorities that may be called upon to assist in an emergency. These local authorities and their responsibilities are provided Section 10.0. Notification of hazardous waste operations has been provided by letter to local authorities as documented in Appendix G-1.

8.0 EVACUATION PLAN

8.1 Emergency Evacuation

In the event a fire, explosion, or release of hazardous waste was to occur at the Facility such that evacuation of the Facility is required, the EC will use the telephone and two-way radio systems to notify Facility personnel to evacuate. The EC will indicate which evacuation route(s) to use. Possible evacuation routes are shown on Figure G-2. The designated evacuation assembly area (rally point) is identified on the plot plan. Other rally points may be designated by the emergency coordinator if necessary. The EC will identify the alternate rally point location after an evaluation of the conditions specific to the emergency such as location of the incident and wind direction.

In an emergency, the EC will notify the appropriate state or local agencies with response roles if their help is needed and will immediately identify the character, source, amount and extent of released materials.

The following tasks are to be conducted during an evacuation. Prompt, orderly evacuation is critical in preventing unnecessary injuries. The following should be implemented:

- 1) Cut power to equipment.
- 2) Leave promptly (do not go to retrieve your lunch box, jacket, or other items).
- 3) Follow the evacuation route out of the Facility (as shown on Figure G-2).
- 4) Once out of the building, **immediately** go to the rally point(s) designated on Figure G-2.
- 5) Find your supervisor at the rally point area and report in.
- 6) Supervisors are responsible for determining if their employees are in the rally point area.
- 7) Any employees missing should be immediately reported to the EC, safety manager, medical personnel, firemen, etc. These individuals will decide on the best way to attempt a rescue.
- 8) **Do not** return to the Facility until the all-clear signal has been given by the EC or designee.

8.2 Emergency Response Affecting the Local Area

If the EC determines that the Facility has a fire, explosion, and/or release condition that could threaten human health or the environment outside the Facility, they will notify the appropriate state or local agencies with response roles if their help is needed and will immediately identify the character, source, amount and extent of released materials. The EC will remain at a rally point and be available to local authorities to provide information on materials and processes conducted at the Facility.

9.0 TRAINING

Annual Training drills will be conducted onsite and documented. In addition, quarterly emergency evacuation drills will be conducted. The drills will include a realistic scenario and mimic a worst-case incident or one that's most likely to occur. The EC will document and review the results and lessons learned.

10.0 REQUIRED PROCEDURES FOR RECORDKEEPING AND REPORTING

Ecobat will maintain a Facility Report that identifies the types and quantities of solid and hazardous wastes at the Facility, their location, locations where employees are operating, general Facility layout, and the entrances and roads in the facility for possible evacuation. Ecobat shall review the contents of the Facility Report annually and update the report, as necessary. The Facility Report will be maintained in the administrative office area as shown on Figure G-2 and be made readily available to emergency response personnel upon request.

For emergency response actions, the EC will submit a written report to ADEQ within 15 days after an emergency event causing implementation of this CP. The report will include the following:

- Name, address, and telephone number of the owner or operator of the Facility;
- Name, address, and telephone number of the Facility;
- Date, time, and type of incident (e.g., fire, explosion); Name and quantity of material(s) involved;
- Extent of injuries, if any;
- An assessment of actual or potential hazards to human health or the environment, where this is applicable; and
- Estimated quantity and disposition of recovered material that resulted from the incident.
- A copy of the incident report will be retained on-site in the facility operating record.



11.0 LOCATION AND DISTRIBUTION OF CONTINGENCY PLAN

The primary copy of this CP will be maintained by the EC and kept in the office at the Facility. The EC will update the CP as required.

The following agencies/entities have been notified of the activities to be conducted at the Facility concerning the presence of hazardous waste and hazardous wastes constituents and offered to make arrangements to familiarize the agencies with the Facility layout and operations. Each of the agencies/entities listed below are to be provided a copy of this CP and any amended versions of the CP. The EC will provide updates to the CP when as they are made.

- **State of Arizona**

ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY
1110 West Washington Street
Phoenix, AZ 85007
Phone No. 602-771-2300
Response: Reportable spills and releases

- **City of Casa Grande Fire Department**

377 E. Val Vista Boulevard
Casa Grande, AZ 85122
Phone No. 520-421-8777
Response: Fires, releases, explosions, medical emergencies

- **Pinal County Sheriff's Office**

820 E. Cottonwood Lane
Casa Grande, CA 85122
Phone No. 520-866-7419
Response: Traffic/pedestrian control

- **Banner Casa Grande Medical Center**

Emergency Department
1800 E Florence Boulevard
Casa Grande, AZ 85122
Phone No. 911 or 520-381-6300
Response: Emergency medical care

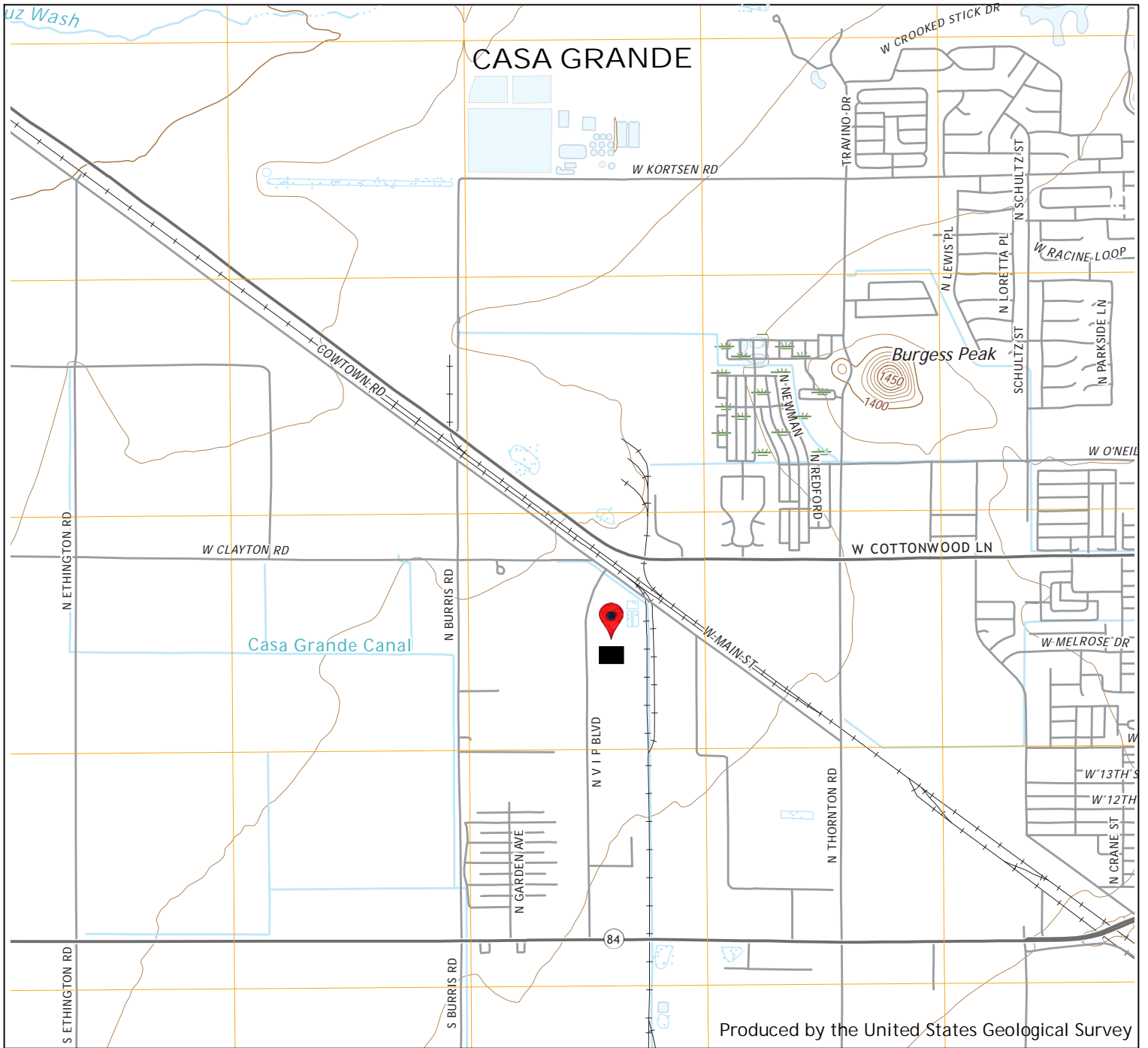
A summary statement of Preparedness and Prevention Information (PPI) is provided in AppendixG-2. A copy of the PPI has been provided to the Pinal County Local Emergency Planning Committee.

12.0 AMENDMENTS TO THE CONTINGENCY PLAN

This CP will be reviewed, and immediately amended, if necessary, whenever:

- (a) The Facility permit is revised;
- (b) The CP is implemented in an emergency;
- (c) The Facility changes its design, construction, operation, maintenance, or other circumstances in a way that materially increases the potential for fires, explosions, or releases of hazardous waste or hazardous waste constituents, or changes the response necessary in an emergency;
- (d) The list of emergency coordinators changes; or
- (e) The list of emergency equipment changes.

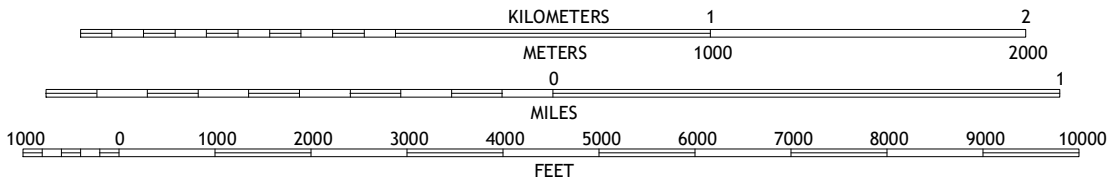
FIGURES



Produced by the United States Geological Survey

Legend

SCALE 1:24 000

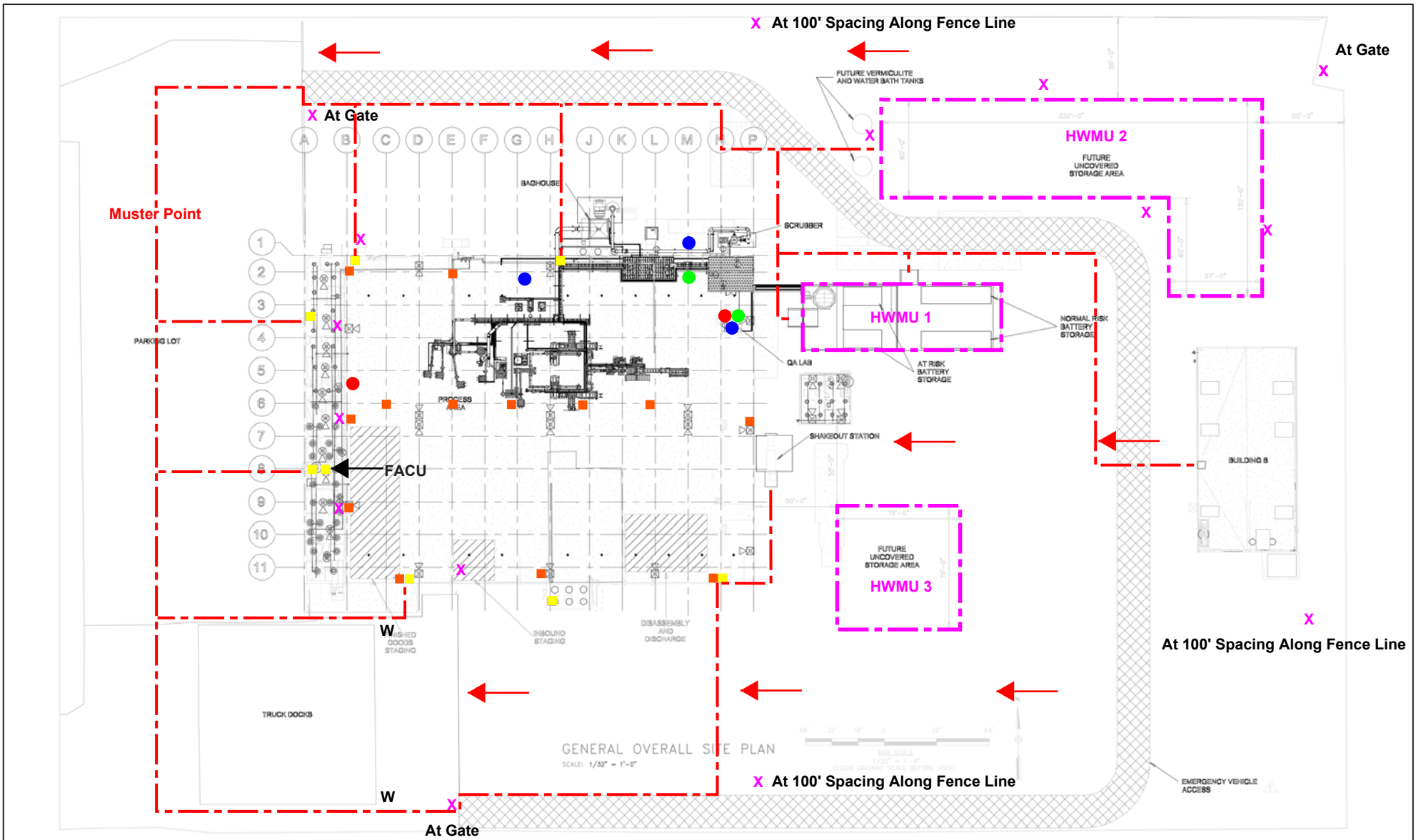


ROAD CLASSIFICATION

- Expressway
- Secondary Hwy
- Ramp
- Local Connector
- Local Road
- 4WD
- Interstate Route
- US Route
- State Route



 associates environmental	Associates Environmental 18141 Beach Boulevard, Suite 200 Huntington Beach, CA 92648 (949) 352-4941 Fax (714) 362-9085		
	Description Ecobat Solutions Arizona, Inc. Figure G-1 - Site Location Map		
Job No.	Drawing Date	Drawn By:	Drawing
433-147	06-06-2024	MO	2.0



Legend	
	Direction of Flow
	Unit Emergency Exit Route
	Fire Pull Station
	Fire Extinguisher
	First Aid Kit
	Spill Kit
	Shower + Eyewash
	Warning Sign
	Dry Well Location
	HWMU: Hazardous Waste Management



		Associates Environmental 18141 Beach Boulevard, Suite 200 Huntington Beach, CA 92648 (949) 352-4941 Fax (714) 362-9085	
		Description Ecobat Solutions Arizona, Inc. 1474 North V.I.P. Blvd. Casa Grande, Arizona 85122	
Secondary Description Figure G-2 - Site Map		Scale	
Job No.: 433-147	Drawing Date: 07-12-2024	Drawn By: MO	Drawing Version: 1.0



Legend

 Principal Route



Associates Environmental
 18141 Beach Boulevard, Suite 200
 Huntington Beach, CA 92648
 (949) 352-4941 Fax (714) 362-9085

Description		Ecobat Solutions Arizona, Inc. 1474 North V.I.P. Blvd. Casa Grande, Arizona 85122	
Secondary Description			Scale
Figure G-3 - Route to Hospital			
Job No.:	Drawing Date:	Drawn By:	Drawing Version:
433-147	02-13-2024	MO	1.0

Appendix G-1
Operations Notices



Date

Pinal County Sheriff's Office
820 E. Cottonwood Lane
Casa Grande, CA 85122

Subject: Lithium Battery Recycling Facility Operations

To Whom It May Concern:

Ecobat Solutions Arizona is in the process of preparing a permit application to operate a hazardous waste facility currently located at 1474 N. VIP Boulevard, in Casa Grande, ZA. The operation will be managed consistent with Federal and State Regulations for hazardous waste facilities and subject to permit requirements issued to the Arizona Department of Environmental Quality. This facility will be initially designed to process 4 tons per hour of raw materials. Storage of spent lithium batteries and other lithium containing materials will be necessary for occasions when materials cannot be processed immediately upon arrival at the facility and for at-risk batteries and non-conforming materials.

Attached is a site location map and site plan that illustrate the location of hazardous waste management units. We would like to make arrangements to meet with your representatives and review the layout of the facility, the properties of the lithium-ion batteries and the associated hazards, places where facility personnel will normally be working, access for entrance to and within the facility and evacuation routes. We would like to discuss any agreements that are necessary for emergency services from your organization.

Please contact me to make arrangements to review our operations with your staff.

Sincerely,



City of Casa Grande Fire Department
377 E. Val Vista Boulevard
Casa Grande, AZ 85122

Subject: Lithium Battery Recycling Facility Operations

To Whom It May Concern:

Ecobat Solutions Arizona is in the process of preparing a permit application to operate a hazardous waste facility currently located at 1474 N. VIP Boulevard, in Casa Grande, ZA. The operation will be managed consistent with Federal and State Regulations for hazardous waste facilities and subject to permit requirements issued to the Arizona Department of Environmental Quality. This facility will initially be designed to process 4 tons per hour of raw materials. Storage of spent lithium batteries and other lithium containing materials will be necessary for occasions when materials cannot be processed immediately upon arrival at the facility and for at-risk batteries and non-conforming materials.

Attached is a site location map and site plan that illustrate the location of hazardous waste management units. We would like to make arrangements to meet with your representatives and review the layout of the facility, the properties of the lithium-ion batteries and the associated hazards, places where facility personnel will normally be working, access for entrance to and within the facility and evacuation routes. We would like to discuss any agreements that are necessary for emergency services from your organization.

Please contact me to make arrangements to review our operations with your staff.

Sincerely,



Date

Banner Casa Grande Medical Center
1800 E Florence Blvd
Casa Grande, AZ 85122

Subject: Lithium Battery Recycling Facility Operations

To Whom It May Concern:

Ecobat Solutions Arizona is in the process of preparing a permit application to operate a hazardous waste facility currently located at 1474 N. VIP Boulevard, in Casa Grande, ZA. The operation will be managed consistent with Federal and State Regulations for hazardous waste facilities and subject to permit requirements issued to the Arizona Department of Environmental Quality. This facility will be initially designed to process 4 tons per hour of raw materials. Storage of spent lithium batteries and other lithium containing materials will be necessary for occasions when materials cannot be processed immediately upon arrival at the facility and for at-risk batteries and non-conforming materials.

Attached is a site location map and site plan that illustrate the location of hazardous waste management units. We would like to make arrangements to meet with your representatives and review the layout of the facility, the properties of the lithium-ion batteries and the associated hazards, places where facility personnel will normally be working, access for entrance to and within the facility and evacuation routes. We would like to discuss any agreements that are necessary for emergency services from your organization.

Please contact me to make arrangements to review our operations with your staff.

Sincerely,

Appendix G-2

Preparedness and Prevention Information



Ecobat Solutions Arizona, Inc.
Preparedness and Prevention Information

1. Facility Name: Ecobat Solutions Arizona, Inc.
2. Facility Description: A Lithium-Ion Battery Recycling facility.
3. Hazardous Waste Management Units: Three

HWMU1: HWMU1 consists of a concrete pad that houses four containers. Two containers are designated as At-Risk Storage and two containers are designated as Normal Risk.

HWMU2: HWMU2 consists of outdoor uncovered storage at the Northeast portion of the property. The total square footage for HWMU2 is 17,340 square feet.

HWMU3: HWMU3 consists of outdoor uncovered storage east of the main building. The total square footage for HWMU3 is 5,625 square feet.

4. Internal Communication

Internal alarm system with three pull stations throughout the facility. Alarm provides audible signal and notifies the Emergency Coordinator of the location where the alarm is activated.

Primary Emergency Response Coordinator: Eric Knowles

Plant Manager
(760) 514-8494

Alternate Emergency Response Coordinators: Wesley Poorman

Production Supervisor
(602) 206-3120

5. External Communication

Emergency Response: Casa Grande Fire Department Station 501 911/ (520) 421-8777

Police/Traffic Control: Pinal County Sheriff's Office 911/ (520) 866-7149

Medical Emergency Room: Banner Casa Grande Medical Center 911/(520) 381-6300

Fire Fighting Equipment: Fire Extinguishers in all HWMUs and processing building, fire suppression system.

6. Emergency Water Supply

Fire Department Connection with 8" CLDI Pipe.

Appendix G-3

Fire Prevention Drawings

ECOBAT - AZ LITHIUM BATTERY RECYCLING

1474 N. V I P BLVD
CASA GRANDE, ARIZONA 85122

APPROVING AGENCY
CITY OF CASA GRANDE
101 E. 5TH ST.
CASA GRANDE, ARIZONA 85222
(520) 421-8777

SHEET INDEX
FA.1 - COVER SHEET
FA.2 - PARTIAL BLDG A FIRE ALARM
DEVICE LOCATION PLAN
FA.3 - PARTIAL BLDG A & AT-RISK
CONTAINER FIRE ALARM DEVICE
LOCATION PLAN
FA.4 - FIRE ALARM RISER DIAGRAM &
SYSTEM CALCULATIONS

INSTALLATION CONTRACTOR
WESTERN STATES FIRE PROTECTION INC.
DBA- SIGNAL ONE FIRE & COMMUNICATIONS
4346 E. ELWOOD ST.
SUITE #100
PHOENIX, ARIZONA 85040
(480) 752-1777

MONITORING COMPANY
AVANTGUARD MONITORING CENTERS
P.O. BOX 150224
OGDEN, UTAH 84415
(877) 206-9141

TYPE OF SYSTEM
 CONVENTIONAL HARDWIRE
 ADDRESSABLE
 CLASS 'A'
 CLASS 'B'

BUILDING INFORMATION
OCCUPANCY TYPE: B & S
SQUARE FOOTAGE: 55,394

CODES & STANDARDS
 2016 NFPA 72 2017 NFPA 70
 2018 IFC 2018 IBC
 2018 IMC ADA
 LOCAL AMENDED CODES

TYPE OF NOTIFICATION
 TEMPORAL
 VOICE
 CODED

SPECIAL SYSTEMS
 FM-200
 ECARO-25
 PRE-ACTION
 RADIO DIALER
 DIALER

EQUIPMENT LIST				
SYMBOL	QTY.	DESCRIPTION	PART NUMBER	BACKBOX
[FACU]	1	FACU - ADDRESSABLE FIRE ALARM CONTROL UNIT	NFS-320	FURNISHED WITH EQUIPMENT
	2	12 VOLT, 12 AMP HOUR BATTERY	UB12120	N/A
[NACPH]	1	NACP - NOTIFICATION APPLIANCE CIRCUIT PANEL	PSE-10	FURNISHED WITH EQUIPMENT
	2	12 VOLT, 7 AMP HOUR BATTERY	UB1270	N/A
[⊙]	1	PHOTOELECTRIC SMOKE DETECTOR W/BASE	FSP-951/B300-6	4" SQ., 2-1/8" DP., 3/4" KO'S PLASTER RING, SINGLE GANG
[⊙]	1	DUCT SMOKE DETECTOR	DNR	FURNISHED WITH EQUIPMENT
	1	PHOTOELECTRIC SMOKE DETECTOR	FSP-951R	PLUG INTO DETECTOR BASE
[RTS]	1	REMOTE TEST STATION	RTS151	SINGLE GANG
	1	3' SAMPLE TUBE	DST3	N/A
[F]	7	MANUAL PULL STATION DUAL ACTION	NBG-12LX	4" SQ., 2-1/8" DP., 3/4" KO'S PLASTER RING, SINGLE GANG
[M]	11	DUAL MONITOR MODULE	FDM-1	4" SQ., 2-1/8" DP., 3/4" KO'S
[R]	1	RELAY MODULE	FRM-1	4" SQ., 2-1/8" DP., 3/4" KO'S
[W]	3	SPRINKLER WATERFLOW SWITCH	F.B.O.	N/A
[T]	3	SPRINKLER TAMPER SWITCH	F.B.O.	N/A
[U]	6	UV / IR DETECTOR	F.B.O.	N/A
[S]	2	SURGE PROTECTION	DTK-2MHLP-BWB	4" SQ., 2-1/8" DP., 3/4" KO'S W/ SCREW COVER
[W]	17	WALL MOUNT HORN/STROBE	P2WL	4" SQ., 2-1/8" DP., 3/4" KO'S PLASTER RING, SINGLE GANG
[C]	10	CEILING MOUNT HORN/STROBE	PC2WL	4" SQ., 2-1/8" DP., 3/4" KO'S PLASTER RING, SINGLE GANG
[W]	1	WALL MOUNT OUTDOOR STROBE W/ BLUE LENS	SRK / LENS-B	FURNISHED WITH EQUIPMENT
[C]	4	CEILING MOUNT STROBE ONLY	SCWL	4" SQ., 2-1/8" DP., 3/4" KO'S PLASTER RING, SINGLE GANG
[W]	4	WALL MOUNT STROBE W/ BLUE LENS	SWL / LENS-B2	4" SQ., 2-1/8" DP., 3/4" KO'S PLASTER RING, SINGLE GANG

F.B.O. DENOTES FURNISHED BY OTHERS

WIRING & CONDUIT INFORMATION
Project To Be Run In Conduit
 Power Limited Fire Alarm Cable
 THHN
Project To Be Run In Free Air
 Power Limited Plenum Rated Fire Alarm Cable

NOTES
1. THESE FIRE ALARM PLANS COMPLY WITH 2016 NFPA 72 SECTION 7.4. ALL REQUIRED ITEMS LISTED IN SECTION 7.4 ARE INCLUDED IN THIS PLAN ONLY IF REQUIRED AS STATED IN SECTION 7.4.1.
2. DETECTION INSTALLED TO PERFORM A SPECIFIC FUNCTION BUT NOT REQUIRED BY ANY LAWS, CODES, OR STANDARDS SHALL BE INSTALLED PER 2016 NFPA 72 SECTIONS 17.5.3.3 & A17.5.3.3.
3. WHEN SMOKE DETECTORS ARE INSTALLED IN CONCEALED LOCATIONS MORE THAN 10 FT. A.F.F. OR IN LOCATIONS THAT PROHIBIT RESPONDING PERSONNEL TO VIEW THE STATUS OF THE DETECTOR, REMOTE INDICATION SHALL BE INSTALLED PER 2016 NFPA 72 SECTIONS 17.4.7.
4. ALL CONDUCTORS FOR FIRE ALARM SYSTEM SHALL BE MIN. 16ga (CU).
5. ALL FIRE ALARM DEVICES e.g. (HORNS, PULL STATIONS, DETECTORS, ETC.) SHALL BE RIGIDLY AND SECURE FASTENED TO WALLS OR CEILINGS.
6. NO SMOKE DETECTOR SHALL BE LOCATED CLOSER THAN 36" TO ANY AIR REGISTER OR DIFFUSER.
7. DUCT DETECTORS SHALL BE MOUNTED BY THE MECHANICAL CONTRACTOR. HVAC SHUT DOWN WIRING SHALL BE PROVIDED, INSTALLED, AND TERMINATED BY THE MECHANICAL CONTRACTOR.
8. SMOKE DETECTORS SHALL NOT BE INSTALLED UNTIL AFTER CONSTRUCTION CLEAN UP OF ALL TRADES IS COMPLETED PER NFPA 72.

SEQUENCE OF OPERATION
FOR BLDG A SEQUENCE OF OPERATIONS SEE SHEET FA.2.
FOR AT-RISK CONTAINER SEQUENCE OF OPERATIONS SEE SHEET FA.3.

SCOPE OF WORK
INSTALLATION OF A NEW FIRE ALARM SYSTEM INTO A RECYCLE PROCESS FACILITY.

	FURNISHED BY:		
	ELECTRICAL CONTRACTOR	MECHANICAL CONTRACTOR	FIRE ALARM CONTRACTOR
120V POWER SUPPLY	X		
BACK BOXES	X		
CONDUIT	X		
FITTINGS	X		
DUCT DETECTORS			X



VICINITY MAP
SCALE: N.T.S.

FIELD COPY

APPROVED

Approved By:
Marc Buie, Fire Plans Examiner
In accordance with the 2018 IFC and all applicable codes

Signal One Fire and Communication
Protecting Lives and Property
a division of WSEF

4346 E. ELWOOD ST.
SUITE #100
PHOENIX, ARIZONA 85040
PHONE: (480) 752-1777
R.O.C. 304539 CLASS CR-67

Professional Engineer
CASA GRANDE
SCHWA
2018
ARIZONA, U.S.A.
Expires 08/30/2025

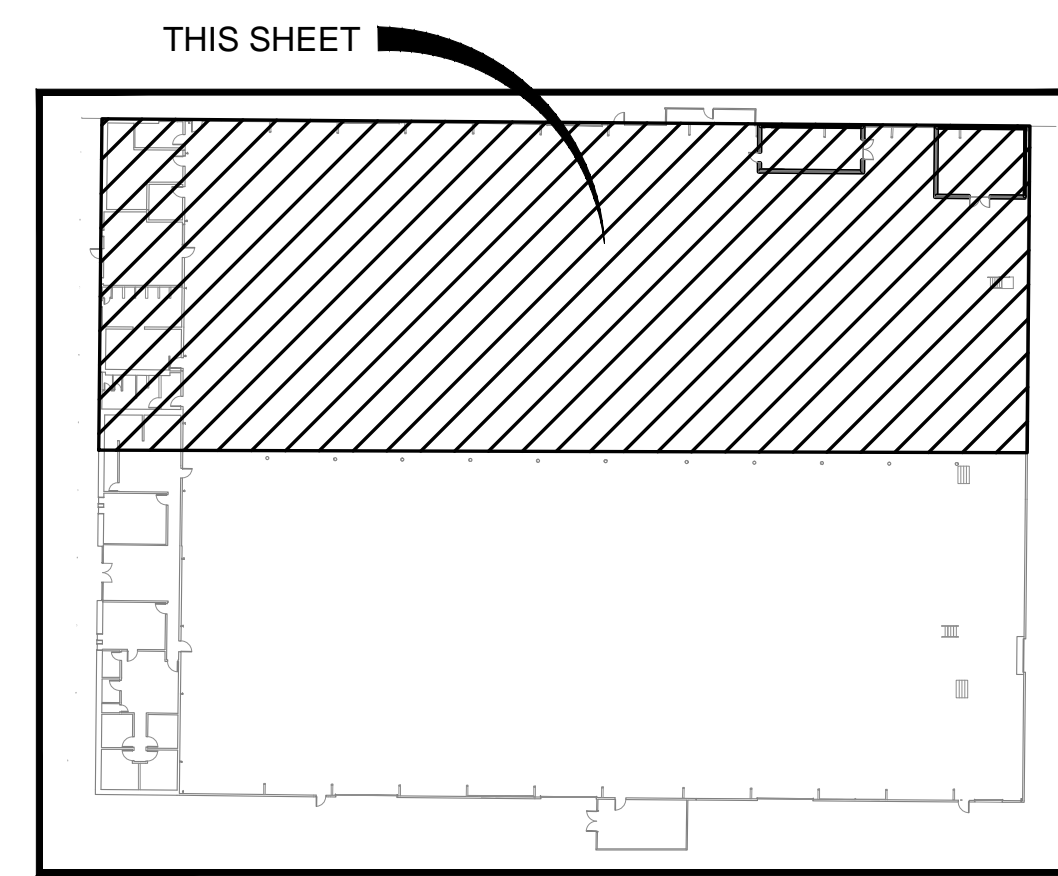
ECOBAT
1474 N. V I P BLVD
CASA GRANDE, AZ 85122
COVER SHEET

SHEET
FA.1
OF 4

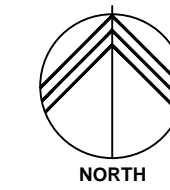
NO. REVISION DATE DRAWN BY

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BLDG A - FIRE ALARM SYSTEM SEQUENCE OF OPERATION MATRIX										
	ALARM AT FACU	SUPERVISORY AT FACU	TROUBLE AT FACU	ALARM AT RECEIVING STATION	SUPERVISORY AT RECEIVING STATION	TROUBLE AT RECEIVING STATION	ACTIVATE HORNS & STROBES	SILENCE HORNS & STROBES REMAIN ACTIVE	ACTIVATE BLUE STROBE	SHUTDOWN AHU / ERV
MANUAL PULL STATION	●			●			●			
SMOKE DETECTOR	●			●			●			
WATERFLOW SWITCH	●			●			●			
THERMAL DETECTOR		●			●				●	
TAMPER SWITCH		●			●					
DUCT SMOKE DETECTOR		●			●					●
FIRE ALARM TROUBLE CONDITION (OPENS, SHORTS OR GROUNDS)			●			●				
ALARM SILENCE AT FACU OR FSA			●			●		●		



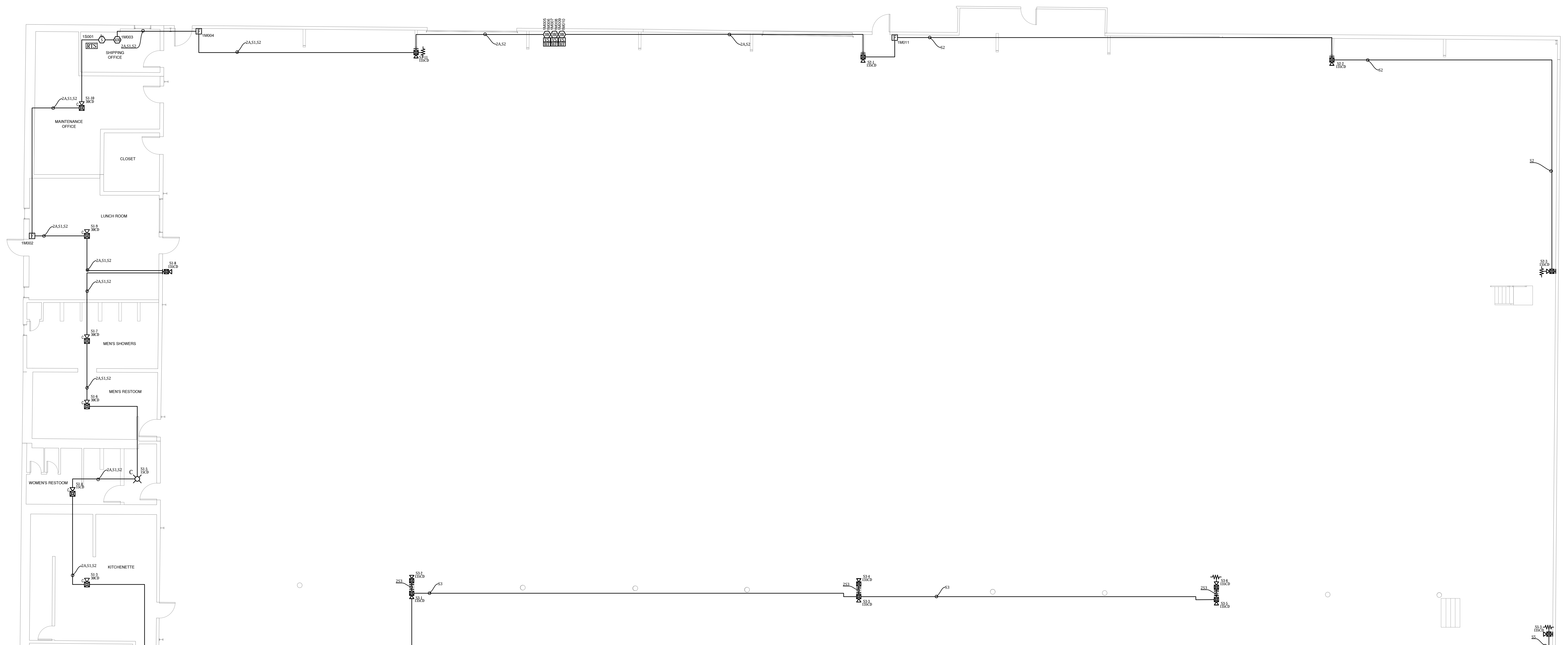
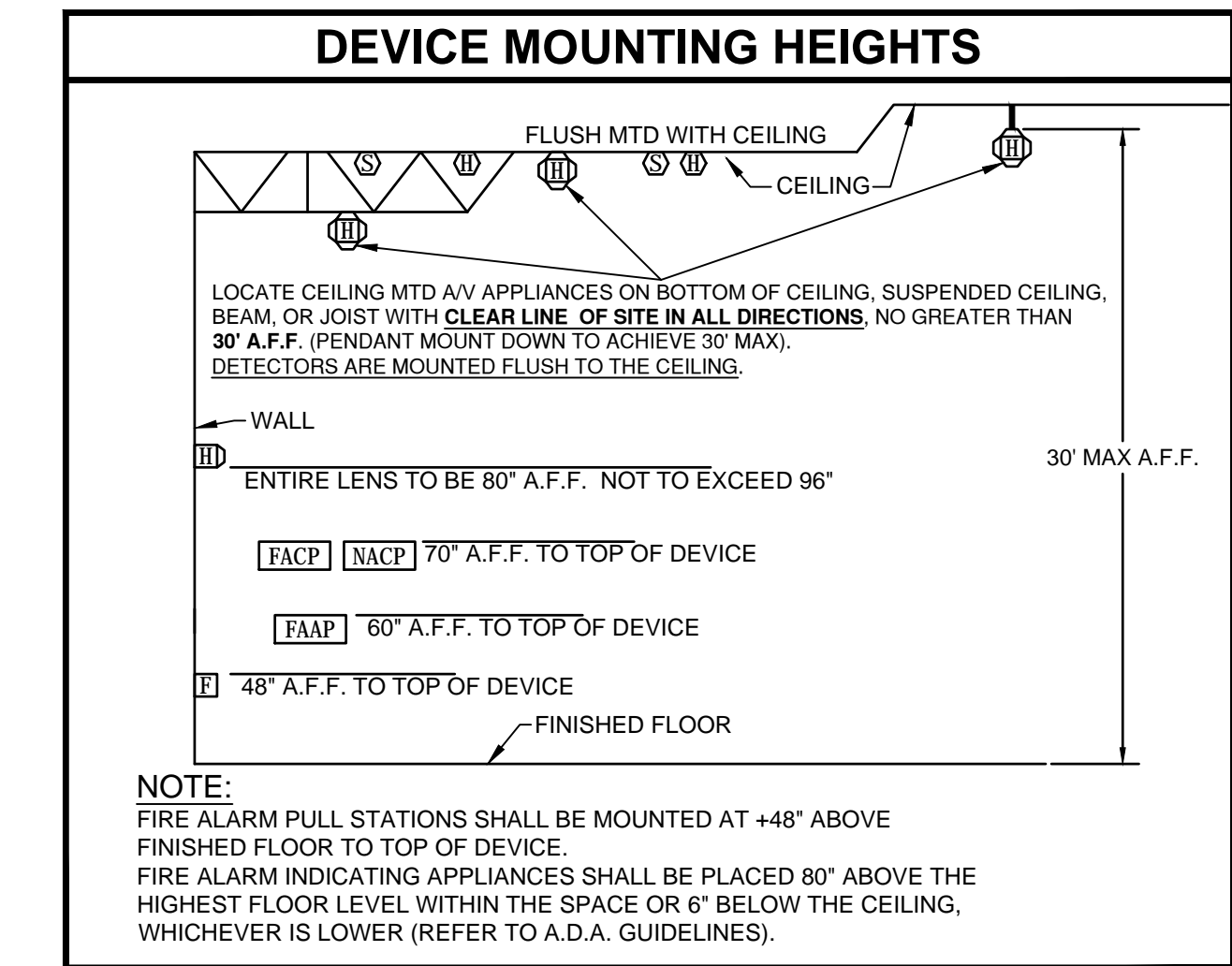
KEY PLAN
SCALE: N.T.S.



