RECEIVED
MAY 06 2026
By

April 22, 2026

Mr. Ramy Hassan
Engineer II
DNREC-Air Quality
715 Grantham Lane
New Castle, DE 19720

APC-2002/0738-Operation (Amendment 13)
APC-2027/0038-Construction
APC-2027/0039-Construction

RE: Middletown Materials, Permit: APC-2002/0738-Operation (SM)(Amendment 2)
Permit Modification Request

Dear Ramy,

On behalf of Middletown Materials, this letter requests modification of the facility's Synthetic Minor permit to authorize the construction/operation of additional portable crushing, screening, conveying, and stacking equipment, update operating locations, and establish voluntary operational limits to maintain synthetic minor source status.

Middletown Materials operates portable equipment used to process a variety of materials including reclaimed asphalt pavement (RAP), recycled concrete, natural aggregate, soil, dirt, and other construction and demolition materials. Materials may be crushed, screened, conveyed, and stacked for use onsite as aggregate substitute material, structural fill, or general construction aggregate. Processed materials may also be transported offsite for use in construction and infrastructure projects. Equipment is powered by diesel-fired nonroad engines and wet suppression is utilized to control fugitive particulate emissions at crushers, screens, conveyors, and transfer points.

The portable equipment will be based at the Middletown Materials facility located at 1559 Cedar Lane Rd., Middletown, Delaware, which will serve as the home base location. Consistent with prior approvals, the equipment may also be operated at previously approved locations under existing permits. The same operational limits, control measures, and recordkeeping requirements described in this application will be implemented at all approved operating locations. Equipment will not be operated at new locations without prior DNREC approval.

Middletown Materials requests authorization to operate the following equipment as detailed by the enclosed application package:

Equipment ID	Equipment Description
GCS-32	McCloskey 144 RV3HD Impact Crusher and 350hp Caterpillar Engine
GCS-33	Edge TS100 Stacker and 115 hp Caterpillar Engine
GCS-29	McCloskey R230 Tracked Screen with a Caterpillar C6.6 Engine.
GCS-28	MCCLOSKEY J45 JAW CRUSHER with Volvo Engine (separate application previously submitted)
GCS-26	Nordberg 475 hp Nordberg Crushing and Screening Plant (previously referred to as GCS-2052-2414 from Christiana Materials Permit) (separate application previously submitted)
GCS-25	Ezystak BF7042 Belt Feeder with Caterpillar C4.4 engine

Equipment ID	Equipment Description
GCS-24	McCloskey 621 RE Trommel Screener with Caterpillar C6.6 engine
GCS-11	MCCLOSKEY BROS MCB616REG TROMMEL SCREEN PLANT Screen with Caterpillar/3054 engine
GCS-18	Terex Warrior Power Screen with Caterpillar C4.4 engine

The following locations are requested to be removed from the current permit as projects have been completed:

- Fitzgerald Salvage & Recycling – 17115 Fitzgeralds Road, Lincoln, DE
- 6957 Bay Road – Frederica, DE
- Everett Meredith Middle School – Middletown, DE
- 316 Bayview Road – Middletown, DE
- Airport Road – New Castle, DE
- 34611 Delaware Avenue – Frankford, DE
- SR1 & SR16 – Milton, DE

In addition, Middletown Materials also requests the existing permit be modified to:

- Authorize the operation of GCS-04, GCS-15, and GCS-21 at Adel's Sussex County facility located at 21039 Lowes Rd., Gumboro, Sussex County.
- Remove GCS-22 McCloskey International Jaw Crusher from the permit.
- Authorize the operation of GCS-16 at US113 at sr18/sr404 Grade Separated Intersection (job site T201412701).

To maintain synthetic minor source status, Middletown Materials requests voluntary operational limits. Unless otherwise specified all new portable equipment will be limited to 1,800 hours of operation per rolling 12-month period.

The following currently permitted equipment will retain existing operating limits:

- GCS-16 – Nordberg Crusher – 2,000 hours
- GCS-04 – 650 hp Morbark Tub Grinder – 1,100 hours
- GCS-15 – 750 hp Morbark Tub Grinder – 950 hours
- GCS-21 – 1200 hp Morbark Tub Grinder – 835 hours
- GCS-26-10,000 gallons of Fuel

Enclosed please find the completed air permit application package and associated fees for permit modification and advertisement. If you have any questions or require additional information, please contact myself or [redacted] of RainWise Environmental Solutions at [redacted] or 302.423.8137.

Sincerely,

[redacted]

AIR PERMIT APPLICATION PACKAGE

MIDDLETOWN MATERIALS

MIDDLETOWN MATERIALS
SYNTHETIC MINOR PERMIT MODIFICATION
FACILITY OPERATIONS SUMMARY

The equipment will be used to process a variety of materials including reclaimed asphalt pavement (RAP), recycled concrete, natural aggregate, soil, dirt, and other construction and demolition materials brought to the site. Materials may be processed in large chunks and reduced in size through crushing and screening operations. Processed materials may be used onsite as aggregate substitutes in the manufacture of asphalt paving materials, as structural fill, or as general construction aggregate. Some processed materials may also be used offsite in construction and infrastructure projects. Wet suppression represents Best Available Control Technology (BACT) for particulate emissions from portable crushing, screening, and conveying operations in Delaware, based on regulatory precedent and technical feasibility. The portable crushing, screening, and conveying equipment will be based at the Middletown Materials facility, which will serve as the home base location. However, consistent with prior approvals, the equipment may also be operated at approved locations as identified by operating permits. Equipment will not be operated at new locations without prior review and approval from DNREC, as required. When operating at alternate approved locations, the same control measures, operational limits, and recordkeeping requirements described in this application will be implemented.

