



# GEORGIA

DEPARTMENT OF NATURAL RESOURCES

## ENVIRONMENTAL PROTECTION DIVISION

### Air Quality Permit

In accordance with the provisions of the Georgia Air Quality Act, O.C.G.A. Section 12-9-1, et seq and the Rules, Chapter 391-3-1, adopted pursuant to and in effect under that Act,

**Facility Name:** SungEel Recycling Park Georgia, LLC

**Facility Address:** 32 Hayes-Wilbanks Road  
Toccoa, Georgia 30577, Stephens County

**Mailing Address:** 3237 Satellite Boulevard  
Duluth, Georgia 30096

**Facility AIRS Number:** 04-13-257-00060

is issued a Permit for the following:

**The construction and operation of a lithium-ion battery recycling facility. This Permit is issued for the purpose of establishing practically enforceable emission limitations such that the facility will not be considered a major source with respect to Title V of the Clean Air Act Amendments of 1990.**

This Permit is conditioned upon compliance with all provisions of The Georgia Air Quality Act, O.C.G.A. Section 12-9-1, et seq, the Rules, Chapter 391-3-1, adopted and in effect under that Act, or any other condition of this Permit.

This Permit may be subject to revocation, suspension, modification or amendment by the Director for cause including evidence of noncompliance with any of the above; or for any misrepresentation made in Application No. 28891 dated May 22, 2023; any other applications upon which this Permit is based; supporting data entered therein or attached thereto; or any subsequent submittals or supporting data; or for any alterations affecting the emissions from this source.

This Permit is further subject to and conditioned upon the terms, conditions, limitations, standards, or schedules contained in or specified on the attached **11** pages.



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Jeffrey W. Cown, Director  
Environmental Protection Division

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**Table 1: Equipment List for SungEel Recycling Park Georgia, LLC**

<b>Emission Unit ID No.</b>	<b>Equipment Description</b>	<b>Air Pollution Control Device ID No.</b>	<b>Air Pollution Control/Recovery Device Description<sup>1</sup></b>	<b>Stack ID No.</b>
WD1	Water Discharging Zone No. 1	AC3	Activated Carbon Tower	EM-1
RTD1	Rotary Type Dryer No. 1	CYC1 CON1 ESP1 AC1 WS1	Cyclone Condenser Electrostatic Precipitator Activated Carbon Tower Wet Scrubber	EM-2A
RTD2	Rotary Type Dryer No. 2	CYC2 CON2 ESP2 AC2 WS2	Cyclone Condenser Electrostatic Precipitator Activated Carbon Tower Wet Scrubber	EM-2B
CPF1	Cell Module Finishing Product Line No. 1	DC1	Dust Collector	EM-3A
CPF2	Cell Module Finishing Product Line No. 2	DC2	Dust Collector	EM-3B
CAM1	CAM Finishing Product Line No. 1	DC3	Dust Collector	EM-4A
CAM2	CAM Finishing Product Line No. 2	DC4	Dust Collector	EM-4B

<sup>1</sup> Note that the dust collectors are control equipment, as are the activated carbon towers and wet scrubbers. The cyclones, condensers, and electrostatic precipitators are recovery equipment since they do not emit pollutants into the ambient air.

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**1. General Requirements**

- 1.1 At all times, including periods of startup, shutdown, and malfunction, the Permittee shall maintain and operate this source, including associated air pollution control equipment, in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Division which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection or surveillance of the source.
- 1.2 The Permittee shall not build, erect, install or use any article, machine, equipment or process the use of which conceals an emission which would otherwise constitute a violation of an applicable emission standard. Such concealment includes, but is not limited to, the use of gaseous diluents to achieve compliance with an opacity standard or with a standard that is based on the concentration of a pollutant in the gases discharged into the atmosphere.
- 1.3 The Permittee shall submit a Georgia Air Quality Permit application to the Division prior to the commencement of any modification, as defined in 391-3-1-.01(pp), which may result in air pollution and which is not exempt under 391-3-1-.03(6). Such application shall be submitted sufficiently in advance of any critical date involved to allow adequate time for review, discussion, or revision of plans, if necessary. The application shall include, but not be limited to, information describing the precise nature of the change, modifications to any emission control system, production capacity and pollutant emission rates of the plant before and after the change, and the anticipated completion date of the change.
- 1.4 Unless otherwise specified, all records required to be maintained by this Permit shall be recorded in a permanent form suitable for inspection and submission to the Division and shall be retained for at least five (5) years following the date of entry.
- 1.5 In cases where conditions of this Permit conflict with each other for any particular source or operation, the most stringent condition shall prevail.