WIRE LEGEND	
	NAC 2c #14ga.FPLP
	SLC LOOP 2c #16ga.FPLP
	3/4" CONDUIT UNLESS NOTED

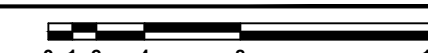
KEY NOTES:

- 1 TO AT-RISK STORAGE CONTAINERS. ALL UNDERGROUND CONDUIT AND ASSOCIATED BACK BOXES PROVIDED BY ELECTRICAL CONTRACTOR. FIELD VERIFY EXACT ROUTING.



MATCHLINE SEE SHEET FA.2

**PARTIAL BLDG. A
FIRE ALARM DEVICE LOCATION PLAN**
SCALE: 1/8" = 1'-0"



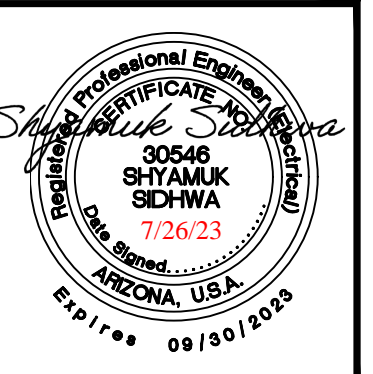
Approved By:
Marc Buie, Fire Plans Examiner
In accordance with the 2018 IFC
and all applicable codes

FA.2

NO.	REVISION	DATE	DRAWN BY

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Fire and Communication
Protecting Lives and Property
a division of WSEF

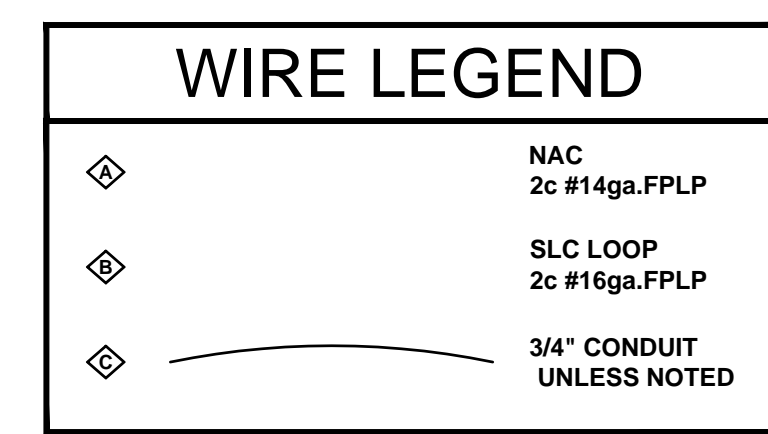
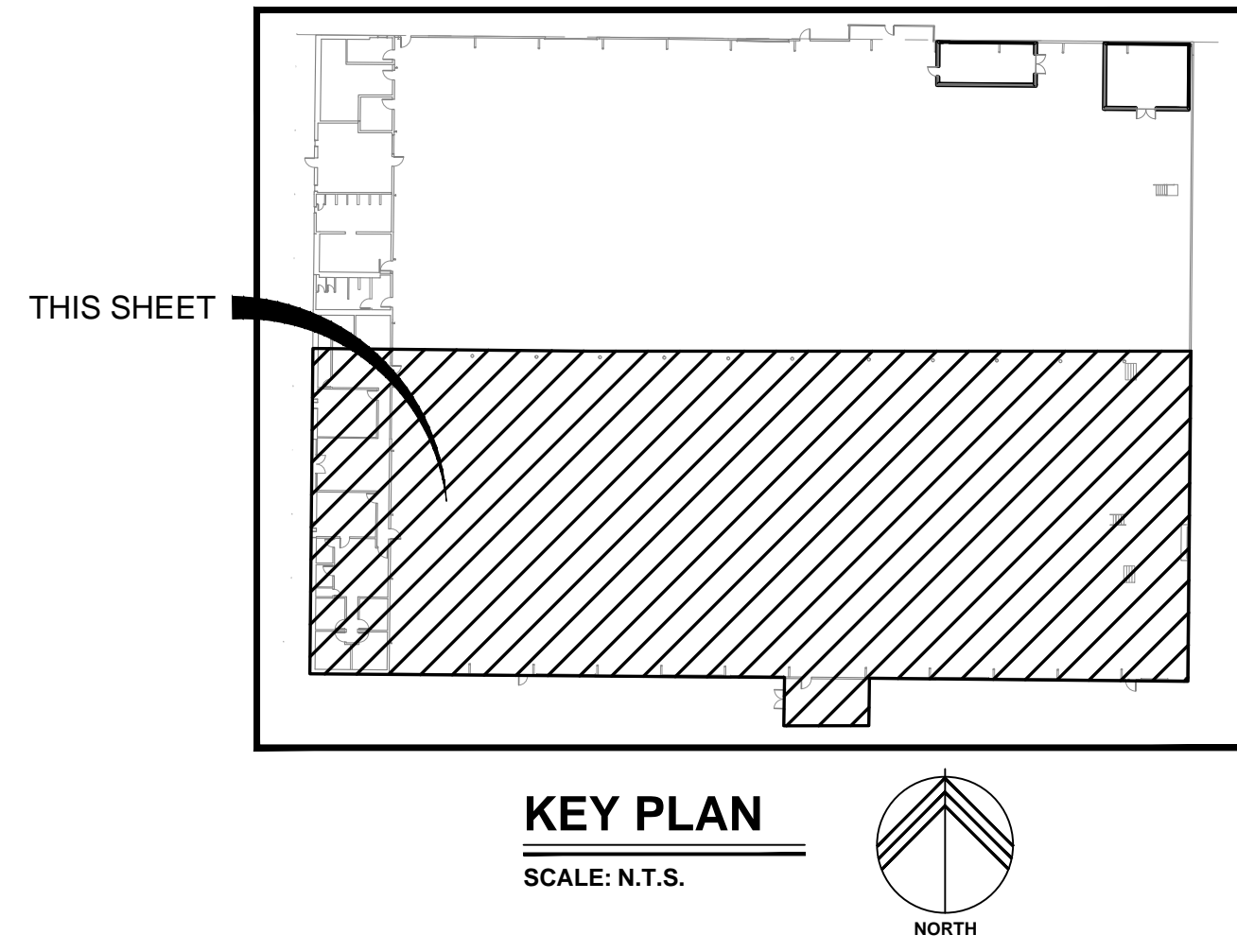
4346 E. ELLWOOD ST.
SUITE #100
PHOENIX, ARIZONA 85040
PHONE: (480) 752-1777
R.O.C. 304539 CLASS CR-67



ECOBAT
1474 N. V I P BLVD
CASA GRANDE, AZ 85122
PARTIAL BLDG. A
FIRE ALARM DEVICE LOCATION PLAN

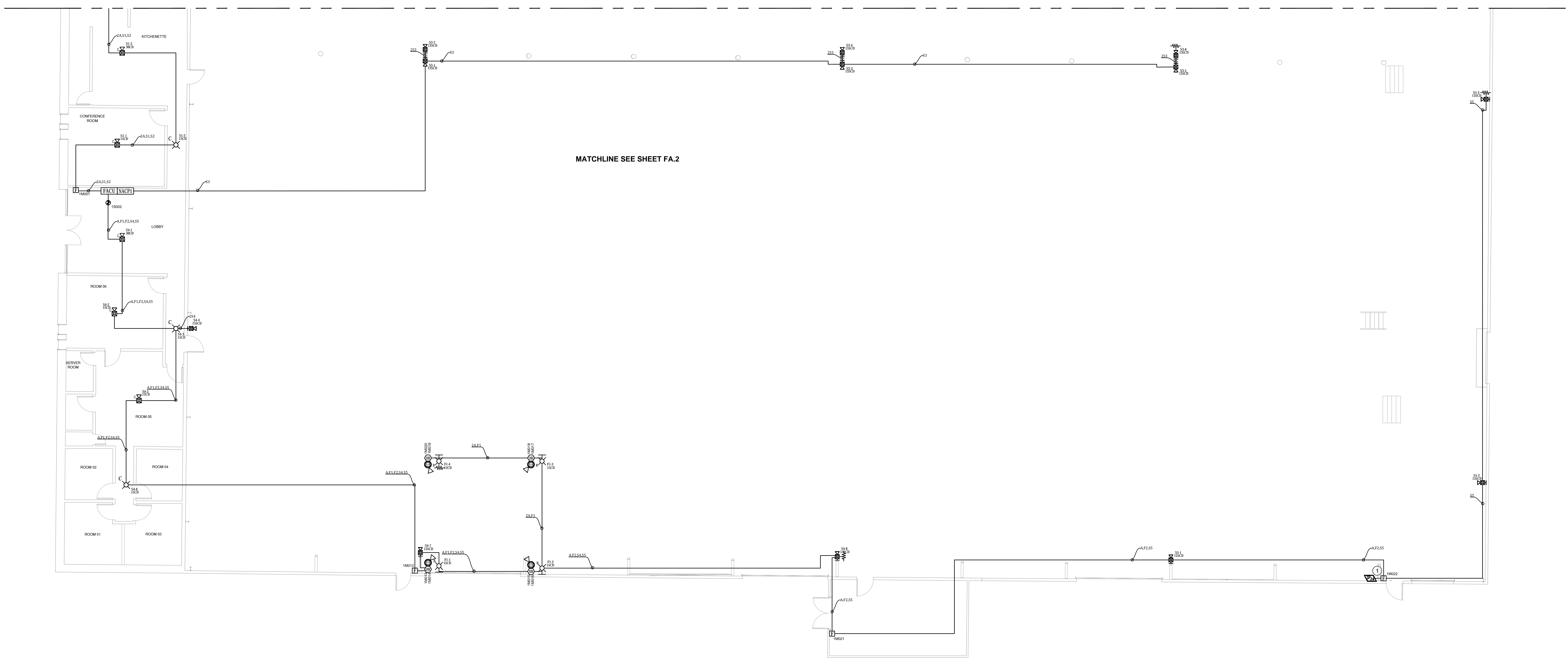
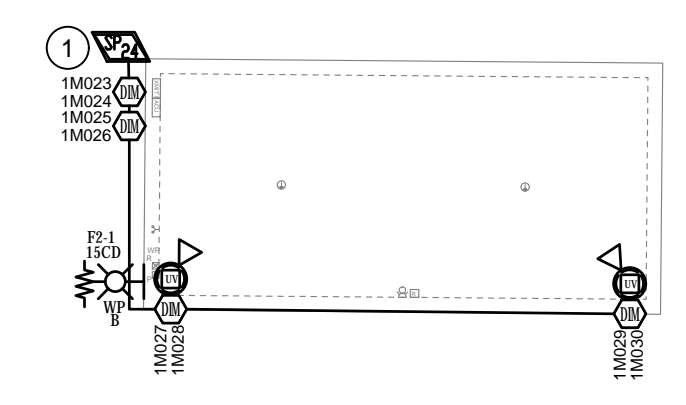
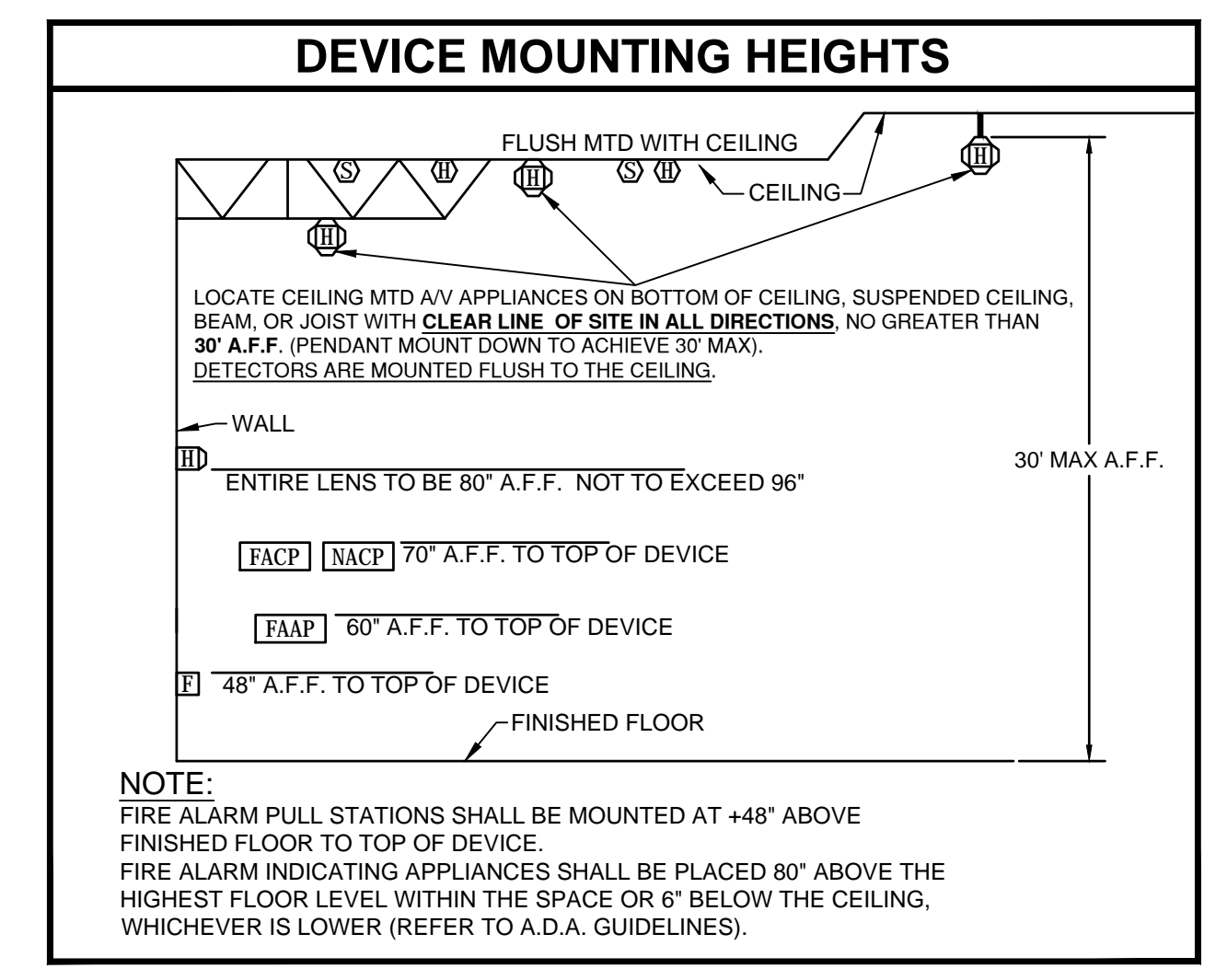
SHEET

AT-RISK CONTAINERS - FIRE ALARM SYSTEM SEQUENCE OF OPERATION MATRIX (BY OTHERS)										
	ALARM AT FACU	SUPERVISORY AT FACU	TROUBLE AT FACU	ALARM AT RECEIVING STATION	SUPERVISORY AT RECEIVING STATION	TROUBLE AT RECEIVING STATION	ACTIVATE RED STROBE	SILENCE HORNS	ACTIVATE BLUE STROBE	INITIATE FIRE SUPPRESSION SYSTEM
MANUAL PULL STATION	●			●			●			●
HEAT DETECTOR	●			●			●			●
THERMAL DETECTOR		●			●				●	
SUPPRESSION SYSTEM CONTROL VALVE TAMPER SWITCH		●			●					
FIRE ALARM TROUBLE CONDITION (OPENS, SHORTS OR GROUNDS)			●			●				
ALARM SILENCE AT FACU OR FSA			●			●		●		



KEY NOTES:

① TO AT-RISK STORAGE CONTAINERS, ALL UNDERGROUND CONDUIT AND ASSOCIATED BACK BOXES PROVIDED BY ELECTRICAL CONTRACTOR. FIELD VERIFY EXACT ROUTING.



PARTIAL BLDG. A FIRE ALARM DEVICE LOCATION PLAN
SCALE: 1/8" = 1'-0"

Approved By:
Marc Butte, Fire Plans Examiner

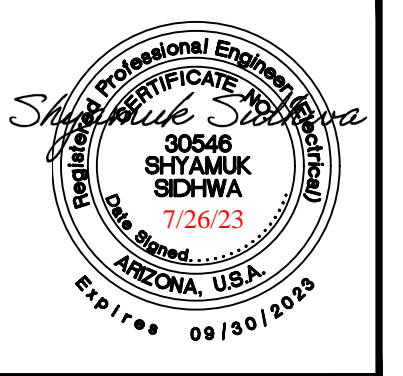


FA.3

NO.	REVISION	DATE	DRAWN BY

Signal ONE
Fire and Communication
Protecting Lives and Property
a division of WSPF

4346 E. ELLWOOD ST.
SUITE #100
PHOENIX, ARIZONA 85040
PHONE: (480) 752-1777
R.O.C. 304539 CLASS CR-67

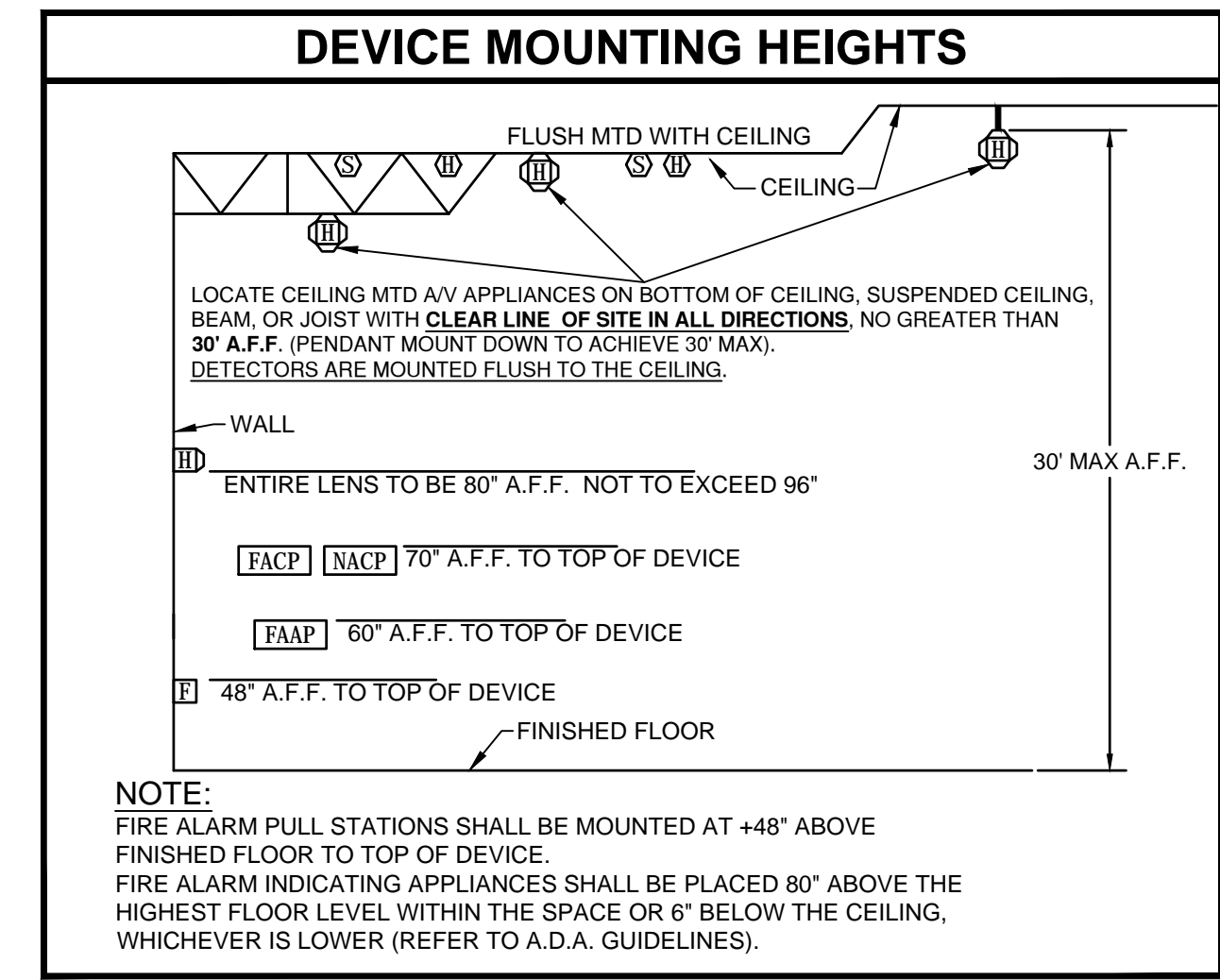


ECOBAT
1474 N. V.I.P. BLVD
CASA GRANDE, AZ 85122
PARTIAL BLDG. A & AT-RISK CONTAINER
FIRE ALARM DEVICE LOCATION PLAN

SIGNAL ONE FIRE AND COMMUNICATION IS NOT RESPONSIBLE FOR ANY WORK STARTED OR COMPLETED IN ASSOCIATION WITH THE PREMATURE DISTRIBUTION AND USE OF SHOP DRAWINGS BEFORE A FORMAL REVIEW AND APPROVAL PROCESS HAS BEEN COMPLETED BY THE AHJ (AUTHORITY HAVING JURISDICTION), and all applicable codes.

FACU BATTERY CALCULATION						
QTY	MODEL NUMBER	DESCRIPTION	STANDBY CURRENT	STANDBY TOTAL	ALARM CURRENT	ALARM TOTAL
1	CPU-320	MAIN BOARD	0.25000	0.25000	0.25000	0.25000
1	UDACT	UNIVERSAL DIGITAL ALARM COMM. TRANS.	0.05200	0.05200	0.05200	0.05200
11	FDM-1	DUAL MONITOR MODULE	0.00075	0.00825	0.00075	0.00825
1	FRM-1	RELAY MODULE	0.00060	0.00060	0.00026	0.00026
2	FSP-951_951R	PHOTOELECTRIC SMOKE DETECTOR	0.00030	0.00060	0.00030	0.00060
7	NBS-12LX	MANUAL PULL STATION	0.00038	0.0027	0.00038	0.0027
1	RTS151	REMOTE TEST STATION	0.00000	0.00000	0.01000	0.01000
		NAC OUTPUT #1 F1	0.00000	0.00000	VOLTAGE DROP NAC #1 F1	0.1720
		NAC OUTPUT #2 F2	0.00000	0.00000	VOLTAGE DROP NAC #2 F2	0.0660
TOTAL STANDBY (AMPS)			0.3141	0.3141	TOTAL ALARM (AMPS)	0.5988
AMP LOAD WITHIN LIMITS (8A MAX)			YES		AMP LOAD WITHIN LIMITS (8A MAX)	YES
STANDBY HOURS			24		ALARM MINUTES	0.0030
TOTAL STANDBY AMP HOURS			7.5396		TOTAL ALARM AH	0.0497
					TOTAL AMP HOURS	7.5893
					SAFETY FACTOR 20%	9.1060
12 amp HOUR BATTERIES WILL BE USED						

NAC POWER SUPPLY #1 BATTERY CALCULATION					
MODEL	DESCRIPTION	STANDBY TOTAL	SOURCE	ALARM TOTAL	
PSE-10	MAIN BOARD	0.1560		0.1560	
	OUTPUT #1 (S1)	0.0000	VOLTAGE DROP CIRCUIT S1	0.0660	
	OUTPUT #2 (S2)	0.0000	VOLTAGE DROP CIRCUIT S2	0.5880	
	OUTPUT #3 (S3)	0.0000	VOLTAGE DROP CIRCUIT S3	1.1760	
	OUTPUT #4 (S4)	0.0000	VOLTAGE DROP CIRCUIT S4	0.9020	
	OUTPUT #5 (S5)	0.0000	VOLTAGE DROP CIRCUIT S5	0.5880	
	OUTPUT #6 (S6)	0.0000	VOLTAGE DROP CIRCUIT S6	0.0000	
TOTAL STANDBY (AMPS)		0.1560	TOTAL ALARM (AMPS)	4.5050	
AMP LOAD WITHIN LIMITS (10A MAX)		YES	AMP LOAD WITHIN LIMITS (10A MAX)	YES	
STANDBY HOURS		24	ALARM MINUTES	0.0630	
TOTAL STANDBY AH		3.7440	TOTAL ALARM AH	0.3738	
			TOTAL AMP HOURS	4.1178	
			SAFETY FACTOR 20%	4.9415	
7 amp HOUR BATTERIES WILL BE USED					



WIRE LEGEND		
(Symbol)	NAC	2c #14ga.FPLP
(Symbol)	SLC LOOP	2c #16ga.FPLP
(Symbol)	3/4" CONDUIT	UNLESS NOTED

KEY NOTES:
 ① TO AT-RISK STORAGE CONTAINERS. ALL UNDERGROUND CONDUIT AND ASSOCIATED BACK BOXES PROVIDED BY ELECTRICAL CONTRACTOR. FIELD VERIFY EXACT ROUTING.

Point to Point Method CIRCUIT IS WITHIN LIMITS					
Circuit Number	F1	Source:	NFS-320		
Nominal System Voltage			20.4		
Minimum Device Voltage			16		
Circuit Load Limit (1.5A Max)	YES	Wire Gauge	14	Ohm's Per 1000	3.07
Distance from source to 1st device	127		14		3.07
Wire Gauge for balance of circuit			14		3.07
Standard Wire Resistance in Ohms per 1000 feet.					
18=7.77	16=4.89	14=3.07	12=1.98	10=1.24	
Enter current in amps					
	Distance	from	Voltage		
Device Number	Current	previous device	At source	Drop from source	Percent Drop
Device 1	0.043	127	20.27	0.134	0.66%
Device 2	0.043	79	20.20	0.197	0.96%
Device 3	0.043	61	20.17	0.229	1.12%
Device 4	0.043	79	20.15	0.250	1.22%
Totals	0.172	346			20.15

Point to Point Method CIRCUIT IS WITHIN LIMITS					
Circuit Number	F2	Source:	NFS-320		
Nominal System Voltage			20.4		
Minimum Device Voltage			16		
Circuit Load Limit (1.5A Max)	YES	Wire Gauge	14	Ohm's Per 1000	3.07
Distance from source to 1st device	590		14		3.07
Wire Gauge for balance of circuit			14		3.07
Standard Wire Resistance in Ohms per 1000 feet.					
18=7.77	16=4.89	14=3.07	12=1.98	10=1.24	
Enter current in amps					
	Distance	from	Voltage		
Device Number	Current	previous device	At source	Drop from source	Percent Drop
Device 1	0.066	590	20.16	0.239	1.17%
Totals	0.066	590			20.16

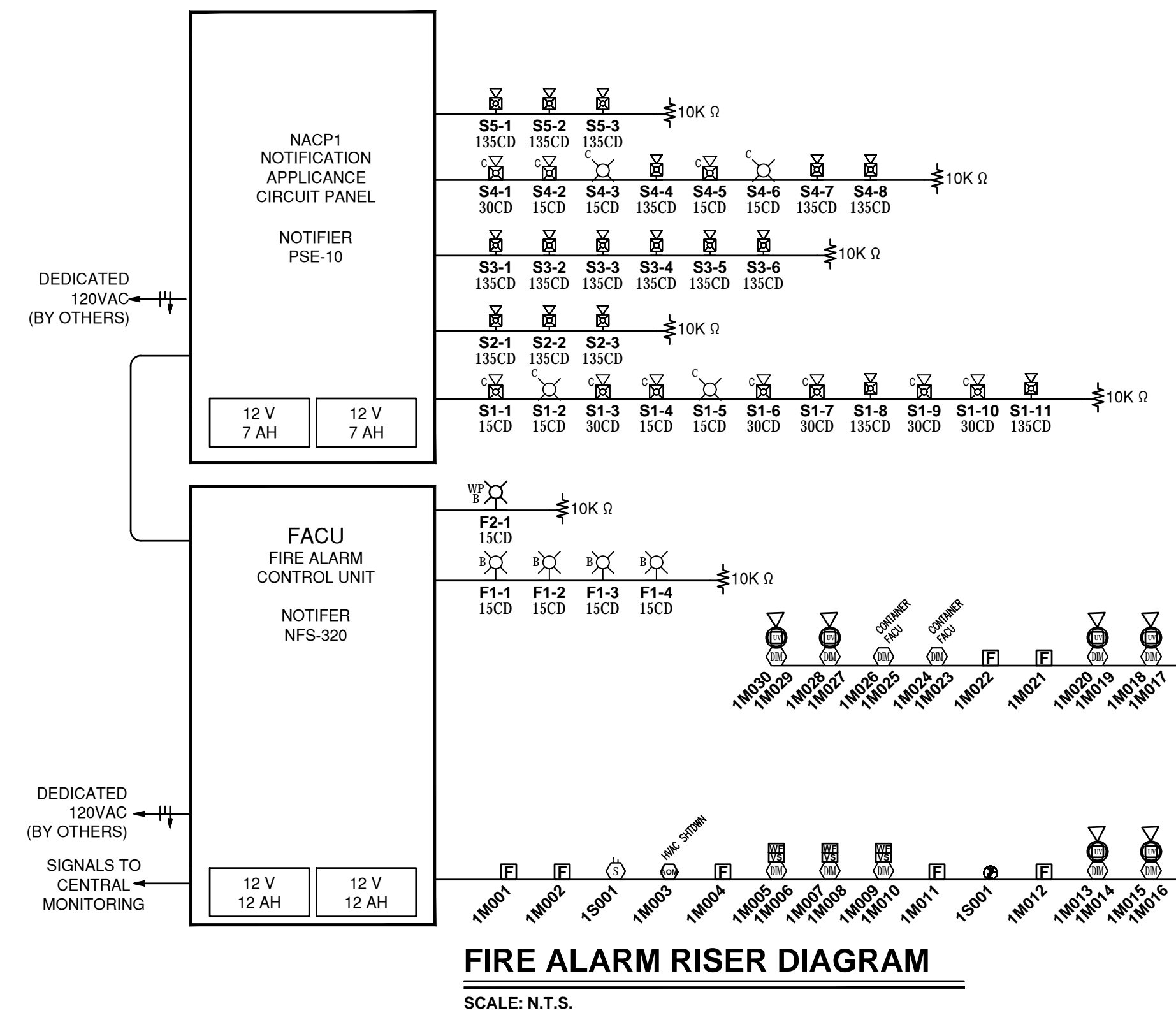
Point to Point Method CIRCUIT IS WITHIN LIMITS					
Circuit Number	S1	Source:	PSE-10		
Nominal System Voltage			20.4		
Minimum Device Voltage			16		
Circuit Load Limit (3A Max)	YES	Wire Gauge	14	Ohm's Per 1000	3.07
Distance from source to 1st device	51		14		3.07
Wire Gauge for balance of circuit			14		3.07
Standard Wire Resistance in Ohms per 1000 feet.					
18=7.77	16=4.89	14=3.07	12=1.98	10=1.24	
Enter current in amps					
	Distance	from	Voltage		
Device Number	Current	previous device	At source	Drop from source	Percent Drop
Device 1	0.071	51	20.07	0.334	1.64%
Device 2	0.041	17	19.96	0.438	2.15%
Device 3	0.090	34	19.76	0.637	3.12%
Device 4	0.071	25	19.63	0.769	3.77%
Device 5	0.041	19	19.54	0.862	4.23%
Device 6	0.090	27	19.41	0.987	4.84%
Device 7	0.090	17	19.34	1.056	5.18%
Device 8	0.196	57	19.14	1.256	6.16%
Device 9	0.090	49	19.03	1.369	6.71%
Device 10	0.090	47	18.95	1.452	7.12%
Device 11	0.196	107	18.82	1.580	7.75%
Totals	0.066	450			18.82

Point to Point Method CIRCUIT IS WITHIN LIMITS					
Circuit Number	S2	Source:	PSE-10		
Nominal System Voltage			20.4		
Minimum Device Voltage			16		
Circuit Load Limit (3A Max)	YES	Wire Gauge	14	Ohm's Per 1000	3.07
Distance from source to 1st device	441		14		3.07
Wire Gauge for balance of circuit			14		3.07
Standard Wire Resistance in Ohms per 1000 feet.					
18=7.77	16=4.89	14=3.07	12=1.98	10=1.24	
Enter current in amps					
	Distance	from	Voltage		
Device Number	Current	previous device	At source	Drop from source	Percent Drop
Device 1	0.196	441	18.81	1.592	7.80%
Device 2	0.196	151	18.44	1.956	9.59%
Device 3	0.196	137	18.28	2.120	10.36%
Totals	0.588	729			18.28

Point to Point Method CIRCUIT IS WITHIN LIMITS					
Circuit Number	S3	Source:	PSE-10		
Nominal System Voltage			20.4		
Minimum Device Voltage			16		
Circuit Load Limit (3A Max)	YES	Wire Gauge	14	Ohm's Per 1000	3.07
Distance from source to 1st device	113		14		3.07
Wire Gauge for balance of circuit			14		3.07
Standard Wire Resistance in Ohms per 1000 feet.					
18=7.77	16=4.89	14=3.07	12=1.98	10=1.24	
Enter current in amps					
	Distance	from	Voltage		
Device Number	Current	previous device	At source	Drop from source	Percent Drop
Device 1	0.196	113	19.58	0.816	4.00%
Device 2	0.196	14	19.50	0.900	4.41%
Device 3	0.196	109	18.98	1.425	6.95%
Device 4	0.196	14	18.92	1.475	7.23%
Device 5	0.196	104	18.67	1.726	8.46%
Device 6	0.196	14	18.66	1.743	8.54%
Totals	1.176	308			18.66

Point to Point Method CIRCUIT IS WITHIN LIMITS					
Circuit Number	S4	Source:	PSE-10		
Nominal System Voltage			20.4		
Minimum Device Voltage			16		
Circuit Load Limit (3A Max)	YES	Wire Gauge	14	Ohm's Per 1000	3.07
Distance from source to 1st device	42		14		3.07
Wire Gauge for balance of circuit			14		3.07
Standard Wire Resistance in Ohms per 1000 feet.					
18=7.77	16=4.89	14=3.07	12=1.98	10=1.24	
Enter current in amps					
	Distance	from	Voltage		
Device Number	Current	previous device	At source	Drop from source	Percent Drop
Device 1	0.090	42	20.17	0.233	1.14%
Device 2	0.071	21	20.06	0.337	1.65%
Device 3	0.041	19	19.98	0.424	2.09%
Device 4	0.196	44	19.79	0.613	3.00%
Device 5	0.071	56	19.61	0.786	3.85%
Device 6	0.041	24	19.55	0.850	4.17%
Device 7	0.196	109	19.29	1.112	5.45%
Device 8	0.196	116	19.15	1.252	6.14%
Totals	0.902	431			18.15

Point to Point Method CIRCUIT IS WITHIN LIMITS					
Circuit Number	S5	Source:	PSE-10		
Nominal System Voltage			20.4		
Minimum Device Voltage			16		
Circuit Load Limit (3A Max)	YES	Wire Gauge	14	Ohm's Per 1000	3.07
Distance from source to 1st device	359		14		3.07
Wire Gauge for balance of circuit			14		3.07
Standard Wire Resistance in Ohms per 1000 feet.					
18=7.77	16=4.89	14=3.07	12=1.98	10=1.24	
Enter current in amps					
	Distance	from	Voltage		
Device Number	Current	previous device	At source	Drop from source	Percent Drop
Device 1	0.196	359	19.10	1.296	6.35%
Device 2	0.196	121	18.81	1.587	7.78%
Device 3	0.196	113	18.68	1.723	8.45%
Totals	0.588	593			18.68



FIRE ALARM RISER DIAGRAM
SCALE: N.T.S.

Signal ONE <i>Protecting Lives and Property</i> <small>a division of WSP</small>	4346 E. ELLWOOD ST. SUITE #100 PHOENIX, ARIZONA 85040 PHONE: (480) 752-1777 R.O.C. 304539 CLASS CR-67			
	ECOBAT 1474 N. V.I.P BLVD CASA GRANDE, AZ 85122 FIRE ALARM RISER DIAGRAM & SYSTEM CALCULATIONS			
SHEET FA.4	Approved By: Marc Buie, Fire Plans Examiner In accordance with the 2018 IFC and all applicable codes THE PRELIMINARY DISTRIBUTION AND USE OF SHOP DRAWINGS BEFORE A FORMAL REVIEW AND APPROVAL PROCESS HAS BEEN COMPLETED BY THE AHJ (AUTHORITY HAVING JURISDICTION).			
NO. REVISION	DATE	DRAWN BY		

ATTACHMENT H

PERSONNEL TRAINING PLANS



RCRA Application Checklist Section H
Personnel Training
40 CFR 270.14(b)(12)

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1. INTRODUCTION

All personnel working at Ecobat Solutions Arizona, Inc. (“Ecobat” or “Facility”) will receive training pertinent to their job functions and responsibilities. Personnel training will generally be provided by Ecobat employees, contracted persons, or contracted entities that are qualified in the safety aspects of handling hazardous wastes. The sections below provide an outline of the personnel training program implemented by Ecobat with an emphasis on how the program applies to individual job positions at the Facility.

2. OUTLINE OF INTRODUCTORY AND CONTINUING TRAINING PROGRAMS

Two types of personnel training will be provided to Facility personnel; initial training and refresher training. Personnel training will be integrated with human resource functions such that training is oriented toward the duties and responsibilities for each job position at the Facility.

Training will include classroom instruction and hands-on training of specific processing tasks at the Facility. All training will be provided by qualified instructors or persons experienced in performing the specific processing task at the Facility or at a similar facility. Some classroom instruction may be provided by contracted entities electronically via the internet for coursework related to certification or certification renewal provided the coursework is recognized by certifying entities.

2.1 Job Title/Job Description

Ecobat’s human resources program includes job descriptions for the various job titles/positions that are required for efficient waste processing operations at the Facility. Job positions at the Facility at Start Up will include the following:

Job Title	Total Employees
Plant Manager	1
Process Engineer	1
Quality Engineer	1
Production Supervisor	1
Maintenance Technician	1
Shipping/Receiving Clerk	1
Shipping/Receiving Operator	1
Production Operator	3



Job Positions at Full Capacity will include the following:

Job Title	Total Employees
Plant Manager	1
Process Engineer	1
Quality Engineer	1
QC Technician	2
Production Supervisor	1
Maintenance Technician	2
Shipping/Receiving Clerk	1
Shipping/Receiving Operator	3
Production Operator	10
Discharge and Dismantle Technicians	3

Multiple job roles may be performed by individual employees. All personnel information including employee names, job positions, job descriptions, and training records are maintained at the Facility. These files are maintained by the Plant Manager/Training Manager and are accessible to all Manager Positions. Training records on current personnel are kept until closure of the Facility; training records on former employees are kept for at least three years from the date the employee last worked at the Facility.

2.2 Description of How Training will be Designed to Meet Actual Job Tasks

Ecobat employees receive introductory 24-hour HAZWOPER training in accordance with 1910.120 (p) before they begin work and 8-hour annual refresher training to allow them to perform their assigned duties in a safe manner. A written certificate will be issued for the initial training documenting that they have successfully completed the necessary training. Copies of the written certificates will be saved in the employee training files.