Equipment/Activity Identification

New Equipment

GCS-32: McCloskey 144Rv3HD Impact Crusher and 350 hp Caterpillar Engine

Equipment: McCloskey 144RV3HD Impact Crusher
Serial Number: 903718
Model: 144Rv3HD
Production Rating: 400 tons per hour
Conveyers: 3
Dust Suppression: Yes
Engine: 2025 Caterpillar C9.3B Tier 4, Diesel Engine, Serial No. NGH07749, Engine Arrangement 539-5436
The I44R impact crusher functions as the primary size-reduction unit (and may also perform secondary reduction depending on feed material).

GCS-33: Edge TS100 Stacker and 115 hp Caterpillar Engine

Equipment: Edge TS100 Stacker (Belt Conveyer)
Serial Number: 23TS10048225
Model: TS100
Production Rating: 400 tph
Conveyers: 1
Dust Suppression: Yes
Engine: 2023 Caterpillar/C3.4, Tier 4, Serial No. CJ702289, Engine Arrangement 483-3549

MIDDLETOWN MATERIALS
SYNTHETIC MINOR PERMIT MODIFICATION
FACILITY OPERATIONS SUMMARY

GCS-29: McCloskey R230 Tracked Screen with a Caterpillar C6.6 Engine.

Equipment: McCloskey R230 Tracked Screen
Model: R230
Serial No.:80898
Process rate: 400 tph
Conveyers: 3
Engine: 2012 Caterpillar C6.6 Engine, 225 hp/168 kw, Serial No. 66623631, Engine Arrangement 373-8069
Dust Suppression: Yes

GCS-25: Ezystak BF7042 Belt Feeder with Caterpillar C4.4 engine

Process Rate: 400 tph
Model No. BF7042
Serial No.: 2613
Conveyers/Transfer Points: 3. Hopper dump point and Feeder belt loading and discharge transfer to crusher/screener
Engine: 2017 Caterpillar C4.4, 100 hp/74.5 kw, Tier 4
Dust Suppression: Yes

GCS-24: McCloskey 621 RE Trommel Screener with Caterpillar C6.6 engine

Process rate: 300 tph
Model: 621RE
Serial No. 70770
Engine rating: 2010 Caterpillar C6.6 engine, 150 hp, Serial No. 66614277, Engine Arrangement No. 278-4283, Tier 3
2 Conveyers
Dust Suppression: Yes

GCS-11: MCCLOSKEY BROS MCB616REG TROMMEL SCREEN PLANT Screen with Caterpillar/3054 engine

Processing Rate: 180 tph
Serial No. 11006-P
Model No. MCB616Reg
Engine Rating: 2004 Caterpillar 3054 engine, 100 hp, Serial No. 5YS02719, Engine arrangement (partial tag) 154-9244
3 conveyers

Dust Suppression: Yes

GCS-18: Terex Warrior Power Screen with Caterpillar C4.4 engine

Process Rate:600 tph
Model: Warrior 1800
Serial No.: PID00123CDGB22150
Conveyers:4
Engine: 2011 Caterpillar C4.4, 2011, Serial No. 44605467, Engine Arrangement321-3042, Tier 4

Applications Previously Submitted:

GCS-28 MCCLOSKEY J45 JAW CRUSHER (application recently submitted) with Volvo Engine

Equipment: 300 tph McCloskey Jaw Crusher
Model: J45
Serial No. 86729
Engine: 2017 Volvo Penta, Model TAD1171VE, Serial No.7011382096, Engine Arrangement VP265825
Conveyers: 2
Dust Suppression: Yes

GCS-26 (previously referred to as GCS-2052-2414 from Christiana Materials Permit):
475 hp Nordberg Crushing and Screening Plant (Letter submitted requesting transfer of equipment)
Equipment: 1997 NORDBERG
Model No., NW1213CC CRUSHER/SCEENING PLANT
Crusher Serial No. 2052-2414
Engine: 1997 Cummins/CN14, Serial No. 29386

Currently Permitted:

GCS-04: 650 hp Morbark Tub Grinder with Caterpillar/3412 Engine
Process Rate: 650 hp
Serial No. 565173
Model: 1200
Engine: Caterpillar/3412, Engine Serial No. 38S15956, Engine Arrangement4N-2246

MIDDLETOWN MATERIALS
SYNTHETIC MINOR PERMIT MODIFICATION
FACILITY OPERATIONS SUMMARY

GCS-15: 750 hp Mobark Tub Grinder with Caterpillar/3054 Engine

Process Rate: 750 hp
Serial No. 571258
Model 1300 Portable
Engine: Caterpillar/3054 Engine, Serial No. 4CR01170, Engine Arrangement131-4014

GCS-21: 1200 hp Morbard Tub Grinder with Caterpillar/3412 Engine

Model 6600
Process Rate: 1200 hp
Serial No.: 186-1032

Engine: Caterpillar/3412, Serial No. BDT03437, Engine Arrangement, 134-5371

GCS-16: 425 Horsepower Nordberg Lokotrack Crusher with Caterpillar C12 engine

Process Rate:
Model: LT1213
Serial No. 72879
Engine: Caterpillar C12 engine, BDL00773
Engine Arrangement: 203-7099

Regulatory Review

1. Federal New Source Performance Standards (NSPS)

Middletown Materials operates portable crushing, screening, and conveying equipment used to process concrete, asphalt, soil, and recycled aggregate materials. Equipment constructed, modified, or reconstructed after August 31, 1983 may be subject to 40 CFR Part 60 Subpart OOO. Applicable equipment includes crushers, screens, trommel screens, conveyors, and transfer points. Opacity limits of 10 percent apply to crushers, screens, and conveyors, and 15 percent opacity applies to transfer points. Compliance will be achieved through wet suppression and fugitive dust control measures.