**2. Allowable Emissions**

- 2.1 The Permittee shall not discharge or cause the discharge into the atmosphere from the permitted facility, PM, PM<sub>10</sub>, PM<sub>2.5</sub>, or VOC emission in amounts equal to or exceeding 100 tons during any twelve (12) consecutive month period.  
[Title V Avoidance]
- 2.2 The Permittee shall not discharge or cause the discharge into the atmosphere from the permitted facility, any single hazardous air pollutant which is listed in Section 112 of the Clean Air Act, in the amount equal to or exceeding 10 tons during any twelve (12) consecutive month period, or any combination of such listed pollutants in amount equal to or exceeding 25 tons during any twelve (12) consecutive month period.  
[Title V Avoidance]

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- 2.3 The Permittee shall at all times operate the control and recovery equipment when the indicated emission unit is in operation as shown in Table 2.

[391-3-1-.03(2)(c)]

**Table 2**

Emission Units		Air Pollution Control and Recovery Devices	
ID No.	Description	ID No.	Description
WD1	Water Discharging Zone No. 1	AC3	Activated Carbon Tower
RTD1	Rotary Type Dryer No. 1	CYC1	Cyclone
		CON1	Condenser
		ESP1	Electrostatic Precipitator
		AC1	Activated Carbon Tower
		WS1	Wet Scrubber
RTD2	Rotary Type Dryer No. 2	CYC2	Cyclone
		CON2	Condenser
		ESP2	Electrostatic Precipitator
		AC2	Activated Carbon Tower
		WS2	Wet Scrubber
CPF1	Cell Module Finishing Product Line No. 1	DC1	Dust Collector
CPF2	Cell Module Finishing Product Line No. 2	DC2	Dust Collector
CAM1	CAM Finishing Product Line No. 1	DC3	Dust Collector
CAM2	CAM Finishing Product Line No. 2	DC4	Dust Collector

- 2.4 The Permittee shall not cause, let suffer, or allow emissions from each emission unit in Condition 2.3 the opacity of which is equal to or greater than forty (40) percent.

[391-3-1-.02(2)(b)1]

- 2.5 The Permittee shall not discharge or cause the discharge into the atmosphere from each emission unit in Condition 2.3 any gases which contain particulate matter equal to or in excess of the rate derived from  $E=4.1(P)^{0.67}$ , where E equals the allowable emission rate in pounds per hour and P equals the process input weight rate in tons per hour.

[391-3-1-.02(2)(e)1]

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- 2.6 The Permittee shall not discharge or cause the discharge into the atmosphere from the emission units RTD1, RTD2, CPF1, CPF2, CAM1, and CAM2 any gases which contain pollutants in excess of the amounts indicated for that unit in permit application 28891 under any operating condition.  
[391-3-1-.03(2)(c)]

**3. Fugitive Emissions**

- 3.1 The Permittee shall take all reasonable precautions with any operation, process, handling, transportation, or storage facilities to prevent fugitive emissions of air contaminants.  
[391-3-1-.02(2)(n)]

**4. Process & Control Equipment**

- 4.1 Routine maintenance shall be performed on all air pollution control equipment. Maintenance records shall be recorded in a permanent form suitable and available for inspection by the Division. The records shall be retained for at least five years following the date of such maintenance.  
[391-3-1-.03(2)(c)]
- 4.2 The Permittee shall maintain an inventory of filter bags such that an adequate supply of bags is on hand to replace any defective bags in the dust collectors.  
[391-3-1-.03(2)(c)]
- 4.3 Following performance testing, the Permittee shall maintain the following parameters for scrubbers at the facility:  
[391-3-1-.02(6)(b)1]
- a. Scrubbing liquid flow rate (gpm) for Scrubbers WS1 and WS2: Minimum established in accordance with Condition 6.4.
  - b. Differential pressure of the gas stream (inches of water) for Scrubbers WS1 and WS2: Minimum established in accordance with Condition 6.4.
  - c. pH of the scrubbing liquid for Scrubbers WS1 and WS2: Range established in accordance with Condition 6.4.

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**5. Monitoring**

5.1 The Permittee shall install, calibrate, maintain, and operate monitoring devices for the measurement of the indicated parameters on the following equipment. Data shall be recorded at the frequency specified below. Where such performance specification(s) exist, each system shall meet the applicable performance specification(s) of the Division's monitoring requirements.

