



**CITY OF PHILADELPHIA
DEPARTMENT OF PUBLIC HEALTH
AIR MANAGEMENT SERVICES**

DRAFT PLAN APPROVAL

Plan Approval Permit No: IP16-000291
Plant ID: T0060

Date: XXXX

Owner: Britton Industries, Inc
Address: 1 East M -Y Lane
Morrisville, PA 19067

Source: Britton Industries, Inc
Location: 8901 Torresdale Ave
Philadelphia, PA 19136

Attention: Mr. Dan Carr
Telephone: (215) 295-3333
E-mail: Dcarr@brittonindustries.com

Pursuant to the provisions of Title 3 of the Philadelphia Code, the Air Management Code of February 17, 1995, as amended, and after due consideration of a plan approval application received under the rules and regulations of the Philadelphia Air Pollution Control Board, the City of Philadelphia, Department of Public Health, Air Management Services (AMS) on XXXX approved plans for the installation and temporary operation of the air contamination device(s) described below:

Facility wide fugitive dust emissions from wood waste, concrete crushing and soil processing.

The property is a commercial concrete and wood recycling center. Products manufactured include, concrete, mulch, and soils.

Source Description Process	Rated Capacity or Max Process Rate	Type of fuel or material Processed
Portable Screener No.1 with an Associated Non-road Internal Combustion Engine. Engine Manufacturer. Perkins Engine Model No. C4-4 Engine Serial No: 44806882 Engine Year:2014	Engine:110 horsepower (HP) Screener: 20 tons/hr	Engine: Diesel
Portable Screener No. 2 on Tracks with an Associated Non-road Internal Combustion Engine. Engine Manufacturer. Caterpillar Engine Model No. C7-1 Engine Serial No: 77001032 Engine Year: 2014	Engine: 151 HP Screener: 28 tons/hr	Engine: Diesel
Portable Concrete Crusher on Tracks with an Associated Non-road Internal Combustion Engine. Engine Manufacturer. Caterpillar	Engine: 350 HP Crusher: 39 tons/hr	Engine: Diesel

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Engine Model No. C9-3 Engine Serial No:C9N01200 Engine Year: 2013		Crusher: Concrete
Portable Jaw Crusher on Tracks (concrete crusher) with an Associated Non-road Internal Combustion Engine. Engine Manufacturer: Caterpillar Engine Model No. C9-3 Engine Serial No: REH05077 Engine Year: 2015	Engine: 275 HP Crusher: 39 tons/hr	Engine: Diesel Crusher: Concrete
Primary Tub Grinder with dust cover/lid (Wood crusher) Manufacturer: Hogzilla	Grinder:200 cubic yard /hr	Engine: Electric
Secondary Grinding Mill with dust cover/lid (Wood crusher) Manufacturer: XXX	Grinder: 200 cubic yard /hr	Engine : Electric
Horizontal Grinding Mill (Wood crusher) Manufacturer: XXXX Engine Year: 2015	Engine: 1200 HP Grinder: 200 cubic yard /hr	Engine Diesel
Under Conveyor	200 cubic yard/hr	Electric
Radial Conveyor	200 cubic yard/hr	Electric
Surge Hopper	200 cubic yard/hr	Electric
Dye Drum Conveyor	200 cubic yard/hr	Electric
Dye Drum	200 cubic yard/hr	Electric
Secondary Mill Conveyor	200 cubic yard/hr	Electric
Inline Conveyor	200 cubic yard/hr	Electric
Radial Stacking Conveyor	200 cubic yard/hr	Electric
Water Suppression System /Spray Bars		
Temperature Monitor		

This Plan Approval expires on XXXX. If construction has not been completed by this date, an application for either an extension or new plan approval must be made. The conditions of this plan approval will remain in effect until they are incorporated in an operating permit.

This Plan Approval is subject to conditions prescribed in the attachment.