2. Best Available Control Technology (BACT)

BACT for particulate matter emissions consists of wet suppression systems at crushers, screens, conveyors, and transfer points. Additional controls include water application on haul roads, limiting drop heights, housekeeping practices, and stockpile moisture control. Nonroad diesel engines are EPA-certified and use ultra-low sulfur diesel fuel, and therefore are considered to meet BACT.

MIDDLETOWN MATERIALS
SYNTHETIC MINOR PERMIT MODIFICATION
FACILITY OPERATIONS SUMMARY

3. Delaware Minor New Source Review (NSR)

The facility is subject to 7 DE Admin. Code 1102. Voluntary operational limits are proposed to restrict emissions below major source thresholds. Selected equipment will be limited to 1,800 hours per consecutive 12-month period. With these restrictions, NOx, VOC, CO, PM, and SO2 emissions remain below major source thresholds.

4. Prevention of Significant Deterioration (PSD)

PSD applicability was evaluated using restricted emissions. Emissions increases do not exceed PSD significance thresholds. Therefore, PSD review, modeling, and PSD BACT analysis are not required.

5. Synthetic Minor Source Status

Voluntary operational limits establish the facility as a synthetic minor source. The following units will be limited to 1,800 hours per consecutive 12-month period: GCS-32, GCS-33, GCS-29, GCS-28, GCS-25, GCS-24, GCS-11, and GCS-18.

6. Monitoring and Recordkeeping

The facility will use runtime meters, record operating hours monthly, maintain rolling 12-month totals, track wet suppression operation, and retain records for at least five years.

7. Compliance Determination

Based on proposed controls and restrictions, Subpart OOO applies, wet suppression represents BACT, PSD review is not triggered, and the facility qualifies as a synthetic minor source.

Administrative Information

One original and one copy of All Application Forms Should Be Mailed To:
Division of Air Quality
100 West Water Street, Suite 6A
Dover, DE 19904

All Checks Should Be Made Payable To:
State of Delaware

Company and Site Information

1.	Company Name: **Middletown Materials, LLC.**		
2.	Company Mailing Address: **10 Adel Dr.**		
	City: **Newark**	State: **DE**	Zip Code: **19702**
3.	Site Name: **Middletown Materials**		
4.	Site Mailing Address: **1559 Cedar Lane Rd.** *(if different from above)*		
	City: **Middletown**	State: **DE**	Zip Code: **19709**
5.	Physical Location of Site: **Same as above** *(if different from above)*		
	City:	State:	Zip Code:
6.	Site Billing Address: **10 Adel Dr.** *(if different from above)*		
	City: **Newark**	State: **DE**	Zip Code: **19702**
7.	Air Quality Management Facility ID Number: **1000300646**		
8.	Site NAICS Code): **423320** *(list all that apply*		
9.	Site SIC Code: **5032** *(list all that apply)*		
10.	Site Location Coordinates:	Latitude: 39 ° 48' 52" Longitude: -75 ° 70' 08"	
11.	Is the Facility New or Existing?	☐ NEW ☒ EXISTING	
If the Facility is an Existing Facility, Complete the Rest of Question 11. If Not, Proceed to Question 12.			
11.1.	Does the Facility Have Active Air Permits?	☒ YES	☐ NO
12.	Is this Application For New Equipment or a Modification to Existing Equipment? ☒ New Equipment ☐ Modification of Existing Equipment ☐ Other (Specify):		
If the application is for the modification of existing equipment, complete the rest of Question 12. If not, proceed to Question 13.			

Company and Site Information

12.1. Does the Equipment Have an Active Air Permit? ☐ YES ☒ NO

If the equipment has an active air permit, complete the rest of Question 12. If not, proceed to Question 13.

12.2. Permit Number of Existing Equipment:

13. Status of Equipment Being Applied For:
☐ Natural Minor Source
☒ Synthetic Minor Source
☐ Major Source
☐ Federally Enforceable Restrictions

14. Facility Status: ☐ Natural Minor Facility ☒ Synthetic Minor Facility ☐ Major Facility

If the facility is a Major Source, complete the rest of Question 14. If not, proceed to Question 15.

14.1. Responsible Official Name: [redacted]

14.2. Responsible Official Title: **Member, Middletown Materials**

Contact Information

15. Name of Owner or Facility Manager: [redacted]

16. Title of Owner or Facility Manager: **Member, Middletown Materials**

17. Permit Contact Name: [redacted]

18. Permit Contact Title: **Member, Middletown Materials**

19. Permit Contact Telephone Number: **302.453.8288 ext 105**

20. Permit Contact Fax Number: **302.453.9550**

21. Permit Contact E-Mail Address: [redacted]

22. Billing Contact Name: [redacted]

23. Billing Contact Title: **Executive Assistant**

24. Billing Contact Telephone Number: **302.453.8286**

25. Billing Contact Fax Number: **302.453.9550**

26. Billing Contact E-Mail Address: [redacted]

Proposed Construction and Operating Schedule

27. When Will the Proposed Construction/Installation/Modification Occur: 04/15/2026

28. Proposed Operating Schedule: **8** hours/day **6** days/week **50** weeks/year

28.1. Is There Any Additional Information Regarding the Operating Schedule? ☒ YES ☐ NO

If YES, complete the rest of Question 28. If NO, proceed to Question 29.