The training program at Ecobat utilizes audio/visual presentations and group discussions to convey the material to be covered. Classroom training is conducted using audio/visual methods and a group safety meeting format is used for routine training follow-up. Classroom training is given: 1) upon hire before the employee begins work; and 2) annually in refresher training. Group discussion training in safety meetings is given: 1) initial on-the-job training; 2) in 5-minute crew briefs before the start of each shift each day; and 3) in monthly 20-minute safety meetings.

The training received by the employees covers several safety and health education topics that help the employees to perform their jobs safely. Many training topics pertain directly to hazardous waste management.

Training is given on emergency response, fire extinguisher use, other fire prevention measures, respiratory protection, hazard communication, the hazardous waste regulations, hazardous waste manifests, personal protective equipment, forklifts and job specific responsibilities dealing with handling, storing and processing of materials, including hazardous wastes. Training is also given on other directly related safety topics that help prevent accidents and thus help prevent undesirable incidents while managing the hazardous wastes. A brief outline of the hazardous waste training content follows:

1. Pre-employment Training/ Annual Refresher
 - a. Brief overview of RCRA
 - b. Training requirements of RCRA
 - c. What is considered hazardous waste and why
 - d. What materials in the Plant may be hazardous wastes
 - e. Personal hazards presented by these materials
 - f. Environmental hazards presented by these materials
 - g. How, when, and where hazardous wastes are stored
 - h. Cleanup of any minor spillage of hazardous waste
 - i. Notification of Emergency Coordinator
 - j. Emergency Procedures as a result of a major spill
 - k. Implementation of Contingency Plan
 - l. Quality Assurance Program- QS 9000, ISO 14001
 - m. Safety Data Sheets
 - n. Hazard Communication
 - o. Questions and Answers

2. Safety Meetings
 - a. Topics considered important by Personnel
 - b. Topics considered important by Facility Management
 - c. Topics may include safety shares or a review of near-miss accidents, industry alerts or perceived non-observation of safety rules.

3. On-the-Job Training includes review of:
 - a. Raw Materials Receiving Procedures
 - b. Rejection of Receipts Procedures
 - c. Unloading Procedures
 - d. Laboratory Involvement Procedures
 - e. Shipping Procedures
 - f. Hazardous Waste Manifest Handling Procedures
 - g. Inspection Lists
 - h. Safety Procedures for Handling Hazardous Materials
 - i. Emergency Preparedness Plan

The Plant Manager/ Training Manager will review the training program annually. This review will include identifying any changes in processing methods used at the Facility, safety incidents that may have occurred during the previous year, and changes in regulations that may apply to the Facility. The training program will be modified to incorporate any required changes that are identified in this annual review. Should there be changes in processing methods or regulations that require immediate modification of training, the training modules will be revised to incorporate such changes at the earliest possible time. The Facility Manager will document the training review in a Training Review Report and maintain records of the review on-site in the Facility's operating record.

2.3 Qualifications of the Training Manager

The Plant Manager/Training Manager is an Ecobat employee who is responsible for presenting and overseeing the design and implementation of the training program. The Plant Manager/Training Manager is trained on the many aspects of safety and environmental requirements such as OSHA, NFPA, DOT, HAZWOPER and local plant policies and procedures. At the completion of the initial training and each annual course, the Plant Manager/Training Manager certifies that each Personnel has successfully completed the program. Training may also be conducted by a reputable outside firm experienced in the appropriate training courses (HAZWOPER, DOT, etc.).

The personnel training program is coordinated by the Plant Manager/Training Manager. The Plant Manager/Training Manager is responsible for developing and implementing all instruction programs regarding safety and other hazardous waste management issues. Training is provided to Personnel at levels that are relevant to their position within the plant. The Plant Manager/Training Manager is required to receive comprehensive training in safety training and management, hazardous chemicals and materials, and hazardous waste training programs.

2.4 Relevance of Training to Job Position

The type and amount of 24-hour training and the 8-hour refresher does not change position to position. The type of on-the-job training may vary greatly between departments because of the different responsibilities and functions. Ecobat is constantly striving to update and improve its topics of training as the industry and the regulatory requirements change. Therefore, the information provided above is subject to change and is reflective of current practice at this time.

2.5 Training for Emergency Response

All Facility personnel are trained to be familiar with the initial responses to an emergency. This training is provided in the Facility Contingency Plan module and includes the following:

- Location and use of telephones, radios, intercoms and the security alarm systems.
- Initial response to fire or explosion to prevent loss of life;
- Identity of emergency response agencies and contracted entities that are to be notified if the Facility is to be evacuated; and
- Facility evacuation procedures.

Managers, Supervisors, and Technicians are also trained as necessary in the following:

- Inspecting and using emergency response equipment such as fire extinguishers and respirators;
- Calibrating, field testing, and using monitoring equipment;
- Using pumps and other devices in the handling of hazardous waste materials and instruction on how to shut down for emergency conditions;
- Inspecting and using decontamination equipment such as eyewash and showers;
- Precautions and procedures for container and tank filling and overflow prevention;
- Basic instructions in fire prevention and response;
- Instruction in spill prevention and response; and
- Basic instruction in planned and unplanned Facility shutdowns.

2.6 Maintenance of Training Records

Current and past training records are maintained at the Facility and are managed by the Plant Manager/Training Manager. These records include employee files containing employee name, position, job description, dates of instruction and training, and training certificates with general descriptions of the training received. Training records will be maintained by Ecobat until the Facility is closed.

ATTACHMENT I

CLOSURE PLAN



RCRA Application Checklist Section I
Closure Plan
40 CFR 270.14(b)(13) and (15)

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1.0 INTRODUCTION

1.1 Background

This Closure Plan (Plan) has been prepared to address closure requirements applicable to the Ecobat Solutions Arizona, Inc. Facility (Ecobat) detailed in 40 CFR 264, Subparts G and financial assurance requirements detailed in 40 CFR 264, Subpart H, and A.A.C. R18-8-264.A.in support of the Ecobat RCRA Part B permit application. A list of all acronyms and a definition of key terms used in this Plan is provided with General Information provided in Appendix I-1 of Attachment A of the Permit.

The Facility operates as a lithium-ion battery recycling facility. Figure I-1 illustrates the location of the Facility. A site plan illustrating the location of HWMUs is provided in Figure I-2. This plan provides a blueprint for the closure of the hazardous waste units subject to closure requirements and ensures the proper disposal of hazardous waste, which could be harmful to human health or the environment if not properly disposed of as a result of facility closure. The procedures presented in this plan will provide the means for implementing proper facility closure while minimizing the risk of possible release(s) of hazardous waste or hazardous waste constituents to the environment during and after facility closure. This Closure Plan is applicable to the closure of the entire facility as well as the closure of one or more hazardous waste management units (partial closure).

1.2 Closure Performance Standard

The intent of this Plan is to provide a clean closure to all hazardous waste operations such that all hazardous wastes and hazardous waste residues are removed from the facility without imposing restrictions on post-closure use. This Plan provides the steps necessary to close out all hazardous waste operations at the facility at any point during or at the completion of its operating life.

The objectives of Facility closure are to:

- Minimize the need for post closure maintenance,
- To the extent necessary to protect human health and the environment, minimize or eliminate the post-closure escape of hazardous waste, hazardous constituents, leachate or contaminated run-off, or hazardous waste decomposition products to the environment, and,
- Comply with all applicable partial closure and final closure requirements.

All work under this Plan will be conducted in accordance with applicable local, state, and federal regulations.

1.3 Maximum Waste Inventory

The potential maximum inventory of waste is assumed to be the amount in storage at the time of closure. Assumed maximum waste inventory at the time of closure is based strictly on the permitted capacity of the hazardous waste management units.

Storage Unit Name	Maximum Inventory
HWMU1	337,920 pounds
HWMU2	1,267,200 pounds
HWMU3	422,400 pounds

1.4 Schedule for Final Closure of the Facility

The intended life of the Facility for hazardous waste activities is estimated to be 50 years, however the actual operational life will be dependent on the local and regional lithium battery market and not on-site constraints. Closure is therefore projected to occur in or after the year 2074, depending on market conditions.

Closure activities will begin by submitting notice to the ADEQ Hazardous Waste Program of intent to close hazardous waste activities at the Facility. The notice to ADEQ will be provided at least 45 days prior to the date Ecobat expects to begin final closure. A Health and Safety Plan (HASP) will be prepared and submitted to ADEQ Hazardous Waste Program at least 30 days prior to the date Ecobat expects to begin final closure. Closure activities will begin on or prior to the final day of hazardous waste receipt at the Facility. Hazardous Waste Management Units (HWMUs) HWMU1, HWMU2, and HWMU3 are suspected to close concurrently, but only one may be closed in the event of a partial closure. The estimated schedule for conducting all closure activities under this Plan is as follows:

- Initial closure assessment: 5 weeks/35 days
- Inventory removal (HWMU1, HWMU2, HWMU3): 6 weeks/42 days
- Facility decontamination (HWMU1, HWMU2, HWMU3): 8 weeks/56 days
- Confirmation sampling: 2 weeks/14 days
- Closure certification: 2 weeks/14 days
- Total: 23 weeks/161 days

All treatment, removal and disposal of hazardous waste is anticipated to be completed within 90 days of the final receipt of hazardous waste at the Facility. Decontamination and removal of the Facility inventory is anticipated to be completed within 150 days of the final receipt of hazardous waste at the Facility. The completion of closure on the site is expected to occur within 180 days of the final receipt of hazardous waste at the Facility.

1.5 Extension for Closure Time

At the time of closure, if an extension is necessary, all applicable procedures will be followed in requesting such an extension within the specified time frames.

2.0 HAZARDOUS WASTE MANAGEMENT UNITS

Ecobat will receive lithium-ion batteries for recycling. Most batteries will be processed upon arrival. However, storage of spent lithium batteries and other lithium containing materials will be necessary for occasions when materials cannot be processed immediately upon arrival at the facility and for at-risk batteries and non-conforming materials. Site developments include three HWMUs where waste batteries are staged, consolidated, and stored. These units are described as follows:

HWMU1 consists of a concrete pad that houses four containers. Two containers are designated as At-Risk Storage as described below:

- 8'4" H × 22' L × 10' W with Three 60" W × 80" H Double Door with 36" Active Leaf.
- Fire Rated Walls, Intertek Tested & FM Approved 4 Hour fire-resistive construction with protected opening (or equivalent).
- Fire Rated Roof, Intertek Tested & FM Approved for 3 Hours (or equivalent).
- Audible and Visual notification of a fire or release of the dry chemical extinguishing system. Total flooding Dry Chemical Fire Suppression System with automatic and manual release.
- A 3" diameter Fire Department Connection that supplies the fire sprinkler system within the unit. This will allow for the Casa Grande Fire Department to introduce cooling water to the container if it is determined to be required.
- Explosion-proof air conditioning unit. Maintaining consistent temperature within the unit may help reduce the potential for thermal runaway
- Energy-sensing fire detectors (per fire alarm drawings).
- Electrically classified equipment rated for Class I Division 2 hazardous environments.
- Internal Containment Capacity: 824 Gallons.
- Weight: 18,400 Pounds.
- Storage of 12 pallet slots in each container. There are up to 4 drums per pallet. Each pallet can hold up to 3,520 pounds, so the capacity of the two At-Risk Storage Units is approximately 84,480 pounds.

Two containers are considered Normal-Risk Storage as described below:

- 41'-4" L × 9'-4" W × 13'-8" H), Int. 40'-0" L × 8'-6" W × 11'-6" H. Six overhead doors (11'-6" × 11'-0" H).
- UL490 design, FM Approved 4 hours resistive construction with protected openings (or equivalent).
- Total flooding dry chemical system with automatic and manual release.
- Continuous mechanical exhaust with emergency shutdown controls.
- Heat Sensor. Controller shuts down the fan if the dry chemical fire suppression is deployed. Fire suppression is deployed by fusible link.
- Horn/Strobe exterior mounted notification of a fire or release of the dry chemical extinguishing system.
- Electrically classified equipment rated for Class I Division 1 hazardous environments.
- Internal Containment; Water pressure tested and protected with chemical resistant coating, meeting EPA CFR, Part 264.175.
- Internal Containment Capacity: 128 Gallons.
- Storage of 36 pallet slots in each building. There are up to 4 drums per pallet. Each pallet can hold up to 3,520 pounds, so the capacity of the two Normal Risk Storage Units is approximately 253,440 pounds.

HWMU2 consists of outdoor uncovered storage at the Northeast portion of the property. The total square footage for HWMU2 is 17,300 square feet. This area is equipped with thermal imaging cameras connected to the security network or alternative technology that performs the same function. The security system will send automated alerts by email and text message to responsible persons. This area is used for storing drums of scrap batteries on pallets. There are up to 4 drums per pallet. In this area the batteries will be stored in concrete wall-separated "bays" that are 20-ft in width and depth (400 ft² per bay), 9-ft tall (8-ft height of storage), with a drive aisle a minimum of 10-feet. The area can store up to 360 pallets, stored at least one foot below the height of the bay. Each pallet can hold up to 3,520 pounds, so the capacity of HWMU2 is approximately 1,267,200 pounds. The facility may receive larger batteries that do not fit into drums. Large batteries may be stored in wooden crates, manufacturer storage containers or directly on pallets.

HWMU3 consists of outdoor uncovered storage east of the main building. The total square footage for HWMU3 is 5,625 square feet. This area is equipped with thermal imaging cameras connected to the security network or alternative technology that performs the same function. The security system will send automated alerts by email and text message to responsible persons. This area is used for storing drums of scrap batteries on pallets. There are up to 4 drums per pallet. In this area the batteries will be stored in a similar manner to HWMU2, with concrete walls separating 400 ft² storage bays, and a 10-ft wide drive aisle. The area can store up to 120 pallets, stored at least one foot below the height of the bay. Each pallet can hold up to 3,520 pounds, so the capacity of HWMU3 is approximately 422,400 pounds. The facility may receive larger batteries that do not fit into drums. Large batteries may be stored in wooden crates, manufacturer storage containers or directly on pallets.

3.0 CLOSURE PROCEDURES

Closure of the Facility HWMUs will consist of the following steps:

1. Health and Safety Plan (pre-closure)
2. Initial Closure Assessment
3. Inventory Removal
4. Facility Decontamination
5. Confirmation Sampling
6. Demolition of Structures
7. Closure Certification

3.1 Health and Safety Plan (HASP)

Ecobat will prepare a HASP to address workplace hazards associated with implementing this Plan. Personnel will be equipped with appropriate health and safety equipment as identified in the HASP. This equipment is anticipated to include, but will not be limited to, protective clothing, head protection, and respirators. Chemical neutralizers and spill control pads will be available to personnel in the event spills occur during periods of pipe drainage, disconnection, or dismantling processes. All Occupational Health and Safety Administration (OSHA) requirements for personal protection and monitoring will be adhered to at all times. The HASP will be submitted to ADEQ Hazardous Waste Program at least 30 days prior to initiating closure activities.

An estimated 20 hours for a Field Engineer, 20 hours for a Health and Safety Specialist, 10 hours of clerical time and 10 hours of a Project Manager's time are anticipated in preparing the HASP including a visit to the site by professional staff preparing the HASP.

3.2 Initial Closure Assessment

Upon initiating closure and prior to removal of inventory, Ecobat will review Facility history and operational records and conduct an inventory of all waste at the Facility. The inventory will be performed in order to:

- Verify that the actual inventory is consistent with the records of reported waste identity and quantities;
- Confirm the integrity of all containers in preparation for inventory removal; and
- Identify, by visual observation, any potentially contaminated areas.

All HWMU areas will be inspected to look for potential hazards such as visible contamination, chemical hazards and/or physical hazards following removal of all hazardous wastes from the HWMU. A photographic log of each HWMU inspection will be maintained for a summary report of the initial closure assessment. Any potential safety hazard identified in the inspection will be addressed in the HASP before closure begins. Based on the potential wastes stored in these areas, sampling to verify areas have been decontaminated will be analyzed for a variety of parameters as identified in Section 4 of this Plan.

It is anticipated that it will take approximately 2 weeks to review operational records and prepare for the initial closure assessment, one day to inspect the condition of all HWMUs, and approximately 2 weeks to prepare an initial closure assessment report to be included in the final closure report.

3.3 Inventory Removal

Prior to final closure of the Facility, operations will be modified to eliminate storage of materials and operations in HWMU1, HWMU2, and HWMU3. In the event that any batteries are not eliminated by processing, any remaining inventory stored in the HWMUs will be transported to a permitted third party capable of reclaiming lithium-ion batteries. Leaking or damaged batteries will be placed in overpack drums prior to shipment.

If the above scenario is not possible, then a worst case scenario cost estimate for inventory removal has been established. All hazardous wastes and hazardous waste containers will be removed from the Facility and transported under hazardous waste manifest for off-site treatment and disposal at a licensed recycling, treatment or disposal facility prior to closure.

For cost estimating purposes, Ecobat conservatively assumes that each HWMU will be at capacity and storing all wastes in drums. The total inventory is 2,112 drum-equivalents in between all three HWMU's. The total weight in pounds is 2,027,520 pounds. The waste will be transported by a third party.

Palletized batteries and large batteries (e.g., >26 lbs) stored in wooden crates, manufacturer storage containers or directly on pallets will be inspected for stability before removal. All pallets found to be unstable will be restacked and secured with metal banding or shrink wrap. All batteries stored in the unit will be loaded onto trucks for off-site transport using forklifts. Inventory will be properly characterized before transport. Transportation of all wastes, including batteries, will be performed by a permitted transporter.

3.4 Non-Inventory Waste Management

Following the removal of all stored hazardous wastes from the Facility, Facility equipment will be either disposed of as bulk solid waste, bulk hazardous waste, or decontaminated by pressure washing to remove hazardous waste residues that may negatively impact their future use. Each HWMU will be decontaminated by pressure washing exposed surfaces. This section details the disposal of non-inventory items and steps necessary to decontaminate structures, equipment, and soils at the Facility as a component of Facility closure.

Equipment and non-hazardous bulk solid wastes will be sold or disposed of in rented roll-off containers. Any hazardous wastes generated during closure, which may include wash water, rinsate, disposable clothing, contaminated tools and equipment, contaminated soils, and other miscellaneous closure wastes are included in the cost estimate as a separate item from the stored hazardous waste inventory. Wastes generated during closure will be assessed to determine if they are mixtures that include a listed hazardous waste or whether they exhibit a hazardous waste characteristic.

Any metal items and equipment that are destined for reuse or to be recycled as scrap metal will be cleaned within a containment area.

Non-hazardous solid wastes will be sent to a local or regional solid waste landfill. Casa Grande Landfill located approximately 10 miles south of the Facility was used for the purposes of this cost estimate. Recyclable scrap will be sent to a local recycling facility that will accept the type of scrap anticipated in this closure plan.

Hazardous solid wastes will be sent to a regional hazardous waste facility permitted to accept bulk solid hazardous wastes.

3.5 Decontamination

The surface of the floors of HWMU1, HWMU2, HWMU3 will be cleaned using high pressure water. The final and specific choice of sampling points, number of samples, type of sampling performed, and standards used to verify the decontamination objectives will be determined at the time of closure by ADEQ. The standards will be based on ADEQ's regulatory clean-up standards at the time of closure.

High-pressure wash water will be collected on-site. The waters will be characterized and disposed of in accordance with applicable regulations.

The existing concrete and asphalt pads will remain in place unless sampling data from the wash water indicates any contamination requiring additional investigation.

All tools and equipment used during the closure process will be decontaminated. High-pressure water will be used. Rinsate will be collected on-site and the waters will be characterized and disposed of in accordance with applicable regulations.

Disposable personal protective clothing and equipment, such as coveralls and gloves, will be separately contained in drums, labeled and disposed at a permitted off-site facility. All containers used to store waste will be shipped off-site for disposal.

Run-on/run-off mitigation measures during closure activities will be managed within the plantwide stormwater collection system. Any precipitation that would fall within the area would be captured and contained.

3.6 Demolition of Structures

Ecobat intends to leave the existing warehouse, storage pads, and associated structures intact for post-closure operations at the site. No demolition of structures is anticipated under this Plan.

3.7 Closure Certification

To certify that final closure activities at the facility have been completed under the approved plan, Ecobat will submit a closure certification report to ADEQ documenting all closure activities and sampling results. Within 90 days of completion of closure, a closure certification report will be submitted by registered mail, verifying the facility has been closed in accordance with the specifications and procedures in the approved closure plan. This certification will be signed by Ecobat and by an independent registered professional engineer in accordance with 40 CFR 270.A 270.11(b) and (d)). The closure report will include, at a minimum, the following items:

- i) Cover with Engineer's Seal affixed,
- ii) Table of Contents, with Engineer's Seal affixed,
- iii) Executive Summary,
- iv) Deviations from the approved closure plan,
- iv) Closure procedures that were followed,
- v) Results and conclusions,
- vi) Appendices with field notes, photographs, waste profiles, waste manifests, bills of lading, laboratory reports for all waste and site conditions characterization, and any other information necessary to fully describe the site closure.
- vii) Owner/operator and engineer certification statements
- viii) Figures showing the facility and where closure of hazardous waste management units occurred.

If remediation is necessary, other figures may be included showing the areas impacted by the remediation, including zones of the remediation, the support zone, areas where equipment decontamination occurred, access roads for haul trucks, location of the decontamination station of wheels and tires, wheel wells, and vehicle undercarriage, and locations where degraded soil piles were placed and imported soil piles were placed.

Forms for closure certification by the Owner and Project Engineer are included in Appendix I-1.

4.0 CLOSURE SAMPLING AND ANALYSIS PLAN (CSAP)

The purpose of the CSAP is to verify and document clean closure of the HWMUs such that all residues from hazardous waste operations have been sufficiently removed through the process of inventory removal and decontamination to render the Facility suitable for post-closure use. All sampling will be performed by properly trained and qualified personnel at the Field Engineer level with experience collecting environmental samples. Sampling personnel will be required to have active OSHA hazardous waste operations and emergency response certification. All samples will be analyzed by an Arizona certified laboratory using certified QA/QC procedures.

This CSAP provides a sampling plan, sample collection and analytical methodologies, and data validation requirements in sufficient detail to meet sampling and analysis quality assurance requirements necessary for site closure.

Samples will be collected from off-site background locations, locations from the concrete slab for loading dock/dry well and soils underlying the slab, locations for concrete from each HWMU concrete slab and soils underlying the HWMU concrete slabs, locations from at the inbound staging area, disassembly & discharge area, finished goods staging area, locations from the former manufacturing building, locations from the scrubber, baghouse and process lines. Judgmental sampling based on inspections consistent with this CSAP will be used to determine sample locations unless otherwise described in this section. A summary of the samples to be collected under this CSAP and their general location is provided in the table in Attachment I-2. Tentative sample locations for background samples and general samples, including loading dock bay, and background, are shown in Figure I-3. Tentative locations for sample locations within and adjacent to the HWMUs are shown in Figure I-3. Specific sample locations will be determined from the Initial Closure Assessment consistent with this CSAP.

In the event the visual inspection does not identify a sufficient number of areas with suspect contamination for judgmental sampling, samples will be collected at randomly determined locations in or adjacent to the HWMUs.

4.1 Inspection of Concrete Pad Areas

Clean concrete surfaces in the HWMUs will be inspected for cracks by a civil or structural engineer knowledgeable about concrete and damage to concrete structures. The inspector will use the American Concrete Institute's Guide for Conduction Visual Inspections of Concrete in Service or other industry-standard method for evaluating the condition of concrete floor slabs. All areas where the floor slab meets the sidewall foundations and the locations of known saw cuts in the floor slab will be included in the inspection. Locations where significant cracking could potentially penetrate the slab will be visually examined using penetrant dyes and removing the surficial concrete layer near the crack to determine if the crack penetrates into the interior of the slab. The inspecting engineer will document the inspection with a technical memorandum report including a photographic record of observations made during the inspection. Tentative locations of HWMU sample locations are shown in Figure I-3.

If necessary, the civil/structural engineer will develop a concrete integrity assessment plan using destructive or non-destructive concrete test methods to determine the location of any cracks that penetrate the entire thickness of the concrete slab. These areas will be further evaluated by coring the concrete slab for subsurface soil sampling using the sampling and analysis methods identified in this Plan.

Samples will also be collected at the loading dock. The approximate location of loading dock samples are shown in Figure I-3.

4.2 Inspection of Exposed Soil Areas

Materials in the outdoor storage area being stored in palletized drums or other containers that act as storage in the event of a liquid leak from a battery. Nonhazardous solid waste storage and processing occur both on concrete pads as well as in areas of exposed soil in the facility. A visual inspection of areas at the Facility where hazardous waste transport vehicles were known to have been present will be performed by a Field Engineer properly trained to identify areas suspected of soil contamination that may be the result of leaked or spilled hazardous waste, in addition to the sampling locations used on the known areas of hazardous waste management. The inspector will prepare a technical memorandum report with recommendations on soil sampling locations that includes a photographic record of observations made during the inspection.

In particular, exposed soils near the loading/unloading bay doors in the warehouse building and the soils adjacent to the concrete storage surfaces in HWMU1, HWMU2, HWMU3 will be inspected for contamination. Indicators of soil that may require further investigation include:

- Visible discoloration or abnormally wet soils.
- Any areas which soil exhibits a chemical odor.
- Adjacent to stained areas of the concrete pad, particularly areas where the concrete containment curb is stained.
- Areas adjacent to the concrete slab where large spills of liquid hazardous waste are known to have occurred.

The tentative location of soil samples adjacent to HWMUs is shown in Figure I-3.

Any exposed soils designated for further investigation will be first screened for organic compounds consistent with the standard operating procedure for screening soils for Volatile Organic Compounds (VOCs). Screening will be conducted with a PID or similar instrument. The total VOC concentration above background will be noted for each sample screened. For screening in exposed soil areas, a surface sample and a sample at one-foot depth will be collected consistent with this CSAP. If the soil to be sampled is beneath a concrete slab, the concrete will be cored and screening samples collected from the soils or aggregate base course immediately beneath the slab and at a depth of 1 foot beneath the slab. Soil immediately underneath the concrete slab will be screened for VOCs no more than 6 inches below the concrete slab. A detection of VOCs in the screening samples will be considered indicative of soil contamination and the contingent samples will be subject to laboratory analysis consistent with this CSAP.

4.3 Background Samples

Eight (8) background samples will be collected at four (4) locations prior to initiating hazardous waste storage operations at the Facility. Locations along the perimeter of the site will be selected to minimize the potential for contamination from past site use and current solid waste operations. Background samples will be collected at the surface and at one (1) foot depth for the same constituents as soil samples collected under this CSAP. The background concentration will be established as the Upper Confidence Limit of the mean (UCL) with 95 percent confidence. The background distribution will be established as a tolerance interval with a 95 percent confidence and 95 percent coverage, with the Upper Tolerance Limit (UTL) established as a screening level.

The background distribution will be evaluated to determine if sufficient background samples based on a substantial difference test with the acceptable substantial difference (S) being established as 95 percent of the commercial/industrial (non-residential) Soil Remediation Level (nrSRL) for each inorganic compound evaluated in background samples using EPA guidance for comparing background with chemical compounds at CERCLA sites (“EPA Guidance,” EPA 540-R-01-003, OSWER 9285.7-41, Appendix A.2.4, September 2002). If the ratio of S to the standard deviation is less than or equal to three, the number of appropriate background samples will be computed using the methodology in Section 3.1 of EPA Guidance with a minimum detectable difference equal to S. If the ratio of S to the standard deviation is greater than three, the number of appropriate background samples will be computed using a minimum detectable difference of S/2. Additional background samples will be collected and analyzed as necessary to establish the minimum number of acceptable background samples.

4.4 Sampling Methodology

Samples of concrete will be collected from concrete cores produced when drilling the concrete slab with a core barrel drill. Concrete core sample locations must include expansion joints and cold joints where the slab joins the concrete containment berm for each HWMU. Each concrete sample shall be placed in a ziplock bag after coring, labelled, and stored on ice in a cooler pending transport to the analytical laboratory. A complete core of the concrete slab will be considered a representative sample of the concrete slab.

Soils underlying concrete slabs will be accessed for sampling through core holes drilled through the concrete slab. Soil samples from HWMU1, HWMU2, HWMU3 and loading dock areas will be collected from the surface and at depths of 1 and 5 feet below the slab. Soil samples at all other areas will be collected at surface and at 1 foot below the surface.

The soil core will be examined for staining or odors being emitted. A hand auger, hollow-stem auger, or direct-push soil sampler will be used to collect soil below the concrete and aggregate base course material. A hollow-stem auger rig is assumed for the purposes of this cost estimate.

Collected samples will be placed in laboratory-supplied containers immediately upon collection. Samples for VOCs will be collected using a field extraction sample container such as En Core® samplers or equivalent volumetric sampling device. For both soil samples underneath concrete slabs and soil samples in uncovered areas, the sample taken at the soil surface will be analyzed for all parameters listed Table 4. If analytical results for all parameters are non-detect or below nrSRLs and VOCs were not detected in PID screening described in Section 4.2, no further action will be taken. If one of these parameters is above the nrSRL or VOCs were detected above screening levels, additional analysis for the respective parameters will be analyzed for each of the deeper samples. A supplement to the CSAP with additional sample locations and depths to determine the extent of soils exceeding nrSRLs or any Groundwater Protection Levels (GPLs) developed for the site will be prepared and submitted to ADEQ for review and approval. This will be repeated until the extent of contamination has been defined. If necessary, additional samples will be collected from depths greater than 5 feet below the top of native soil.

Sampling boreholes will be backfilled with clean soil. A concrete fill patch will be installed to repair the concrete slab for sample locations within the HWMUs. The repair will be epoxy-sealed consistent with the concrete slab surface.

All samples will be labelled to include, at a minimum, the following information:

- Sample Identification Number
- Date
- Time
- Sampling Personnel
- Matrix

As each sample is collected, a record will be made in the field notebook which further identifies the sample. All samples will be taken to a central staging area where they will be checked and recorded on a chain-of-custody form. Chain-of-custody procedures provide documentation of the handling of each sample from the time it is collected until it is destroyed. To maintain a record of sample collection, transfer between personnel, shipment, and receipt and handling by the laboratory, a "Chain-of-Custody Record" will be included with each sample shipment. This document will record pertinent information about each sample included in that shipment. Each time the samples are transferred to another custodian, signatures of the person relinquishing the sample and receiving the sample, as well as the time and date, will document the transfer.

Chain-of-custody records will have each sample identified with the station number, date and time of collection, matrix, number of containers per station, analytical constituents, and any special instructions for the analytical laboratory. A copy of the chain-of custody will be retained by the sampler while the original is shipped with the samples.

The Chain-of-custody record will be placed inside the shipping container. A sealable plastic bag or other sheet protector will be used to protect the chain-of-custody form during shipment. All samples will be delivered directly to or shipped by the most expedient method to the analytical laboratory. Samples will be packed to prevent container breakage. The shipping container will be sealed with evidence tape to provide evidence of any tampering with samples during transport.

Sampling personnel will be properly trained and experienced in environmental sample collection consistent with sampling methodologies. Sampling personnel will also be trained consistent with OSHA HAZWOPER requirements for work at a hazardous waste management facility with current HAZWOPER certification. The HASP will be followed by all contractors working on-site.

All sample bottle preparation, sample preservation, sample size and maximum holding times shall conform to the procedures described in the analytical method. Sample containers will be prepared by the analytical laboratory and will be used as received. The analytical laboratory will be responsible for disposing of all samples in accordance with local, state and federal regulations. Soil samples collected for VOC will be appropriately collected and either sub-sampled or field extracted in accordance with EPA Method 5035.

Sampling equipment will be decontaminated after each use and before reusing by the following steps:

- Detergent wash followed by a clean water rinse
- Isopropyl alcohol rinse
- Triple rinse with deionized water and air dry
- Covered to minimize open exposure

Cleaning solutions and rinses will be collected into drums, totes or a portable tank and characterized for off-site disposal at an approved disposal facility.

4.5 Analytical Methods

Heavy metals, VOCs, SVOCs, and to a lesser extent pesticides and herbicides are present in a wide variety of waste streams accepted at the Facility. The analysis procedures listed below are expected to provide a good indication of the possible contaminants that could be present at the time of closure. Analytical procedures and detection limits of the most recent version of each of the following methods published in EPA Hazardous Waste Test Methods/SW-846 are to be used in analyzing for specific compounds in closure samples:

- Method 6010 (metals: As, Ba, Cd, Cr, Pb, Hg, Se, Ag, Fe, Ni, Ti and Zn)
- Method 8260 (VOCs)
- Method 8270 (SVOCs)

Soil samples will be analyzed for total concentrations for each of 12 heavy metals as identified above. The soil concentrations for total metals will be compared statistically to the background data set. Statistical comparison of mean concentration in soil samples collected from operational areas will be compared to the UCL of uncontaminated background samples using to determine if the distribution of analytical results is representative of background concentrations. Individual sample results will be compared to the background UTL to determine if specific samples are representative of the background distribution. Ecobat may propose an alternate statistical procedure with ADEQ approval of an amendment to this Plan if determined to be necessary or appropriate.

If background samples identify metals in constituents above non-residential Soil Remediation Levels (nrSRLs) or GPLs, the samples will be analyzed for underlying hazardous constituents to characterize the nature of the exceedance.

4.6 Data Validation

Analytical laboratory data will be validated by reviewing the precision and accuracy of the data. The precision, or degree of agreement between measurements, is determined by the standard deviation of a single measurement from the mean of the data set. Duplicates of the same sample will be analyzed by the laboratory as a routine precision check consistent with the laboratory's QA/QC plan. Field duplicates will be collected at a rate of ten percent (10%) of samples for each sampling media, selected at random, to be analyzed as a check on sampling and analytical technique.

The accuracy of a sample measurement is reported as percent spike recovery which represents the percentage recovery of a known quantity of compound which is added to the original sample and subsequently analyzed. The methods used in sample analyses will contain quality control audit standards, including sample spiking, to be implemented to ensure data reliability.

The analytical laboratory will prepare quality assurance documentation for all samples analyzed for each sampling event. The level of detail will be sufficient to document all quality assurance activities specified by the method and shall include periodic assessment of measurement data accuracy, precision, and completeness, results of performance audits, results of systems audits, and significant quality assurance problems and resolutions.

The analytical laboratory will analyze the samples using the procedures outlined in EPA Guidance Publication SW 846 for all analyzed compounds. All analytical reports received from the laboratory will be included in the closure certification report and will include quality assurance test results, analytical methods, detection limits and dates. Analytical data will be summarized in tabular form for ease of presentation in a certification report. Statistical analysis comparing soil sample results with background concentrations will be prepared and submitted with the report.

4.7 Data Analysis

Analytical results for samples in exposed areas of soil will be compared to UTL screening level as a preliminary indication of whether or not the results are representative of the background distribution. For samples with contaminants exceeding the UTL, additional judgment samples for the contaminants exceeding the UTL screening level will be collected on a step-out pattern of 10 feet from the sampling location where UTLs were exceeded. The step out pattern of judgment sampling will continue until the extent of contamination is characterized by an area with maximum concentration of contaminants identified.

Areas where contaminants are identified above RSLs will be evaluated in relation to Arizona health-based guidance levels designated as nrSRLs. In the event analytical results indicate that the soils contain contaminants above the Arizona nrSRL's, the affected soils as defined by step-out samples will be excavated and treated or disposed at a permitted site. A minimum of one additional sample will be collected and analyzed six inches below each excavation to determine whether all contaminated soils have been removed. Larger excavations may require additional samples.

In addition to comparison with Arizona health-based guidance levels, Ecobat will determine whether Arizona GPLs are warranted for any contaminants detected in soil samples. Ecobat will use ADEQ guidance and methods for establishing GPLs for the contaminants of concern. Soils with contaminants above GPLs will be considered to not meet clean closure criteria under this Plan.

Impacted soil that does not meet the clean closure criteria will be removed and treated or disposed in an off-site permitted facility in accordance with appropriate State and Federal regulations. If the extent or location of contamination makes removal impractical based on technical or economic reasons, it may be necessary to use other methods to address the impacted area. This may include in-situ treatment or it may involve post-closure care. A plan to address soil corrective action, a site-specific risk analysis, or a Post Closure Plan, will be developed if necessary.

4.8 Additional Sampling

In the event contamination is discovered in samples collected at a depth of 5 feet bgs, additional samples will be collected at the location of the detection at one-foot intervals until an area of no contamination is discovered. If the water table is encountered, a sample will be collected at the depth of the water table. In this event, a grab sample of groundwater will be collected from the top of the aquifer using a disposable or decontaminated sampling bailer.

If additional samples are required due to any unexpected event, such as discovery of contamination or discovery of a release to the environment, the closure plan will be modified and such modification will be submitted to ADEQ for approval.

5.0 FINANCIAL ASSURANCE

5.1 Closure Cost Estimate

A closure cost estimate is presented in Appendix I-2. The closure cost estimate contains a summary page and supporting documents to calculate an estimated cost for each element of the Facility closure.

The closure cost estimates are based on closure costs involving third parties for inventory disposal, transportation, site/equipment decontamination, labor, and administrative and engineering certifications. Engineering estimates were made for the cost of PPE, vehicle fuel consumption and cost, non-hazardous waste disposal and recycling facility costs, miscellaneous sampling materials costs, and shipping costs associated with sample shipments to an analytical laboratory. Although no inventory is anticipated for the time of closure, Ecobat has included costs for the removal of the maximum capacity of stored batteries.

As calculated in October, 2024, the total direct costs for the Facility closure are estimated to be \$1,092,474. A contingency of 20 percent of the total direct costs was applied for an additional \$218,494.72 and a project management cost of 5 percent of the total direct costs was applied for an additional \$54,623.68. The total estimated costs for Facility closure financial assurance is estimated to be \$1,365,592.

5.2 Financial Assurance Mechanism for Closure

Ecobat will execute and provide to ADEQ a financial assurance mechanism in compliance with R18-8-264.A (40 CFR 264, Subpart H). Ecobat will establish a fiduciary mechanism for closing the Facility consistent with this Plan. The fiduciary mechanism will provide funds for closure of the existing units based on the closure cost estimates provided herein in the event Ecobat is unable to provide the financial resources needed for closure. The fiduciary mechanism will be presented to ADEQ for review and approval prior to issuance of the final permit.

The amount of fiduciary mechanism will be adjusted annually by a new estimate of the maximum cost of closure in current dollars or by using an inflation factor derived from the most recent Implicit Price Deflator for Gross National Product published by the U.S. Department of Commerce in its Survey of Current Business. The inflation factor will be determined by dividing the latest published annual Deflator by the Deflator for the previous year. The first adjustment is made by multiplying the closure cost estimate by the inflation factor. The result is the adjusted closure cost estimate. Subsequent adjustments are to be made by multiplying the latest adjusted closure cost estimate by the latest inflation factor.

5.3 Post Closure Care

Post closure care and subsequent funding will not be necessary at the Facility since all hazardous components and materials will be removed from the site during closure activities. If hazardous components or contaminated soils are found at the site during closure and the Facility demonstrates that not all contaminated soils can be practically removed or decontaminated, post closure care will be performed as specified in 40 CFR 264.197. A post closure plan will be prepared in accordance with all applicable post closure requirements under 40 CFR 264.117 through 264.120.