Edward Wiener
Chief of Source Registration
(215) 685-9426

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Facility

1. The Permittee shall install, operate, and maintain each process or unit in the facility in accordance with the manufacturer's specifications and the specifications in the application (as approved herein).
2. The Permittee may not permit the emission into the outdoor atmosphere of visible air contaminants in such a manner that the opacity of the emission is either of the following: [25 Pa Code §123.41]
 - (a) Equal to or greater than 20% for a period or periods aggregating more than three (3) minutes in any one hour.
 - (b) Equal to or greater than 60% at any time.
3. The Permittee shall take all reasonable actions to prevent particulate matter from becoming airborne. These actions include the following: [25 Pa Code §123.1(a)(9) and (c)].
 - (a) Interior roadways running through the facility should be suitably treated to minimize fugitive dust. Tires of trucks leaving the property shall be washed with water to avoid dirt being carried outside.
 - (b) The crushed concrete stockpiles shall be managed to minimize fugitive emissions either by applying a water spray or by covering the crushed concrete stockpiles.
4. The Permittee may not permit fugitive particulate matter to be emitted from any source into the outdoor atmosphere if the emissions are visible at the point the emissions pass outside the person's property. [25 Pa Code §123.2]
5. The Permittee shall not permit the emission into the outdoor atmosphere of any malodorous air contaminants from any source, in such a manner that the malodors are detectable outside the property. [25 Pa Code §123.31(b)]
6. The Permittee shall not cause or permit the handling, transporting, storing or disposing of any substance or material which is likely to be scattered by the wind, or is susceptible to being wind-borne, without taking effective precautions or measures to prevent air contamination. Permittee shall not operate or maintain, or allow or cause to be operated or maintained, any premises, open area, right of way, storage piles, or vehicle, or any construction, alterations, demolition, or wrecking operation, or any other enterprises, which involves any material or substance likely to be scattered by the wind, or susceptible to being wind-borne, without effective precautions or measures to prevent air contamination. Permittee shall not maintain, conduct, or use, or cause to be maintained, conducted, or used, any parking lot, or similar areas, unless the lot, area, or roadway is maintained in such manner as to prevent air contamination. [Air Management Regulation (AMR) II, Section VIII]
7. All reasonable actions shall be taken to prevent particulate matter that may arise from stockpiling or use of roads from becoming airborne fugitive emissions shall not cross the owner or operator's property line at any time. [25 Pa. Code 25 § 123.1(a), 25 Pa. Code § 123.1(c), and 25 Pa. Code § 123.2]
8. Water spray dust suppression systems shall be operated during crushing and grinding. Operation without simultaneous operation of the water spray dust suppression system can take place only in those unusual instances where processed materials contain sufficient moisture so as not to create air contaminant

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emissions in excess of the limitations and standards of this permit. If, however, the water spray dust suppression system is incapable of operation due to weather conditions or any other reason, the Permittee may not operate the plant. A pressure gauge will be installed to indicate a normal operation of the dust suppression system. The Permittee shall record the water pressure for each crusher and grinder daily during operation [Application, assures compliance with 25 Pa Code §§127.1]