Proposed Construction and Operating Schedule

28.2. Describe the Additional Information: **Facility equipment is not operated on a continuous basis and is operated only in response to customer demand. The facility is proposing a voluntary restriction on equipment operating hours to ensure emissions remain below major source thresholds.**

Coastal Zone Information

29. Is the Facility Located in the Coastal Zone? ☐ YES ☒ NO

If the facility is located in the Coastal Zone complete the rest of Question 29. If not, proceed to Question 30.

29.1. Is a Coastal Zone Permit Required for Construction or Operation of the Source Being Applied for? ☐ YES ☒ NO

Attach a copy of the Coastal Zone Determination if it has not been previously submitted

If a Coastal Zone Permit is required complete the rest of Question 29. If not, proceed to Question 30.

29.2. Has a Coastal Zone Permit Been Issued? ☐ YES ☐ NO

Attach a copy of the Coastal Zone Permit if it has not been previously submitted

Local Zoning Information

30. Parcel Zoning: **Industrial**

Attach Proof of Local Zoning if it has not been previously submitted

Application Information

31. Is the Appropriate Application Fee Attached? ☒ YES ☐ NO

32. Is the Advertising Fee Attached? ☒ YES ☐ NO

For help determining your application and advertising fees see: https://dnrec.delaware.gov/air/permitting/fees/.

Attach the appropriate fees. Note that your Application will not be considered complete if the appropriate fees are not included.

33. Is a Cover Letter Describing the Process Attached? ☒ YES ☐ NO

Attach a brief cover letter describing your Application.

If the Facility is a New Facility complete Question 34. If not, proceed to Question35.

34. Is a Copy of the Applicant Background Information Questionnaire on Record at the Department? ☐ YES ☐ NO

If NO, complete the rest of Question 34. If YES, process to Question 35.

34.1 Is a Copy of the Applicant Background Information Questionnaire Attached? ☐ YES ☐ NO

For a copy of the Applicant Background Information Questionnaire see https://documents.dnrec.delaware.gov/services/Documents/Chapter79Form.pdf.

Attach a copy of the Applicant Background Information Questionnaire if applicable.

35. Check Which Application Forms are Attached:

Application Information

☒ AQM-1	☐ AQM-3.4	☒ AQM-3.9	☐ AQM-3.14	☐ AQM-4.4	☐ AQM-4.9	☐ AQM-6
☒ AQM-2	☐ AQM-3.5	☐ AQM-3.10	☐ AQM-3.15	☐ AQM-4.5	☐ AQM-4.10	
☐ AQM-3.1	☐ AQM-3.6	☐ AQM-3.11	☐ AQM-4.1	☐ AQM-4.6	☐ AQM-4.11	
☐ AQM-3.2	☐ AQM-3.7	☐ AQM-3.12	☐ AQM-4.2	☐ AQM-4.7	☐ AQM-4.12	
☒ AQM-3.3	☐ AQM-3.8	☐ AQM-3.13	☐ AQM-4.3	☐ AQM-4.8	☒ AQM-5	

36. Check Which Documents are Attached:

☐ Coastal Zone Determination
☐ Coastal Zone Permit
☒ Proof of Local Zoning
☒ Application Fee
☒ Advertising Fee
☐ Applicant Background Information Questionnaire
☐ Claim of Confidentiality
☒ Manufacturer Specification(s)
☐ Material Safety Data Sheets (MSDSs)
☒ Supporting Calculations
☒ Descriptive Cover Letter
☒ Other (Specify): **Equipment and regulatory requirement summary.**

Confidentiality Information

37. Do You Consider Any of the Information Submitted With this Application Confidential? ☐ YES ☒ NO

For help on how to submit a confidentiality claim see https://dnrec.delaware.gov/foia/.

If a Claim of Confidentiality is made it MUST meet the requirements of Section 6 of DNREC's Freedom of Information ("FOIA") Regulation at the time the Application is submitted.

Community Outreach Information

38. Local Community Leader Name and Title: [redacted] **HOA Board Member**
39. Organization Represented by Community Leader: **Pleasanton HOA**
40. Local Community Leader E-Mail Address: [redacted]
41. Local Community Leader Telephone number:
42. Local Community Leader Name and Title:
43. Organization Represented by Community Leader:
44. Local Community Leader E-Mail Address:
45. Local Community Leader Telephone number:
46. Local Community Leader Name and Title:
47. Organization Represented by Community Leader:
48. Local Community Leader E-Mail Address:
49. Local Community Leader Telephone number:

Each application must include the contact information for at least one local community leader. The community leader should represent an organization with an interest in the facility's operations. Community leaders may include representatives of local organizations or homeowners' associations. Community leaders included in this application should not be elected officials.

Signature Block

I, the undersigned, hereby certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all of its attachments as to the truth, accuracy, and completeness of this information. I certify based on information and belief formed after reasonable inquiry, the statements and information in this document are true, accurate, and complete. By signing this form, I certify that I have not changed, altered, or deleted any portions of this application. I acknowledge that I cannot commence construction, alteration, modification or initiate operation until I receive written approval (i.e. permit, registration, or exemption letter) from the Department. I acknowledge that I may be required to perform testing of the equipment to receive construction or operation approval, and that if I do not receive approval to construct or operate that I may appeal the decision.