As this Plan anticipates clean closure of the Facility, a post closure care cost estimate and post closure care financial assurance mechanism is not applicable.

6.0 MISCELLANEOUS PROVISIONS

6.1 Notice in Deed

If contamination above the nrSRLs remains after closure, Ecobat will comply with deed notice requirements in R18-8-101 (40 CFR 270.14(b) (14)).

6.2 Liability Insurance

Liability coverage for sudden and non-sudden accidental occurrences with a four million dollar (\$4,000,000) per occurrence and an annual aggregate amount of eight million dollars (\$8,000,000) will be secured by the Facility before permit issuance. Such liability coverage is demonstrated by a Hazardous Waste Certificate of Liability Insurance.

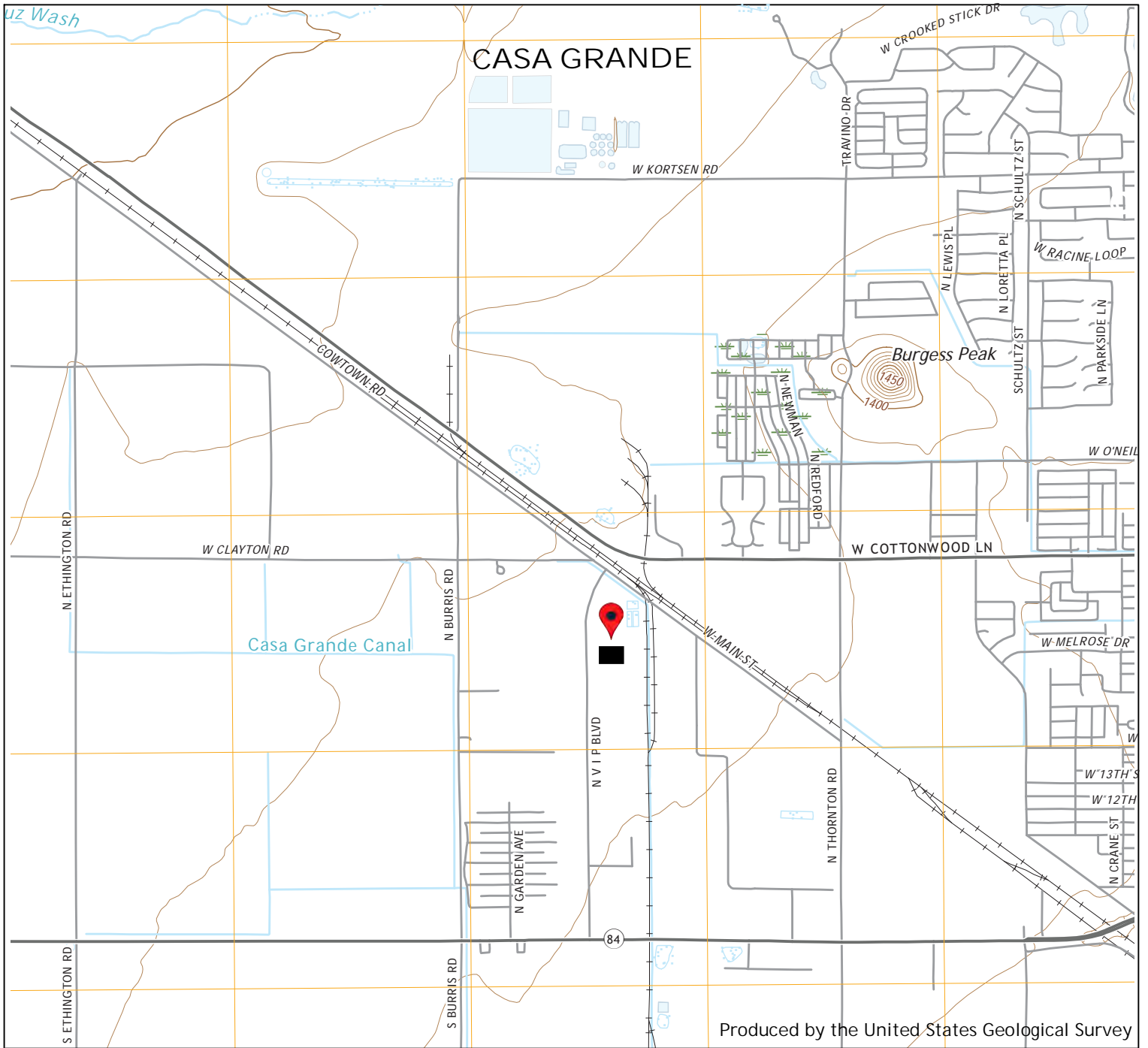
6.3 Amending the Closure Plan

Ecobat may amend this closure plan at any time through the permit modification process during the life of the facility to incorporate any changes in operating plans, Facility design, or waste streams. If a modification is required, the request for modification will be submitted in accordance with 40 CFR 264.112 (c)(3).

6.4 Pre-Closure Corrective Action

Section 3004 (u) of the Resource Conservation and Recovery Act, 42, USC §6924, as amended by section 206 of the Hazardous and Solid Waste Amendments of 1984 (JHWA), and 40 CFR 264.101, requires that all permits address corrective action for releases of hazardous waste or hazardous constituents from any solid waste management unit (SWMU), regardless of when waste was placed in the unit or whether the unit closed. As of this date of this Closure Plan, there have been no releases of hazardous waste or hazardous waste constituents from a SWMU or HWMU at the Facility.

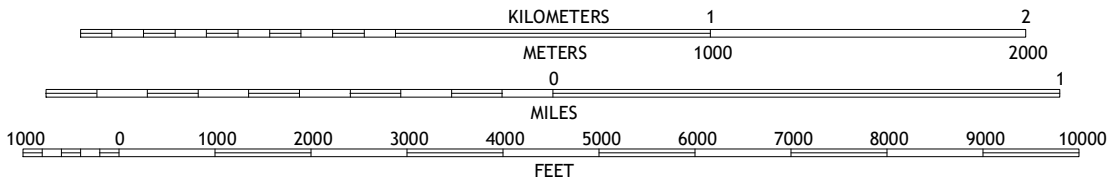
FIGURES



Produced by the United States Geological Survey

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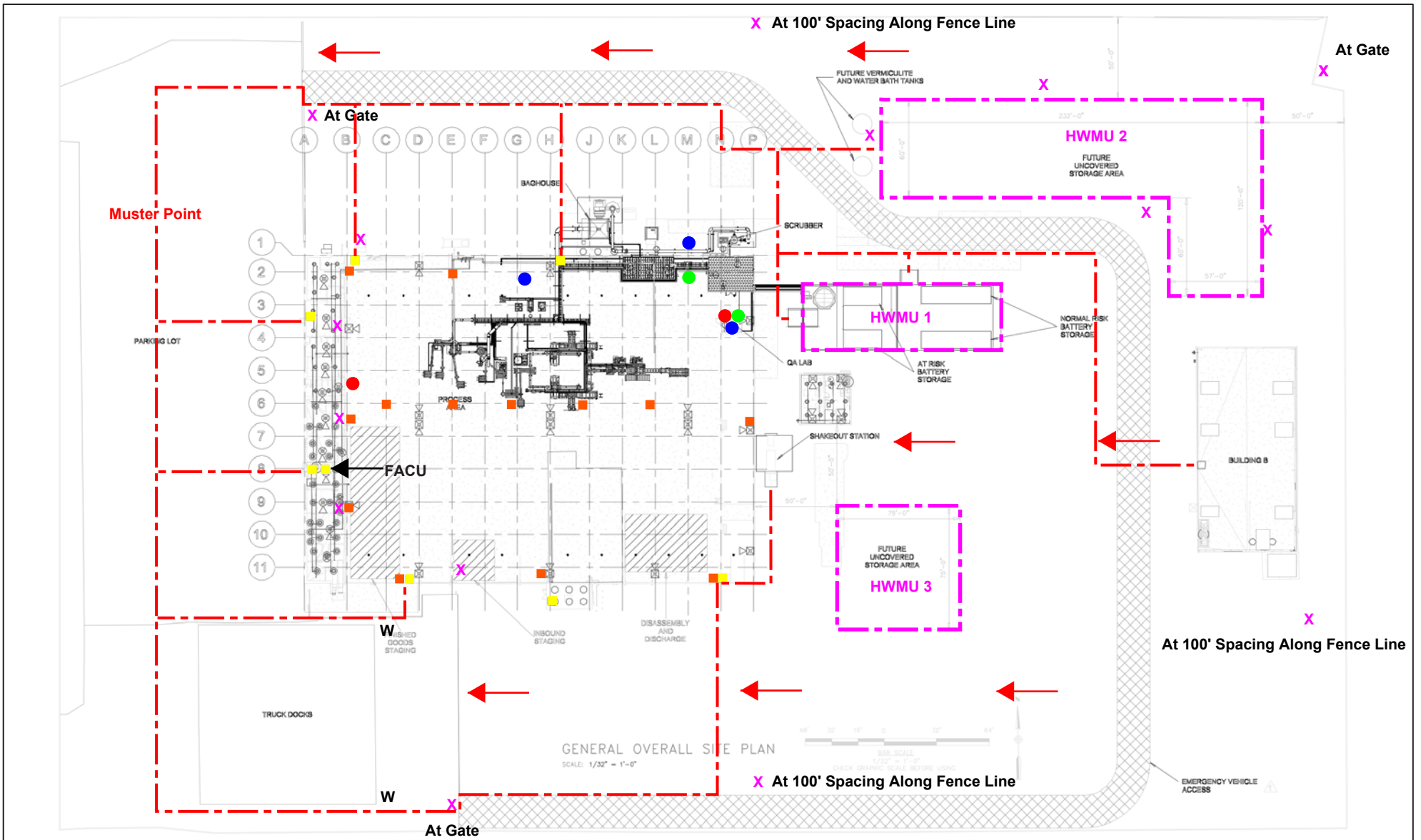


ROAD CLASSIFICATION

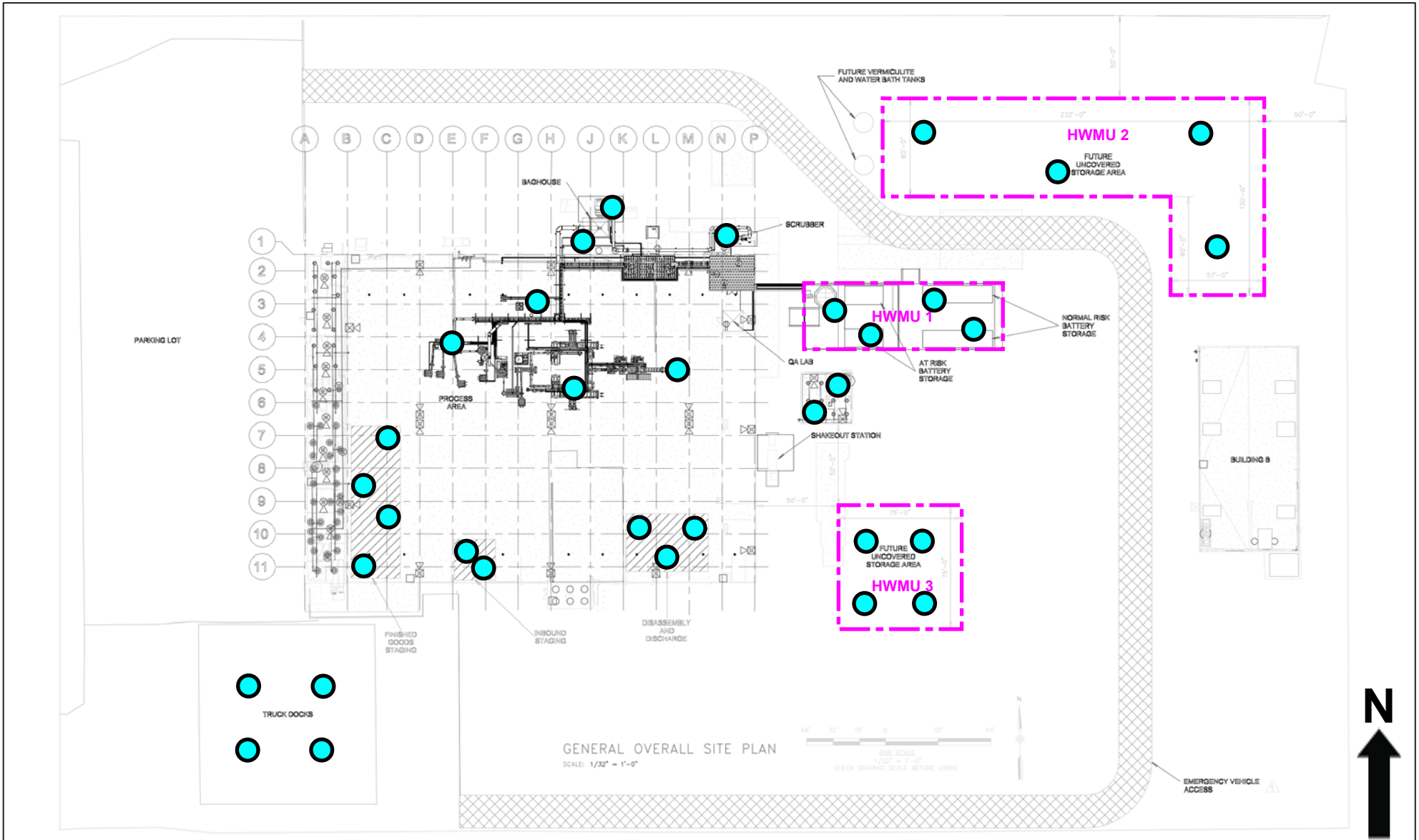
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- Secondary Hwy
- Ramp
- Local Connector
- Local Road
- 4WD
- Interstate Route
- US Route
- State Route



 <small>associates environmental</small>	Associates Environmental 18141 Beach Boulevard, Suite 200 Huntington Beach, CA 92648 (949) 352-4941 Fax (714) 362-9085		
	Description Ecobat Solutions Arizona, Inc. Figure I-1 - Site Location Map		
Job No.	Drawing Date	Drawn By:	Drawing
433-147	06-06-2024	MO	2.0

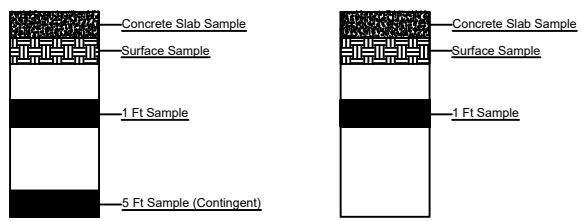


Legend Direction of Flow HWMU: Hazardous Waste Management Unit Emergency Exit Route Fire Pull Station Fire Extinguisher First Aid Kit Spill Kit Shower + Eyewash Warning Sign Dry Well Location		associates environmental Associates Environmental 18141 Beach Boulevard, Suite 200 Huntington Beach, CA 92648 (949) 352-4941 Fax (714) 362-9085	
		Description Ecobat Solutions Arizona, Inc. 1474 North V.I.P. Blvd. Casa Grande, Arizona 85122	
Secondary Description Figure I-2 - Site Map		Scale	
Job No.: 433-147	Drawing Date: 07-12-2024	Drawn By: MO	Drawing Version: 1.0



Legend

- HWMU: Hazardous Waste Management Unit
- Sampling Locations



Associates Environmental
18141 Beach Boulevard, Suite 200
Huntington Beach, CA 92648
(949) 352-4941 Fax (714) 362-9085

Description		Ecobat Solutions Arizona, Inc. 1474 North V.I.P. Blvd. Casa Grande, Arizona 85122	
Secondary Description		Figure I-3 - Sampling Locations	Scale
Job No.: 433-147	Drawing Date: 05-02-2024	Drawn By: MO	Drawing Version: 1.0

Appendix I-1
Closure Certifications



PE and Owner Operator Certification Templates



**FACILITY CLOSURE
OWNER OR OPERATOR CERTIFICATION**

(The owner or operator must certify that the activities performed in closing the facility are in accordance with the specifications of the closure plan approved by the Arizona Department of Environmental Quality, Waste Programs Division. Accordingly, the certification will be straightforward, no matter how complex closure itself has been.[40 CFR 264.115 as adopted by A.A.C. R18-8-264.A or 40 CFR 265.115 as adopted by A.A.C. R18-8-265])

I, _____, of
Owner or Operator

Name and address of hazardous waste facility

hereby state and certify that, to the best of my knowledge and belief, the above-named hazardous waste facility has been closed in accordance with specifications of the approved closure plan, and that the closure was completed on the _____ day of _____, 20 ____.

Signature

Date



**PARTIAL CLOSURE
OWNER OR OPERATOR CERTIFICATION**

(The owner or operator must certify that the activities performed in the closure of the unit(s) identified below are in accordance with the specifications of the partial closure plan approved by the Arizona Department of Environmental Quality, Waste Programs Division. Accordingly, the certification will be straightforward, no matter how complex closure itself has been.[40 CFR 264.115 as adopted by A.A.C. R18-8-264.A or 40 CFR 265.115 as adopted by A.A.C. R18-8-265])

I, _____, of
Owner or Operator

Name and address of hazardous waste facility

hereby state and certify that, to the best of my knowledge and belief, the

Hazardous Waste Treatment, Storage, or Disposal Unit(s)

has (have) been closed in accordance with specifications of the approved partial closure plan, and that the closure was completed on the _____ day of _____, 20 ____.

Signature

Date



PROFESSIONAL ENGINEER CLOSURE CERTIFICATION

(An independent registered professional engineer(s) must certify that the facility has been closed in accordance with the approved closure plan. The engineer is not certifying the adequacy of the activities or the plan; he is certifying only that, in his judgement, the activities performed were in accordance with the specifications in the approved plan. At final closure the professional engineer who certifies that closure has been completed may rely in part on earlier certifications of any partial closures and in part on his inspections of the facility as a whole to ensure that those partially closed areas have been maintained. [40 CFR 264.115 as adopted by A.A.C. R18-8-264.A or 40 CFR 265.115 as adopted by A.A.C. R18-8-265])

I, _____, a registered professional engineer, hereby certify that I have verified to the best of my knowledge and belief that Professional Engineer Closure Certifications were issued for all prior closure activities at

(Name and address of hazardous waste facility)

and that I have made visual inspection(s) of the aforementioned facility, and closure of the aforementioned facility has been performed in accordance with the specifications contained in the closure plan for the facility approved by the Arizona Department of Environmental Quality, Waste Programs Division.

Signature

Date

Professional Seal(Pursuant to A.R.S. §32-125)
Issued by the Arizona State Board of Technical Registration



PROFESSIONAL ENGINEER PARTIAL CLOSURE CERTIFICATION

(An independent registered professional engineer(s) must certify that the facility’s hazardous waste management unit(s) has/have been closed in accordance with a respective approved closure plan. The engineer is not certifying the adequacy of the activities or the plan; he is certifying only that, in his judgement, the activities performed were in accordance with the specifications in the approved plan. [40 CFR 264.115 as adopted by A.A.C. R18-8-264.A or 40 CFR 265.115 as adopted by A.A.C. R18-8-265])

I, _____, a registered professional engineer, hereby certify, that I have made visual inspections(s) of the hazardous waste management unit(s) as described in the plan dated, _____ and designated as

Partial Closure Plan Title

I also verify to the best of my knowledge and belief that all activities as required per the approved partial closure plan have been performed in accordance with the specifications contained in the closure plan for the facility approved by the Arizona Department of Environmental Quality, Waste Programs Division.

Signature

Date

Professional Seal(Pursuant to A.R.S. §32-125)
Issued by the Arizona State Board of Technical Registration

Appendix I-2
Closure Cost Estimate

Ecobat Solutions Arizona, Inc.
 Summary of Closure Costs

Closure Activity	Estimated Cost	Supporting Information
Health and Safety Plan	\$5,000	Estimate provided by Associates Environmental.
Initial Closure Assessment	\$5,000	Estimate provided by Associates Environmental.
Inventory Removal	\$ 973,209.60	Maximum possible inventory removal.
Waste/Recycling Disposal and Decontamination	\$15,000	Estimate.
Sampling	\$83,264	Cost estimates provided by sampler, driller, lab.
Closure Sampling Report	\$10,000	Estimate provided by Associates Environmental.
Closure Certification	\$1,000	Estimate.
Total Cost	\$1,092,474	
Contingency	\$218,494.72	20%
Project Management	\$54,623.68	5%
Total Cost	\$1,365,592	

Sampling Locations

Sampling Area	Number of Locations	Concrete/Asphalt Samples	Primary Soil Samples	Contingent Soil samples	Rinsate Samples
General					
Background	4	0	8	0	0
Loading Dock	4	4	8	4	1
Total	8	4	16	4	1
HWMU1					
Concrete Pad Area	4	4	4	0	1
Underlying Soils	4	0	8	4	0
Total	8	4	12	4	1
HWMU2					
Storage Area	4	4	4	4	1
Underlying Soils	4	0	8	4	0
Total	8	4	12	8	1
HWMU3					
Concrete Pad Area	4	4	4	4	1
Underlying Soils	4	0	8	4	0
Total	8	4	12	8	1
SWMU's					
Inbound Stage Area Main Building	2	2	4	0	0
Dissassembly & Discharge Area Main Building	3	3	6	0	0
Finished Goods Staging Area Main Building	4	4	8	0	0
Total	9	9	18	0	0
AOC					
Former Manufacturing Building	2	2	4	0	0
Total	2	2	4	0	0
Process Areas					
Scrubber	1	1	2	0	0
Baghouse	2	2	4	0	0
Process Lines	4	4	8	0	0
Total	7	7	14	0	0
Total	50	34	88	24	4

Summary of Sampling Costs

Desctiption	Source	Hrs/Qty	Unit Cost	Total Cost
Field Engineer	Chambers			14419
Concrete Coring	All-Cut			8695
Sample Costs (Concrete)	Eurofins	34	385	13090
Sample Costs (Soil)	Eurofins	88	385	33880
Sample Costs (Rinsate)	Eurofins	4	385	1540
Soil (Contingent)	Eurofins	24	385	9240
Sampling materials	Estimate		2000	2000
Sample Shipping	Estimate		400	400
Total				\$83,264

Closure Costs for Inventory Removal

Inventory Description	Drums	Disposal Facility	Pounds	Cost/pound**	Disposal Facility	Total Cost
Lithium Batteries	2112	Veolia	2,027,520	\$ 0.48	\$ 973,209.60	\$ 973,209.60

*Cost per pound from quote provided by Veolia. This includes loading, transportation and disposal.



Chambers Environmental Services, Inc.

4230 5th Ave
 San Diego, CA 92103
 (619) 889-9331

Estimate

Date	Estimate #
8/13/2024	2024-07

Name / Address
Associates Environmental 18141 Beach Blvd., Suite 200 Huntington Beach, CA 92648

P.O. No.

Arizona Soils

Description	Hrs/Qty	Rate	Total
Prepare for assigned tasks.	4	105.00	420.00
MOB/DE-MOB	14	100.00	1,400.00
Mileage	760	1.15	874.00
Soil Sampling and concrete sampling tasks	75	105.00	7,875.00
Sampling materials for sample collection	112	10.00	1,120.00
Hotel Fees	9	210.00	1,890.00
Daily Per Diem Charges - FAR rates	9	70.00	630.00
Prepare Data & Archive Data	2	105.00	210.00
		Total	\$14,419.00

Jennifer Fieber

From: JR <assistant@all-cut.com>
Sent: Tuesday, August 27, 2024 3:18 PM
To: Jennifer Fieber
Subject: Re: Follow Up information

Jennifer,

The estimate to core drill 34- 4" cores X 6" cc is \$7,685.00 to \$8,695.00

JR
ALL-CUT

From: Jennifer Fieber <jfieber@associatesenvironmental.com>
Sent: Tuesday, August 27, 2024 10:19 AM
To: JR <assistant@all-cut.com>
Subject: RE: Follow Up information

Hi JR,
These areas were either containment for lithium batteries or the location of the equipment for recycling lithium batteries. There are no known issues, but the sampling is required for closure. Let me know if you need more info.

Thank you,
Jennifer Fieber
Associates Environmental

From: JR <assistant@all-cut.com>
Sent: Tuesday, August 27, 2024 1:04 PM
To: Jennifer Fieber <jfieber@associatesenvironmental.com>
Subject: Re: Follow Up information

Jennifer,

The concrete we are coring into was their hazardous material or fluids on them?
If there was what was it?

JR
ALL-CUT

From: Jennifer Fieber <jfieber@associatesenvironmental.com>
Sent: Tuesday, August 27, 2024 9:14 AM
To: JR <assistant@all-cut.com>
Subject: Follow Up information

I requested a quote this morning, and I'm following up with additional information requested by your office:

1. Address: 1474 N. VIP Blvd, Casa Grande, AZ
2. Thickness of concrete – 6”
3. Drilling inside of the building: 15
4. Drilling outside of the building: 19
5. Core diameter: 4”

Thank you,
Jennifer Fieber
Associates Environmental



Environment Testing

Eurofins Calscience Tustin
2841 Dow Avenue, Suite 100
Tustin, CA 92780

Tel: (714) 895-5494

www.EurofinsUS.com

August 14, 2024

Jennifer Fieber
Associates Environmental Inc
18141 Beach Blvd
Suite 200
Huntington Beach, CA 92648
jfieber@associatesenvironmental.com | Tel: (949) 352-4941

Subject: Analytical Services Proposal - Concrete, Soil and Rinsate
Eurofins Calscience Quotation Number 57021186

Dear Jennifer Fieber:

We appreciate the opportunity to provide your company with a quotation for your Concrete, Soil and Rinsate project. Eurofins Calscience has a unique combination of full service capabilities, technical expertise, local service options, and online resources necessary to ensure successful project outcomes.

At Eurofins Calscience, quality is the hallmark of our business. To ensure your project's data quality objectives are met, we offer experienced personnel who are trained and committed to completing your analytical project on time, a fully documented QA/QC program, and state-of-the-art laboratory equipment and facilities. Janice Hsu has been assigned as your Project Manager for this work and can be reached by phone at 657 210-6359 or via email at Janice.Hsu@et.eurofinsus.com.

The following quotation includes a detailed price breakdown, as well as any notes and clarifications pertaining to your project, and is subject to Eurofins Calscience's Standard Terms and Conditions, unless otherwise agreed upon in writing.

We thank you for choosing Eurofins Calscience, and we look forward to working with you on this project.

Sincerely,

Don Burley
Inside Sales Support
Donald.Burley@et.eurofinsus.com
657 250-0198

cc: Shane Nystrom; Janice Hsu

Eurofins Calscience Tustin
2841 Dow Avenue, Suite 100
Tustin, CA 92780

Prepared for:
Jennifer Fieber
Associates Environmental Inc
18141 Beach Blvd
Suite 200
Huntington Beach, CA 92648
jfeiber@associatesenvironmental.com | Tel: (949) 352-4941

Prepared by: Burley, Don
Date: 8/14/2024 Expiration Date: 11/12/2024

Project: Concrete, Soil and Rinsate

Quote Number: 57021186 - 0

Concrete TAT: 10_Days (Business Days) (to be analyzed by Eurofins Calscience)

Matrix	Method	Test Description	Quantity	Unit Price	Surcharge	Extended Price
Solid	6010B	Title 22 ICP Metals	1	\$ 90.00		\$ 90.00
Solid	7471A	Mercury	1	\$ 30.00		\$ 30.00
Solid	8260B	VOCs	1	\$ 90.00		\$ 90.00
Solid	8270C	SVOCs	1	\$ 175.00		\$ 175.00
Solid	Crushing	Concrete Crushing (if needed)	0	\$ 60.00		\$ 0.00
Total Concrete						\$ 385.00

Soil TAT: 10_Days (Business Days) (to be analyzed by Eurofins Calscience)

Matrix	Method	Test Description	Quantity	Unit Price	Surcharge	Extended Price
Solid	6010B	Title 22 ICP Metals	1	\$ 90.00		\$ 90.00
Solid	7471A	Mercury	1	\$ 30.00		\$ 30.00
Solid	8260B	VOCs	1	\$ 90.00		\$ 90.00
Solid	8270C	SVOCs	1	\$ 175.00		\$ 175.00
Total Soil						\$ 385.00

Rinsate TAT: 10_Days (Business Days) (to be analyzed by Eurofins Calscience)

Matrix	Method	Test Description	Quantity	Unit Price	Surcharge	Extended Price
Water	6010B	Title 22 ICP Metals	1	\$ 90.00		\$ 90.00
Water	7470A	Mercury	1	\$ 30.00		\$ 30.00
Water	8260B	VOCs	1	\$ 90.00		\$ 90.00
Water	8270C	SVOCs	1	\$ 175.00		\$ 175.00
Total Rinsate						\$ 385.00

Quote Other Charges

Description	Quantity	Unit Price	Extended Price
Safe and Environmentally Responsible Waste Management (per sample)	3	\$ 3.00	\$ 9.00
Deliverables - Level II Report (\$)	1	\$ 0.00	\$ 0.00
Minimum Total Invoice per analytical receipt (for details see T&Cs)	0	\$ 250.00	\$ 0.00
Surcharge Rush Bottle Order (< 3 BD), if available (shipping separate)	0	\$ 50.00	\$ 0.00
Total Other Charge			\$9.00

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jfeber@associatesenvironmental.com | Tel: (949) 352-4941

Prepared by: Burley, Don
Date: 8/14/2024 Expiration Date: 11/12/2024

Project: Concrete, Soil and Rinsate

Quote Number: 57021186 - 0

Total Other Charges	\$ 9.00
Total Analysis Charges	\$ 1,155.00
Grand Total for Quote 57021186	\$ 1,164.00

***Quoted charges do not include sales tax. Applicable sales tax will be added to invoices where required by law.*

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Prepared by: Burley, Don

Date: 8/14/2024

Expiration Date: 11/12/2024

Project: Concrete, Soil and Rinsate**Quote Number: 57021186 - 0**

PROJECT DETAILS

Additional Information

General Terms & Conditions

Unless agreed upon in writing prior to sample receipt, the attached General Terms & Conditions apply to this sample submittal.

Minimum Charge

A \$250 minimum invoice fee per analytical receipt will be applied to all invoices. This minimum is applied whenever a sample(s) is submitted where the analytical charges do not total \$250; that is, an additional amount will be included such that the analytical invoice total is \$250 which does not include the SERWM fee, rush charges, or any other non-analytical charges.

Sample Receiving

Sample Receiving is located at each of the main laboratory facilities, please be sure to utilize the laboratory that will be managing your specific project.

Samples received after 3:30 PM, or anytime on Saturday, will be considered as received on the following business day for the purposes of calculating the turnaround time (TAT). Please note that if a Eurofins Calscience courier receives samples in the field, the TAT does not commence until the courier arrives back at the laboratory. The courier may have additional stops before returning to the laboratory, so delays in initiation of testing are possible when using a Eurofins Calscience courier. The TAT for samples received after normal business hours will commence the following business day.

Eurofins Calscience's acceptance of samples is subject to available capacity and is contingent upon the creation of a mutually acceptable delivery schedule. Please contact your Calscience representative prior to sample delivery to schedule analyses. Samples should be shipped to the lab on the day they are collected.

Eurofins Calscience

2841 Dow Avenue
Tustin, CA 92780
714 895-5494

Sample Receiving Hours (excludes holidays)

7:30 AM to 7 PM Monday - Friday

9 AM to 3 PM Saturday

Sampling Supplies

Please contact your project manager prior to sampling activities to order sampling supplies or to confirm proper containers and volume requirements. Pre-preserved sample containers are included in the cost of the analysis with the exception of supplies for EPA Method 5035 preparation for soils, wipe sample kits, and air sampling devices and rental fees.

Unused sample containers cannot be returned to Eurofins Calscience for reuse due to possible contamination issues.

Shipping bottles to the project site or your office will be provided by Eurofins Calscience, via courier or ground transportation at no charge for sites within the contiguous US. Please place your request for bottle delivery at least 7 business days prior to your required delivery date. If fewer than 7 days' notice is provided and alternative/quicker shipping is required, additional shipping and handling charges will apply.

Sample Container Pick-up Location

Eurofins Calscience Tustin
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Project: Concrete, Soil and Rinsate

Quote Number: 57021186 - 0

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714 895-5494

Standard Deliverables

Standard Level II report, which includes batch QC, and a standard Electronic Data Deliverable (e.g. Excel or Access) are included in the cost of analysis if requested on or before the time samples are received by the laboratory.

Turn-Around-Time

The normal Turn-Around-Time (TAT) is dependent upon the methods requested. For most methods, results can be reported in ten working days. Certain specialty analyses or difficult matrices (e.g. marine sediment and tissue) may require a longer TAT. Electronic (pdf) reports are provided via e-mail or available for download via our secured web portal.

The TAT commences on the date and time samples are received by the laboratory, or when any CoC discrepancies are resolved. Please note that if a Eurofins Calscience courier receives samples in the field, the TAT does not commence until the courier arrives back at the laboratory. The courier may have additional stops before returning to the laboratory, so delays in initiation of testing are possible when using a Eurofins Calscience courier. The TAT for samples received after normal business hours will commence the following business day.

Rush TAT surcharges for analyses performed in house, and normally reported in ten working days, are as follows:

- 1 Business Day: 100%
- 2 Business Days: 75%
- 3 Business Days: 50%
- 4 Business Days: 35%
- 5 Business Days: 25%
- 6-7 Business Days: 15%
- 8-9 Business Days: 10%

Project specific rush fees can be negotiated.

Advance notice is strongly recommended for all rush analyses. Availability of rush service is contingent upon approval of the labs involved and must be approved prior to sample submission.

QA/QC

Eurofins Calscience standard QA/QC and reporting protocols will be followed. Any project specific requirements must be agreed to in advance and may incur additional costs.

Special Sample Handling Fees

Unit prices assume that samples are a single-phase matrix and that analyses can be performed in accordance with the laboratory's standard analytical procedures. If additional handling is required, additional fees may apply. Examples of special handling include (but are not limited to):

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Prepared by: Burley, Don
Date: 8/14/2024 Expiration Date: 11/12/2024

Project: Concrete, Soil and Rinsate**Quote Number: 57021186 - 0**

- Matrices requiring additional dilutions or special clean up steps
- Multiphasic samples requiring separate preparations and/or analyses
- Particle size reduction or special sub-sampling procedures
- Extra disposal costs for unique waste streams
- Foreign Soil Fees

Data Validation Packages

For projects requiring reporting of analytical and quality control data including raw data, a surcharge of 10% will apply for a full validation package. These surcharges are applicable to packages that are requested at the time of sample delivery. Requests for generation of data packages after results have been reported may result in additional fees. Validation packages are available on CD ROM. The standard TAT for validation packages for work performed in-house is ten days post reporting of Level II report.

Additional surcharges and fees may apply to work subcontracted outside of Eurofins Calscience.

Electronic Data Deliverables (EDD)

Presentation of data in spreadsheet format (e.g. Excel or Access) is included in the cost of analysis if requested on or before the time samples are received by the laboratory. Requests for EDDs after the final report is prepared may result in a fee. Complex EDDs may also require a fee.

Preparation of State mandated Geotracker EDF deliverables are billed at \$25 per report.

Additional Report Copies

At Client request, Eurofins Calscience will provide additional copies of reports and/or supporting raw data that has previously been provided at a cost of \$25 per report. Additional fees may apply for archived data retrieval.

Canceled Analysis

A fee ranging from a minimal amount up to the full unit price of an analysis may be charged depending on the status of the analysis at the time of cancellation.

Sample Disposal

Disposal of solid and aqueous samples will occur 14 days following sample receipt unless other arrangements have been made in advance. Samples are subject to the Safe and Environmentally Responsible Waste Management (SERWM) fee of \$3.00/sample.

Sample Storage & Archiving

Solid and Aqueous samples received but not analyzed are subject to a sample disposal fee of \$5.00 per container. Samples are normally stored for a period of 14 days after sample receipt. Samples requiring archiving beyond 14 days are subject to a fee of \$5.00 per container per month.

Discontinued Methods

If a listed method is discontinued by Eurofins Calscience, samples requiring that method may be subcontracted with permission from the client. Eurofins Calscience, however, will not honor the quoted prices if samples are subcontracted.

Comments & Clarifications**Shipping**

Eurofins Calscience Tustin
2841 Dow Avenue, Suite 100
Tustin, CA 92780

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18141 Beach Blvd
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jfeiber@associatesenvironmental.com | Tel: (949) 352-4941

Prepared by: Burley, Don
Date: 8/14/2024 Expiration Date: 11/12/2024

Project: Concrete, Soil and Rinsate

Quote Number: 57021186 - 0

Local courier drop-off/pick-up is available within our standard courier service area during normal business hours at a nominal fee depending on location. Please provide a minimum of three days advance notice to project manager; based upon availability.

Sample receiving at our Tustin laboratory is open and available to receive sample drop-offs Monday through Friday from 7:30AM - 7:00PM; Saturday 9AM - 3PM, excludes holidays.

Eurofins Calscience can provide shipping of sample containers with 7 - 10 days' notice at no charge assuming that supplies are available at the time of the request within the contiguous United States. Rush shipment, if required, will be billed at cost. Return shipment is not included and is the responsibility of the client.

Eurofins Calscience can provide shipping of containers/bottles to the site via Fed-Ex Ground. Shipping of samples back to Eurofins Calscience is the responsibility of the client.