9. The Permittee shall comply with the following limitations and requirements: [25 Pa Code §127.1]
 - (a) The drop heights from front-end loaders being used to stockpile, transfer, and load aggregate shall be kept as short as possible to minimize dust emissions.
 - (b) Stockpiles shall be kept as compact as possible to limit exposure to the wind. Material shall be stockpiled in such a manner that it may be adequately wetted as necessary to control fugitive emissions.
 - (c) All in-plant roads shall be maintained to prevent particulate matter from becoming airborne in accordance with 25 Pa. Code §§ 123.1 and 123.2.
 - (d) All unpaved in-plant roads shall be watered once per day during warm weather, at the start of each shift, if no precipitation has fallen within the previous twenty four (24) hours, and as needed thereafter on a preventative basis such that visible fugitive emissions are controlled in accordance with 25 Pa. Code §§ 123.1 and 123.2. Other methods of dust control may be used when weather conditions make the watering of unpaved roads hazardous.
 - (e) The owner or operator shall promptly remove earth or other material from paved roads onto which earth or other material has been transported by trucking or earth moving equipment, or other means. [25 Pa. Code § 123.1(c)]
 - (f) A set vehicle pattern shall be established and maintained for vehicles entering and exiting the plant.
 - (g) The owner or operator shall post a sign limiting speeds to less than 15 mph on all in-plant roads.
 - (h) The owner or operator shall post and enforce a requirement stating "All vehicles entering or exiting the plant property shall be properly tarpaulin covered." Vehicles with a gross vehicle weight rating of less than 10,000 pounds shall be exempt from this condition.
 - (i) Speed limit signs shall be posted consistent with the requirements of the Pennsylvania Department of Transportation (overall dimension 20 inches x 24 inches, "SPEED LIMIT" in 4-inch letters and 10-inch numerals).
10. The Permittee shall operate in accordance with an AMS-approved Fugitive Dust and Odor Control Plan.
11. The Permittee shall cease all mulch production, storage of mulch precursors, and storage of finished mulch and mulch intermediates at the facility as soon as practical, but by no later than **August 1, 2018**. All related equipment and materials, including but not limited to:
 - Primary Tub Grinder
 - Secondary Grinding Mill
 - Horizontal Grinding Mill
 - Under Conveyor
 - Radial Conveyor

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- Surge Hopper
 - Dye Drum Conveyor
 - Dye Drum
 - Secondary Mill Conveyor
 - Inline Conveyor
 - Radial Stacking Conveyor
- shall be rendered inoperable by August 1, 2018 and removed from the facility as soon as practical.
12. The owner or operator shall perform monitoring of the facility during operation for the presence of visible emissions. A Method 9 reading is not required for the evaluation of visible emissions. The owner or operator shall take immediate corrective action for any visible emission that is not in compliance with Condition 4.
13. The Permittee shall monitor and keep records of the following :
- (a) Records of reasonable actions taken to demonstrate compliance with Condition 4. Corrective action taken to control visible emissions and malodors to demonstrate compliance with Condition 5, 6, and 7.
 - (b) Daily pressure gauge readings when the water spray is in operation to demonstrate compliance with Condition 8.
 - (c) Records required by the Approve Dust and Odor Plan to demonstrate compliance with Condition 10 and the recordkeeping requirements for the Plan.
 - (d) The date all mulch-related equipment and stockpiles are removed from the facility to demonstrate compliance with Condition 11.

Crushing, Grinding, and Wood and Soil Recycling Processes

14. Each crusher, grinder, and screener shall not operate for more than 720 hours per rolling 12 month period. [Application]
15. The Jaw Crusher, and Concrete Crusher, process rates each shall not exceed 39 tons per hour. The Primary Tub Grinder process rate shall not exceed 200 cubic yard/hr. [Application]
16. The Jaw Crusher and the Concrete Crusher shall only crush concrete. Crushing is limited to non-asbestos containing material as defined by the City of Philadelphia Asbestos Control Regulation.
17. The Permittee shall comply with an AMS-approved Asbestos Inspection and Sampling Plan. If the concrete contains suspect asbestos containing material, the Permittee shall comply with the following:
- (a) The Permittee shall not process any building construction or demolition materials in the concrete crusher prior to obtaining an Asbestos Inspection Report (AIR) or test data from the generator of the material showing that the material does not contain asbestos. If the generator of the material is not able to provide an AIR or test data, the material will not be accepted at the facility and will not be processed.
18. The Primary Tub Grinder, Secondary Grinding Mill, and Horizontal Grinding Mill shall only grind wood material and shall be equipped with dust cover and lid that control dust emission during operation. [Application]
19. The Permittee shall monitor and keep records of the following :
- (a) For each screener, crusher, and grinder, daily operating hours, total monthly operating hours, and 12 month rolling operating hours to demonstrate