[redacted]
Owner or Operator

4/24/2026
Date

[redacted]
Signature of Owner or Operator

One Original and One Copy of All Application Forms Should Be Mailed To:
Division of Air Quality
100 W. Water Street, Suite 6A
Dover, Delaware 19904

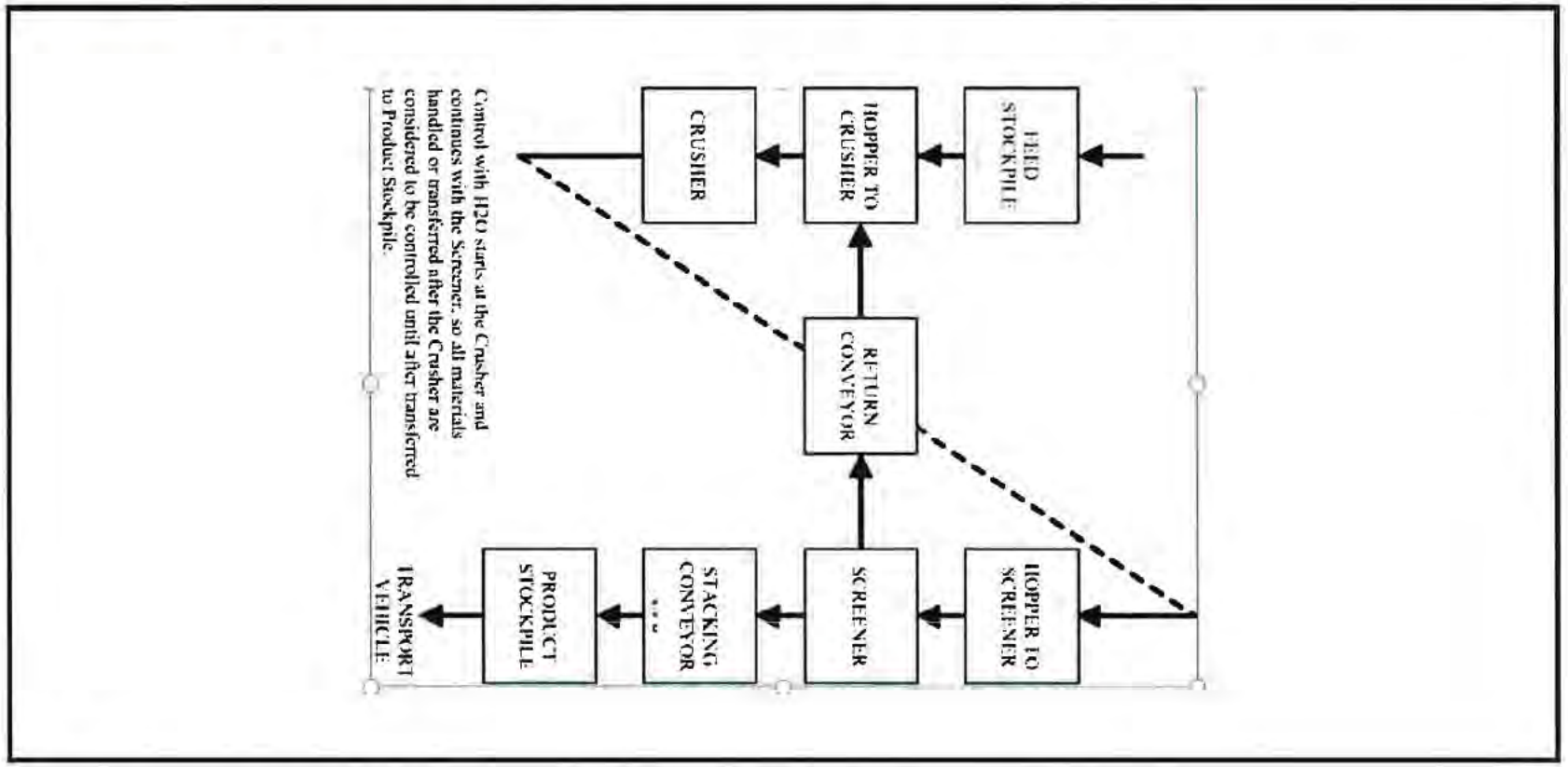
All Checks Should Be Made Payable To:
State of Delaware

GCS-32

MCCLOSKEY I44RV3HD CRUSHER WITH C9.3B CATERPILLAR ENGINE

Process Flow Diagram

Sketch the Process Flow Diagram for the equipment or process being applied for. Include each emission unit and control device (even existing emission units that will not be modified by this application). You may identify each emission unit with a simple shape. Label each emission unit and control device with a unique identifier. Show the relationship between each emission unit and/or control device by drawing arrows between them to indicate the flow of air pollutants. List which application forms are included for each emission unit or control device below the shape representing each emission unit or control device . See http://www.delaware.gov/reg2/default.htm for example Process Flow Diagrams for common processes. If you already have a Process Flow Diagram for the equipment or process being applied for, you may attach it to the application instead of using this form.



Crushed Stone Equipment Application

If you are using this form electronically, press F1 at any time for help

General Information

1. Facility Name: **Middletown Materials**

2. Equipment ID Number: **GCS-32**

3. Where Does the Stone Originate: ☐ On-Site
☒ Off-Site (Specify): **Road Pavement Materials and Clean Reclaimed Concrete**

4. Locations Where Crusher Will Operate:

If the Crusher will operate at more than five locations, attach additional copies of this page as needed. Note that state law requires that a public notice for each location be made.

	Street Address	City	County	Zip Code	Condition of Roads at Location
4.1.	**Middletown Materials 1559 Cedar Lane Road**	**Middletown**	**New Castle**	**19709**	☐ Paved ☐ Unpaved ☒ Both
4.2.	**Adel Construction 10 Adel Dr.**	**Newark**	**New Castle**	**19702**	☐ Paved ☐ Unpaved ☒ Both
4.3.	**Adel Construction 20139 Lowes Rd.**	**Gumboro**	**Sussex**	**19966**	☐ Paved ☐ Unpaved ☒ Both
4.4.	**Heritage Concrete 376 Holly Oak Lane**	**Cheswold**	**Kent**	**19936**	☐ Paved ☐ Unpaved ☒ Both
4.5.	**Oyster Cove Old Orchard Road, Lewes, DE**	**Lewes**	**Sussex**	**19958**	☐ Paved ☐ Unpaved ☒ Both

Attach Proof of Local Zoning for each location.