Exceptions & Clarifications

Certifications

- **Please note that CA now certifies for organic methods by analyte; therefore, our routine lists now contain several compounds that are not certifiable by the State. Please review the analyte lists and limits located prior to our T&Cs and let us know if you require a customized list or accept the list included in this quote as is.**
- **Eurofins Calscience has CA certification for methods that we analyze and are offered by CA ELAP for certification.**

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Project: Concrete, Soil and Rinsate

Quote Number: 57021186 - 0

Concrete

Matrix	Method	Test Description	Analyte	RL	MDL	Units
Solid	6010B	Title 22 ICP Metals	Antimony	10.0	5.66	mg/Kg
			Arsenic	3.00	1.94	mg/Kg
			Barium	2.00	0.295	mg/Kg
			Beryllium	0.400	0.0940	mg/Kg
			Cadmium	0.400	0.153	mg/Kg
			Chromium	1.00	0.531	mg/Kg
			Cobalt	2.00	0.426	mg/Kg
			Copper	2.00	0.569	mg/Kg
			Lead	2.00	1.32	mg/Kg
			Molybdenum	4.00	0.980	mg/Kg
			Nickel	2.00	1.14	mg/Kg
			Selenium	3.00	1.57	mg/Kg
			Silver	2.00	0.425	mg/Kg
			Thallium	10.0	2.86	mg/Kg
			Vanadium	4.00	0.876	mg/Kg
Zinc	4.00	1.63	mg/Kg			
Solid	7471A	Mercury	Mercury	0.0833	0.0220	mg/Kg
Solid	8260B	VOCs	1,1,1,2-Tetrachloroethane	1.00	0.291	ug/Kg
			1,1,1-Trichloroethane	1.00	0.234	ug/Kg
			1,1,2,2-Tetrachloroethane	2.00	0.544	ug/Kg
			1,1,2-Trichloro-1,2,2-trifluoroethane	10.0	0.462	ug/Kg
			1,1,2-Trichloroethane	1.00	0.464	ug/Kg
			1,1-Dichloroethane	1.00	0.280	ug/Kg
			1,1-Dichloroethene	1.00	0.265	ug/Kg
			1,1-Dichloropropene	2.00	0.388	ug/Kg
			1,2,3-Trichlorobenzene	2.00	0.376	ug/Kg
			1,2,3-Trichloropropane	2.00	0.419	ug/Kg
			1,2,4-Trichlorobenzene	2.00	0.411	ug/Kg
			1,2,4-Trimethylbenzene	2.00	0.278	ug/Kg
			1,2-Dibromo-3-Chloropropane	10.0	3.33	ug/Kg
			1,2-Dibromoethane	1.00	0.206	ug/Kg
			1,2-Dichlorobenzene	1.00	0.251	ug/Kg
			1,2-Dichloroethane	1.00	0.276	ug/Kg
			1,2-Dichloropropane	1.00	0.276	ug/Kg
1,3,5-Trimethylbenzene	2.00	0.267	ug/Kg			
1,3-Dichlorobenzene	1.00	0.252	ug/Kg			
1,3-Dichloropropane	1.00	0.295	ug/Kg			

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Prepared by: Burley, Don
Date: 8/14/2024 Expiration Date: 11/12/2024

Project: Concrete, Soil and Rinsate

Quote Number: 57021186 - 0

Concrete

Matrix	Method	Test Description	Analyte	RL	MDL	Units
Continued						
			1,4-Dichlorobenzene	1.00	0.307	ug/Kg
			2,2-Dichloropropane	5.00	0.271	ug/Kg
			2-Butanone (MEK)	20.0	4.51	ug/Kg
			2-Chlorotoluene	1.00	0.252	ug/Kg
			2-Hexanone	20.0	3.07	ug/Kg
			4-Chlorotoluene	1.00	0.242	ug/Kg
			4-Methyl-2-pentanone (MIBK)	20.0	2.91	ug/Kg
			Acetone	20.0	9.83	ug/Kg
			Benzene	1.00	0.258	ug/Kg
			Bromobenzene	1.00	0.208	ug/Kg
			Bromochloromethane	2.00	0.445	ug/Kg
			Bromodichloromethane	1.00	0.325	ug/Kg
			Bromoform	5.00	1.32	ug/Kg
			Bromomethane	20.0	6.58	ug/Kg
			cis-1,2-Dichloroethene	1.00	0.337	ug/Kg
			cis-1,3-Dichloropropene	1.00	0.349	ug/Kg
			Carbon disulfide	10.0	0.400	ug/Kg
			Carbon tetrachloride	1.00	0.299	ug/Kg
			Chlorobenzene	1.00	0.268	ug/Kg
			Chloroethane	2.00	0.743	ug/Kg
			Chloroform	1.00	0.589	ug/Kg
			Chloromethane	20.0	1.54	ug/Kg
			Dibromochloromethane	2.00	0.273	ug/Kg
			Dibromomethane	1.00	0.305	ug/Kg
			Dichlorodifluoromethane	2.00	0.454	ug/Kg
			Ethylbenzene	1.00	0.206	ug/Kg
			Isopropylbenzene	1.00	0.276	ug/Kg
			Methylene Chloride	10.0	3.12	ug/Kg
			Methyl-t-Butyl Ether (MTBE)	2.00	0.188	ug/Kg
			Naphthalene	10.0	3.93	ug/Kg
			n-Butylbenzene	1.00	0.210	ug/Kg
			N-Propylbenzene	2.00	0.260	ug/Kg
			o-Xylene	1.00	0.255	ug/Kg
			m,p-Xylene	2.00	0.474	ug/Kg
			p-Isopropyltoluene	1.00	0.282	ug/Kg
			sec-Butylbenzene	1.00	0.274	ug/Kg
			Styrene	1.00	0.317	ug/Kg
			trans-1,2-Dichloroethene	1.00	0.301	ug/Kg
			trans-1,3-Dichloropropene	2.00	0.280	ug/Kg
			tert-Butylbenzene	1.00	0.254	ug/Kg
			Tetrachloroethene	1.00	0.223	ug/Kg
			Toluene	1.00	0.269	ug/Kg
			Xylenes, Total	2.00	0.600	ug/Kg
			Trichloroethene	2.00	0.386	ug/Kg
			Trichlorofluoromethane	10.0	0.273	ug/Kg

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Matrix	Method	Test Description	Analyte	RL	MDL	Units
Continued						
			Vinyl acetate	10.0	3.91	ug/Kg
			Vinyl chloride	1.00	0.379	ug/Kg
			Surrogate Cpnd			
			1,2-Dichloroethane-d4 (Surr)			
			4-Bromofluorobenzene (Surr)			
			Dibromofluoromethane (Surr)			
			Toluene-d8 (Surr)			
				RL	MDL	Units
Solid	8270C	SVOCs	1,2,4-Trichlorobenzene	0.500	0.120	mg/Kg
			1,2-Dichlorobenzene	0.500	0.0843	mg/Kg
			1,3-Dichlorobenzene	0.500	0.105	mg/Kg
			1,4-Dichlorobenzene	0.500	0.0959	mg/Kg
			1-Methylnaphthalene	0.500	0.103	mg/Kg
			2,4,5-Trichlorophenol	0.500	0.196	mg/Kg
			2,4,6-Trichlorophenol	0.500	0.118	mg/Kg
			2,4-Dichlorophenol	0.500	0.132	mg/Kg
			2,4-Dimethylphenol	0.500	0.129	mg/Kg
			2,4-Dinitrophenol	2.00	0.911	mg/Kg
			2,4-Dinitrotoluene	0.500	0.0813	mg/Kg
			2,6-Dichlorophenol	0.500	0.112	mg/Kg
			2,6-Dinitrotoluene	0.500	0.0860	mg/Kg
			2-Chloronaphthalene	0.500	0.0866	mg/Kg
			2-Chlorophenol	0.500	0.133	mg/Kg
			2-Methylnaphthalene	0.500	0.100	mg/Kg
			2-Methylphenol	0.500	0.0965	mg/Kg
			2-Nitroaniline	0.500	0.0915	mg/Kg
			2-Nitrophenol	0.500	0.139	mg/Kg
			3,3'-Dichlorobenzidine	2.50	0.537	mg/Kg
			3 & 4 Methylphenol	1.00	0.105	mg/Kg
			3-Nitroaniline	0.500	0.0836	mg/Kg
			4,6-Dinitro-2-methylphenol	2.50	0.947	mg/Kg
			4-Bromophenyl phenyl ether	0.500	0.0732	mg/Kg
			4-Chloro-3-methylphenol	0.500	0.0927	mg/Kg
			4-Chloroaniline	0.500	0.0824	mg/Kg
			4-Chlorophenyl phenyl ether	0.500	0.101	mg/Kg
			4-Nitroaniline	0.500	0.102	mg/Kg
			4-Nitrophenol	0.500	0.315	mg/Kg
			Acenaphthene	0.500	0.0794	mg/Kg
			Acenaphthylene	0.500	0.0964	mg/Kg
			Aniline	0.500	0.0954	mg/Kg
			Anthracene	0.500	0.0776	mg/Kg
			Azobenzene	0.500	0.0784	mg/Kg

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Matrix	Method	Test Description	Analyte	RL	MDL	Units
Continued						
			Benzidine	5.00	0.575	mg/Kg
			Benzo[a]anthracene	0.500	0.0833	mg/Kg
			Benzo[a]pyrene	0.500	0.0996	mg/Kg
			Benzo[b]fluoranthene	0.500	0.0847	mg/Kg
			Benzo[g,h,i]perylene	0.500	0.0893	mg/Kg
			Benzo[k]fluoranthene	0.500	0.0946	mg/Kg
			Benzoic acid	2.50	0.673	mg/Kg
			Benzyl alcohol	0.500	0.167	mg/Kg
			Bis(2-chloroethoxy)methane	0.500	0.111	mg/Kg
			Bis(2-chloroethyl)ether	2.50	0.106	mg/Kg
			bis (2-Chloroisopropyl) ether	0.500	0.118	mg/Kg
			Bis(2-ethylhexyl) phthalate	0.500	0.218	mg/Kg
			Butyl benzyl phthalate	0.500	0.235	mg/Kg
			Chrysene	0.500	0.0831	mg/Kg
			Dibenz(a,h)anthracene	0.500	0.0798	mg/Kg
			Dibenzofuran	0.500	0.0947	mg/Kg
			Diethyl phthalate	0.500	0.115	mg/Kg
			Dimethyl phthalate	0.500	0.0984	mg/Kg
			Di-n-butyl phthalate	0.500	0.111	mg/Kg
			Di-n-octyl phthalate	0.500	0.232	mg/Kg
			Fluoranthene	0.500	0.0948	mg/Kg
			Fluorene	0.500	0.0939	mg/Kg
			Hexachloro-1,3-butadiene	0.500	0.125	mg/Kg
			Hexachlorobenzene	0.500	0.0800	mg/Kg
			Hexachlorocyclopentadiene	1.50	0.0865	mg/Kg
			Hexachloroethane	0.500	0.0919	mg/Kg
			Indeno[1,2,3-cd]pyrene	0.500	0.124	mg/Kg
			Isophorone	0.500	0.0795	mg/Kg
			Naphthalene	0.500	0.139	mg/Kg
			Nitrobenzene	2.00	0.136	mg/Kg
			N-Nitrosodimethylamine	0.500	0.0890	mg/Kg
			N-Nitrosodi-n-propylamine	0.500	0.0855	mg/Kg
			n-Nitrosodiphenylamine(as diphenylamine)	0.500	0.0853	mg/Kg
			Pentachlorophenol	2.50	1.84	mg/Kg
			Phenanthrene	0.500	0.0722	mg/Kg
			Phenol	0.500	0.0972	mg/Kg
			Pyrene	0.500	0.102	mg/Kg
			Pyridine	0.500	0.236	mg/Kg

Surrogate Cpnd

- 2,4,6-Tribromophenol (Surr)
- 2-Fluorobiphenyl (Surr)
- 2-Fluorophenol (Surr)
- Nitrobenzene-d5 (Surr)

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Concrete

Matrix	Method	Test Description	Analyte	RL	MDL	Units
Continued		Surrogate Cpnd				
			p-Terphenyl-d14 (Surr) Phenol-d6 (Surr)			
Solid	Crushing	Concrete Crushing (if needed)	Crushed	NONE	NONE	Units

Soil

Matrix	Method	Test Description	Analyte	RL	MDL	Units
Solid	6010B	Title 22 ICP Metals	Antimony Arsenic Barium Beryllium Cadmium Chromium Cobalt Copper Lead Molybdenum Nickel Selenium Silver Thallium Vanadium Zinc	10.0 3.00 2.00 0.400 0.400 1.00 2.00 2.00 2.00 4.00 2.00 3.00 2.00 10.0 4.00 4.00	5.66 1.94 0.295 0.0940 0.153 0.531 0.426 0.569 1.32 0.980 1.14 1.57 0.425 2.86 0.876 1.63	mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg
Solid	7471A	Mercury	Mercury	0.0833	0.0220	mg/Kg
Solid	8260B	VOCs	1,1,1,2-Tetrachloroethane 1,1,1-Trichloroethane 1,1,2,2-Tetrachloroethane 1,1,2-Trichloro-1,2,2-trifluoroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethene 1,1-Dichloropropene 1,2,3-Trichlorobenzene	1.00 1.00 2.00 10.0 1.00 1.00 1.00 2.00 2.00	0.291 0.234 0.544 0.462 0.464 0.280 0.265 0.388 0.376	ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg

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Soil

Matrix	Method	Test Description	Analyte	RL	MDL	Units
Continued						
			1,2,3-Trichloropropane	2.00	0.419	ug/Kg
			1,2,4-Trichlorobenzene	2.00	0.411	ug/Kg
			1,2,4-Trimethylbenzene	2.00	0.278	ug/Kg
			1,2-Dibromo-3-Chloropropane	10.0	3.33	ug/Kg
			1,2-Dibromoethane	1.00	0.206	ug/Kg
			1,2-Dichlorobenzene	1.00	0.251	ug/Kg
			1,2-Dichloroethane	1.00	0.276	ug/Kg
			1,2-Dichloropropane	1.00	0.276	ug/Kg
			1,3,5-Trimethylbenzene	2.00	0.267	ug/Kg
			1,3-Dichlorobenzene	1.00	0.252	ug/Kg
			1,3-Dichloropropane	1.00	0.295	ug/Kg
			1,4-Dichlorobenzene	1.00	0.307	ug/Kg
			2,2-Dichloropropane	5.00	0.271	ug/Kg
			2-Butanone (MEK)	20.0	4.51	ug/Kg
			2-Chlorotoluene	1.00	0.252	ug/Kg
			2-Hexanone	20.0	3.07	ug/Kg
			4-Chlorotoluene	1.00	0.242	ug/Kg
			4-Methyl-2-pentanone (MIBK)	20.0	2.91	ug/Kg
			Acetone	20.0	9.83	ug/Kg
			Benzene	1.00	0.258	ug/Kg
			Bromobenzene	1.00	0.208	ug/Kg
			Bromochloromethane	2.00	0.445	ug/Kg
			Bromodichloromethane	1.00	0.325	ug/Kg
			Bromoform	5.00	1.32	ug/Kg
			Bromomethane	20.0	6.58	ug/Kg
			cis-1,2-Dichloroethene	1.00	0.337	ug/Kg
			cis-1,3-Dichloropropene	1.00	0.349	ug/Kg
			Carbon disulfide	10.0	0.400	ug/Kg
			Carbon tetrachloride	1.00	0.299	ug/Kg
			Chlorobenzene	1.00	0.268	ug/Kg
			Chloroethane	2.00	0.743	ug/Kg
			Chloroform	1.00	0.589	ug/Kg
			Chloromethane	20.0	1.54	ug/Kg
			Dibromochloromethane	2.00	0.273	ug/Kg
			Dibromomethane	1.00	0.305	ug/Kg
			Dichlorodifluoromethane	2.00	0.454	ug/Kg
			Ethylbenzene	1.00	0.206	ug/Kg
			Isopropylbenzene	1.00	0.276	ug/Kg
			Methylene Chloride	10.0	3.12	ug/Kg
			Methyl-t-Butyl Ether (MTBE)	2.00	0.188	ug/Kg
			Naphthalene	10.0	3.93	ug/Kg
			n-Butylbenzene	1.00	0.210	ug/Kg
			N-Propylbenzene	2.00	0.260	ug/Kg
			o-Xylene	1.00	0.255	ug/Kg
			m,p-Xylene	2.00	0.474	ug/Kg

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Soil

Matrix	Method	Test Description	Analyte	RL	MDL	Units
Continued						
			p-Isopropyltoluene	1.00	0.282	ug/Kg
			sec-Butylbenzene	1.00	0.274	ug/Kg
			Styrene	1.00	0.317	ug/Kg
			trans-1,2-Dichloroethene	1.00	0.301	ug/Kg
			trans-1,3-Dichloropropene	2.00	0.280	ug/Kg
			tert-Butylbenzene	1.00	0.254	ug/Kg
			Tetrachloroethene	1.00	0.223	ug/Kg
			Toluene	1.00	0.269	ug/Kg
			Xylenes, Total	2.00	0.600	ug/Kg
			Trichloroethene	2.00	0.386	ug/Kg
			Trichlorofluoromethane	10.0	0.273	ug/Kg
			Vinyl acetate	10.0	3.91	ug/Kg
			Vinyl chloride	1.00	0.379	ug/Kg

Surrogate Cpnd

1,2-Dichloroethane-d4 (Surr)
4-Bromofluorobenzene (Surr)
Dibromofluoromethane (Surr)
Toluene-d8 (Surr)

Matrix	Method	Test Description	Analyte	RL	MDL	Units
Solid	8270C	SVOCs	1,2,4-Trichlorobenzene	0.500	0.120	mg/Kg
			1,2-Dichlorobenzene	0.500	0.0843	mg/Kg
			1,3-Dichlorobenzene	0.500	0.105	mg/Kg
			1,4-Dichlorobenzene	0.500	0.0959	mg/Kg
			1-Methylnaphthalene	0.500	0.103	mg/Kg
			2,4,5-Trichlorophenol	0.500	0.196	mg/Kg
			2,4,6-Trichlorophenol	0.500	0.118	mg/Kg
			2,4-Dichlorophenol	0.500	0.132	mg/Kg
			2,4-Dimethylphenol	0.500	0.129	mg/Kg
			2,4-Dinitrophenol	2.00	0.911	mg/Kg
			2,4-Dinitrotoluene	0.500	0.0813	mg/Kg
			2,6-Dichlorophenol	0.500	0.112	mg/Kg
			2,6-Dinitrotoluene	0.500	0.0860	mg/Kg
			2-Chloronaphthalene	0.500	0.0866	mg/Kg
			2-Chlorophenol	0.500	0.133	mg/Kg
			2-Methylnaphthalene	0.500	0.100	mg/Kg
			2-Methylphenol	0.500	0.0965	mg/Kg
			2-Nitroaniline	0.500	0.0915	mg/Kg
			2-Nitrophenol	0.500	0.139	mg/Kg
			3,3'-Dichlorobenzidine	2.50	0.537	mg/Kg
			3 & 4 Methylphenol	1.00	0.105	mg/Kg
			3-Nitroaniline	0.500	0.0836	mg/Kg
			4,6-Dinitro-2-methylphenol	2.50	0.947	mg/Kg

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Soil

Matrix	Method	Test Description	Analyte	RL	MDL	Units
Continued						
			4-Bromophenyl phenyl ether	0.500	0.0732	mg/Kg
			4-Chloro-3-methylphenol	0.500	0.0927	mg/Kg
			4-Chloroaniline	0.500	0.0824	mg/Kg
			4-Chlorophenyl phenyl ether	0.500	0.101	mg/Kg
			4-Nitroaniline	0.500	0.102	mg/Kg
			4-Nitrophenol	0.500	0.315	mg/Kg
			Acenaphthene	0.500	0.0794	mg/Kg
			Acenaphthylene	0.500	0.0964	mg/Kg
			Aniline	0.500	0.0954	mg/Kg
			Anthracene	0.500	0.0776	mg/Kg
			Azobenzene	0.500	0.0784	mg/Kg
			Benzidine	5.00	0.575	mg/Kg
			Benzo[a]anthracene	0.500	0.0833	mg/Kg
			Benzo[a]pyrene	0.500	0.0996	mg/Kg
			Benzo[b]fluoranthene	0.500	0.0847	mg/Kg
			Benzo[g,h,i]perylene	0.500	0.0893	mg/Kg
			Benzo[k]fluoranthene	0.500	0.0946	mg/Kg
			Benzoic acid	2.50	0.673	mg/Kg
			Benzyl alcohol	0.500	0.167	mg/Kg
			Bis(2-chloroethoxy)methane	0.500	0.111	mg/Kg
			Bis(2-chloroethyl)ether	2.50	0.106	mg/Kg
			bis (2-Chloroisopropyl) ether	0.500	0.118	mg/Kg
			Bis(2-ethylhexyl) phthalate	0.500	0.218	mg/Kg
			Butyl benzyl phthalate	0.500	0.235	mg/Kg
			Chrysene	0.500	0.0831	mg/Kg
			Dibenz(a,h)anthracene	0.500	0.0798	mg/Kg
			Dibenzofuran	0.500	0.0947	mg/Kg
			Diethyl phthalate	0.500	0.115	mg/Kg
			Dimethyl phthalate	0.500	0.0984	mg/Kg
			Di-n-butyl phthalate	0.500	0.111	mg/Kg
			Di-n-octyl phthalate	0.500	0.232	mg/Kg
			Fluoranthene	0.500	0.0948	mg/Kg
			Fluorene	0.500	0.0939	mg/Kg
			Hexachloro-1,3-butadiene	0.500	0.125	mg/Kg
			Hexachlorobenzene	0.500	0.0800	mg/Kg
			Hexachlorocyclopentadiene	1.50	0.0865	mg/Kg
			Hexachloroethane	0.500	0.0919	mg/Kg
			Indeno[1,2,3-cd]pyrene	0.500	0.124	mg/Kg
			Isophorone	0.500	0.0795	mg/Kg
			Naphthalene	0.500	0.139	mg/Kg
			Nitrobenzene	2.00	0.136	mg/Kg
			N-Nitrosodimethylamine	0.500	0.0890	mg/Kg
			N-Nitrosodi-n-propylamine	0.500	0.0855	mg/Kg
			n-Nitrosodiphenylamine(as diphenylamine)	0.500	0.0853	mg/Kg

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Prepared by: Burley, Don
Date: 8/14/2024 Expiration Date: 11/12/2024

Project: Concrete, Soil and Rinsate

Quote Number: 57021186 - 0

Soil

Matrix	Method	Test Description	Analyte	RL	MDL	Units
Continued						
			Pentachlorophenol	2.50	1.84	mg/Kg
			Phenanthrene	0.500	0.0722	mg/Kg
			Phenol	0.500	0.0972	mg/Kg
			Pyrene	0.500	0.102	mg/Kg
			Pyridine	0.500	0.236	mg/Kg
		Surrogate Cpnd	2,4,6-Tribromophenol (Surr)			
			2-Fluorobiphenyl (Surr)			
			2-Fluorophenol (Surr)			
			Nitrobenzene-d5 (Surr)			
			p-Terphenyl-d14 (Surr)			
			Phenol-d6 (Surr)			

Rinsate

Matrix	Method	Test Description	Analyte	RL	MDL	Units
Water	6010B	Title 22 ICP Metals	Antimony	0.100	0.0255	mg/L
			Arsenic	0.100	0.0199	mg/L
			Barium	0.0100	0.00111	mg/L
			Beryllium	0.0100	0.00127	mg/L
			Cadmium	0.0100	0.000620	mg/L
			Chromium	0.0500	0.00296	mg/L
			Cobalt	0.0500	0.000880	mg/L
			Copper	0.0500	0.00269	mg/L
			Lead	0.0500	0.00527	mg/L
			Molybdenum	0.0500	0.00391	mg/L
			Nickel	0.0500	0.00307	mg/L
			Selenium	0.0500	0.0162	mg/L
			Silver	0.0100	0.00259	mg/L
			Thallium	0.0500	0.00996	mg/L
			Vanadium	0.0100	0.00239	mg/L
			Zinc	0.250	0.0133	mg/L
Water	7470A	Mercury	Mercury	0.000200	0.000124	mg/L
Water	8260B	VOCs	1,1,1,2-Tetrachloroethane	2.00	0.364	ug/L
			1,1,1-Trichloroethane	1.00	0.362	ug/L
			1,1,2,2-Tetrachloroethane	1.00	0.309	ug/L

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Matrix	Method	Test Description	Analyte	RL	MDL	Units
Continued						
			1,1,2-Trichloro-1,2,2-trifluoroethane	10.0	2.53	ug/L
			1,1,2-Trichloroethane	1.00	0.302	ug/L
			1,1-Dichloroethane	1.00	0.338	ug/L
			1,1-Dichloroethene	1.00	0.418	ug/L
			1,1-Dichloropropene	1.00	0.409	ug/L
			1,2,3-Trichlorobenzene	1.00	0.589	ug/L
			1,2,3-Trichloropropane	5.00	0.417	ug/L
			1,2,4-Trichlorobenzene	1.00	0.708	ug/L
			1,2,4-Trimethylbenzene	1.00	0.336	ug/L
			1,2-Dibromo-3-Chloropropane	10.0	2.07	ug/L
			1,2-Dibromoethane	1.00	0.413	ug/L
			1,2-Dichlorobenzene	1.00	0.258	ug/L
			1,2-Dichloroethane	0.500	0.253	ug/L
			1,2-Dichloropropane	1.00	0.422	ug/L
			1,3,5-Trimethylbenzene	1.00	0.500	ug/L
			1,3-Dichlorobenzene	1.00	0.262	ug/L
			1,3-Dichloropropane	1.00	0.321	ug/L
			1,4-Dichlorobenzene	1.00	0.283	ug/L
			2,2-Dichloropropane	1.00	0.502	ug/L
			2-Butanone (MEK)	10.0	4.54	ug/L
			2-Chlorotoluene	1.00	0.328	ug/L
			2-Hexanone	10.0	2.66	ug/L
			4-Chlorotoluene	1.00	0.352	ug/L
			4-Methyl-2-pentanone (MIBK)	10.0	3.19	ug/L
			Acetone	10.0	7.36	ug/L
			Benzene	0.500	0.243	ug/L
			Bromobenzene	1.00	0.288	ug/L
			Bromochloromethane	2.00	0.376	ug/L
			Bromodichloromethane	1.00	0.288	ug/L
			Bromoform	5.00	1.85	ug/L
			Bromomethane	25.0	7.37	ug/L
			cis-1,2-Dichloroethene	1.00	0.392	ug/L
			cis-1,3-Dichloropropene	0.500	0.262	ug/L
			Carbon disulfide	10.0	0.422	ug/L
			Carbon tetrachloride	0.500	0.374	ug/L
			Chlorobenzene	1.00	0.259	ug/L
			Chloroethane	5.00	1.92	ug/L
			Chloroform	1.00	0.321	ug/L
			Chloromethane	10.0	2.23	ug/L
			Dibromochloromethane	2.00	0.371	ug/L
			Dibromomethane	1.00	0.328	ug/L
			Dichlorodifluoromethane	5.00	0.622	ug/L
			Ethylbenzene	1.00	0.297	ug/L
			Isopropylbenzene	1.00	0.414	ug/L

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Matrix	Method	Test Description	Analyte	RL	MDL	Units
Continued						
			Methylene Chloride	10.0	2.96	ug/L
			Methyl-t-Butyl Ether (MTBE)	1.00	0.301	ug/L
			Naphthalene	10.0	4.94	ug/L
			n-Butylbenzene	1.00	0.525	ug/L
			N-Propylbenzene	1.00	0.469	ug/L
			o-Xylene	1.00	0.267	ug/L
			m,p-Xylene	2.00	0.492	ug/L
			p-Isopropyltoluene	1.00	0.468	ug/L
			sec-Butylbenzene	1.00	0.368	ug/L
			Styrene	1.00	0.381	ug/L
			trans-1,2-Dichloroethene	1.00	0.418	ug/L
			trans-1,3-Dichloropropene	0.500	0.312	ug/L
			tert-Butylbenzene	1.00	0.375	ug/L
			Tetrachloroethene	1.00	0.397	ug/L
			Toluene	1.00	0.297	ug/L
			Xylenes, Total	2.00	0.492	ug/L
			Trichloroethene	1.00	0.387	ug/L
			Trichlorofluoromethane	10.0	0.754	ug/L
			Vinyl acetate	10.0	5.04	ug/L
			Vinyl chloride	0.500	0.426	ug/L

Surrogate Cpnd

			1,2-Dichloroethane-d4 (Surr)			
			4-Bromofluorobenzene (Surr)			
			Dibromofluoromethane (Surr)			
			Toluene-d8 (Surr)			
				RL	MDL	Units
Water	8270C	SVOCs	1,2,4-Trichlorobenzene	10.0	0.767	ug/L
			1,2-Dichlorobenzene	10.0	0.594	ug/L
			1,3-Dichlorobenzene	10.0	0.757	ug/L
			1,4-Dichlorobenzene	10.0	0.700	ug/L
			1-Methylnaphthalene	10.0	0.952	ug/L
			2,4,5-Trichlorophenol	10.0	1.20	ug/L
			2,4,6-Trichlorophenol	10.0	1.17	ug/L
			2,4-Dichlorophenol	10.0	1.35	ug/L
			2,4-Dimethylphenol	10.0	1.14	ug/L
			2,4-Dinitrophenol	50.0	13.0	ug/L
			2,4-Dinitrotoluene	10.0	1.10	ug/L
			2,6-Dichlorophenol	10.0	1.51	ug/L
			2,6-Dinitrotoluene	10.0	1.11	ug/L
			2-Chloronaphthalene	10.0	0.694	ug/L
			2-Chlorophenol	10.0	0.947	ug/L
			2-Methylnaphthalene	10.0	0.877	ug/L

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Matrix	Method	Test Description	Analyte	RL	MDL	Units
Continued						
			2-Methylphenol	10.0	0.799	ug/L
			2-Nitroaniline	10.0	1.31	ug/L
			2-Nitrophenol	10.0	2.29	ug/L
			3,3'-Dichlorobenzidine	10.0	6.80	ug/L
			3 & 4 Methylphenol	10.0	0.761	ug/L
			3-Nitroaniline	10.0	1.84	ug/L
			4,6-Dinitro-2-methylphenol	50.0	11.4	ug/L
			4-Bromophenyl phenyl ether	10.0	1.23	ug/L
			4-Chloro-3-methylphenol	10.0	1.39	ug/L
			4-Chloroaniline	10.0	0.922	ug/L
			4-Chlorophenyl phenyl ether	10.0	1.03	ug/L
			4-Nitroaniline	10.0	2.67	ug/L
			4-Nitrophenol	10.0	3.65	ug/L
			Acenaphthene	10.0	0.905	ug/L
			Acenaphthylene	10.0	0.868	ug/L
			Aniline	10.0	0.786	ug/L
			Anthracene	10.0	0.982	ug/L
			Azobenzene	10.0	0.736	ug/L
			Benzidine	50.0	11.2	ug/L
			Benzo[a]anthracene	10.0	1.26	ug/L
			Benzo[a]pyrene	10.0	1.89	ug/L
			Benzo[b]fluoranthene	10.0	1.71	ug/L
			Benzo[g,h,i]perylene	10.0	1.89	ug/L
			Benzo[k]fluoranthene	10.0	1.22	ug/L
			Benzoic acid	50.0	14.5	ug/L
			Benzyl alcohol	10.0	2.52	ug/L
			Bis(2-chloroethoxy)methane	10.0	1.01	ug/L
			Bis(2-chloroethyl)ether	25.0	7.70	ug/L
			bis (2-Chloroisopropyl) ether	10.0	1.19	ug/L
			Bis(2-ethylhexyl) phthalate	10.0	4.90	ug/L
			Butyl benzyl phthalate	10.0	4.14	ug/L
			Chrysene	10.0	1.24	ug/L
			Dibenz(a,h)anthracene	10.0	1.84	ug/L
			Dibenzofuran	10.0	1.03	ug/L
			Diethyl phthalate	10.0	1.17	ug/L
			Dimethyl phthalate	10.0	0.934	ug/L
			Di-n-butyl phthalate	10.0	1.40	ug/L
			Di-n-octyl phthalate	10.0	4.58	ug/L
			Fluoranthene	10.0	1.13	ug/L
			Fluorene	10.0	0.933	ug/L
			Hexachloro-1,3-butadiene	10.0	1.11	ug/L
			Hexachlorobenzene	10.0	0.891	ug/L
			Hexachlorocyclopentadiene	25.0	3.01	ug/L
			Hexachloroethane	10.0	0.884	ug/L
			Indeno[1,2,3-cd]pyrene	10.0	3.06	ug/L

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Continued						
			Isophorone	10.0	1.43	ug/L
			Naphthalene	10.0	3.60	ug/L
			Nitrobenzene	25.0	7.48	ug/L
			N-Nitrosodimethylamine	10.0	0.741	ug/L
			N-Nitrosodi-n-propylamine	10.0	1.03	ug/L
			n-Nitrosodiphenylamine(as diphenylamine)	10.0	1.22	ug/L
			Pentachlorophenol	10.0	4.81	ug/L
			Phenanthrene	10.0	1.13	ug/L
			Phenol	10.0	0.423	ug/L
			Pyrene	10.0	1.21	ug/L
			Pyridine	10.0	1.48	ug/L
		Surrogate Cpnd	2,4,6-Tribromophenol (Surr)			
			2-Fluorobiphenyl (Surr)			
			2-Fluorophenol (Surr)			
			Nitrobenzene-d5 (Surr)			
			p-Terphenyl-d14 (Surr)			
			Phenol-d6 (Surr)			

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Analytical Sample Information

Analysis Method	Matrix	Preservative	Client Sub List Desc Container	Volume Required	Holding Time
Concrete Crushing prep Concrete_Crush	Solid	None	Concrete Crushing (if needed) Soil jar 8oz - clear glass	200 g	
Mercury (CVAA) 7471A	Solid	None	Mercury Soil jar 4oz - clear glass	10 g	28 Days
Metals (ICP) 6010B	Solid	None	Title 22 ICP Metals Soil jar 8oz - clear glass	10 g	180 Days
Semivolatile Organic Compounds (GC/MS) 8270C	Solid	None	SVOCs Soil jar 4oz - clear glass	50 g	14 Days
Volatile Organic Compounds (GC/MS) 8260B	Solid	None	VOCs Soil jar 2oz - clear glass	15 g	14 Days
Mercury (CVAA) 7470A	Water	Nitric Acid	Mercury Plastic 250ml - with Nitric Acid	50 mL	28 Days
Metals (ICP) 6010B	Water	Nitric Acid	Title 22 ICP Metals Plastic 250ml - with Nitric Acid	50 mL	180 Days
Semivolatile Organic Compounds (GC/MS) 8270C	Water	None	SVOCs Amber Glass 1 liter - unpreserved	1000 mL	7 Days
Volatile Organic Compounds (GC/MS) 8260B	Water	Hydrochloric Acid	VOCs Voa Vial 40ml - Hydrochloric Acid	120 mL	14 Days

Hold Times listed above represent the minimum allotted time between sampling and lab extraction, prep or analysis.

Multiple analyses may be consolidated into fewer containers. Please contact your Project Manager for clarification when requesting sample containers.

Except for some special tests, all samples should be kept cold at 6 degrees C.

**EUROFINS ENVIRONMENT TESTING SOUTHWEST, LLC
TERMS AND CONDITIONS OF SALE (Short Form)**

When a purchaser ("Client") places an order for laboratory, consulting or sampling services from Eurofins Environment Testing Southwest, LLC ("EETSW"), a Delaware limited liability company. EETSW shall provide the ordered services pursuant to these Terms and Conditions and the related Quotation or Price Schedule, or as agreed in a negotiated contract. In the absence of a written agreement to the contrary, a client order constitutes an acceptance by the Client of EETSW's offer to do *business* under these Terms and Conditions, and an agreement to be bound by these Terms and Conditions. Receipt of a Client's samples at an EETSW laboratory constitutes acceptance of these Terms and Conditions (in the absence of any other negotiated contract). No contrary or additional terms and conditions expressed in a Client's document shall be deemed to become a part of the contract created upon acceptance of these Terms and Conditions, unless accepted by EETSW in writing.

1. ORDERS AND RECEIPT OF SAMPLES

1.1 A Client may place an order (i.e., specify a Scope of Work) either by submitting a purchase order to EETSW in writing or by telephone subsequently confirmed in writing, or by negotiated contract. Whichever option the Client selects for placing an order, the order shall not be valid unless it contains sufficient specification to enable EETSW to carry out the Client's requirements. In particular, samples must be accompanied by: a) adequate instruction on type of analysis requested, and b) complete written disclosure of the known or suspected presence of any hazardous substances, as defined by applicable federal or state law. If a Client fails to provide these required disclosures accompanying the submission of samples, and such failure results in an interruption in the lab's ability to process work due to contamination of instruments or work areas, the Client will be responsible for the costs of clean-up and recovery.

1.2 The Client shall provide one week's advance notice of the sample delivery schedule, or any changes to the schedule, whenever possible. Upon timely delivery of samples, EETSW will use its best efforts to meet mutually agreed turnaround times. All turnaround times will be calculated from the point in time when EETSW has determined that it can proceed with defined work following receipt, inspection of samples, and resolution of any discrepancies in Chain-of-Custody forms and project guidance regarding work to be done (Sample Delivery Acceptance). Rush turnaround times not requested in advance of the delivery of samples and specifically agreed to by the lab are not guaranteed. If the Client changes the sample delivery schedule prior to Sample Delivery Acceptance, EETSW reserves its rights to modify its turnaround time commitment, change the date upon which EETSW will accept samples, or refuse Sample Delivery Acceptance for the affected samples.

1.3 EETSW reserves the right, exercisable at any time, to refuse or revoke Sample Delivery Acceptance for any sample which in the sole judgment of EETSW: a) is of unsuitable volume; b) may pose a risk or become unsuitable for handling, transport, or processing for any health, safety, environmental or other reason, whether or not due to the presence of any hazardous substance in the sample and whether or not such presence has been disclosed to EETSW by the Client; or c) holding times cannot be met, due to passage of more than 48 hours from the time of sampling or 1/2 the holding time for the requested test, whichever is less.

1.4 Prior to Sample Delivery Acceptance, the entire risk of loss or damage to samples remains with the Client, except where EETSW provides courier services. In no event will EETSW have any responsibility or liability for the action or inaction of any carrier shipping or delivering any sample to or from EETSW's premises. Client is responsible for assuring that any sample that contains or may contain any hazardous substance to be delivered to EETSW's premises is properly packaged, labeled, transported and delivered, all in accordance with applicable laws.

1.5 EETSW reserves the right to begin processing samples upon receipt, unless the Client specifically notifies EETSW in writing prior to sample receipt that the samples are to be held without preparation or other processing or pending receipt of a purchase order. EETSW shall under no circumstances be responsible for missed holding times or turnaround times or for re-sampling costs if samples are released from hold with less than 48 hours or 1/2 the holding time for the requested test remaining, whichever is less.

2. PAYMENT TERMS

2.1 Services performed by EETSW will be in accordance with prices quoted and later confirmed in writing or as stated in the Price Schedule. Quoted prices do not include sales tax. Applicable sales tax will be added to invoices where required by law.

2.2 Invoices may be submitted to Client upon completion of any sample delivery group. Billing corrections must be requested within 30 days of invoice date. Payment in advance is required for all clients except those whose credit has been established with EETSW. For clients with approved credit, payment terms are net 30 days from the date of invoice by EETSW, unless alternative terms have been agreed in a separate written agreement. Payment shall be made without retainage and shall not be contingent upon the receipt of funds from third parties. All overdue payments are subject to an additional interest and service charge of one- and one-half percent (1.5%) (or the maximum rate permissible by law, whichever is less) per month or portion thereof from the due date until the date of payment. All fees are charged or billed directly to the Client. The billing of a third party will not be accepted without a statement, signed by the third party, acknowledging, and accepting payment responsibility in accordance with these payment terms.

2.3 If Client fails to make timely payment of its invoices, EETSW reserves the right to pursue all appropriate remedies, including withdrawing certifications, suspending work, and withholding delivery of data under this order without recourse. Client shall be responsible for all reasonable fees, expenses, and costs of collection including but not limited to arbitrator's and attorney's fees. EETSW reserves the right to refuse to proceed with work at any time based upon an unfavorable Client credit report.

3. CHANGE ORDERS, TERMINATION

3.1 Changes to the Scope of Work, price, or result delivery date may be initiated by EETSW after Sample Delivery Acceptance due to any condition which conflicts with analytical, QA or other protocols warranted in these Terms and Conditions. EETSW will not proceed with such changes until an agreement with the Client is reached on the amount of any cost, schedule change or technical change to the Scope of Work, and such agreement is documented in writing.

