

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

Monthly Usage Report?

Month _____ Year _____

????? Processed during Month _____ lbs

????? added during Month _____ lbs

Total ????? used during Month _____ lbs

Report Prepared by _____ Date _____