5. Material Crushed:

If more than five Materials are crushed, attach additional copies of this page as needed.

	Material Name	Material Description
5.1.	**Reclaimed Asphalt Pavement**	**Roadway Pavements**
5.2.	**Reclaimed Concrete**	**Clean reclaimed concrete for crushing into recycled aggregate**
5.3.		
5.4.		
5.5.		

6. Is a Feeder Used to Sort the Material Before Crushing? ☒ YES ☐ NO

If YES, complete the rest of Question 6. If NO, proceed to Question 7.

6.1. Is a Wet Suppression System Used to Control Emissions From the Feeder? ☒ YES ☐ NO

General Information

6.2. Feeder Power Provided By: ☒ Generator/Engine ☐ Utility ☐ Other (Specify):

If a Generator/Engine is used, include completed Form AQM-3.3 with this application.

Crusher Information

7. Number of Crushers: **1**

If there are more than two Crushers, attach additional copies of this page as needed.

For Primary Crusher

8. Primary Crusher Identification: **GCS-32**

8.1. Primary Crusher Manufacturer: **McCloskey**

8.2. Primary Crusher Model: **I44R**

8.3. Primary Crusher Serial Number: **903718**

8.4. Maximum Amount of Material Processed in Primary Crusher: **400 ton/hr**

8.5. Is a Wet Suppression System Used to Control Emissions from the Crusher? ☒ YES ☐ NO

8.6. Primary Crusher Power Provided By: ☒ Generator/Engine ☐ Utility ☐ Other (Specify):

If a Generator/Engine is Used, Include Completed Form AQM-3.3 With this Application

8.7. Is a Screen Used to Sort Crushed Material? ☒ YES ☐ NO

If YES, complete the rest of Question 8.7. If NO, proceed to Question 9.

8.7.1. Is a Wet Suppression System Used to Control Emissions from the Screen? ☒ YES ☒ NO

8.7.2. Screen Power Provided By: ☒ Generator/Engine ☐ Utility ☐ Other (Specify):

If a Generator/Engine is used, include completed Form AQM-3.3 with this application.

For the Secondary Crusher. If There is No Secondary Crusher, Proceed to Question 10.

9. Secondary Crusher Identification:

9.1. Manufacturer:

9.2. Model:

9.3. Serial Number:

9.4. Maximum Amount of Material Processed: **ton/hr**

9.5. Is a Wet Suppression System Used to Control Emissions from the Crusher? ☐ YES ☐ NO

9.6. Power Provided By: ☐ Generator/Engine ☐ Utility ☐ Other (Specify):

If a Generator/Engine is used, include completed Form AQM-3.3 with this application.

Crusher Information

9.7. Is a Screen Used to Sort Crushed Material? ☐ YES ☐ NO

If YES, complete the rest of Question 9.7. If NO, proceed to Question 10.

9.7.1. Is a Wet Suppression System Used to Control Emissions From the Screen? ☐ YES ☐ NO

9.7.2. Screen Power Provided By: ☐ Generator/Engine
☐ Utility
☐ Other (Specify):

If a Generator/Engine is used, include completed Form AQM-3.3 with this application.

Conveyor Information

10. Are Conveyors Used in the Process? ☒ YES ☐ NO

If YES, proceed to Question 11. If NO, proceed to Question 15.

11. Number of Conveyors in Process: **Three conveyors integral to the crusher (fines/side conveyor, radial return/recirculating conveyor, and main discharge conveyor). A separate Edge TS100 stacker may also be used under separate application.**

If more than three Conveyors are used, attach additional copies of this page as needed.

For the First Conveyor

12. Conveyor Identification: **Fines conveyor**

12.1. Location: ☒ Before (Specify Equipment): **Crusher**
☐ After (Specify Equipment):
☐ Between (Specify Equipment):

12.2. Maximum Amount of Material Conveyed: **400 ton/hr**

12.3. Is a Wet Suppression System Used to Control Emissions? ☒ YES ☐ NO

12.4. Conveyor Power Provided By: ☒ Generator/Engine
☐ Utility
☐ Other (Specify):

If a Generator/Engine is used, include completed Form AQM-3.3 with this application.

For the Second Conveyor. If There Is No Second Conveyor, Proceed to Question 15.

13. Conveyor Identification: **Recirculating Conveyer**

13.1. Location ☐ Before (Specify Equipment):
☒ After (Specify Equipment): **Onboard Screen**
☐ Between (Specify Equipment):

13.2. Maximum Amount of Material Conveyed: **400 ton/hr**

13.3. Is a Wet Suppression System Used to Control Emissions? ☒ YES ☐ NO

13.4. Conveyor Power Provided By: ☒ Generator/Engine
☐ Utility
☐ Other (Specify):

If a Generator/Engine is used, include completed Form AQM-3.3 with this application.

For the Third Conveyor. If There Is No Third Conveyor, Proceed to Question 15.

Conveyor Information

14. Conveyor Identification: **Main Discharge Conveyer**

14.1. Location: ☐ Before (Specify Equipment):
☒ After (Specify Equipment): **Crusher (downstream of the impact crusher and onboard screen and conveys the final sized product from the crusher to the stacker or stockpile)**
☐ Between (Specify Equipment):

14.2. Maximum Amount of Material Conveyed: **400 ton/hr**

14.3. Is a Wet Suppression System Used to Control Emissions? ☒ YES ☐ NO

14.4. Conveyor Power Provided By: ☒ Generator/Engine
☐ Utility
☐ Other (Specify):

If a Generator/Engine is used, include completed Form AQM-3.3 with this application.