3.2 Changes to the Scope of Work, including but not limited to increasing or decreasing the work, changing test and analysis specification, or acceleration in the performance of the work may be initiated by the Client after Sample Delivery Acceptance. Such change must be documented in writing and may result in a change in cost and turnaround time commitment. EETSW's acceptance of such changes is contingent upon technical feasibility and operational capacity.

3.3 Suspension or termination of all or any part of the work may be initiated by the Client upon thirty (30) day written notice to EETSW. EETSW will be compensated consistent with Section 2 of these Terms and Conditions. EETSW will complete all work in progress and be paid in full for all work completed, including all costs incurred and reasonable profit margin, even if EETSW does not issue a final or partial report.

4. WARRANTIES AND LIABILITY

4.1 Where applicable, EETSW will use appropriate and approved analytical test methods. EETSW has referenced these methods in its Laboratory Quality Manuals and has documented them in Standard Operating Procedures. EETSW reserves the right based on its reasonable judgment to deviate from these methodologies as necessary or appropriate to the extent required by the nature or composition of the sample, which deviations, if any, will be made on a basis consistent with recognized standards of the industry and/or EETSW's Laboratory Quality Manuals. Client may request that EETSW perform according to a mutually agreed Quality Assurance Project Plan (QAPP). If samples arrive prior to agreement on a QAPP, EETSW will proceed with analyses under its standard Quality Manuals then in effect. EETSW will not be responsible for any resampling or other charges if work must be repeated to comply with a subsequently finalized QAPP.

4.2 EETSW shall start preparation and/or analysis within holding times provided that Sample Delivery Acceptance occurs within 48 hours of sampling or 1/2 of the holding time for the test, whichever is less,

unless the Client has specifically requested that EETSW hold the samples without preparation or other processing or pending receipt of a purchase order. Where resolution of inconsistencies leading to Sample Delivery Acceptance does not occur within this period, EETSW will use its best efforts to meet holding times and will proceed with the work provided that, in EETSW's judgment, the chain-of-custody or definition of the Scope of Work provide sufficient guidance. Reanalysis of samples to comply with EETSW's Quality Manuals will be deemed to have met holding times provided the initial analysis was performed within the applicable holding time. Where reanalysis demonstrates that sample matrix interference is the cause of failure to meet any Quality Manual requirements, the warranty will be deemed to have been met.

4.3 EETSW warrants that it possesses and maintains all licenses and certifications that are required to perform services under these Terms and Conditions provided that such requirements are specified in writing to EETSW prior to Sample Delivery Acceptance. EETSW will notify the Client in writing of any decertification or revocation of any license, or notice of either, that affects work in progress.

4.4 The warranty obligations set forth in Sections 4.1, 4.2 and 4.3 are the sole and exclusive warranties given by EETSW in connection with any services performed by EETSW or any results generated from such services, and EETSW gives and makes NO OTHER REPRESENTATION OR WARRANTY OF ANY KIND, EXPRESS OR IMPLIED. No representative of EETSW is authorized to give or make any other representation or warranty or modify this warranty in any way.

4.5 Client's sole and exclusive remedy for breach of warranty in connection with any services performed by EETSW will be limited to repeating any services performed, contingent on the Client's providing, at the request of EETSW and at the Client's expense, additional sample(s) if necessary. Any reanalysis requested by the Client generating results consistent with the original results will be at the Client's expense. If resampling is necessary, EETSW's liability for resampling costs will be limited to actual cost or one hundred and fifty dollars (\$150) per sample, whichever is less.

4.6 EETSW's liability for any and all causes of action arising hereunder, whether based in contract, tort, warranty, negligence or otherwise, shall be limited to the lesser amount of compensation for the services performed or \$100,000. All claims, including those for negligence, shall be deemed waived unless suit thereon is filed within one year after EETSW's completion of the services. Under no circumstances, whether arising in contract, tort (including negligence), or otherwise, shall EETSW be responsible for loss of use, loss of profits, or for any special, indirect, incidental or consequential damages occasioned by the services performed or by application or use of the reports prepared.

4.7 In no event shall EETSW have any responsibility or liability to the Client for any failure or delay in performance by EETSW that results, directly or indirectly, in whole or in part, from any cause or circumstance beyond the reasonable control of EETSW. Such causes and circumstances include, but are not limited to, acts of God, acts of Client, acts or orders of any governmental authority, strikes or other labor disputes, natural disasters, accidents, wars, civil disturbances, equipment breakdown, matrix interference or unknown highly contaminated samples that impact instrument operation, unavailability of supplies from usual suppliers, difficulties or delays in transportation, mail or delivery services, or any other cause beyond EETSW's reasonable control.

5. RESULTS, WORK PRODUCT

5.1 Data or information provided to EETSW or generated by services performed under this agreement shall only become the property of the Client upon receipt in full by EETSW of payment for the entire order. Ownership of any analytical method, QA/QC protocols, software programs or equipment developed by EETSW for performance of work will be retained by EETSW. Client shall not disclose such information to any third party without EETSW's express prior consent.

5.2 Data and sample materials provided by Client or at Client's request, and the result obtained by EETSW shall be held in confidence

(unless such information is generally available to the public or is in the public domain or Client has failed to pay EETSW for all services rendered or is otherwise in breach of these Terms and Conditions), subject to any disclosure required by law or legal process.

5.3 Should the results delivered by EETSW be used by the Client or Client's client, even though subsequently determined not to meet the warranties described in these Terms and Conditions, then the compensation will be adjusted based upon mutual agreement. In no case shall the Client unreasonably withhold EETSW's right to independently defend its data.

5.4 EETSW reserves the right to perform the services at any laboratory in the EETSW network. If a Client has requested a particular location for the work, EETSW will inform the Client when operational constraints require the work to be performed at another EETSW location. In addition, EETSW reserves the right to subcontract services ordered by the Client to another laboratory or laboratories, if, in EETSW's sole judgment, it is reasonably necessary, appropriate or advisable to do so. EETSW will in no way be liable for any subcontracted services (outside the EETSW network) except for work performed at laboratories which have been audited and approved by EETSW.

5.5 EETSW will dispose of non-hazardous samples, sample extracts and digestates 30 days after the final analytical report is issued, unless instructed to store them for an alternate period of time or to return such samples to the Client, in a manner consistent with U.S. Environmental Protection Agency regulations or other applicable federal, state or local requirements. Charges for disposal will be billed to the client. Alternatively, samples can be returned to the client for disposal. Cost of return shipping will be billable to the client. Air samples in Summa canisters and tedlar bags are used and the containers cleaned immediately after testing, such that those samples are not retained. Longer storage periods may be requested and may be accommodated if space allows, and for an additional charge. Any samples for projects that are canceled or not accepted, or for which return was requested, will be returned to the Client at its own expense. EETSW reserves the right to return to the Client any sample or unused portion of a sample that is not within EETSW's permitted capability or the capabilities of EETSW's designated waste disposal vendor(s). ALL DIOXIN, MIXED WASTE, AND RADIOACTIVE SAMPLES WILL BE RETURNED TO THE CLIENT, unless prior arrangements for disposal are made.

5.6 Unless a different time period is agreed to in an order under these Terms and Conditions, EETSW agrees to retain all records for five (5) years.

5.7 If EETSW is required to respond to legal process related to services for Client, Client agrees to reimburse EETSW for hourly charges for personnel involved in the response and attorney's fees reasonably incurred in obtaining advice concerning the response, preparation to testify, and appearances related to the legal process, travel and all reasonable expenses associated with the litigation. Additional consulting beyond that normally associated with lab reports will be billed at EETSW's current published rates.

6. INSURANCE

6.1 During the performance of services under these Terms and Conditions, EETSW shall maintain in force Workers' Compensation and Employer's Liability Insurance in accordance with the laws of the states having jurisdiction over EETSW's employees who are engaged in the performance of the work. EETSW shall also maintain during such period Comprehensive General and Contractual Liability (limit of \$1,000,000 per occurrence; \$2,000,000 aggregate), Comprehensive Automobile Liability, owned and hired (\$1,000,000 combined single limit), Professional Liability Insurance (limit of \$5,000,000 per claim/aggregate), and Pollution Liability Insurance (limit of \$1,000,000 per claim/aggregate).

7. MISCELLANEOUS PROVISIONS

7.1 These Terms and Conditions, together with any additions or revisions which may be agreed to in writing by EETSW, embody the whole agreement of the parties and provide the only remedies available. There are no promises, terms, conditions, understandings, obligations or

agreements other than those contained herein, and these Terms and Conditions shall supersede all previous communications, representations, or agreements, either verbal or written, between the Client and EETSW. These Terms and Conditions, and any transactions or agreements to which they apply, shall be governed both as to interpretation and performance by the laws of the state where EETSW's services are performed.

7.2 The invalidity or unenforceability, in whole or in part, of any provision, term or condition hereof shall not affect in any way the validity or enforceability of the remainder of these Terms and Conditions, the intent of the parties being that the provisions be severable. The section headings of these Terms and Conditions are intended solely for convenient reference and shall not define, limit or affect in any way these Terms and Conditions or their interpretations. No waiver by either party of any provision, term or condition hereof or of any obligation of the other party hereunder shall constitute a waiver of any subsequent breach or other obligation.

7.3 The obligations, liabilities, and remedies of the parties, as provided herein, are exclusive and in lieu of any others available at law or in equity. Indemnifications, releases from liability and limitations of liability shall apply, notwithstanding the fault, negligence or strict liability of the party to be indemnified, released, or whose liability is limited, except to the extent of sole negligence or willful misconduct.

From: Bechard, Holli <holli.bechard@veolia.com>
Sent: Friday, October 25, 2024 9:10 AM
To: Mark Hoffman <Mark.Hoffman@ecobat.com>
Cc: Thomas Schaefer <Thomas.Schaefer@ecobat.com>
Subject: Re: Lithium Disposal Cost Estimate

Good morning Mark,

I apologize for the big delay in my response. I have been off site on a jobsite.

I'm not sure what type of lithium battery pricing you are looking for but these rates will include recycling & full truck load transportation of lithium ion batteries. The pricing is for standard lithium ion batteries and will be based on chemistry and certain types of batteries. I can't be exact with the timeframe and limited information but please utilize this price for your closing cost.

\$.48 lb charge for lithium ion battery.

I'm off today but if you can give me more information or I can try to call today, I will do what I can to get you the information you need.

Thank you and please let me know if you have any questions.

--

Holli A Bechard
Operations Manager - Phoenix, Az.
Electronic Recycling Division (ERD) Industrial Business
VEOLIA NORTH AMERICA
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For prepaid recycling of fluorescent lamps, ballast, batteries and more, visit www.prepaidrecycling.com

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"GOD BLESS ALL OF OUR MEN AND WOMEN IN UNIFORM FOR THEIR LOYAL AND FAITHFUL MILITARY SERVICE"

ATTACHMENT J

FIRE PREVENTION PLAN

**FIRE PROTECTION CODE COMPLIANCE
ANALYSIS AND FIRE PROTECTION PLAN FOR
BATTERY STORAGE AND RECYLING AT**

ECOBAT

1474 NORTH VIP BLVD., CASA GRANDE, AZ

9/20/2024

Prepared by:



SIGNATURE PAGE

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Revision History

Date	Rev. Number	Description
9/20/2024	0	Initial Document



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REFERENCED DOCUMENTS

The following documents were used in the development of this Fire Protection Plan and Code Compliance Analysis.

Codes and Standards

- 2024 Edition of the International Fire Code (IFC)
 - Specifically, Section 320 *Storage of Lithium-ion and Lithium-Metal Batteries*
- 2024 Edition of the International Building Code (IBC)
- 2018 Edition of the IFC as adopted and amended by the City of Casa Grande, AZ.
- 2018 Edition of the IBC as adopted and amended by the City of Casa Grande, AZ.
- 2023 Edition of NFPA 855 *Standard for the Installation of Stationary Energy Storage Systems (ESS)*.
 - Note: Chapter 14 of NFPA 855 provides prescriptive criteria for the outdoor storage of lithium-ion batteries, though the Standard is titled to regulate the installation of ESS

Plans, Drawings, and Reporting Documents

- Ecobat Solutions Arizona, Inc.
 - RCRA Part B Permit Application (221 Pages)
 - EPA ID No: AZR00527002
- Ecobat Solutions (Corporate)
 - Emergency Plan – Ref SM12 Rev.07 – September 2023
- Fire Sprinkler Drawings – Approved by the Casa Grande Fire Department
 - Prepared by Foothills Fire Protection, Inc.
 - Dated 06/09/2023
- Fire Alarm Drawings – Approved by the Casa Grande Fire Department
 - Prepared by Signal One Fire and Communications
 - Dated 7/12/2023
- Secureall Safety Storage Equipment
 - Design Drawings for prefabricated storage units
 - Storage Units used for storage of “*At Risk*” lithium-ion batteries.
 - Drawings dated 6/2/2023 – four pages
- Safe, Inc.
 - Manufacturers specifications for prefabricated storage units
 - Storage Units used for storage of “*Normal Risk*” lithium-ion batteries.
 - Information dated 05/02/2023 – two pages
- Site Development Plan
 - Drawings provided by Woodard & Curran
 - Civil drawings for site development
 - Drawings dated July 2023 – six pages



TECHNICAL SUMMARY

This document serves as a fire protection engineering plan and code compliance assessment of the proposed exterior storage of lithium-ion batteries at the facility operated by Ecobat at 1474 North VIP Blvd., Casa Grande, AZ.

In addition, this plan and assessment evaluates the exposures to the proposed storage from proximal buildings, infrastructure, and traffic patterns to ensure a robust fire protection posture is implemented at the location.

The analyses and recommendations herein have been developed in accordance with Section 104.8.2 of the 2018 Edition of the International Fire Code (IFC) as a Technical Assistance Report (TAR). Additionally, the 2024 Edition of IFC Section 320 *Lithium-Ion and Lithium-Metal Battery Storage* is utilized in conjunction with the 2023 Edition of NFPA 855 *Standard for the Installation of Energy Storage Systems* to perform the evaluations.

The City of Casa Grande, AZ currently adopts the 2018 Edition of the IFC. Neither the 2024 Edition of the IFC nor NFPA 855 are adopted locally; however, the 2024 Edition of the IFC and the 2023 Edition of NFPA 855 provide the most current and forward-leaning fire and life safety practices in the battery storage sector. When reviewed against those most current requirements, the facility is expected to perform safely and respond to any incidents in an effective and proper manner. A complete list of referenced Codes and documents is provided in the Referenced Documents section.

As discussed herein, the proposed outdoor storage of lithium-ion batteries will be properly segregated from the production buildings through the use of ample separation distances, pile sizes, commercially-available prefabricated portable structures, and concrete walls.

Detailed regular inspection protocols have been provided for review, which include thermal imaging of battery storage to aid in the timely identification of lithium-ion batteries that may be progressing into thermal runaway. Regular communications and engagement with the local Casa Grande Fire Department will further ensure that responding agencies are well informed of the hazards and mitigation protocols necessary for an event involving stored lithium-ion batteries.

The intent of the analyses in this TAR is to provide a code compliance summary and review of the means and methods by which Ecobat can provide a code-compliant and safe method of lithium-ion battery storage and that a solid fire protection program is implemented.



GENERAL FACILITY OPERATIONAL BACKGROUND

Section 3 of the RCRA Application for this facility provides a detailed description of the planned operations and production processes and is referenced in this review.

In summary, Ecobat will recycle various battery types and sizes that are specifically lithium-ion in nature via typical shredding and separation operations within the main facility identified as “Building A.” Building A is constructed of typical Type II noncombustible construction and is approximately 55,394 ft² in footprint.

Additional structures onsite include Building B, which is a Type II noncombustible building approximately 7,500 ft² in size. Building C is a Type III-B building with concrete walls and a wooden roof. Building B and Building C are currently unused and are left over from the previous owner’s operations. There are no planned operations for these ancillary buildings.

This TAR focuses on the storage of lithium-ion batteries both in dedicated hazardous material storage units (prefabricated structures), and in drums stored on pallets in dedicated yard areas. The yard areas will not be provided with weather protection (awnings).

There are three primary storage areas, identified as Hazardous Waste Management Units (HWMU). The HWMUs are numbered sequentially 1 through 3. A site plan showing all buildings and HWMUs storage areas is provided on the following page for reference.

HWMU 1: Immediately to the east of the northeast corner of Building A and located over 50-ft away from the Building, are four prefabricated storage structures in HWMU1. Details of the construction and fire protection measures onboard these structures follows later in this TAR. These storage units will house two class designations of received lithium-ion batteries:

- 1) Normal Risk Batteries
 - a. These batteries, as noted on Page 94 of 221 in the RCRA Application, will be checked for indications of thermal runaway. Those that are exhibiting exothermic behavior will be designed as the “At Risk” batteries.
 - b. These batteries are typically those which cannot be fit into a storage drum or are oddly sized and cannot be efficiently stacked.
- 2) At Risk Batteries
 - a. Batteries that are demonstrating a risk of thermal runaway will be processed immediately, placed into a water bath, or stored in the At Risk storage unit. Please see RCRA Application Page 94 for more information.

HWMU 2: This “L-shaped” area is ~17,300 ft² in size and is located 90-ft to the northeast of Building A. It is ~55-ft to the north of the At Risk batteries in HWMU 1. This area will store the batteries in concrete wall-separated “bays” that are 20-ft in width and depth (400 ft² per bay), 9-ft tall (8-ft height of storage), with a drive aisle a minimum of 10-ft.

HWMU 3: This area is approximately 75-ft x 75-ft (5,625 ft²) in size and is located 50-ft to the east of the southeast corner of Building A. It is approximately 100-ft to the south of the At Risk batteries in HWMU 1. This area will store the batteries in a similar manner to HWMU 2, with concrete walls separating 400 ft² storage bays, and a 10-ft wide drive aisle.



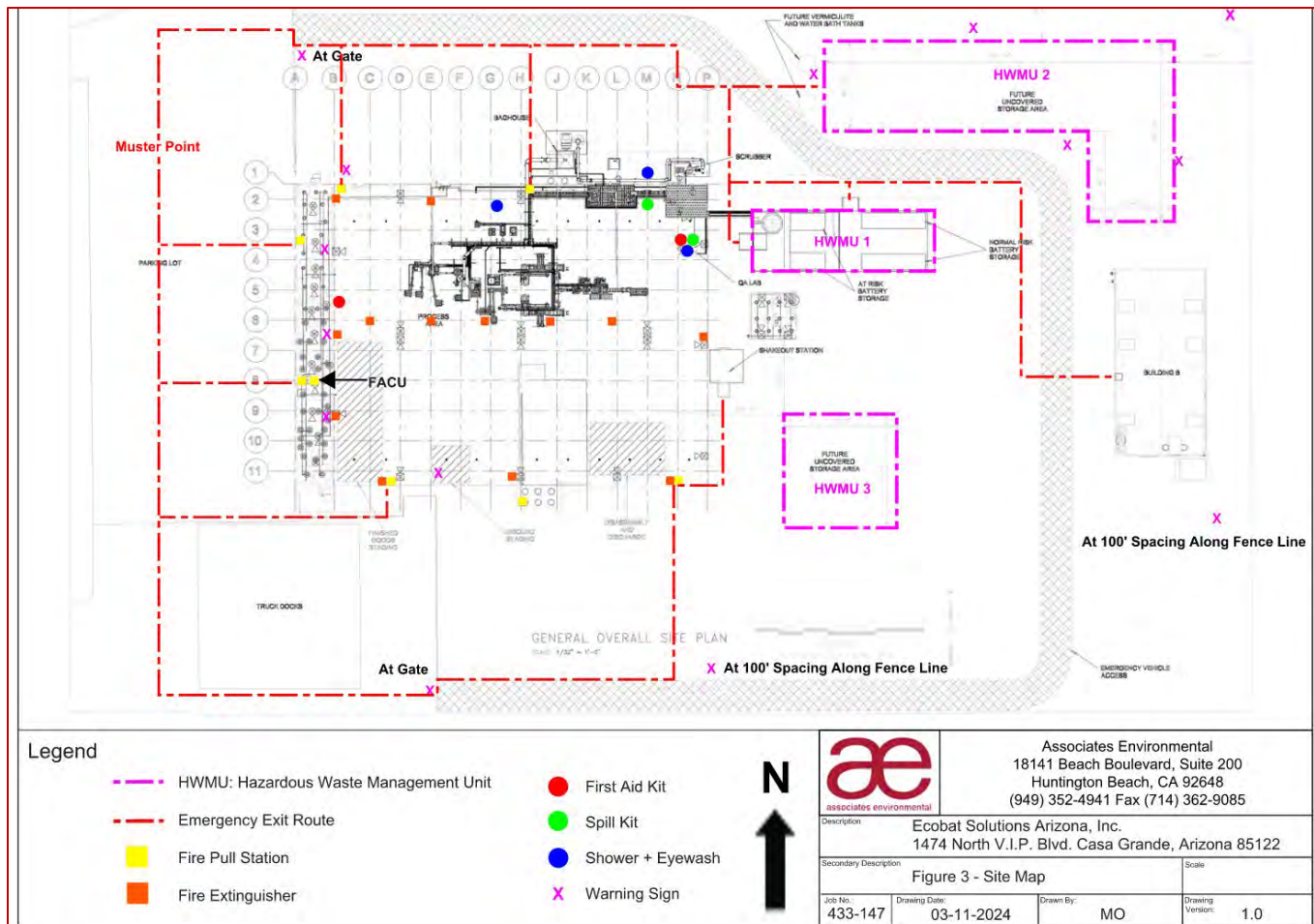
FIRE PROTECTION SYSTEMS AND EQUIPMENT

The various fire protection systems provided for the building are subject to the International Building Code (IBC), IFC, and local Amendments to the IBC/IFC. Additional regulatory requirements, such as those promulgated by OSHA, are beyond the scope of this TAR analyzing the fire protection posture of the facility.

The main processing facility, Building A, is provided with several passive and active fire protection systems, including a complete fire alarm and notification system, and a complete fire sprinkler system. Additionally, fire extinguishers, warning signs, spill kits, and safety showers/ eye washes are present.

The fire protection measures for Building A are integral to the safety of the outdoor storage, as the Building could serve as an exposure to the outdoor storage in HMWU1 if it is not protected properly. The Normal Risk and At Risk storage of lithium-ion batteries will be located >50-ft to the east of Building A, in the prefabricated storage units located in HMWU 1 as discussed on the previous page.

Please see the Site Map below, from Page 15 of the RCRA Application, showing the various emergency response infrastructure provided for Building A:



Fire Sprinkler Protection

Building A is provided with fire sprinkler protection based on an Extra Hazard Group 1 (EH1) level of protection, providing a minimum of 0.30 gpm/ft² of fire sprinkler waterflow over the most hydraulically remote 2,500 ft². This level of protection is consistent with the NFPA 13 Definition of Extra Hazard 1 in Section 5.4.1 of the 2016 Edition of NFPA 13 as adopted locally.

Below is the design basis from the fire sprinkler drawings:

CODES AND STANDARDS ANALYSIS						
ARIZONA STATE BOARD OF TECHNICAL REGISTRATION APPLICABLE LAWS ARIZONA REVISED STATUTES § 32-101 (B)(11), ARIZONA ADMINISTRATIVE CODE, TITLE 4, CHAPTER 30 R4-30-302 (B)(4).						
BUILDING CODE			FIRE CODE			
IBC 2018 AS AMENDED BY CITY OF CASA GRANDE			IFC 2018 AS AMENDED BY CITY OF CASA GRANDE, NFPA 13 (2016 EDITION)			
FIRE HAZARD ANALYSIS AND SPRINKLER SYSTEM REQUIREMENTS						
BUILDING CODE CLASSIFICATION						
NUMBER OF BUILDINGS	BUILDING NAME	OCCUPANCY CLASSIFICATION	CONSTRUCTION TYPE	STORY	ENTIRE BLDG AREA	
1	ECOBAT	F2, B	II-B	1	55,057	
SPRINKLER SYSTEM DESIGN CRITERIA PER AREA						
BUILDING AREAS	HAZARD CLASSIFICATION	MAXIMUM SPRINKLER SPACING	DESIGN DENSITY	AREA OF OPERATION	REMARKS	
LITH. BATTERY RECYCLING	EXTRA GRP 1	100 SOFT	.30	2,500 SQFT	5,6	
EXTERIOR CANOPY	ORD GRP 1	130 SOFT	.15	1,500 SQFT	1,2,3,4	
OFFICES	LIGHT	225 SOFT	.10	1,500 SQFT	1,2,3,4	
x	x	x SOFT	x	x SQFT	x	
x	x	x SOFT	x	x SQFT	x	
		SOFT		SOFT		

Section 4.3.4 from NFPA 13, defining EH1, follows below:

4.3.4 * Extra Hazard (Group 1) (EH1).

The following shall be protected with EH1 occupancy criteria in this standard:

- (1) Spaces with very high quantity and combustibility of contents
- (2) Spaces where dust, lint, or other materials are present, introducing the probability of rapidly developing fires

The level of protection is also consistent with 2024 IFC Section 1207.5.5 for Indoor Energy Storage System (ESS) installations, which present a significantly higher energy density than the batteries being recycled in this facility. This level of protection is both proper and adequate for the battery recycling operations within Building A and provides a level of assurance that a fire in Building A will not grow in an uncontrolled manner and expose the exterior battery storage in HMWU 1.

1207.5.5 Fire suppression systems. P CDP

Rooms and areas within buildings and walk-in units containing electrochemical ESS shall be protected by an automatic fire suppression system designed and installed in accordance with one of the following:

1. *Automatic sprinkler systems* designed and installed in accordance with Section 903.3.1.1 for ESS units (groups) with a maximum stored energy capacity of 50 kWh, as described in Section 1207.5.1, shall be designed with a minimum density of 0.3 gpm/ft² (1.14 L/min) based over the area of the room or 2,500 square-foot (232 m²) design area, whichever is smaller, unless a lower density is approved based on large-scale fire testing in accordance with Section 1207.1.7.



Automatic Fire Detection and Notification Systems

Based on information provided for review, a complete manual fire alarm system is provided for Building A, though not required by the IFC for this typical Group F-1 Occupancy. However, Ecobat recognizes the danger and rapidity with which a lithium-ion battery fire can develop and has provided the ability for occupants to sound the evacuation/ fire alarm. Manual fire alarm pull stations are provided at building exits. Additionally, fire sprinkler waterflow will also activate the fire alarm system.

Further, ultraviolet (UV) fire alarm initiating devices, and a visual notification appliance are required in the Normal Risk and At Risk battery storage structures. These devices will alert building occupants of an issue emerging in the HMWU 1 battery storage structures and allow the facility emergency response plan to be enacted. *Please see the Recommendations Section.*

Fire Detection for HMWU 2 and HMWU3 Uncovered Outdoor Storage Areas

Per 2024 IFC Section 320.4.3.3, a radiant energy-sensing fire detection system must be provided for the storage of batteries in HMWU2 and HMWU3, although they are uncovered and separated from other storage. Given that there are already provisions for similar fire detection at the site, these additional fire detection devices can be readily added to the existing system. *Please see the Recommendations Section.*

320.4.3.3 Fire detection. CDP

Outdoor storage areas for lithium-ion or lithium metal batteries, regardless of whether such areas are open, under weather protection or in a prefabricated portable structure, shall be provided with an *approved* automatic fire detection and alarm system complying with Section 907. The fire detection system shall use radiant energy-sensing fire detection.

Fire Extinguishers

The fire extinguishers provided must consider the potentially rapid spread of a lithium-ion battery fire within the building, and the general storage of various commodities after recycling.

Minimum 4A:60B:C rated fire extinguishers are noted throughout the facility on maximum 75-ft intervals, which is appropriate for this facility that does not use flammable or combustible liquids. Additionally, fire extinguishers that use F500 agent are also present and located throughout the processing areas. F500 is specifically designed for this purpose.

Manual Fire Prevention and Inspection Measures

Regular inspections of the battery storage areas will be performed with Thermal Imaging Cameras (TICs), per the schedule noted on page 92 of the RCRA Application, located in Section 6 “Procedures to prevent Hazards.”

The At Risk Batteries will be inspected with the TICs on 2-hour intervals, with inspections recorded on Form QF94. The Normal Risk batteries, including those within the storage structures and in the uncovered storage areas, will be inspected and logged every 8 hours.

These regular inspections will aid in identifying incipient thermal runaway events and allow for notification of first responders and implementation of the Emergency Response Plan.

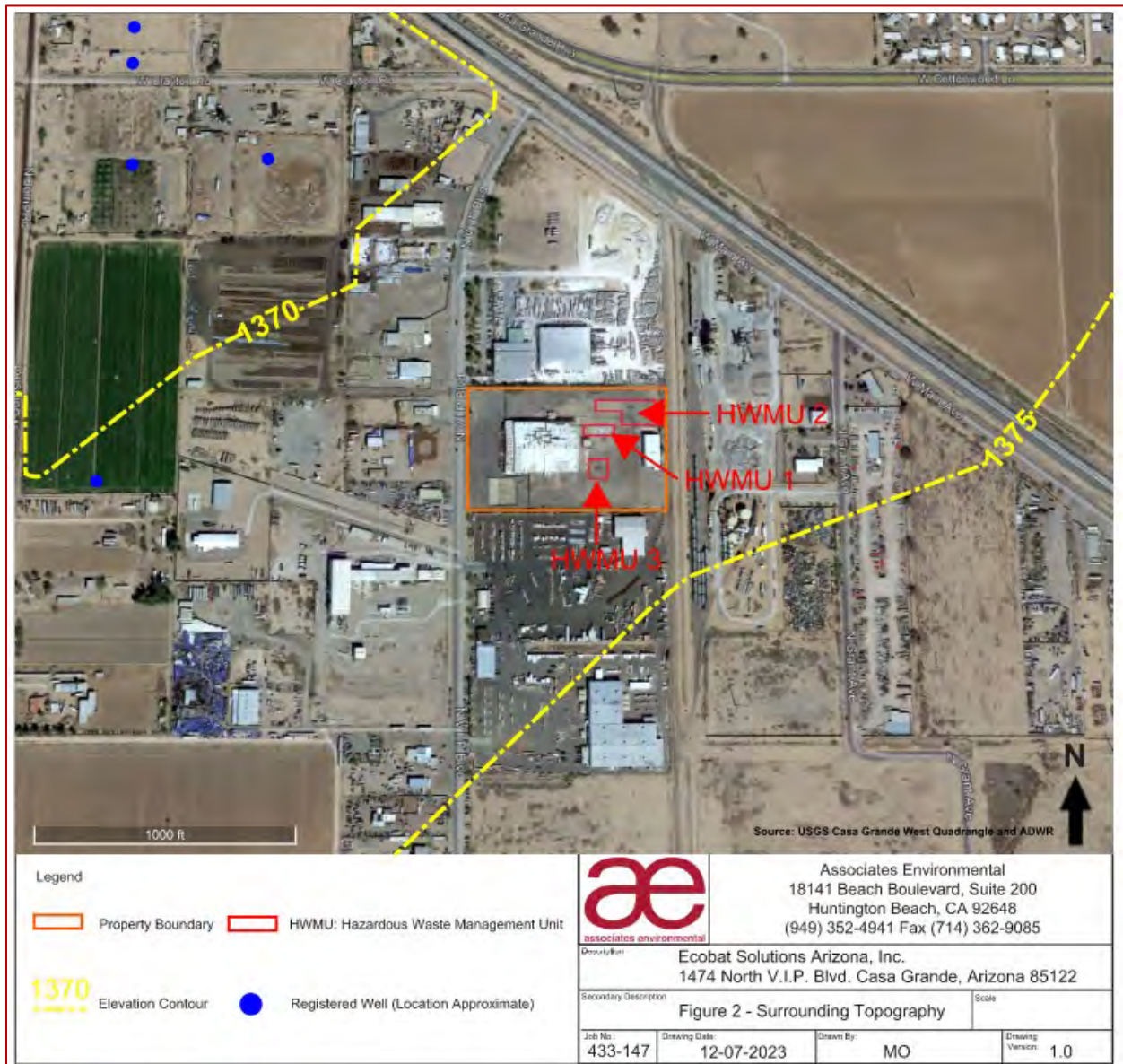


Fire Department Emergency Access and Response

The entire site is accessible by the Fire Department, with major roadways providing paved access into the site.

The site development plan Sheet C-200 provides information on the fire hydrant and fire main layouts, which indicates several fire hydrants within 200-ft for firefighting, with several other hydrants sufficiently separated in case of a significant standoff distance is required to provide exposure protection during a large-scale thermal runaway event.

The drawing below from the RCRA Application Page 38 provides a satellite view of the facility and accessibility. Ample roadways and access are provided around the entire property.



EMPLOYEE SAFETY PROCEDURES AND TRAINING

Ecobat has a Corporate Emergency Plan that is being tailored to this specific location. Within the existing Emergency Plan are various requirements for emergency procedures, emergency response, and for communication with first responders.

As discussed later in this TAR, the requirements from the 2024 Edition of the IFC establish that a Fire Safety and Evacuation Plan must be provided for this facility due to the planned storage of lithium-ion batteries. Sections 404.2.1 and 404.2.2 of the 2024 IFC establish the requirements for the Fire Evacuation Plan and Fire Safety Plan, respectively.

The overall Ecobat Emergency Plan provides response scenarios and protocols for several types of incidents, including:

- A fire within a building or on a vehicle
- Smoking batteries within reach and within hoppers during recycling
- Smoking batteries on vehicles
- Smoking or hot batteries or modules detected on thermal imaging equipment
- General First Aid incidents
- Spillage/ Leakage / Release of Fumes
- Theft of batteries

Additionally, the Emergency Plan contains an incident summary dating back to 2008, to serve as lessons learned for facilities to use in the development of site-specific procedures.

Evacuation Planning – 2024 IFC Section 404.2.1

As included previously in this TAR, an evacuation map is provided as a function of the overall fire safety equipment and site map. Please see Page 6 of this TAR and Page 15 of the RCRA Application for the map. All exits within Building A are properly marked and are clearly visible. For the exterior storage area, egress and access around the storage is ample. A facility “muster point” is also identified on the map, in front of the building.

Fire Safety Planning – 2024 IFC Section 404.2.2

The requirements noted for the fire safety plan include proper procedures for notification of the emergency, procedures for notification of occupants, site plans, evacuation routes, location of emergency equipment, and the assignment of emergency response personnel, etc.

Please see the Recommendations for the site-specific information required, including:

1. Determination of personnel who will fill specific roles in the Emergency Plan such as the Compliance/ Operations personnel, Shift Supervisors, roll call leaders, Incident Controller, etc., as mentioned in the Emergency Plan.
2. Information on proper housekeeping, a list of major hazards in the facility, and proper maintenance/ housekeeping requirements.
3. Establishment of a regular drill and training cycle, including proper documents that must be prepared (e.g., roll call lists and data sheets as identified on the Emergency Plan).



PREFABRICATED BATTERY STORAGE STRUCTURES

The primary method of ensuring that a solid fire prevention and fire safety posture is employed for lithium-ion batteries, is to separate and segregate high risk batteries from other buildings, storage, personnel, and lot lines.

The prefabricated storage structures housing the Normal Risk and At Risk batteries are provided with the following fire safety features noted below. Please also see Page 22 of the RCRA Application for more information.

Normal Risk Battery Storage

- Each of the two units is approximately 385 ft² in footprint (41'4" L x 9'4" W) and approximately 13'8" tall.
- FM Approved 4-hour fire-resistive construction with protected openings.
- Sealed secondary containment for 128 gallons of fire protection water.
- Total flooding dry chemical system with automatic and manual release.
- Continuous mechanical exhaust with emergency shutdown controls
- Audible and Visual notification of a fire or release of the dry chemical extinguishing system.
- Electrically classified equipment rated for Class I Division 1 hazardous environments.

At Risk Battery Storage

- Each of the two units is approximately 220 ft² in footprint (22'0" L x 10'0" W) with an interior area of 188 ft² and approximately 8'4" tall.
- 4-hour fire-resistive construction with protected openings
- Secondary containment for 824 gallons of fire protection water
- Total flooding dry chemical system with automatic and manual release.
- A 3" diameter Fire Department Connection that supplies the fire sprinkler system within the unit. This will allow for the Casa Grande Fire Department to introduce cooling water to the container if it is determined to be required.
- Explosion-proof air conditioning unit. Maintaining consistent temperature within the unit may help reduce the potential for thermal runaway.
- Audible and Visual notification of a fire or release of the dry chemical extinguishing system.
- Energy-sensing fire detectors (per fire alarm drawings).
- Electrically classified equipment rated for Class I Division 2 hazardous environments.

Collection of Fire Protection Water

The concrete pad upon which the At Risk prefabricated storage units sit, is bermed and sloped to a collection sump that will pump the fire protection water into an adjacent 15,000 gallon water tank. This sump and tank arrangement will help reduce the potential for fire protection water to be released onto the ground of the facility during an event involving the At Risk battery storage units.



SITE INCIDENT PREVENTION MEASURES – FLOODING

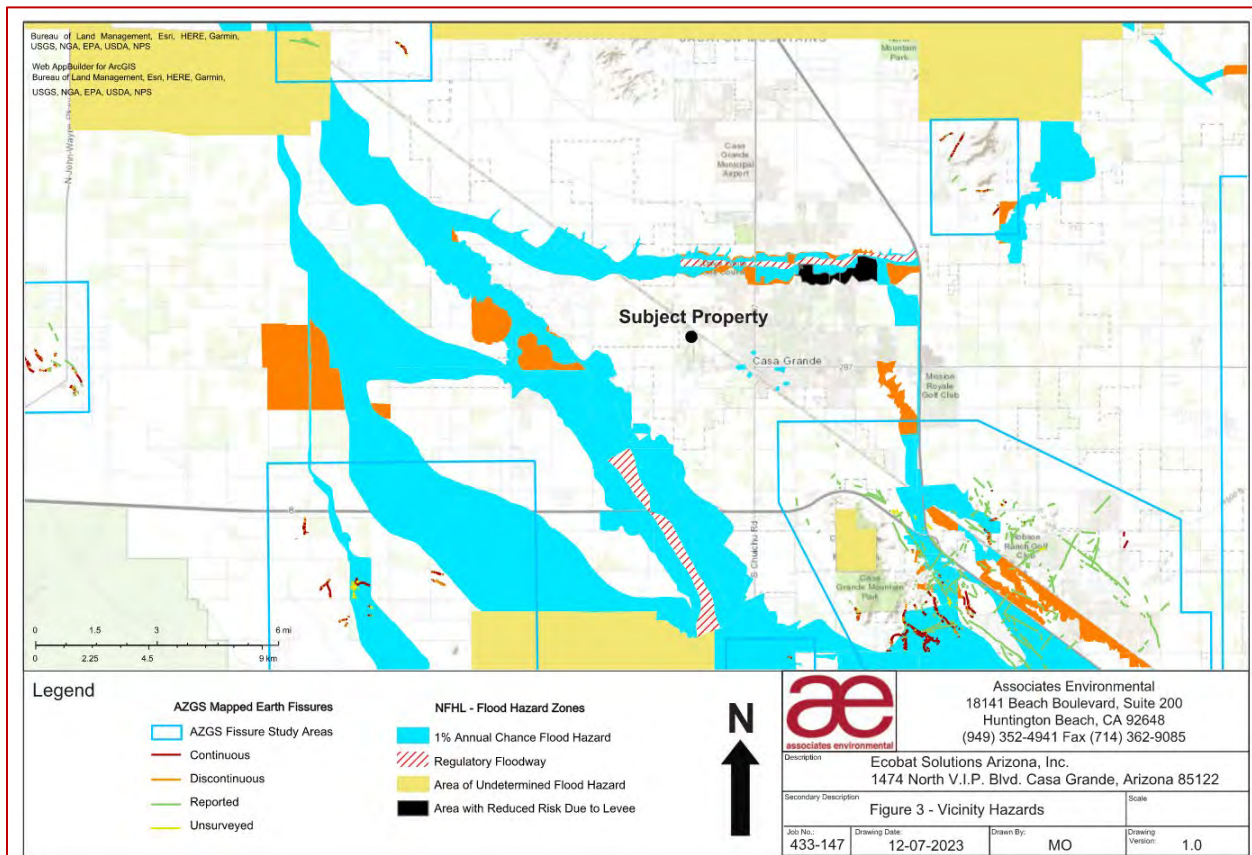
The proposed storage and site as-a-whole is well situated to prevent flood waters from engaging the lithium-ion batteries and causing damage.