[391-3-1-.02(6)(b)1]

- a. Pressure differential across the Dust Collectors DC1 through DC4. Data shall be recorded once per week of operation.
- b. Scrubbing liquid flow rate (gpm) for Scrubbers WS1 and WS2. Data shall be recorded once per day of operation.
- c. Differential pressure of the gas stream (inches of water) for Scrubbers WS1 and WS2. Data shall be recorded once per day of operation.
- d. pH of the scrubbing liquid for Scrubbers WS1 and WS2. Data shall be recorded once per day of operation.
- e. Hours of operation, including partial hours, of each facility process that utilizes any scrubber to control VOC and HAP emissions. Data shall be recorded once per day of operation.

5.2 The Permittee shall perform a check of visible emissions from stacks EM-3A, EM-3B, EM-4A, and EM-4B which vent the flue gas from Dust Collectors DC1 through DC4. The Permittee shall retain a record in a weekly visible emissions (VE) log suitable for inspection or submittal. The check shall be conducted at least once for each week or portion of each week of operation using procedures a. through c. below except when scheduling, atmospheric conditions or sun positioning prevent any opportunity to perform the weekly VE check. Any operational week when scheduling, atmospheric conditions or sun position prevent a weekly reading shall be reported as monitor downtime in the report required by Condition 7.7. Scheduling prevents a weekly VE check only when an emission unit is not operating during a regularly scheduled time period established for the weekly VE checks.

[391-3-1-.02(6)(b)1]

- a. Determine, in accordance with the procedures specified in paragraph c. of this condition, if visible emissions are present at the discharge point to the atmosphere from each of the sources and record the results in the weekly (VE) log. For sources that exhibit visible emissions, the Permittee shall comply with paragraph b. below.
- b. For each source that requires action in accordance with paragraph a., the Permittee shall determine the cause of the visible emissions and correct the problem in the most expedient manner possible. The Permittee shall note the cause of the visible emissions, the pressure

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drop, any other pertinent operating parameters, and the corrective action taken in the maintenance log.

- c. The person performing the determination shall stand at a distance of at least 15 feet which is sufficient to provide a clear view of the plume against a contrasting background with the sun in the 140° sector at his/her back. Consistent with this requirement, the determination shall be made from a position such that the line of vision is approximately perpendicular to the plume direction. Only one plume shall be in the line of sight at any time when multiple stacks are in proximity to each other.

5.3 Within sixty (60) days after startup of the facility, the Permittee shall develop and implement a Preventive Maintenance Program for the Dust Collectors DC1 through DC4 to assure proper operation of the units. The program shall be subject to review and, if necessary to assure compliance, modification by the Division and shall include the pressure drop ranges that indicate proper operation for each baghouse. At a minimum, the following operation and maintenance checks shall be made on at least a weekly basis, and a record of the findings and corrective actions taken shall be kept in a maintenance log:

[391-3-1-.02(6)(b)1]

- a. Record the pressure drop across each baghouse and ensure that it is within the appropriate range.
- b. For baghouses equipped with compressed air cleaning systems, check the system for proper operation. This may include checking for low pressure, leaks, proper lubrication, and proper operation of timer and valves.
- c. For baghouses equipped with reverse air cleaning systems, check the system for proper operation. This may include checking damper, bypass, and isolation valves for proper operation.
- d. For baghouses equipped with shaker cleaning systems, check the system for proper operation. This may include checking shaker mechanism for loose or worn bearings, drive components, mounting; proper operation of outlet/isolation valves; proper lubrication.
- e. Check dust collector hoppers and conveying systems for proper operation.

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**6. Performance Testing**

- 6.1 The Permittee shall cause to be conducted a performance test at any specified emission point when so directed by the Division. The following provisions shall apply with regard to such tests:
- a. All tests shall be conducted and data reduced in accordance with applicable procedures and methods specified in the Division's Procedures for Testing and Monitoring Sources of Air Pollutants.
  - b. All test results shall be submitted to the Division within sixty (60) days of the completion of testing.
  - c. The Permittee shall provide the Division thirty (30) days prior written notice of the date of any performance test(s) to afford the Division the opportunity to witness and/or audit the test, and shall provide with the notification a test plan in accordance with Division guidelines.
  - d. All monitoring systems and/or monitoring devices required by the Division shall be installed, calibrated and operational prior to conducting any performance test(s). For any performance test, the Permittee shall, using the monitoring systems and/or monitoring devices, acquire data during each performance test run. All monitoring system and/or monitoring device data acquired during the performance testing shall be submitted with the performance test results.
- 6.2 Should production rates increase above the rates at which the acceptable performance test were made, the Division may require that the exhaust to the atmosphere be tested for compliance at a higher production rate.  
[391-3-1-.02(6)(b)1]
- 6.3 Performance and compliance tests shall be conducted and data reduced in accordance with applicable procedures and methods specified in the Division's Procedures for Testing and Monitoring Sources of Air Pollutants. The methods for the determination of compliance with emission limits listed under Section 2.0 are as follows:  
[391-3-1-.02(6)(b)1]
- a. Method 1 shall be used for the determination of sample point locations,
  - b. Method 2 shall be used for the determination of stack gas flow rate,
  - c. Method 3 or 3A shall be used for the determination of stack gas molecular weight,
  - d. Method 3B shall be used for the determination of the emissions rate correction factor or excess air. Method 3A may be used as an alternative,
  - e. Method 4 shall be used for the determination of stack gas moisture,