Fines Crushing Information

15. Do you perform any of the following activities at your facility: ☐ Pulverize Minerals
☐ Produce Sand
☐ Crush Stone Into a Fine Product

If you checked any of the boxes above, include complete Form AQM-3.10 with this application.

Visible Emissions Monitoring Information

16. Proposed Technique Used to Monitor Visible Emissions: ☐ Opacity Monitor (COM)
☒ Manual (Method 9)
☐ Manual (Method 22)
☐ Other (Describe):

If an Opacity Monitor (COM) is used, complete the rest of Question 16. If not, proceed to Question 17.

16.1. Describe the Continuous Opacity Monitoring System:

16.2. Manufacturer:

16.3. Model:

16.4. Serial Number:

17. Proposed Frequency of Opacity Monitoring:

Voluntary Emissions Limitation Request Information

18. Are You Requesting Any Voluntary Emission Limitations to Avoid Major Source Status, Minor New Source Review, MACT, NSPS, etc.? ☐ YES ☒ NO

If YES, complete the rest of Question 18. If NO, proceed to Question 19.

Voluntary Emissions Limitation Request Information

19.1. Describe Any Proposed Emission Limitations:

Voluntary Operating Limitation Request Information

19. Are You Requesting Any Voluntary Operating Limitations to Avoid Major Source Status, Minor New Source Review, MACT, NSPS, etc.? ☒ YES ☐ NO

If YES, complete the rest of Question 19. If NO, proceed to Question 20.

19.1. Describe Any Proposed Operating Limitations: **Request restriction on hours of operation at 1,800 to restrict emissions below major source thresholds.**

Additional Information

20. Is There Any Additional Information Pertinent to this Application? ☐ YES ☒ NO

If YES, complete the rest of Question 20.

Additional Information

20.1. Describe:

DNREC – Division of Air Quality
Application to Construct, Operate, or Modify Stationary Sources

Generator/Engine Application

If you are using this form electronically, press F1 at any time for help

General Information

1.	Facility Name: **Middletown Materials**
2.	Equipment ID:
3.	Manufacturer: **Caterpillar**
4.	Model: **C9.3B**
5.	Serial Number: **NGH07749**
6.	Maximum Power Rating of Engine: **350** horsepower
7.	Standby Power Rating of Generator: kilowatt
8.	Date of Manufacture: **2024**
9.	Installation Date: **TBD**
10.	Is the Equipment Being Applied For a Generator or an Engine? ☐ Generator ☒ Engine
If the equipment is a Generator, complete the rest of Question 10. If not, proceed to Question 11.	
10.1.	Is the Generator Existing or New? ☐ Existing ☐ New
10.2.	Will the Generator Be Classified as an Emergency Generator or a Distributed Generator? ☐ Emergency ☐ Distributed
10.3.	Has an Initial Notification Pursuant to 7 **DE Admin. Code** 1144 Been Submitted for this Generator? ☐ YES ☐ NO
If NO, include a copy of the Initial Notification with this application.	
10.4.	Have the Emissions From the Generator Been Certified to Meet the Currently Applicable US EPA Non-Road Emission Standards? ☐ YES ☐ NO
If YES, attach a copy of the Manufacturer's Certification. If NO, attach copies of any/all of the following: any maintenance or operating requirements/instructions provided by the generator manufacturer; the type, or a description, of any emission control equipment use; and/or emissions test data for the generator (such as a manufacturer's technical data sheet), any supporting documentation for any emission control equipment used, any supporting calculations, any quality control or assurance information, and any other information needed to demonstrate compliance with the requirements. Proceed to Question 11.	
11.	Primary Fuel: ☐ Natural Gas ☒ Diesel ☐ Propane ☐ Biodiesel ☐ Other (specify):
11.1.	Maximum Annual Primary Fuel Consumption: **33,000 gal**
11.2.	Heat Content of Primary Fuel: **128,700 BTU/CF**
11.3.	Maximum Firing Rate: **18.3 gallons/hr**
11.4.	Percent Sulfur of Primary Fuel: **0.0015** %
12.	Secondary Fuel: ☐ Natural Gas ☐ Diesel ☐ Propane ☐ Biodiesel ☐ Other (specify):

General Information

12.1.	Maximum Annual Secondary Fuel Consumption: **MMCF**
12.2.	Heat Content of Secondary Fuel: **BTU/CF**
12.3.	Maximum Firing Rate: **MMCF/hr**
12.4.	Percent Sulfur of Secondary Fuel: %
13.	Is SCR/NSCR/SNCR/Ammonia Injection Used: ☐ YES ☐ NO

Stack Information

14. How Does the Process Equipment Vent:
(check all that apply)
☒ Directly to the Atmosphere
☐ Through a Control Device Covered by Forms AQM-4.1 through 4.12

If any of the process equipment vents directly to the atmosphere proceed to Question 15. If the process equipment vents through a control device, provide the stack parameters on the control device form and proceed to Question 16.