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- compliance with Condition 25
- (b) Crushing and grinding rate per hour for each crusher and grinder to demonstrate compliance with Condition 15.
 - (c) For the Jaw Crusher and Concrete Crusher, type material crushed and grinded to demonstrate compliance with Condition 16.
 - (d) For the Jaw Crusher and Concrete Crusher, the Permittee shall keep records of the AIR or analytical test results for asbestos provided by the generator of the material.
 - (e) For the Primary Tub Grinder, Secondary Grinding Mill, and Horizontal Grinding Mill, type of material processed to assure compliance with Condition 18.
 - (f) For the Jaw Crusher, Concrete Crusher, Primary Tub Grinder, Secondary Grinding Mill, and Horizontal Grinding Mill, the water pressure daily during operation.

Diesel Engines (Portable Screener No.1 Engine, Portable Screener No. 2 Engine, Portable Concrete Crusher Engine, Portable Jaw Crusher Engine, Horizontal Grinding Mill (Wood crusher) Engine

- 20. Carbon Monoxide (CO) emissions from each diesel engine shall not exceed 1% by volume of exhaust gases. [AMR VIII]
- 21. Particulate Matter emissions from each diesel engine shall not exceed 0.04 grain per dry standard cubic foot. [25 Pa Code §123.13(c)(1)(i)]
- 22. In addition to the emission requirements of Conditions 20 & 21, emissions from Portable Screener No.1 and No.2 engines shall not exceed any of the following emission limits below;
 - (a) NMHC emissions from each diesel engine shall not exceed 0.19 grams/kilowatt-hour (g/kW-hr). [Tier 4 Engine]
 - (b) Carbon Monoxide emissions from each engine shall not exceed 5.0 g/kW-hr. [Tier 4 Engine]
 - (c) Particulate Matter (PM) emissions from each engine shall not exceed 0.02 g/kW-hr. [Tier 4 Engine]
 - (d) Nitrogen Oxides (NOx) emissions from each engine shall not exceed 0.40 grams/kilowatt-hour (g/kW-hr). [Tier 4 Engine]
- 23. In addition to the emission requirements of Conditions 20 & 21, emissions from the Concrete Crusher and Jaw Crusher engines shall not exceed any of the following emission limits below;
 - (a) NMHC emissions from each engine shall not exceed 0.19 grams/kilowatt-hour (g/kW-hr). [Tier 4 Engine]
 - (b) Carbon Monoxide emissions from each engine shall not exceed 3.5 g/kW-hr. [Tier 4 Engine]
 - (c) Particulate Matter (PM) emissions from each engine shall not exceed 0.02 g/kW-hr. [Tier 4 Engine]
 - (d) Nitrogen Oxides (NOx) emissions from each engine shall not exceed 0.40 grams/kilowatt-hour (g/kW-hr). [Tier 4 Engine]
- 24. In addition to the emission requirements of Conditions 20 & 21, emissions from the Horizontal Grinding mill engines shall not exceed any of the following emission limits below;