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- f. Method 5 or 29 may be used for the determination of PM emissions and filterable PM<sub>10</sub> concentrations,
  - g. Method 9 and the Procedures of Section 1.3 shall be used for the determination of the opacity of visual emissions,
  - h. Method 18, 21, 25 or 25A for the measurement of VOC emissions,
  - i. Method 29 for the measurement of HAP emissions,
  - j. Method 26 or 26A for the measurement of HCl emissions,
  - k. Method 320 for the measurement of formaldehyde emissions.
- 6.4 Within 120 days after the startup of this source, the Permittee shall conduct performance tests for the following pollutants emitted from the indicated equipment as specified in a. through f. below. The Permittee may conduct performance test for a pollutant on one emission unit from one line (ID No. RTD1 or RTD2, ID No. CPF1 or CPF2, ID No. CAM1 or CAM2) provided the test is conducted on that unit during the maximum production rate. The performance tests shall be used to establish operating parameters for the control devices as described in Condition 5.1 and for the purposes of confirming the emission factors (lb pollutant/ton of lithium powder produced) as presented in Application No. 28891. The operating parameters and emission factors shall be subject to approval by the Division.  
[391-3-1-.02(6)(b)1 and 391-3-1-.03(2)(c)]
- a. Metal HAP (i.e., chromium, cadmium, and nickel), copper, hydrogen chloride, formaldehyde, fluorides, PCDD/DFs, and VOC emissions from Rotary Type Dryer No. 1 (ID No. RTD1) exhausting through Wet Scrubber 1 (Stack ID No. EM-2A).
  - b. Metal HAP (i.e., chromium, cadmium, and nickel), copper, hydrogen chloride, formaldehyde, fluorides, PCDD/DFs, and VOC emissions from Rotary Type Dryer No. 2 (ID No. RTD2) exhausting through Wet Scrubber 2 (Stack ID No. EM-2B).
  - c. Metal HAP (i.e., cobalt, manganese, and nickel), copper, aluminum, graphite, and lithium emissions from Cell Module Finishing Product Line No. 1 (ID No. CPF1) exhausting through Dust Collector DC1 (Stack ID No. EM-3A).
  - d. Metal HAP (i.e., cobalt, manganese, and nickel), copper, aluminum, graphite, and lithium emissions from Cell Module Finishing Product Line No. 2 (ID No. CPF2) exhausting through Dust Collector DC2 (Stack ID No. EM-3B).
  - e. Metal HAP (i.e., cobalt, manganese, and nickel), copper, aluminum, graphite, lithium, and carbon black emissions from CAM Finishing Product Line No. 1 (ID No. CAM1) exhausting through Dust Collector DC3 (Stack ID No. EM-4A).

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f. Metal HAP (i.e., cobalt, manganese, and nickel), copper, aluminum, graphite, lithium, and carbon black emissions from CAM Finishing Product Line No. 2 (ID No. CAM2) exhausting through Dust Collector DC4 (Stack ID No. EM-4B).

6.5 The Permittee shall conduct repeat performance tests in accordance with Condition 6.4 every 24 months from the date of the previous performance tests not to exceed 30 months.  
[391-3-1-.02(6)(b)1]

**7. Notification, Reporting and Record Keeping Requirements**

7.1 The Permittee shall submit written notification of startup to the Division within 15 days after such date. The notification shall be submitted to:  
Mr. Sean Taylor  
Stationary Source Compliance Program  
4244 International Parkway, Suite 120  
Atlanta GA 30354

7.2 The Permittee shall maintain the following records for each calendar month for the entire facility:  
[391-3-1-.02(6)(b)1(i)]

- a. Total amount of Lithium powder (pounds or tons) recovered each month.
- b. Total amount of Lithium powder (pounds or tons) recovered during any 12-month consecutive period.
- c. Quantity by weight of incoming batteries received each month.
- d. Quantity by weight of incoming batteries received during any 12-month consecutive period.