Loss history has demonstrated that when lithium-ion batteries are subject to flood waters, the batteries can deteriorate and initiate a thermal runaway event, which has led to the ejection of flammable gases and large scale fires.

Large format batteries such as those used in Electric Vehicles (EVs) have ignited and burned underwater during floods, often times leading to complete destruction of homes and garages where they are parked. As such, flood waters need to be considered in any Fire Protection Plan and Analysis.

The flood map below, taken from the RCRA Application, demonstrates that flood waters with a 1% Annual Chance (also known as the “100 Year Storm”) are not a risk to the facility.

Please see RCRA Application Page 41 and 42 for the flood maps demonstrating that these hazards are mitigated, and for additional information.



National Flood Hazard Layer FIRMette



111°47'24"W 32°53'38"N



Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS		Without Base Flood Elevation (BFE) <i>Zone A, X, A99</i>
		With BFE or Depth <i>Zone AE, AD, AH, VE, AR</i>
		Regulatory Floodway
OTHER AREAS OF FLOOD HAZARD		0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile <i>Zone X</i>
		Future Conditions 1% Annual Chance Flood Hazard <i>Zone X</i>
		Area with Reduced Flood Risk due to Levee. See Notes. <i>Zone X</i>
		Area with Flood Risk due to Levee <i>Zone D</i>
OTHER AREAS		NO SCREEN Area of Minimal Flood Hazard <i>Zone X</i>
		Effective LOMRs
		Area of Undetermined Flood Hazard <i>Zone D</i>
GENERAL STRUCTURES		Channel, Culvert, or Storm Sewer
		Levee, Dike, or Floodwall
OTHER FEATURES		Cross Sections with 1% Annual Chance
		Water Surface Elevation
		Coastal Transect
		Base Flood Elevation Line (BFE)
		Limit of Study
MAP PANELS		Digital Data Available
		No Digital Data Available
		Unmapped

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards.

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 5/23/2023 at 11:29 AM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

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Legend

Property Boundary



Associates Environmental
18141 Beach Boulevard, Suite 200
Huntington Beach, CA 92648
(949) 352-4941 Fax (714) 362-9085

Ecobat Solutions Arizona, Inc.
1474 North V.I.P. Blvd. Casa Grande, Arizona 85122



IFC SECTION 320 AND NFPA 855— ANALYSIS OF STORAGE

The 2024 Edition of the IFC provides new language for the storage of lithium-ion and lithium metal batteries, which provides solid guidance for the protection of the proposed lithium-ion battery storage at this location.

Section 320 of the IFC was derived from Chapter 14 within the 2023 Edition of NFPA 855, which was intended to address the incidental storage and collection of batteries on a small scale in offices buildings, big-box retailers, grocery stores, etc.

The NFPA 855 language was modified in the 2024 Edition of the IFC to address the hazard of storage of batteries in large quantities, rather than incidental collection activities. This information was used as referenced content for the development of IFC Section 320.

In order to provide a complete analysis of fire safety and code compliance, inclusive of best practices per NFPA 855 and IFC Section 320, the storage of batteries in HMWU 1, HMWU 2, and HMWU 3 are evaluated as follows below.

As noted previously, neither the 2024 IFC nor the 2023 NFPA 855 are adopted locally and are rather presented here as a forward leaning Standard of Care for the site as-a-whole.

A. General Discussion of the Application of IFC Section 320 and Fire Risk at Ecobat

The batteries arrive at various states of charge (SOC) and cannot be guaranteed as 0% SOC.

B. General Requirements – IFC Section 320.1

The general provisions of IFC Section 320 establish several Exceptions to the application of the Section as-a-whole, with Exception 4 discussing “*Temporary storage of batteries or battery components during the battery manufacturing process prior to completion of final quality control checks.*”

This Exception does not apply to Ecobat, as the batteries are collected for recycling.

The other Exceptions also do not apply, due to the size and quantity of batteries to be stored exceed the low thresholds.

C. Permits – IFC Section 320.2

An operational permit will be required in accordance with IFC Section 105.5.53, when the City of Casa Grande adopts the 2024 Edition of the IFC or later. The operational permit is administrative only.

D. Fire Safety Plan – IFC Section 320.3

A Fire Safety and Evacuation Plan is required by this Section for storage facilities, which must comply with IFC Section 404. Although IFC Section 320 is intended to apply solely to battery storage, IFC Section 403.10.6 applies R&D, testing, manufacturing, and handling of batteries as well. The Fire Safety Plan should also include the recycling operations.



The facility Fire Safety and Evacuation Plan referenced in Section 403.10.6 must be developed to address the items noted in IFC Section 404.2.2, specifically with regards to emergency notification procedures and required occupant actions.

Please see the Recommendations Section for more information.

E. Indoor Storage Requirements – IFC Sections 320.4.1 and 320.4.2

This Section details the differences between Limited Indoor Storage and Indoor Storage, applying increasing fire safety requirements as hazards increase from total quantity of batteries stored and their relative State of Charge (SOC).

The storage itself is not considered Indoor Storage, as all storage is outside either in open/uncovered areas, or in the prefabricated storage structures. As such Sections 320.4.1 and 320.4.2 do not apply. The storage structures are outside of the intent of true “Indoor Storage,” such as warehouse of batteries that may be inadequately protected. These structures are protected separately and specifically.

NFPA 855 contains specific language in Section 14.3.2.2 regarding “Prefabricated Portable Structures,” which is considered a form of Indoor Storage and addressed via dedicated language in NFPA 855 Section 14.3.2.2.

a. Limited Indoor Storage – IFC Section 320.4.1

The planned exterior storage areas are not considered Limited Indoor Storage.

b. Indoor Storage Areas – IFC Section 320.4.2

The planned exterior storage areas are not considered Indoor Storage.

c. Technical Opinion and Reporting – IFC Section 320.4.2.1

This Section does not apply; however, this TAR serves as the Technical Opinion and Report as noted in this Section and in accordance with IFC Section 104.8.2.

Deflagration Analysis: Please see the Deflagration Analysis Section later in this TAR, which provides the Technical Opinion for the omission of a deflagration venting system for the portable structures.

In summary, the conditions to create a flammable atmosphere and confinement to generate a deflagration or detonation are not present and judged to be satisfactorily addressed.

A deflagration protection system is not required



Fire Protection Basis of Design

Fire Protection is provided for the prefabricated storage units via the dry chemical suppression system. Additionally, the At Risk Battery Storage is provided with a Fire Department Connection for the Casa Grande Fire Department to provide fire protection water into the unit if necessary and appropriate.

Oftentimes the more prudent method of engaging a fire in lithium-ion battery storage is to allow the fire to burn itself out, rather than to apply fire department hose streams. Due to the chemical reaction that occurs within a lithium-ion battery during thermal runaway, both flammable and oxidizing gases are released, which makes firefighting difficult if not impossible. Further, fire protection water often leads to short circuiting of batteries, which can send additional batteries into thermal runaway and create a larger fire hazard. Firefighting water should only be applied by the Fire Department after careful consideration of the risks. As these batteries can burn under water under certain circumstances, hose streams typically are used for exposure protection only.

This requirement is met.

d. Construction Requirements – IFC Section 320.4.2.2

This Section prescriptively requires that building areas not used for the storage of batteries be separated from areas with storage. As these storage areas themselves are not within a building, this requirement does not apply.

The Exception to this Section identifies “prefabricated portable structures” and applies a minimum 2-hour fire-resistive construction requirement upon them if they are inside of a building. For reference, the 4-hour fire-resistive construction of the prefabricated storage units is double the minimum 2-hour fire-resistive construction noted in the IFC, and these units are not within a building.

This requirement is met.

e. Fire Protection Systems – IFC Section 320.4.2.3

The dry chemical fire suppression system provides adequate protection for the prefabricated structures; however, non-water-based protection schemes are being removed from the Codes and Standards as they are ineffective in extinguishing or controlling a thermal runaway fire and may lead to an increased risk of explosion.

Please see the Recommendations Section.

f. Fire Alarm Systems – IFC Section 320.4.2.4

The At Risk storage container is provided with energy-sensing fire detection, and the Normal Risk storage container is provided with a spot-type smoke detector. The requirements in IFC Section 320.4.2.4 and NFPA 855 Section 14.3.2.2 note that the fire detection must be an air-aspirating or radiant energy-sensing detector.

Please see the Recommendations Section.



g. Explosion Control – IFC Section 320.4.2.5

Please see the Technical Opinion of Deflagration Hazards in the next report Section.

Explosion control and deflagration protection are not required.

h. Reduced Requirements for Partially Charged Batteries – Section 320.4.2.6

This Section allows for the removal of the requirements for the Technical Report, Construction Requirements, and Explosion Control, based on the stored energy in the cells being below 30% SOC, with a method to ensure that the SOC is not exceeded after testing is performed.

As noted previously, these are recycled batteries that can arrive in any state of charge. Typically, only those batteries coming from original manufacturers can be guaranteed at or below a 30% SOC. As such, additional protective measures are required.

This reduction of requirements does not apply.

F. Outdoor Storage Requirements – IFC Section 320.4.3

The focus of this TAR and Fire Protection Analysis as-a-whole is on the outdoor storage and the exposures to and from it.

a. Distances to Exposures – Section 320.4.3.1

1. Outdoor battery Storage must be more than 20-ft from any buildings, lot lines, public streets, public alleys, public ways or means of egress.
 - a. As discussed previously, the closest building is 50-ft away from the storage areas, and no publicly accessible streets or means of egress are within 20-ft.
2. Battery storage can be located up to 3-ft away from the exposures mentioned above, if the storage is separated by a minimum 2-hour fire-resistive assembly that extends above and to the side of the storage, or where the storage is within a prefabricated portable structure that provides a complete 2-hour fire resistance rated enclosure.
 - a. The storage units' 4-hour fire-resistive construction meet and exceed this minimum requirement.
3. **This requirement is met.**

b. Storage Area Size Limits and Separation – Section 320.4.3.2

This Section requires that storage areas shall not exceed 900 ft² in size and must not exceed 10-ft in height. Where multiple storage areas are provided, they must be separated by a minimum of 10-ft of open space.

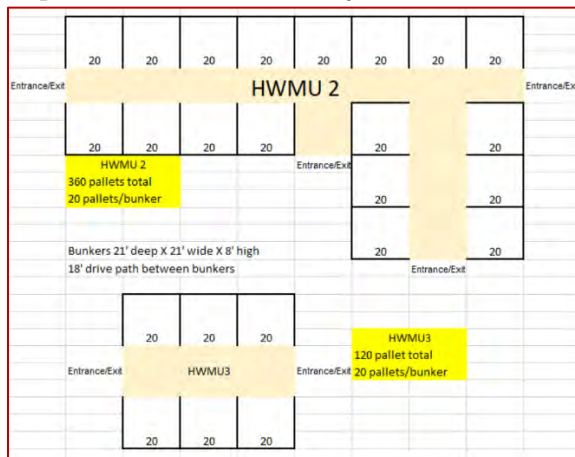
1. The storage in the prefabricated units meets the requirements for maximum size and height of storage.
2. The outside storage plan for the open HMWU 2 and HMWU 3 areas implements an enhanced fire safety posture, which is based on industry best practices and a focus on minimizing the potential spread of fires between storage areas beyond the Code minimums.



3. These best practices are substantially above and beyond the minimum requirements of the IFC and NFPA 855, through the use of physical separation and segregation of storage groups.
4. Ecobat will be constructing storage bays which are a maximum 20x20-ft (400 ft² per bay) and 9-ft tall, separated by solid concrete block walls. The walls will be constructed of concrete blocks that are approximately 18" thick or greater.
5. An example of the storage bays is shown below, taken from a different Ecobat facility. This is the method by which this location will create the storage bays.



6. The screenshot below shows the concept of the bays and drive aisle to be implemented in this facility.



7. Based on the concept of the 2-hour fire-resistive wall between storage areas that are to be located proximally to a public way, lot line, etc., the solid concrete blocks provide an elevated level of fire protection and safety. Typically, filled concrete blocks or concrete walls a minimum of 6" thick can provide 4-hour fire resistivity based on IBC Chapter 7 and Table 721.1(2). The planned 18"+ thick walls are expected to greatly exceed 4 hour fire resistivity and provide for a strong fire spread mitigation posture.
 - a. Industry loss history has shown that these types of walls can prevent large-scale fire events in recycled batteries from spreading.
 - b. These walls greatly exceed the fire prevention requirements in the IFC that establish a minimum 10-ft open space separation to prevent fire spread and to allow for Fire Department access.



8. Storage in each of the concrete-walled bays within HMWU 2 and 3 will not exceed 8-ft in height, which is below the 9-ft height of the walls and the maximum 10-ft storage height overall. Storage will not extend past the front of the bays, and each bay's 400 ft² size is less than the maximum 900 ft² allowed.
9. The minimum drive aisle will be 10-ft wide, meeting the separation requirements from the front of each bay to the bay directly across from it.
10. It is our engineering opinion that this storage method is far superior to that which is promulgated in the IFC and NFPA 855 for outdoor storage. This fire safety design limits the potential for fire to spread by physical separation and protection measures and allows for ample Fire Department access down the drive aisles to monitor any incident and to provide exposure protection.

This Requirement is met.

c. Fire Detection – IFC Section 320.4.3.3

1. As noted previously for indoor storage, outdoor storage requires that a radiant energy-sensing fire detection system be provided.
2. The HMWU 2 and HMWU 3 storage areas must be provided with a radiant energy-sensing fire detection system, though they are not covered or within a structure.

3. Please see the Recommendations Section.

G. NFPA 855 - Section 14.3.2.2 Prefabricated Portable Structures.

The requirements in NFPA 855 mirror those from IFC Section 320, with similar requirements for resistance rating, fire detection, and fire sprinkler systems.

a. Construction Requirements – NFPA 855 Section 14.3.2.2.1

The minimum construction requirements are 2-hour fire resistivity, with approved or listed assemblies. The Normal Risk and At Risk storage units are both FM Approved and 4-hour fire resistive construction.

This requirement is met.

b. Fire Alarm Systems – NFPA 855 Section 14.3.2.2.2

As noted previously, the At Risk storage container is provided with energy-sensing fire detection, and the Normal Risk storage container is provided with a spot-type smoke detector. The prescriptive requirements in NFPA 855 Section 14.3.2.2 note that the fire detection must be an air-aspirating or radiant energy-sensing detector. The Normal Risk storage container requires a radiant energy-sensing detector.

Please see the Recommendations Section.

c. Fire Protection Systems – NFPA 855 Section 14.3.2.2.3

The dry chemical fire suppression system and the FDC for the At Risk battery container provide adequate protection.

Please see the Recommendations Section.



TECHNICAL OPINION OF DEFLAGRATION HAZARDS

The potential for a thermal runaway to create a deflagration hazard is provided below.

For an explosion hazard to be considered, three elements must be present.

- 1) A flammable gas and air mixture within an appropriate ratio to bring the flammable gas above the Lower Flammability Limit (LFL).
- 2) Physical confinement of the gases to ensure concentration and force generation.
- 3) An ignition source must be in the location.

Each of the battery storage units is provided with ventilation and openings that will allow vented gases to escape from within. Vented flammable gases are expected to be released from the At Risk container via the high and low vents in the container itself. Additionally, the doors will typically be left open to allow for the release of gases. Further, the electrical equipment within the At Risk container is electrically classified for hazardous environments, including the air conditioning unit and the exhaust fans. The Normal Risk enclosure is provided with thermal links that allow for the doors to remain open normally and can close upon activation from a fire. By keeping the doors normally open, visual inspection can be readily achieved while allowing for any vented gases to escape.

It is our engineering opinion and judgment that explosion mitigation systems are not necessary.

The outdoor storage areas of HMWU 2 and 3 are open to the air and are not enclosed above, which will allow for natural ventilation to remove any vented thermal runaway gases.

This strategy is also consistent with lithium-ion manufacturing, electric vehicle manufacturing, and R&D facilities. Small-scale incidents do occur; however, those are typically small fires which are significantly different from an enclosed Battery Energy Storage System (BESS) container system that has gone into thermal runaway during normal use and operation at a high state of charge. Those systems are subject to the explosion protection systems in IFC Section 1207, 911, and (where adopted) NFPA 855.



RECOMMENDATIONS

The following recommendations are presented to assist Ecobat in providing a strong overall fire safety posture for the proposed lithium-ion battery storage at this facility.

The recommendations below are not intended to provide a holistic end-to-end evaluation of the facility as-a-whole as regulated by the IFC in general. They are intended to provide a focused set of improvements that will aid in the safe operation and emergency response to an incident in the planned storage and to implement the most current fire safety practices.

1. Provide radiant energy-sensing fire detection for the outdoor, uncovered battery storage in HMWU2 and HMWU3 as well as the Normal Risk battery storage container.
2. The dry-chemical fire suppression system installation should be discussed with the local Fire Marshal for omission in the prefabricated storage structures, due to the loss history and full-scale testing evidence that non-water-based fire protection systems are generally ineffective in extinguishing a thermal runaway fire in lithium-ion batteries.
3. The corporate Ecobat Emergency Plan requires revision to reflect the requirements of the 2024 IFC Sections 403.10.6 and 404 as applied to this specific facility, to ensure that locally-applicable information is included.
 - a. These provisions for the Plan must include site-specific information such as:
 - i. Procedures for reporting a fire or other emergency locally.
 - ii. Life Safety Strategy procedures for notifying occupants of the emergency and how to evacuate persons who require evacuation assistance.
 - iii. Labeling of the Assembly / Muster Point in the front of the building.
 - iv. A list of major fire hazards associated with the normal occupancy and use of the building, including maintenance and housekeeping procedures.
 - v. Identification and assignment of personnel or vendors responsible for the maintenance of systems and equipment installed to prevent or to control fires.
 - vi. Identification and assignment of personnel responsible for maintenance, housekeeping, and regular inspections, etc.
 - vii. Identification and assignment of personnel specifically responsible for the roles and responsibilities designated in the existing Emergency Plan, such as the Incident Controller, Shift Supervisor, Roll Call recorder, and others.
 - viii. Establishment of regular drills and training, and a method for recording the training (personnel, dates, improvements needed, etc.).
4. An Operational Permit must be obtained as outlined in IFC Section 105.5.53, once the City of Casa Grande, AZ adopts the 2024 Edition or later of the IFC.



AUTHOR'S QUALIFICATIONS

Todd LaBerge, P.E. is a licensed Fire Protection Engineer / Professional Engineer, with over 29 years' experience in industrial facilities, hazardous materials operations, and high-piled combustible storage.

Mr. LaBerge's professional Fire Protection Engineering experience spans the public and private sectors, with previous responsibilities including Global Director of Fire Protection and Life Safety for Intel Corporation, Fire Protection Engineer for the City of Sunnyvale California Fire Department, and consulting for the US Department of Defense for hazardous materials storage facilities and weapons depots. Public service includes serving as the Managing Fire Protection Engineer/ Fire Marshal for the US Department of Energy at the Lawrence Berkeley National Laboratory, and a Designated Campus Fire Marshal for the University of California at San Francisco (UCSF).

Mr. LaBerge is deeply involved with the code development process in the International Fire Code (IFC), and the National Fire Protection Association (NFPA), including instructing on hazardous materials at the 2024 NFPA Annual Conference.

Current committee work includes the IFC Committee for Chapter 39 *Processing and Extraction Facilities*, in addition to representing the California Fire Prevention Officers on the Chapter 50 *Hazardous Materials* chapter of the California Fire Code. Additionally, Mr. LaBerge is a primary voting member of NFPA 400 *Hazardous Materials Code* and NFPA 101 *Life Safety Code* Subcommittee on Storage, Industrial, and Miscellaneous Occupancies, and is a founding member of the new NFPA 420 *Standard on Fire Protection for Cannabis Growing, Processing, and Extraction Facilities*.

Specific IFC Fire Code Action Committee (FCAC) work for battery hazards includes the 2027 IFC Work Group 4.x, which develops language for Storage of Lithium-Ion Batteries, Powered Micromobility Devices, Battery Research and Development Facilities, and Powered Industrial Trucks. Additional service is provided to the NFPA 855 Task Group 4 for Explosion Protection system.

Mr. LaBerge is additionally a member of the committee for UL Standard Number 1389 *Standard for Plant Oil Extraction Equipment for Installation and Use in Ordinary (Unclassified) Locations and Hazardous (Classified) Locations* and UL Standard 61010-10 *Standard for Safety Electrical Equipment for Measurement, Control, and Laboratory Use*.

Mr. LaBerge has led numerous Fire Code and Building Code compliance classes focusing on battery energy storage systems, hazardous materials storage and use, high-piled combustible storage, cannabis plant oil extraction and processing, and overall fire and life safety.

Mr. LaBerge can be contacted at 408-718-3356, and todd@tlbfpe.com



ATTACHMENT K
EXISTING PERMITS

Pinal County Air Quality Control District

P. O. Box 987, Florence, Arizona 85132

Phone: (520) 866-6929 Fax: (520) 866-6967

PERMIT NUMBER C31426.000

In accord with the Regulations of the Pinal County Air Quality Control District, the following permittee:

**Ecobat Solutions Arizona, Inc.
433 Las Colinas Boulevard E., Suite 900
Irving, TX 75039**

is authorized to operate the following facility:

Ecobat Solutions Arizona


at the following location:

**1474 North VIP Boulevard
Casa Grande, Arizona**

under the terms and conditions and with the equipment set forth in the underlying specific permit provisions on pages 1 through 21.

Signed this 2nd day of November, 2023

Effective from the 2nd day of November, 2023. Expires the 1st day of November, 2028.



Anu Jain, Interim Control Officer

ECOBAT SOLUTIONS ARIZONA, INC. - CASA GRANDE

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1. Introduction

This permit pertains to a lithium-ion battery recycling facility, operated by Ecobat Solutions Arizona, Inc. The SIC Code is 3691, and the NAICS code is 335911. The facility, also known as Ecobat Solutions Arizona, is located at 1474 North VIP Boulevard, Casa Grande, Arizona, upon a parcel identified by the Pinal County Assessor's Parcel #503-46-0430. The source is situated in an area classified as nonattainment for PM₁₀.

This facility shreds used lithium-ion batteries and isolates the components for re-use in the manufacturing of new batteries.

Input materials are delivered to the facility in various packages, including plastic or steel drums on pallets. The materials are weighed and complex materials are manually disassembled and the individual parts are then processed. The material is broken down by a series of three shredding operations that quickly separate the components and reduce the output size. The shredders and material transfer units are enclosed to control emissions. A water circulation system is utilized throughout the shredding process as a form of treatment and filtration. Screens, density separators, magnetic separators and augers are utilized to separate the different components throughout the shredding processes.

The waste gas produced by the battery pack shredding represents a potential source of volatile organic compound (VOCs) emissions. Each type of battery pack contains a solution comprised of water, dimethyl carbonate and VOCs. The highest percentage by weight was determined by testing to be 11%, within an EV Pouch battery. Of that 11%, approximately 5% decompose to waste gas, with the gas being made up of 45% dimethyl carbonate (DMC) and 55% VOCs. These gases are routed through an aqueous scrubber, equipment ID 504, as a control device to minimize potential VOC emissions. The plant production maximum will be 4 tons of material processed per hour. Based on that production rate, the facility has a potential to emit approximately 90 tons per year of VOCs.

Particulate Matter (PM₁₀) is the other potential criteria pollutant from this facility. This is a result of the shredding process and various other material handling operations that occur, such as screens, bagging stations and a mill. The PM₁₀ emissions will be captured at the point of those operations and sent to a baghouse, equipment 509, through a duct system and a series of accompanied cyclones and blowers. The emissions from the main stack are categorized as EP1. The baghouse is expected to have a 95% control efficiency if operated and maintained according to the manufacturer's specifications. Even without the baghouse control, the PM₁₀ emissions do not have the potential to exceed the annual threshold for this facility to be a major source.

Equipment ID 301, which is a vibratory screen used to separate fines from the larger fraction of copper, aluminum and plastic shredded material, is a fugitive source with emissions that do not exit through the baghouse or main stack. This point of emissions is identified as EP2.

Smaller batteries are received by the facility in drums, packed with vermiculite or other filler material to fill the void space between the batteries. A stand-alone vibratory conveyor is used to remove the vermiculite/filler before the batteries enter the main processing portion of the facility. The particulate matter emissions from this process are controlled by a separate baghouse. This equipment constitutes EP3, or the third emissions point within the facility.

A complete list of equipment from which emissions are allowed by this permit is given in Section 9 of this permit. As an informational disclosure, emissions listed in the last section of this permit entitled "Emission Inventory Table" constitute good-faith estimates of emissions subject to regulation, as set forth in the application for permit.

2. Listing of (*Federally Enforceable*) Applicable Requirements

- A. The listed specific provisions of the Pinal-Gila Counties Air Quality Control District (PGAQCD) Regulations, as adopted by the Pinal County Board of Supervisors on the dates listed, and

approved by the Administrator as elements of the Arizona State Implementation Plan (SIP) by the Federal Register (FR) notice listed:

2-8-300	Visibility Limiting Standard
4-2-040	Fugitive Dust Standards
5-24-1032	Minimum Standard of Performance – Process Particulate Emissions

- B. Those specific provisions of the Pinal County Air Quality Control District Code of Regulations (Code), as adopted by the Pinal County Board of Supervisors on dates listed, and approved by the Administrator as elements of the Arizona State Implementation Plan (SIP) by the Federal Register (FR) notice listed:

2-8-300	Visibility Limiting Standard
4-2-040	Fugitive Dust Standards
4-1-030	Nonattainment Area Fugitive Dust
5-24-1032	Minimum Standard of Performance – Process Particulate Emissions

3. Authority to Construct

- A. Generally [*Federally enforceable pursuant to PCAQCD Code §§3-1-010, 3-1-040 (10/12/95) approved as a SIP element at 65 FR 79742 (12/20/00)*]

As an exercise of authority under PCAQCD's SIP-approved minor new source review program, this permit (or permit revision) authorizes the construction of the equipment enumerated in the Subsection B of this section. That authorization rests on a findings regarding the limited emission potential of the affected equipment, coupled with the enforceable control requirements under this permit. Therefore, based on the regulations in effect upon the date of issuance of this permit and a finding that allowable emissions from the equipment described in Subsection B will neither cause nor contribute to a violation of any ambient air quality standard even without additional limitations, and a further finding that in view of this permit this does not constitute a "major emitting source" within the meaning of Code §3-3-203, this permit constitutes authority to construct such equipment.

- B. Minor New Source Review Requirements - Equipment Authorized [*Federally enforceable pursuant to PCAQCD Code §§3-1-010, 3-1-040 (10/12/95) approved as a SIP element at 65 FR 79742 (12/20/00)*]

All the equipment listed under Section §9 of this permit.

- C. Minor New Source Review Requirements - Control Requirements [*Federally enforceable pursuant to PCAQCD Code §§3-1-010, 3-1-040 (10/12/95) approved as a SIP element at 65 FR 79742 (12/20/00)*]; Material Permit condition (PCAQCD Code §3-1-109)

1. The following control equipment shall be operated and maintained according to manufacturer's specifications, to ensure the stated control efficiency:
 - a. Aqueous packed tower scrubber (504) used to capture VOC emissions at a minimum 15% capture efficiency.
 - b. Main stack baghouse (509) and the preceding blowers and cyclones shall be utilized to capture PM₁₀ emissions at a minimum 95% control efficiency.
 - c. Vibrating Conveyor (601) Baghouse to control particulate matter (PM₁₀) emissions at a minimum 95% control efficiency.
2. Permittee must monitor material that is transferred using equipment listed as insignificant is sufficiently saturated with moisture and does not produce emissions.

4. Emission Limitations and Controls

- A. Applicable Limitations [*Federally enforceable pursuant to PCAQCD Code § 3-1-082 (11/3/93) approved as SIP Elements at 65 FR 79742 (12/20/00)*]

Where different standards or limitations apply under this permit, the most stringent combination shall prevail and be enforceable.

- B. Allowable Emissions [*Federally enforceable pursuant to PCAQCD Code § 3-1-040 (10/12/95) approved as SIP Elements at 65 FR 79742 (12/20/00)*]

The owner/operator ("Permittee") is authorized to discharge or cause to discharge into the atmosphere those emissions of air contaminants as set forth in this permit. Unless exempted under Code §3-2-180, Permittee shall not use any material, process, or equipment not identified in this permit which will cause emissions of any regulated air pollutant in excess of the 5.5 pound-per-day *de minimis* amount, unless authorized by a permit revision under as allowed under this permit, or by a separate permit issued by the District or other competent authority.

- C. Emissions Limitations - Particulate Matter (PM₁₀) [*Federally Enforceable Provision, pursuant to PCAQCD Code §3-1-084 (8/11/94) approved as SIP Elements at 61 FR 15717 (4/9/96)*] (Code §3-1-081.A)

1. Emission Cap

Permittee shall limit emissions in any consecutive twelve-month period such that emissions of particulate matter (PM₁₀) do not exceed 70 tons.

2. Process Controls

Permittee shall operate and maintain the cyclone and baghouse control equipment based on manufacturer's specifications to ensure maximum control of PM₁₀ emissions.

3. Facility-wide Emissions

These operational limitations, in conjunction with the required controls, will limit the potential annual emissions of particulate matter (PM₁₀) to less than one percent (1%) of the major source threshold.

- D. Minor Source Status – VOC & HAP Emissions [*Federally Enforceable Provision, pursuant to PCAQCD Code §3-1-084 (8/11/94)*]

1. Emission Cap

Permittee shall limit emissions, in any consecutive twelve-month period, such that:

- a. Emissions of VOCs do not exceed 100 tons;
- b. Emissions of any single HAPs do not exceed 10 tons.
- c. Emissions of combined HAPs do not exceed 25 tons.

2. Throughput Limitation

Permittee shall limit the throughput of the facility to a rolling average of 8,000 pounds per hour, assuming year-round production.

3. Process Controls

Permittee shall operate and maintain a wet scrubber control device according to manufacturer's specification to ensure maximum control of potential VOC and HAP emissions.

4. Facility-wide Emissions

These operational limitations, in conjunction with the required controls, will limit the potential annual emissions of volatile organic compounds (VOCs) to approximately ninety-one percent (91%) of the major source threshold.

E. Particulate Emissions - Opacity Limits

1. SIP Limitation [*Federally enforceable pursuant to PCAQCD Reg. 7-3-1.1 (6/16/80) approved as SIP element at 47 FR 15580 (4/12/82)*] (Code §4-2-040)

The opacity of any plume or effluent shall not be greater than 40 percent as determined by Reference Method 9 in the Arizona Testing Manual (ADEQ, 1992). Nothing in this limitation shall be interpreted to prevent the discharge or emission of uncontaminated aqueous steam, or uncombined water vapor, to the open air.

2. Visibility Limiting Standard [*Federally enforceable pursuant to Code §2-8-300 (5/18/05) approved as a SIP element at 71 FR 15043 (3/27/06)*]

The opacity of any plume or effluent from any point source not subject to a New Source Performance Standard adopted under Chapter 6 of the Code, and not subject to an opacity standard in Chapter 5 of the Code, shall not be greater than 20% as determined in Method 9 in 40 CFR Part 60, Appendix A.

F. Particulate Emissions - Process Industries [*Federally enforceable pursuant to PGAQCD Reg. 7-3-1.8 (3/31/75) approved as a SIP element at 43 FR 50534 (11/15/78) and PCAQCD Code 5-24-1032 (2/22/95) approved as a SIP element at 77 FR 22676 (4/7/12)*]

Permittee shall capture, to the maximum practical extent, all particulate matter resulting from operation of individual equipment comprising the complete process. Permittee not cause, suffer, allow or permit the discharge of particulate matter into the atmosphere in any one hour from any existing process source whatsoever, except fuel-burning equipment, in total quantities in excess of the amount calculated by whichever of the following equations may be applicable:

1. For process sources having a process weight rate ("P") of 60,000 pounds per hour (30 tons per hour) or less, the maximum allowable emissions ("E") shall not exceed:

$$E = 4.10 * P^{0.67} \text{ pounds-per-hour}$$

2. For process sources having a process weight rate ("P") greater than 60,000 pounds per hour (30 tons per hour), the maximum allowable emissions ("E") shall not exceed:

$$E = 55.0 * P^{0.11} - 40 \text{ pounds-per-hour}$$

G. Particulate Matter Reasonable Precautions [*Federally enforceable pursuant to Code §4-2-040 (6/29/93) approved as a SIP element at 72 FR 41896 (8/1/07) and PGAQD Reg. 7-3-1.2 (7/1/75) approved as a SIP element at 43 FR 53034(11/15/78)*]

1. Permittee shall not cause, suffer, allow, or permit a building or its appurtenances, subdivision site, driveway, parking area, vacant lot or sales lot, or an urban or suburban open area to be constructed, used, altered, repaired, demolished, cleared, or leveled, or the earth to be moved or excavated, or fill dirt to be deposited, without taking reasonable precautions to effectively prevent fugitive dust from becoming airborne.
2. Permittee shall not cause, suffer, allow, or permit a vacant lot, or an urban or suburban open area, to be driven over or used by motor vehicles, such as but not limited to all-terrain vehicles, trucks, cars, cycles, bikes, or buggies, without taking reasonable precautions to effectively prevent fugitive dust from becoming airborne.
3. Permittee shall not disturb or remove soil or natural cover from any area without taking reasonable precautions to effectively prevent fugitive dust from becoming airborne.
4. Permittee shall not crush, screen, handle or convey materials or cause, suffer, allow or permit material to be stacked, piled or otherwise stored without taking reasonable precautions to effectively prevent fugitive dust from becoming airborne.
5. Stacking and reclaiming machinery utilized at storage piles shall be operated at all times with a minimum fall of material and in such a manner, or with the use of spray bars and wetting agents, as to prevent excessive amounts of particulate matter from becoming airborne. Other reasonable precautions shall be taken, as necessary, to effectively prevent fugitive dust from becoming airborne.
6. Permittee shall not cause, suffer, allow or permit transportation of materials likely to give rise to fugitive dust without taking reasonable precautions to prevent fugitive dust from becoming airborne. Earth and other material that is tracked out or transported by trucking and earth moving equipment on paved streets shall be removed by the party or person responsible for such deposits.

H. Surface Stabilization [*Federally enforceable pursuant to Code §4-1-010 (10/28/15) approved as a SIP element at 82 FR 20267 (5/1/17), Amended 1/25/23*]

1. Vehicle Use in Open Areas and Vacant Lots (Code §4-1-030.2)
 - a. Permittee shall not cause or allow visible emissions of particulate matter, including fugitive dust generated from the vehicle use in open areas and vacant lots beyond the property line within which the emissions are generated.
 - b. Permittee shall stabilize the open areas and vacant lots on which vehicles are used to by complying with any one of the stabilization requirements listed in PCAQCD Code §4-1-030.2.A.
 - c. Permittee shall apply appropriate control measures to the open areas and vacant lots on which vehicles are used as listed in PCAQCD Code §4-1-030.2.B.
 - d. Permittee shall implement one or more of the control measures described in PCAQCD Code §4-1-030.2.B within 60 calendar days following the initial discovery by the Control Officer of any open areas and vacant lots that are 0.10 acre (4,356 square feet) or larger and having a cumulative of 500 square feet or more that are disturbed by being driven over and/or used by motor vehicles, by off road vehicles, or for material dumping.
 - e. Permittee shall, within 30 calendar days following the initial discovery by the Control Officer of the disturbance or vehicle use on open areas and vacant lots,

provide in writing to the Control Officer a description and date of the control measure(s) to be implemented to prevent such disturbance.

- f. Permittee shall implement all control measures necessary to limit the disturbance or vehicle uses on open areas and vacant lots in accordance with the requirements of PCAQCD Code §4-1-030.2.B. Control measure(s) shall be considered effectively implemented when the open areas and vacant lots meets the requirements described in PCAQCD Code §4-1-030.2.A.
- g. Use of or parking on open areas and vacant lots by the Permittee shall not be considered vehicles use in open areas and vacant lots.
- h. Establishing initial landscapes without the use of mechanized equipment or conducting landscape maintenance without the use of mechanized equipment shall not be considered vehicle use in open areas and vacant lots.

2. Open Areas and Vacant Lots (Code §4-1-030.3)

- a. Permittee shall not cause or allow visible emissions of particulate matter, including fugitive dust generated from the open areas and vacant lots beyond the property line within which the emissions are generated.
- b. Permittee shall stabilize the open areas and vacant lots by complying with any one of the stabilization requirements listed in PCAQCD Code §4-1-030.3.A.ii.
- c. Permittee shall apply appropriate control measures to the disturbed open areas and vacant lots as listed in PCAQCD Code §4-1-030.3.B.
- d. Permittee shall implement one or more of the control measures described in PCAQCD Code §4-1-030.3.B within 60 calendar days following the initial discovery by the Control Officer of any open areas and vacant lots that are 0.10 acre (4,356 square feet) or larger and having a cumulative of 500 square feet or more that are disturbed, and if such disturbed area remains unoccupied, unused, vacant, or undeveloped for more than 15 days.
- e. Permittee shall, within 30 calendar days following the initial discovery by the Control Officer of the disturbance on the open areas and vacant lots, provide in writing to the Control Officer a description and date of the control measure(s) to be implemented to prevent such disturbance.
- f. Permittee shall apply the control measures listed in PCAQCD Code §4-1-030.5.A if machinery is used to clear weeds and/or trash from open areas and vacant lots of 5,000 square feet or larger.

3. Unpaved Parking Lots (Code §4-1-030.4)

- a. Permittee shall not cause or allow visible emissions of particulate matter, including fugitive dust generated from the unpaved parking lots beyond the property line within which the emissions are generated.
- b. Permittee shall apply appropriate control measures to the disturbed unpaved parking lots as listed in PCAQCD Code §4-1-030.4.B.
- c. Permittee shall repair and/or replace the control measures listed in PCAQCD Code §4-1-030.4.B, and shall clean-up immediately any trackout from areas accessible to the public including curbs, gutters and sidewalks when trackout

extends a cumulative distance of 25 linear feet or more and at the end of the day for all other trackout.