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- (a) NMHC emissions from each engine shall not exceed 0.19 grams/kilowatt-hour (g/kW-hr). [Tier 4 Engine]
 - (b) Carbon Monoxide emissions from each engine shall not exceed 3.5 g/kW-hr. [Tier 4 Engine]
 - (c) Particulate Matter (PM) emissions from each engine shall not exceed 0.04 g/kW-hr. [Tier 4 Engine]
 - (d) Nitrogen Oxides (NOx) emissions from each engine shall not exceed 3.5 grams/kilowatt-hour (g/kW-hr). [Tier 4 Engine]
25. Each diesel engine shall not operate for more than 720 hours per rolling 12 month period. [Application]
26. The Horizontal Grinding Mill's engine shall meet the definition of a "nonroad engine" as defined under 40 CFR 89.2. The engine shall not be at the facility for more than 12 consecutive months and shall not operate as a seasonal source. [Exemption from 25 PA Code 129.203-205]
27. Each engine shall only burn diesel fuel oil. The diesel fuel shall meet the following requirements: [40 CFR 60.4207(b), 40 CFR 80.510(b)]
- (a) The maximum sulfur content of the fuel shall be 15 part per million (ppm) [Assures compliance with AMR II, Sections & III]
 - (b) The minimum cetane index shall be 40 or maximum aromatic content of 35 volume percent.
28. Sound levels produced by each engine shall not exceed the following:
- (a) 5 decibels above background level measured at the property boundary of the nearest occupied residential property: or
 - (b) 10 decibels above background level measured at the property boundary of the nearest occupied non-residential property
- [Philadelphia Code Chapter 10-400 (Noise and Excessive Vibration) §10-403(3)]
29. Vibration levels shall not exceed 0.15 inches per second beyond any source property boundary. [Philadelphia Code Title 10 Chapter 10-400]
30. The Permittee shall monitor and keep records of the following:
- (a) Manufacturer's specifications and certificate of conformity or stack test data to assure compliance with Conditions 22, 23 and 24.
 - (b) For each diesel engine, daily operating hours and operating hours per rolling 12 month period, calculated monthly to demonstrate compliance with Condition 25.
 - (c) For the Horizontal Grinding Mill engine, dates the engine arrived and was removed from the facility to demonstrate compliance with Condition 26.
 - (d) For each diesel engine, type of fuel burned, monthly fuel usage, fuel manifests documenting the sulfur content of fuel oil to demonstrate compliance with Condition 27.

Operating Permit and Inspection and Entry Requirements

- 31. Within 30 days of the Plan Approval issuance date the facility shall submit a Natural Minor Operating Permit application.
- 32. All records shall be kept for five (5) years and be produced upon request by Air Management Services.
- 33. Inspection and Entry [25 Pa Code §127.441, 35 P.S. §4008 and Phila. Code §3-304];

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- (a) Upon presentation of credentials and other documents as may be required by law, the Permittee shall allow AMS or authorized representatives of AMS to perform the following:
- (1) Enter at reasonable times upon the Permittee's premises where a operating permit facility or activity is located or conducted, or where records must be kept under the conditions of this permit;
 - (2) Have access to and copy, at reasonable times any records that must be kept under the conditions of this permit;
 - (3) Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
 - (4) Sample or monitor at reasonable time, any substances or parameters at any location, during operating hours, for the purpose of assuring permit compliance or as otherwise authorized by the Clean Air Act, the Air Pollution Control Act, the Philadelphia Air Management Code, and the regulations promulgated thereunder.
- (b) Pursuant to 35 P.S. §4008, no person shall hinder, obstruct, prevent, or interfere with any such authorized representative while in the process of carrying out his official duties. Refusal of entry or access may constitute grounds for permit revocation and assessment of civil penalties.
- (c) Nothing in this permit condition shall limit the ability of the EPA to inspect or enter the premises of the Permittee in accordance with Section 114 or other applicable provision of the Clean Air Act.

(Alternate Site Specific Fugitive Dust and Odor Control Plan proposed by Britton Industries)

Britton Industries, Inc.
Fugitive Dust and Odor Control Plan
June 6, 2018 (DRAFT)

Britton shall implement the following requirements to minimize fugitive dust and control odors at the facility:

1. As per Condition 3(b) of the plan approval, interior roadways running through the facility should be suitably treated to minimize fugitive dust. Tires of trucks leaving the property shall be washed with water to avoid dirt being carried outside. The Permittee shall flush or run sweeper trucks (wet method); either spray nozzles, or wheel washer may be used to prevent or mitigate dust emissions from roads or other AMS approved plan. The crushed concrete stockpiles shall be managed to minimize fugitive emissions either by applying a water spray or by covering the crushed concrete stockpiles.
2. Stockpiles of mulch shall not exceed 30 feet wide and 15 feet high and the overall dimensions of the piles shall be in accordance with the approved PADEP plan. The shape of piles should be a flat-top oval shape.
3. The pH of each finished product mulch stockpile shall be between 6.0 and 9.0.
4. The Permittee shall measure the pH of each finished product mulch stockpile on a monthly basis by collecting a representative sample of the mulch and sending the sample to a certified laboratory to be analyzed by EPA test method 9045D.
5. At a minimum, the temperature of the aerated or static piles of mulch material, during the processing operation, shall be maintained in the range of 45°C – 60°C (113°F – 140°F) for at least 72 consecutive hours. The finished mulch material is subject to the applicable provisions of the Pennsylvania Fertilizer, Soil Conditioner and Plant Growth Substance Law of the Pennsylvania Department of Agriculture.
6. The Permittee shall monitor the temperature of unprocessed and single grind mulch piles two times per month. The Permittee shall monitor the temperature of double or fine grind mulch weekly. If the temperature of any unprocessed single grind, or fine grind mulch is found to exceed 60 °C (140°F), the Permittee shall take immediate action to reduce the stockpile temperature to 60 °C (140°F) or lower.
7. Britton shall maintain a mesh-covered fence around the facility's perimeter to prevent fugitive dust emissions from leaving the property.
8. Britton shall not operate either crusher or the grinder during any periods when the wind speed would cause dispersal of concrete, wood waste, or wood chips.
9. Each mulch stockpile shall be aerated, turned, or restacked as necessary to avoid anaerobic condition that causes odor. Restacking or turning of piles shall occur when winds are blowing away from sensitive receptors.
10. Mulch stockpile should be located at a minimum of 500 ft. distance from the nearest residential property line. The Permittee shall visually mark and designate areas at the facility for mulch storage to assure compliance with this requirement.
11. The wood waste and wood chips shall be stored in a manner that prevents a risk of

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fire or explosion, harborage or breeding of vectors or creation of odor, litter, noise and other nuisances which may be harmful to the public health, safety, welfare, and the environment.

12. The Permittee shall not process manure, biosolids, and waste food at the facility.
13. The Permittee shall only process wood for mulch, concrete for aggregate, and topsoil. The wood mulching operations shall not include composting operations (leaf and yard waste).
14. Leaf and yard waste shall not be mixed, stored, or beneficially used with the wood waste in the production of the wood chips.
15. The storage and transportation of wood waste and wood chips shall be in a manner which does not create a nuisance or be harmful to the public health, safety or the environment and shall comply with the requirements of Title 25 Pa Code, Chapter 285 (relating to Storage, Collection and Transportation of Municipal Waste).
16. The Permittee should take precaution on the storage, processing activities, cause no adverse impacts on the public health, welfare, safety and the environment, and that potential nuisances or nuisances include dust, odors, noise, and traffic hazard.
17. The Permittee shall monitor the facility for the presence of odors at the beginning of each work day by walking the perimeter of the facility.
18. Unprocessed material and primary grind mulch product shall not be stored more than one year.
19. All processed and unprocessed piles of materials are separated by a minimum of 15 feet.

Monitoring and Recordkeeping Requirements of the Dust Control Plan

The Permittee shall monitoring and keep the following records with regards to the Fugitive Dust and Odor Control Plan:

20. For each mulch stockpile, the Permittee shall record the height and base width to assure compliance with Condition 2 or the Permittee shall install a measuring device to show compliance.
21. Analytical pH results to demonstrate compliance with Condition 3.
22. Temperature monitoring records to demonstrate compliance with Condition 6.
23. Facility map where designated mulch stockpile locations meet the minimum distance from residential requirement of Condition 10.
24. Materials received and processed at the facility to demonstrate compliance with Condition 12 and 13.
25. Odor survey logs to demonstrate compliance with Condition 17.
26. Unprocessed material logs to demonstrate compliance with Condition 18.

Approved by Air Management Services on DATE. XXXXX.

Edward Wiener

Chief of Source Registration
(215) 685-9426