7.3 The Permittee shall maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of an affected facility, any malfunction of the air pollution control equipment or any periods during which a continuous monitoring system or monitoring device is inoperative. The Permittee shall retain these records for a period of at least five (5) years after the date of any such startup, shutdown, or malfunction.  
[391-3-1-.02(6)(b)1(i)]

7.4 The Permittee shall maintain a file of all measurements, including continuous monitoring system, monitoring device, and performance testing measurements; all continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices; and all other information required by this Permit. The information shall be recorded in a permanent form suitable and available for inspection and shall be retained for at least five (5) years following the date of such measurements, maintenance, reports, and records.  
[391-3-1-.02(6)(b)1(i)]

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- 7.5 Upon startup, the Permittee shall develop, implement, and submit a calculation protocol for calculating the total amount of each pollutant emitted from the entire facility on a monthly basis. The protocol shall include, but may not be limited to an emission factor for each pollutant as determined from the most recent performance tests and the production data recorded in accordance with Condition 7.2  
[391-3-1-.03(2)(c)]
- 7.6 The Permittee shall use the protocol required by Condition 7.5 to calculate total monthly emissions of each pollutant from the entire facility. The Permittee shall use the monthly totals to calculate emissions on a 12-month consecutive basis. A new 12-month consecutive total shall be calculated at the end of each calendar month. All emission factors, calculations, and production data used to determine the emissions must be kept as part of the record. The Permittee shall notify the Division in writing if emissions of any individual HAP exceed 0.83 tons from the entire facility, or if emissions of all listed HAPs combined exceed 2.08 tons from the entire facility, during any calendar month. The Permittee shall notify the Division in writing if the combined HAP emissions from the entire facility equal or exceed 25 tons and/or any individual HAP equals or exceeds 10 tons during any 12-month consecutive period. The Permittee shall notify the Division in writing if PM, PM<sub>10</sub>, PM<sub>2.5</sub>, or VOC emissions exceed 8.25 tons during any calendar month or equal to or exceed 100 tons during any 12-month consecutive period. This notification shall be postmarked by the fifteenth day of the following month and shall include an explanation of how the Permittee intends to maintain compliance with the emission limit in Conditions 2.1 and 2.2.  
[Avoidance of 40 CFR Part 70, Area Source Classification Under 40 CFR 63, and 391-3-1-.02(6)(b)1.]
- 7.7 The Permittee shall submit a written report of reportable incidences for each semi-annual period. The report shall cover each semi-annual period ending June 30 and December 31 of each year, shall be postmarked by August 29 and February 28, respectively, and shall contain the nature and cause of the deviation, the time and date of occurrence, and any initial and final corrective action taken. The report shall also contain a summary of any days for which any of the required operation and maintenance surveillance checks were not made and the reason for such failure to perform the surveillance. A reportable incidence is defined as the following:  
[391-3-1-.03(2)(c)]
- a. Any measurement in which the scrubbing liquid flow rate for Scrubbers WS1 and WS2 is outside the range specified in Condition 4.3 or range established during the most recent performance testing.
  - b. Any measurement in which the differential pressure across Scrubbers WS1 and WS2 is outside the range specified in Condition 4.3 or range established during the most recent performance testing.
  - c. Any measurement in which the scrubbing liquid pH for Scrubbers WS1 and WS2 is outside the range specified in Condition 4.3 or range established during the most recent performance testing.

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- d. Any deviation that requires action from the weekly VE checks for Dust Collectors DC1 through DC4 as required by Condition 5.2.
- e. All monthly and 12-month facility-wide rolling totals of individual HAP, total HAP, and emissions of PM, PM<sub>10</sub>, PM<sub>2.5</sub> and VOC.

**8. Special Conditions**

- 8.1 At any time that the Division determines that additional control of emissions from the facility may reasonably be needed to provide for the continued protection of public health, safety and welfare, the Division reserves the right to amend the provisions of this Permit pursuant to the Division's authority as established in the Georgia Air Quality Act and the rules adopted pursuant to that Act.
- 8.2 The Permittee shall calculate and pay an annual Permit fee to the Division. The amount of the fee shall be determined each year in accordance with the "Procedures for Calculating Air Permit Application & Annual Permit Fees."