4. Paved Public Roadway (Code §4-1-030.7)
 - a. Permittee upon discovery of the mud/dirt on its property due to the trackout or erosion-caused deposition that extends 25 feet or more from the nearest unpaved surface exit onto the paved public roadway shall apply any one of the control measures listed in PCAQCD §4-1-030.7.A.i.
 - b. Permittee shall remove the mud/dirt in a manner that does not cause another source of fugitive dust.
 - c. In the event unsafe travel conditions would result from restricting traffic and removal of such material is not possible within 72 hours due to a weekend or holiday condition, the provisions of PCAQCD Code §4-1-030.7.A.i can be extended upon notification to and approval by the Control Officer.
 - d. Permittee who is the owner and/or operator of any existing paved public roadways shall apply in sufficient quantity a dust suppressants to the total surface area subject to the disturbance and prevent track by applying any one of the control measures listed in PCAQCD §4-1-030.7.A.i, prior to, during and after work on unpaved road shoulders.
 - e. Permittee who is the owner and/or operator having jurisdiction over, or ownership of, public or private paved roads shall construct, or require to be constructed, all new or modified paved roads in conformance with the road shoulder width and drivable median stabilization as required in PCAQCD Code §4-1-030.7.D.
 - f. Unpaved shoulders and medians of paved roads shall be considered to have control measures effectively implemented when fugitive dust emissions do not exceed 20% opacity and silt loading does not equal or exceed 0.33 oz/ft² as determined in PCAQCD Code §4-9-310 except for unpaved shoulders on which gravel has been applied. Where gravel is utilized to prevent trackout from unpaved shoulders and medians of paved roads, surface gravel shall be uniformly applied and maintained to a depth of two (2) inches to comply with the 20% opacity standards, the gravel depth and silt content test methods in PCAQCD Code §4-9-310.
 - g. Permittee who is the owner and/or operator having jurisdiction over, or ownership of, existing public or private paved roads which do not conform with the requirements of PCAQCD Code §4-1-030.7.D shall reconstruct, or require to be reconstructed, the existing nonconforming paved road within 365 calendar days following the initial discovery that the road fails to meet the requirements. The control officer may require short-term stabilization of any paved road subject to the requirements set forth in PCAQCD Codes §§4-1-030.7.D and 4-1-030.7.E
5. Recordkeeping (Codes §§4-1-040 and 4-1-050)

Permittee, if subject to the above requirements, shall compile and retain records that provide evidence of control measure application including records of receipts/purchase, street sweeping, water applications, maintenance of trackout control devices, gravel pads, fences, wind barriers, tarps, type of treatment/control measure application, extent of coverage, and date applied. The supporting documentation shall be provided as soon as

possible but no later than 48 hours upon a verbal or written request by the Control Officer, excluding weekends. If the Control Officer is at the site where requested records are kept, the records shall be provided without delay. Copies of such records shall be retained for at least two years.

I. General Maintenance Obligation [*Federally Enforceable pursuant to code §3-1-081.E (9/5/01) approved as a SIP element at 66 FR 63166 (12/5/01)*]

At all times, including periods of start-up, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate the permitted facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions.

5. Compliance Demonstration

A. Performance Testing [*Federally Enforceable pursuant to code §3-1-083 (2/22/95) and §3-1-170 (11/3/93) approved as a SIP element at 65 FR 79742 (12/20/00)*]

1. Initial Testing

Initial testing shall be conducted within sixty (60) days of reaching maximum facility production, but no later than 180 days from the start of facility operations.

a. VOC & HAP Emissions

Permittee shall conduct performance tests on the scrubber, using standard test methods approved by the EPA (40 CFR Part 60) specified below, or equivalent methods as approved by the District. These tests shall be performed at the maximum practical production rate.

- i. VOC emission rates, Methods 18, 25, or 25A
- ii. HAPs (combined & single) emission rates
- iii. The test report shall indicate the emission rates (outlet concentration) in pounds/hour, as well as in tons per year.
- iv. The test reports shall define the operating parameters, namely the temperature, range, pressure differential, liquid flow rate, and the contaminant removal efficiency of the scrubber.
- v. Upon approval of the testing report by the District, Permittee shall operate the scrubber within the operating parameters established during the performance tests.

b. PM₁₀ Emissions – SLY Baghouse & ACT Baghouse

Permittee shall determine particulate matter (PM₁₀) concentration exiting each baghouse in pound per hour (lb/hr). This data should then be used to verify the PM₁₀ emission factors for the processes controlled by each baghouse.

2. Test Protocols

Test protocols shall be submitted to the District for approval at least thirty (30) days prior to the test. The test protocol shall list approved test methods to quantify the rate of VOC, HAP and PM₁₀ as a function of the amount of material processed (lb/lb).

3. Performance Test Notice

Notice of performance tests required by this permit shall be submitted to the District at least thirty (30) days prior to running the test.

4. Test Report

A copy of the test report shall be submitted to the District for approval within forty five (45) days after the test. The test report shall quantify the emission rates for VOCs, HAPs, and PM₁₀ expressed in pounds per hour (lbs/hr) and tons per year (tpy).

5. Recurring Testing

Within five years of the initial performance test, Permittee shall conduct a performance test as required in Section §5.A.1 of this permit.

B. Regular Emissions Monitoring and Recordkeeping – Particulate Matter (PM₁₀) [*Federally enforceable provision, pursuant to Code §3-1-084 (8/11/94) approved as a SIP element at 61 FR 15717 (4/9/96)*]

1. As a surrogate means to monitor emissions of particulate matter emitted, permittee shall maintain records of the amount of material processed through the plant on a semi-annual basis.
2. For each baghouse used to control PM₁₀ emissions:
 - a. Keep records of manufacturing data, verifying their design control efficiencies;
 - b. Operate and maintain the baghouse in accordance with the manufacturer's specifications, which shall be kept on site, and maintain records of the maintenance operations; and
 - c. Maintain a log, documenting the date and time of any upset that caused a malfunction of the baghouse.

C. Regular Emissions Monitoring and Recordkeeping - VOCs and HAPs [*Federally enforceable provision, pursuant to Code §3-1-084 (8/11/94)*]

1. As a surrogate means to monitor emissions of volatile organic compounds and hazardous air pollutants emitted, permittee shall maintain records of the amount of material processed through the plant on a semi-annual basis.
2. Permittee shall keep MSDS documents on-file and readily available for each type of battery processed through the facility.
3. For the aqueous packed tower scrubber:
 - a. Keep records of manufacturing data, verifying their design control efficiencies;
 - b. Operate and maintain the scrubber in accordance with the manufacturer's specifications, which shall be kept on site, and maintain records of the maintenance operations; and
 - c. Maintain a log, documenting the date and time of any upset that caused a malfunction of the scrubber.

- D. Scrubber / Baghouse Corrective Action Plans
1. If the scrubber or baghouses are found to be operating outside a specified range, Permittee shall immediately take corrective action to bring the device back into the established operating parameters or shut down the device and the associated equipment.
 2. If a pattern of excursions, as determined by the Department or the Permittee, of operation outside the specified operating ranges develops, Permittee shall submit for Department approval a Corrective Action Plan to bring the devices back into the specified operating parameters. The Plan shall be submitted to the Department within 30 days of the determination of the existence of excursions.
- E. Opacity Monitoring [*Federally Enforceable pursuant to code §3-1-083 (2/22/95) and §3-1-170 (11/3/93) approved as a SIP element at 65 FR 79742 (12/20/00)*]
1. On at least a monthly basis, Permittee shall conduct a visual opacity screen performed on the each emission point, EP1, EP2, and EP3. Records of the opacity screening, including the date, time and results of the observations and any other related information shall be kept.
 2. If visible emissions in excess of 20% opacity are observed, the Permittee shall investigate the cause and correct it. If for two (2) consecutive months, visible emissions of 20% opacity are observed, Permittee shall have a full Method 9 opacity test performed by a certified opacity observer, and shall provide a copy of the resulting report to the District within 10 days of the test.
- F. Calculation of Monthly VOC, HAP and PM₁₀ Emissions [*Federally enforceable provision, pursuant to Code §3-1-081 (9/5/01) approved as a SIP element at 66 FR 63166 (12/5/01)*]
- Monthly VOC, HAP (combined and single), and PM₁₀ emissions shall be calculated utilizing the emission rates as determined from the most recent performance testing, until subsequent testing is performed and new emission rates are calculated.
- G. Recordkeeping [*Federally enforceable provision, pursuant to Code §3-1-084 (8/15/94) and §3-1-083 (2/22/95) approved as a SIP element at 65 FR 79742 (12/20/00)*]
- Permittee shall maintain records of:
1. All information required pursuant to any federally enforceable provision of this permit, recorded in a permanent form suitable for inspection.
 2. The occurrence and duration of any start-up, shutdown or malfunction in the operation of the permitted facility or any air pollution control equipment. For purposes of this provision, a “shut-down” means a cessation of operations at the entire facility for more than seven days, and a “start-up” constitutes the reactivation of the facility after a “shut-down.”
- H. Semi-Annual Compliance Reporting [*Federally Enforceable pursuant to code §3-1-083 (2/22/95) approved as a SIP element at 65 FR 79742 (12/20/00)*]
- In order to demonstrate compliance with the provisions of this permit, the Permittee shall submit a semi-annual report containing a summary of the information required to be recorded pursuant to this permit, clearly showing that Permittee has complied with the operational and emissions limitations under this permit. All instances of deviations from permit requirements shall be clearly

identified in such reports. For brevity, such deviation reports may incorporate by reference any written supplemental upset reports filed by Permittee during the reporting period. The report shall be submitted to the District within 30 days after the end of each calendar half. Appendix A is a form which may be used for the report.

I. Annual Regular Compliance/Compliance Progress Certification [*Federally Enforceable pursuant to code §3-1-083 (2/22/95) approved as a SIP Element at 65 FR 79742 (12/20/00)*]

Permittee shall annually submit to the Director and the Administrator of the US EPA a certification of compliance with the provisions of this permit. The certification shall:

1. Be signed by a responsible official, namely the proprietor, a general partner, the president, secretary, treasurer or vice-president of the corporation, or such other person as may be approved by the Control Officer as an administrative amendment to this permit;
2. Acknowledge that the product-use limitations under this permit constitute an emissions limitation;
3. Verify whether or not Permittee has complied with respect to the product use limitations under this permit;
4. Verify whether compliance with respect to each such term or condition has been continuous or intermittent;
5. Verify that the compliance certification is based upon records documenting compliance with the product use limitations under this permit; and
6. Be postmarked within thirty (30) days of the start of each calendar year.

6. Other Reporting Obligations

A. Deviations from Permit Requirements [*Federally Enforceable pursuant to code §3-1-081.A.5.b (9/5/01) approved as a SIP element at 66 FR 63166 (12/5/01)*]

Permittee shall report any deviation from the requirements of this permit along with the probable cause for such deviation, and any corrective actions or preventative measures taken to the District within ten days of the deviation unless earlier notification is required by the provisions of this permit.

B. Annual emissions inventory [*Federally Enforceable pursuant to code §3-1-103 (2/22/95) approved as a SIP element at 65 FR 79742 (12/2/00)*]

Permittee shall complete and submit to the District an annual emissions inventory, disclosing actual emissions for the preceding calendar year. Submittal of the form set forth in Appendix A of this permit by January 30th of each year fulfills this requirement.

7. Fee Payment (Code §3-7-600)

As an essential obligation under this permit, a permit fee shall be assessed by the District and paid by Permittee in accord with the provisions of Code Chapter 3, Article 7, as they may exist at the time the fee is due. The permit fee shall be due annually on or before the anniversary date of the issuance of an individual permit, or formal grant of approval to operate under a general permit, or at such other time as may be designated now or hereafter by rule. The District will notify the Permittee of the amount to be due, as well as the specific date on which the fee is due.

8. General Conditions

A. Term (Code §3-1-089)

This permit shall have a term of five (5) years, measured from the date of issuance.

B. Basic Obligation (Code §3-1-081)

Permittee shall operate in compliance with all conditions of this permit, the Pinal County Air Quality Control District ("the District") Code of Regulations ("Code"), and all State and Federal laws, statutes, and codes relating to air quality that apply to these facilities. Any permit noncompliance is grounds for enforcement action; for a permit termination, revocation and reissuance, or revision; or for denial of a permit renewal application and may additionally constitute a violation of the CAA.

C. Duty to Supplement Application (Code §§3-1-050.H., 3-1-081.A.8.e., 3-1-087.A.1.c., 3-1-110)

Even after the issuance of this permit, a Permittee, who as an applicant who failed to include all relevant facts, or who submitted incorrect information in an application, shall, upon becoming aware of such failure or incorrect submittal, promptly submit a supplement to the application, correcting such failure or incorrect submittal. In addition, Permittee shall furnish to the District within thirty days any information that the Control Officer may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit and/or the Code.

D. Right to Enter (Code §§ 3-1-132, 8-1-050)

Authorized representatives of the District shall, upon presentation of proper credentials and a showing that the District representative is equipped with certain safety equipment, namely a hard hat, be allowed:

1. To enter upon the premises where the source is located or in which any records are required to be kept under the terms and conditions of this permit;
2. To inspect any equipment, operation, or method required in this permit; and
3. To sample emissions from the source.

E. Transfer of Ownership (Code §3-1-090)

This permit may be transferred from one person to another by notifying the District at least 30 days in advance of the transfer. The notice shall contain all the information and items required by Code § 3-1-090. The transfer may take place if not denied by the District within 10 days of the receipt of the transfer notification.

F. Posting of Permit (Code §3-1-100)

Permittee shall firmly affix the permit, an approved facsimile of the permit, or other approved identification bearing the permit number, upon such building, structure, facility or installation for which the permit was issued. In the event that such building, structure, facility or installation is so constructed or operated that the permit cannot be so placed, the permit shall be mounted so as to be clearly visible in an accessible place within a reasonable distance of the equipment or maintained readily available at all times on the operating premises.

G. Permit Revocation for Cause (Code §3-1-140)

The Director of the District ("Director") may revoke this permit for cause, which cause shall include occurrence of any of the following:

1. The Director has reasonable cause to believe that the permit was obtained by fraud or material misrepresentation;
2. Permittee failed to disclose a material fact required by the permit application form or a regulation applicable to the permit;
3. The terms and conditions of the permit have been or are being violated.

H. Certification of Truth, Accuracy, and Completeness (Code § 3-1-175)

Any application form, report, or compliance certification submitted pursuant to the Code shall contain certification by a responsible official of truth, accuracy, and completeness. This certification and any other certification required under Chapter 3 of the Code shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

I. Permit Expiration and Renewal (Code §3-1-089)

Expiration of this permit will terminate the facility's right to operate unless either a timely application for renewal has been submitted in accordance with §§3-1-050, 3-1-055 and 3-1-060, or a substitute application for a general permit under §3-5-490. For Class I permit renewals, a timely application is one that is submitted at least 6 months, but not greater than 18 months prior to the date of the permit expiration. For Class II or Class III permit renewals, a timely application is one that is submitted at least 3 months, but not greater than 12 months prior to the date of permit expiration.

J. Severability (Code §3-1-081.A.7)

The provisions of this permit are severable, and if any provision of this permit is held invalid the remainder of this permit shall not be affected thereby.

K. Permit Shield (Code §§3-1-081.A.8.b, 3-1-102)

1. Compliance with the terms of this permit shall be deemed compliance with any applicable requirement identified in this permit.
2. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

L. Permit Revisions (Code Chapter 3, Article 2)

1. This permit may be revised, reopened, revoked and reissued, or terminated for cause. Other than as expressly provided in Code Chapter 3, Article 2, the filing of a request by the permittee for a permit revision, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition.
2. The permittee shall furnish to the Control Officer, within a reasonable time, any information that the Control officer may request in writing to determine whether cause exists for revising, revoking and reissuing, or terminating the permit or to determine compliance with the permit.
3. Permit amendments, permit revisions, and changes made without a permit revision shall conform to the requirements in Article 2, Chapter 3, of the Code.

4. Should this source become subject to a standard promulgated by the Administrator pursuant to CAA §112(d), then Permittee shall, within twelve months of the date on which the standard is promulgated, submit an application for a permit revision demonstrating how the source will comply with the standard. (Code §3-1-050.C.5)
5. Revision to Permit Provisions Designated as Federally Enforceable Pursuant to Code §3-1-084 [*Federally enforceable provision, pursuant to Code §3-1-084 (8/11/94)*]

As an express condition of preserving the federal enforceability of any provision of this permit designated "federally enforceable" pursuant to Code §3-1-084, Permittee shall not make any facility allowed change that would contravene such provision, until thirty (30) days after the Permittee has previously furnished notice of the proposed change to the District and to the Administrator, to thereby allow the Administrator opportunity to comment upon the continued "federal enforceability" of the subject provision after the proposed change.

M. Permit Re-opening (Code §3-1-087)

1. This permit shall be reopened if either:
 - a. The Control Officer determines that it contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of it;
 - b. The Control Officer determines that it needs to be revised or revoked to assure compliance with the applicable requirements; or
 - c. The EPA makes a material objection to any of those federally enforceable designations under Code §3-1-084 after the normal EPA review period is ended.
2. If this permit must be reopened or revised, the District will notify the permittee in accord with Code §3-1-087.A.3.

N. Record Retention (Code §3-1-083.A.2.b)

Permittee shall retain for a period of five (5) years all documents required under this permit, including reports, monitoring data, support information, calibration and maintenance records, and all original recordings or physical records of required continuous monitoring instrumentation.

O. Scope of License Conferred (Code §3-1-081.A.8.d)

This permit does not convey any property rights of any sort, or any exclusive privilege.

P. Excess Emission Reports; Emergency Provision (Code §3-1-081.E, Code §8-1-030)

1. To the extent Permittee may wish to offer a showing in mitigation of any potential penalty, underlying upset events resulting in excess emissions shall reported as follows:
 - a. The permittee shall report to the Control Officer any emissions in excess of the limits established by this permit. Such report shall be in two parts:
 - i. Notifications by telephone or facsimile within 24 hours or the next business day, whichever is later, of the time when the owner or operator first learned of the occurrence of excess emissions, including all available information required under subparagraph b. below.

- ii. Detailed written notification within 3 working days of the initial occurrence containing the information required under subparagraph b. below.
 - b. The excess emissions report shall contain the following information:
 - i. The identity of each stack or other emission point where the excess emissions occurred.
 - ii. The magnitude of the excess emissions expressed in the units of the applicable limitation.
 - iii. The time and duration or expected duration of the excess emissions.
 - iv. The identity of the equipment from which the excess emissions occurred.
 - v. The nature and cause of such emissions.
 - vi. If the excess emissions were the result of a malfunction, steps taken to remedy the malfunction and the steps taken or planned to prevent the recurrence of such malfunctions.
 - vii. The steps that were or are being taken to limit the excess emissions. To the extent this permit defines procedures governing operations during periods of start-up or malfunction, the report shall contain a list of steps taken to comply with this permit.
 - viii. To the extent excess emissions are continuous or recurring, the initial notification shall include an estimate of the time the excess emissions will continue. Continued excess emissions beyond the estimated date will require an additional notification.
2. An "emergency" means any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the source to exceed a technology-based emission limitation under the permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.
3. An emergency constitutes an affirmative defense to an action brought for noncompliance with such technology-based emission limitations if the conditions of the following subparagraph are met.
4. The affirmative defense of emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that:
 - a. An emergency occurred and that the permittee can identify the cause(s) of the emergency;
 - b. The permitted facility was at the time being properly operated;
 - c. During the period of emergency the permittee took all reasonable steps to minimize levels of emissions that exceeded the emissions standards or other requirements in the permit; and

- d. The permittee submitted notice of the emergency to the Control Officer by certified mail or hand delivery within 2 working days of the time when emissions limitations were exceeded due to emergency. The notice shall contain a description of the emergency, any steps taken to mitigate emissions, and corrective action taken.

9. Equipment

A. Equipment

Equipment for which emissions are allowed by this permit are as follows:

ID	Equipment	Model
103	Primary Shredder 1 w/ Airlock	ES1000
105	Discharge Auger (Dewatering)	
106	Primary Shredder 2	ES1000
108	Discharge Auger (Dewatering)	
202-1	Secondary Shredder	ES300
202-2	Secondary Shredder	ES300
204-1	Drying Auger (Oversize)	
204-2	Drying Auger (Oversize)	
205-1	Drying Auger (Oversize)	
205-2	Drying Auger (Oversize)	
303	Bagging Station	
308	Delaminating Mill	Turbomill
309	Process Cyclone	
314	Air Separation Table	CMC4-TO-EL
312	Bagging Station (BM Cut 2)	
316	Bagging Station (Cu Scrap)	
318	Air Separation Table	
320	Bagging Station (Al Scrap)	
322	Bagging Station (Case Plastics)	
414-1	BM Drying Auger	
415-1	Bagging Station	BCA Industries
414-2	BM Drying Auger	
415-2	Bagging Station	BCA Industries
503	Process Cyclone Blower	
504	Packed Tower Wet Scrubber	SLY Inc. Model 48-72
509	Baghouse w/ Blower	BHM
510	Stack	

511	Bagging Station (Residual BM & Light Plastics)	
310	Vibrating Screen	BCA Industries
601	Vibrating Conveyor	
602	Cyclone	
603	Baghouse w/ Blower	ACT Model 2-8

B. Insignificant Activities

ID	Equipment	Model
101	Vibrating Feeder w/ Hopper	
102	Feed Conveyor	
104	Primary Shredder 1 Hydraulic Power Pack	
107	Primary Shredder 2 Hydraulic Power Pack	
109	Feed Diverter	
110-1	Conveyor (Enclosed)	
110-2	Conveyor (Enclosed)	
111-1	Density Separator (w/ Recirculating Pump & Tank)	
111-2	Density Separator (w/ Recirculating Pump & Tank)	
112-1	Magnetic Separator	
112-2	Magnetic Separator	
113-1	Discharge Conveyors (Magnetic & Non-Magnetic)	
113-2	Discharge Conveyors (Magnetic & Non-Magnetic)	
201-1	Density Separators Discharge Auger	
201-2	Density Separators Discharge Auger	
203-1	Discharge Auger (Dewatering)	
203-2	Discharge Auger (Dewatering)	
302	Auger	
304	Magnetic Separator	BCA Industries
305	Discharge Auger	

306	Metering Hopper	
307	Feed Auger	
311	Screw Conveyor	
313	Screw Conveyor	
315	Screw Conveyor	
317	Screw Conveyor	
319	Screw Conveyor	
321	Screw Conveyor	
401	Clean Water Tank (w/ Pressurization Tanks)	
402	Clean Water Pump & Manifold	
403	Grey Water Surge Tank (w/ Pump)	1000-1
404	Grey Water Surge Tank (w/ Pump)	1000-2
405-1	Grey Water Surge Tank (w/ Pump) Density Separator Bleed	
405-2	Grey Water Surge Tank (w/ Pump) Density Separator Bleed	
406-1	Grey Water Surge Tank (w/ Pump) Secondary Shredder	
406-2	Grey Water Surge Tank (w/ Pump) Secondary Shredder	
406	Grey Water Tank	
407	Grey Water Pump / Manifold	
408-1	Wave Thickener	
408-2	Wave Thickener	
409-1	Dosing Pump	
409-2	Dosing Pump	
410-1	Floc Supply (Drum or Day Tank)	
410-2	Floc Supply (Drum or Day Tank)	
411-1	Mini Clarifying Tanks	
411-2	Mini Clarifying Tanks	
412-1	Clarifier Purge Pump	
412-2	Clarifier Purge Pump	
413-1	Clean Water Make-up Pump	

413-2	Clean Water Make-up Pump	
501	Air Compressor	AC GA26VSDs150FF
502	N ₂ Generator	AC AML NGM+
505	Recirculation Tank / Sump	
506	Scrubber Pump	
507	Knock-out Drum	
508	Scrubber Blower	

C. Emission Inventory Table

ID	Equipment	Pollutants	PTE (tons/yr)
EP1	Stack (510)	Particulate Matter (PM ₁₀)	<0.1
		Volatile Organic Compounds (VOCs)	90.1
		Hazardous Air Pollutants (HAPs)	<0.1
EP2	Vibrating Screen (301)	Particulate Matter (PM ₁₀)	0.15
EP3	Vibrating Conveyor (601)	Particulate Matter (PM ₁₀)	<0.1

Appendix A:

Semi-Annual Report

Permit C31426.000

Abstract

This constitutes a semi-annual report, documenting emissions and use of emission-generating materials during the subject reporting period.

Facility - Ecobat Solutions Arizona, Inc.
1474 North VIP Blvd., Casa Grande, AZ

Reporting Period - January - June or July - December Year _____

Material Report

Total amount of material processed through facility during reporting period - _____ tons

Compliance Report

Were the records for each baghouse kept, required by §5.B.2?..... YES NO

Were the records for the scrubber kept, as required by §5.C.3?..... YES NO

Were the opacity screenings of each emission point required under §5.D conducted? YES NO

Were any Method 9 readings required as described in §5.D?..... YES NO

If yes did any Method 9 test exceed 20% opacity?..... YES NO

Were the records required by §5.F maintained? YES NO

Were monthly VOCs and HAPs emissions calculated as required in §5.E of this permit? YES NO

Testing Report

Was the performance testing conducted on the packed tower scrubber, as required by §5.A.1.a of this permit?
..... YES NO

List the date of the initial performance test(s) of the scrubber _____

Was corrective action required on of the scrubber tested? YES NO

If yes, list the date of the corrective action, and the end result for the action taken:

Was the performance testing conducted on each baghouse, as required by §5.A.1.b of this permit?..... YES NO

List the date of the initial performance test of the SLY baghouse (509) _____

List the date of the initial performance test of the ACT baghouse (603) _____

Was corrective action required on of either of the baghouses tested? YES NO

If yes, list the date(s) of the corrective action(s), and the end result(s) for the action(s) taken:

Certification by Responsible Official

I certify that, based on information and belief formed after reasonable inquiry, that the statements and information in this report are true, accurate and complete.

Signed _____

Printed Name _____


Title _____

Contact Phone Number _____

Date _____

Email to - compliancereports@pinal.gov, or

Mail to - Pinal County Air Quality Control District
P.O. Box 987
Florence, AZ 85132

	Planning and Zoning Commission STAFF REPORT	AGENDA # _____
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TO: CASA GRANDE PLANNING AND ZONING COMMISSION
FROM: Joe Horn, City Planner
MEETING DATE: February 2, 2023

REQUEST

Hold a public hearing and consider a request by Ecobat Solutions, Inc. for a Conditional Use Permit to allow for a lithium battery recycling facility at 1474 N VIP Blvd. (DSA-22-00275) (Planner Joseph Horn)

APPLICANT/OWNER

Applicant	Owner
A.J. Williams Ecobat Solutions 4828 Calvert Street Dallas, TX 75247 214-631-6070 Aj.williams@ecobat.com	Ecobat Solutions Arizona, Inc. Same

HISTORY

October 16, 1968	The site was officially annexed into the city limits of Casa Grande
December 16, 1993	Conditional Use Permit was granted for a insulation manufacturing facility
August 7, 1995	The zoning was amended from I-1 to I-2.
March 4, 1999	The Previous Conditional Use Permit was reissued to a different ownership group after a shut down of the previous plant
December 1, 2005	A Conditional Use Permit was granted to allow for the use of manufacturing fiberglass insulation.

PROJECT SITE DESCRIPTION

Site Area	9.55 acres
Zoning	I-2 General Industrial
General Plan Designation	Manufacturing/Industry

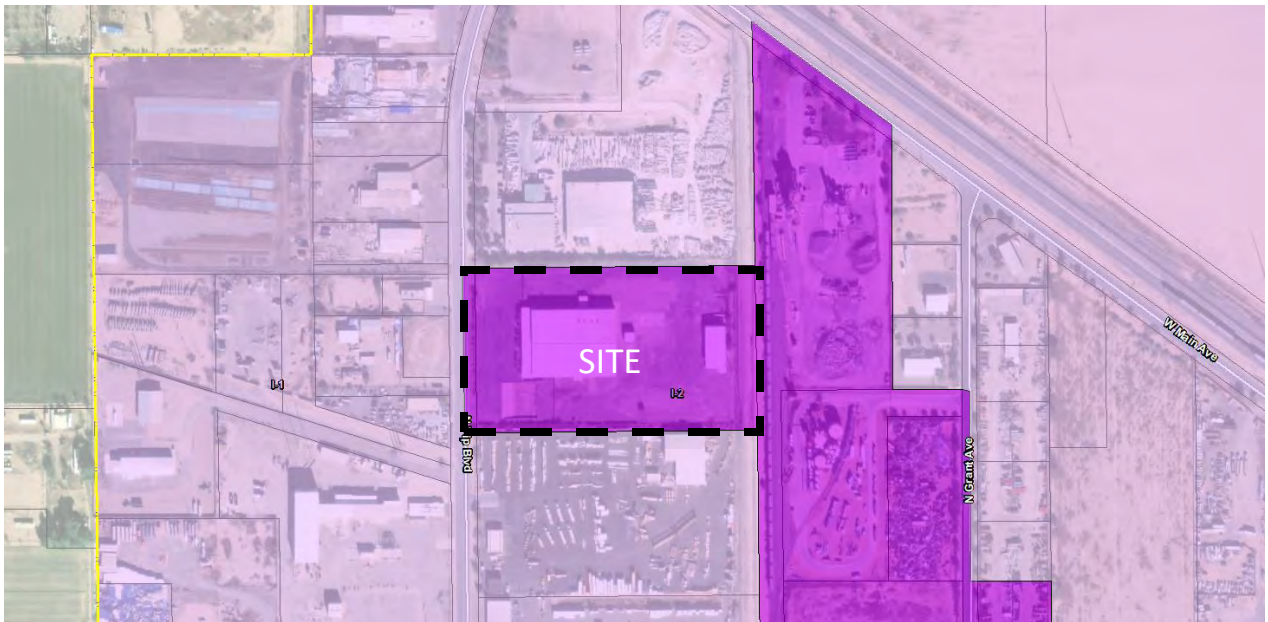
SURROUNDING LAND USE AND ZONING

Direction	General Plan Designation	Existing Zoning	Current Uses
North	<i>Manufacturing/Industry</i>	I-1 (Garden and Light Industrial)	Artistic Pavers
South	<i>Manufacturing/Industry</i>	I-1 (Garden and Light Industrial)	Alliance Lumber
East	<i>Manufacturing/Industry</i>	I-2 (General Industrial)	Rail Cement plant
West	<i>Manufacturing/Industry</i>	I-1 (Garden and Light Industrial)	Auto Repair Undeveloped Office Building

VICINITY MAP



ZONING MAP



OVERVIEW

The applicant is requesting approval of a Conditional Use Permit to operate a complete lithium-ion battery recycling facility in Casa Grande, AZ. A Conditional Use Permit and associated Resolution is required to allow for “uses involving the storage, utilization or manufacture of volatile or explosive material or products”.

The applicant has purchased an existing building to perform the recycling operations within. This facility will be designed to store and process 4 tons per hour of raw materials. The raw materials will first be shredded and pre-sorted, after which the shred will be separated into several categories of finished goods including multiple sizes of black mass, copper, and aluminum. These finished goods will be packaged in supersacks and stored onsite prior to shipping.

Raw material will be transported via truck to the Ecobat facility to be processed. Trucks will enter and exit the property using a dedicated truck drive aisle that is separated from the employee vehicle entrance. The material will be offloaded at existing exterior docks outside the main warehouse building and transported into the building through an at-grade overhead door. The material will be inspected and removed from the shipping pallet or container. The packaging waste material will be collected and consolidated to be returned to the shipper or otherwise disposed of.

Additional and more detailed information on the process can be found in the submitted narrative provided by the applicant.

CONFORMANCE WITH CONDITIONAL USE PERMIT REVIEW CRITERIA 17.68.120

In accordance with Section 17.68.120 of the Zoning Code the Planning and Zoning Commission shall consider the following in review of a Conditional Use Permit:

That the site for the proposed use is adequate in size and topography to accommodate the use, and all yards, spaces, walls and fences, parking, loading and landscaping are adequate to properly relate the use with the land and uses in the vicinity;

Staff finds that the site is adequate to accommodate the proposed development. The site is an existing site with a large building that currently has a Conditional Use Permit to operate as a fiberglass manufacturing facility. The proposed use will operate from inside the existing building. The existing building is in compliance with all applicable City Code requirements regarding setbacks, screening, parking, and loading.

That the site for the proposed use relates to streets and highways adequate in width and pavement type to carry the quantity and kind of traffic generated by the proposed use;

A traffic statement was provided within the narrative, and the existing access drives and road network is sufficient to handle the proposed traffic.

That the proposed use will have no adverse effect upon the abutting property;

The site is located in an I-2 General Industrial zone district and surrounded by I-1 (Garden and Light Industrial) and other I-2 sites. This area is an older industrial area of the City and is well suited for this type of use. As stated in the City code (17.36.010) "The purpose of the I-2 General Industrial Zone is to provide for the development of industries which, because of the nature of their operation, appearance, traffic generation, or emission, would not be compatible with land uses in other zoning districts, but which, nevertheless, are necessary and desirable activities in the city". This zone district provides an appropriate area for this intended use.

That the proposed use shall be in conformance with the General Plan;

This use is in conformance with General Plan 2030. The General Plan designation for the site is Manufacturing/Industry which supports the I-2 Zoning. The proposed use is categorized as conditionally permitted use in the I-2 zone district.

That the conditions stated in the approval are deemed necessary to protect the public health, safety and general welfare;

The proposed use will need to acquire any environmental requirements from other agencies. Staff is recommending the applicant provide a 3-foot tall decorative block wall between the parking area and the street as required by the City Code. The applicant will also be required to update the street frontage landscape to provide 1 tree and 3 shrubs for every 30 feet of frontage. A Final Landscape Plan will be required to be submitted and installed prior or concurrent with any requested building permits (tenant improvements).

PUBLIC NOTIFICATION/COMMENTS

Notification

Public hearing notification efforts for this request meet and exceed those requirements set out by City Code. They include:

- A notice of time, date, place, and purpose of the public hearing was published in the Casa Grande Dispatch.
- A notice was mailed to each owner of property situated within three hundred feet of the site.
- A notice was posted by the applicant on the subject site.

Inquiries/Comments

Staff has not received any inquiries regarding this request.

STAFF RECOMMENDATION

Staff recommends the Commission approve the Conditional Use Permit and Associated Resolution (DSA-22-00275) with the following conditions:

- Prior to issuance of a Certificate of Occupancy a Final Landscape Plan shall be submitted and approved reflecting the following requirements:
 - A 3-foot decorative block wall be placed between the existing parking area and VIP Blvd.
 - 1 tree and 3 shrubs shall be provided for every 30 feet along the street frontage (existing plant material may be included).



DATE/TIME: 02/07/2023 0859
FEE: \$15.00
PAGES: 3
FEE NUMBER: 2023-008617

RESOLUTION NO. DSA-22-00275

A RESOLUTION OF THE PLANNING AND ZONING COMMISSION FOR THE CITY OF CASA GRANDE, GRANTING A CONDITIONAL USE PERMIT FOR A BATTERY RECYCLING FACILITY LOCATED AT 1474 NORTH VIP BOULEVARD.

WHEREAS, Larry Webb, applicant, has requested a conditional use permit for a battery recycling facility;

WHEREAS, a conditional use permit is required for any uses involving the storage, utilization or manufacture of volatile or explosive material or products within a General Industrial (I-2) zoned property;

WHEREAS, the property is currently zoned General Industrial (I-2);

WHEREAS, on the 2nd day of February 2023, the Planning and Zoning Commission of the City of Casa Grande held a public hearing regarding the request for the conditional use permit; and

WHEREAS, the Planning and Zoning Commission of the City of Casa Grande considered all public comments made at said hearing; and

WHEREAS, the Planning and Zoning Commission of the City of Casa Grande has determined that the proposed use would be appropriate for the proposed location, subject to the conditions set forth in this Resolution;

NOW THEREFORE, BE IT RESOLVED by the Planning and Zoning Commission of the City of Casa Grande, Arizona, as follows:

1. The Planning and Zoning Commission of the City of Casa Grande makes the following findings:
 - a. The site for the proposed use is adequate in size and topography to accommodate the use, and all yards, spaces, walls and fences, parking, loading and landscaping is adequate to properly relate the use with the land and the uses in the vicinity;
 - b. The site for the proposed use relates to streets and highways adequate in width and pavement type to carry the quantity and kind of traffic generated by the proposed use;
 - c. The proposed use will have no adverse effect upon the abutting property;

- d. The proposed use is in conformance with the General Plan; and
 - e. The conditions stated in this approval are necessary to protect the health, safety and general welfare.
2. The Planning and Zoning Commission of the City of Casa Grande approves the conditional use permit request by the Applicant subject to the following special conditions which are deemed necessary by the Commission to protect the public health, safety and general welfare:
- a. Applicant shall submit a Final Landscape Plan indicating the following requirements:
 - A 3-foot decorative block wall be placed between the existing parking area and VIP Blvd.
 - 1 tree and 3 shrubs shall be provided for every 30 feet along the street frontage (existing plant material may be included).
3. The Planning and Zoning Commission of the City of Casa Grande approves the conditional use permit request by the Applicant subject to the following general conditions:
- a. The right to a use and occupancy permit shall be contingent upon the fulfillment of all general and special conditions imposed by the conditional use permit procedure.
 - b. That all of the special conditions shall constitute restrictions running with the land and shall be binding upon the owner of the land, his successors and assigns;
 - c. That all conditions specifically stated under any conditional use listed in this chapter shall apply and be adhered to by the owner of the land, his successors or assigns.

PASSED AND ADOPTED by the Planning and Zoning Commission of the City of Casa Grande, Arizona, this 2nd day of February 2023.

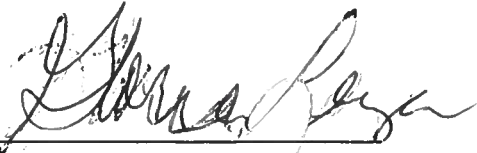


P & Z Commission Chairman



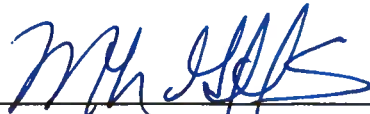
Planning & Development Director

ATTEST:



City Clerk

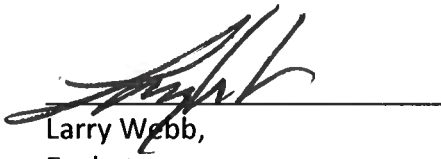
APPROVED AS TO FORM:



Assistant City Attorney

CONSENT TO THE SPECIAL CONDITIONS

Representative, Larry Webb, hereby consent to the special conditions as enumerated above in Section 2 as they relate to this request for a conditional use permit.



Larry Webb,
Ecobat
Applicant

ATTACHMENT L

SUBPART AA PROCESS VENTS

Not Applicable.

ATTACHMENT M

SUBPART BB EQUIPMENT LEAKS

Not Applicable.

ATTACHMENT N

SUBPART CC AIR EMISSION STANDARDS

Not Applicable.

ATTACHMENT O

EXPOSURE INFORMATION

Not Applicable.

ATTACHMENT P

MISCELLANEOUS UNITS

Not Applicable.

ATTACHMENT Q
CORRECTIVE ACTION

RESERVED