15. Emission Point Name: **C9.3B_Stack**

15.1. Stack Height Above Grade: **10 feet**

15.2. Stack Exit Diameter: **0.417 feet**
(Provide Stack Dimensions If Rectangular Stack)

15.3. Is a Stack Cap Present? ☒ YES ☐ NO

15.4. Stack Configuration: ☒ Vertical ☐ Horizontal ☐ Downward-Venting
(check all that apply) ☐ Other (Specify):

15.5. Stack Exit Gas Temperature: **700 °F**

15.6. Stack Exit Gas Flow Rate: **1950 ACFM**

15.7. Distance to Nearest Property Line: **200 ft**

15.8. Describe Nearest Obstruction: **Soil Stockpile**

15.9. Height of Nearest Obstruction: **40 ft**

15.10. Distance to Nearest Obstruction: **145 ft**

15.11. Are Stack Sampling Ports Provided? ☐ YES ☒ NO

Monitoring Information

16. Will Emissions Data be Recorded by a Continuous Emission Monitoring System? ☐ YES ☒ NO

If Yes, Attach a Copy of the Continuous Emission Monitoring System Manufacturer's Specification Sheets

If YES, complete the rest of Question 16. If NO, proceed to Question 17.

16.1. Pollutants Monitored: ☐ VOCs ☐ HAPs ☐ PM ☐ PM_{10} ☐ $PM_{2.5}$ ☐ NO_x ☐ SO_x ☐ Metals
☐ Other (Specify):

16.2. Describe the Continuous Emission Monitoring System:

Monitoring Information

16.3. Manufacturer:

16.4. Model:

16.5. Serial Number:

16.6. Will Multiple Emission Units Be Monitored at the Same Point? ☐ YES ☐ NO

If YES, complete the rest of Question 16. If NO, proceed to Question 17.

16.7. Emission Units Monitored:

16.8. Will More Than One Emission Unit be Emitting From the Combined Point At Any Time? ☐ YES ☐ NO

If YES, complete the rest of Question 15. If NO, proceed to Question 17.

16.9. Emission Units Emitting Simultaneously:

Visible Emissions Monitoring Information

For Primary Fuel

17. Proposed Technique Used to Monitor Visible Emissions:
☐ Opacity Monitor (COM)
☒ Manual (Method 9)
☐ Manual (Method 22)
☐ Other (Describe):

If an Opacity Monitor (COM) is used, complete the rest of Question 17. If not, proceed to Question 18.

17.1. Describe the Continuous Opacity Monitoring System:

17.2. Manufacturer:

17.3. Model:

17.4. Serial Number:

18. Proposed Frequency of Opacity Monitoring:

For Secondary Fuel. If no Secondary Fuel is used, proceed to Question 20.

19. Proposed Technique Used to Monitor Visible Emissions:
☐ Opacity Monitor (COMs)
☐ Manual (Method 9)
☐ Manual (Method 22)
☐ Other (Describe):

If an Opacity Monitor (COMs) is used, complete the rest of Question 19. If not, proceed to Question 20.

19.1. Describe the Continuous Opacity Monitoring System:

19.2. Manufacturer:

19.3. Model:

19.4. Serial Number:

20. Proposed Frequency of Opacity Monitoring:

Voluntary Emission Limitation Request Information

21.	Are You Requesting Any Voluntary Emission Limitations to Avoid Major Source Status, Minor New Source Review, MACT, NSPS, etc.?	☐ YES ☒ NO

If YES, complete the rest of Question 21. If NO, proceed to Question 22.

21.1. Describe Any Proposed Emission Limitations:

Voluntary Operating Limitation Request Information

22.	Are You Requesting Any Voluntary Operating Limitations to Avoid Major Source Status, Minor New Source Review, MACT, NSPS, etc.?	☒ YES ☐ NO

If YES, complete the rest of Question 22. If NO, proceed to Question 23.

22.1. Describe Any Proposed Operating Limitations: **Limit hours of operation to 1,800 to reduce emissions below major source thresholds.**

Additional Information

23. Is There Any Additional Information Pertinent to this Application? ☐ YES ☒ NO

If YES, complete the rest of Question 23.

22.1. Describe:

Emissions Information Application

If you are using this form electronically, press F1 at any time for help

Process Information

1.	Number of Individual Pieces of Process Equipment in Process: **McCloskey Impact Crusher and Caterpillar Engine**
2.	Number of Individual Control Devices in Process: **1 - Dust Supression**

Emissions Information for First Emission Point/Stack

3.	Emission Point Name: **GCS-32 McCloskey Impact Crusher**
4.	Equipment ID Number for all Process Equipment and Control Devices Venting Through Emission Point/Stack: **GCS-32 Impact Crusher**
5.	Pollutant Emissions

If more than 15 pollutants are emitted at this Emission Point/Stack, attach additional copies of this page as needed.

	Pollutant Name (Specify VOCs and HAPs Individually in 5.10 through 5.18)	CAS Number (Not required for 5.1 through 5.10)	Maximum Uncontrolled Emission Rate at Design Capacity	Maximum Controlled Emission Rate at Design Capacity	Annual Potential to Emit (PTE)	Requested Permitted Annual Emissions
5.1.	Particulate Matter (PM)		**22.16 lbs/hour**	**1.86 lbs/hour**	**97.061** tons/year	**1.674** tons/year
5.2.	PM_{10}		**7.752 lbs/hour**	**0.6251 lbs/hour**	**33.954** tons/year	**0.56** tons/year
5.3.	$PM_{2.5}$		**0.4798 lbs/hour**	**0.0504 lbs/hour**	**2.101** tons/year	**0.045** tons/year
5.4.	Sulfur Oxides (SO_X)		**lbs/hour**	**lbs/hour**	tons/year	tons/year
5.5.	Nitrogen Oxides (NO_X)		**lbs/hour**	**lbs/hour**	tons/year	tons/year
5.6.	Carbon Monoxide (CO)		**lbs/hour**	**lbs/hour**	tons/year	tons/year
5.7.	Total Volatile Organic Compounds (VOCs)		**lbs/hour**	**lbs/hour**	tons/year	tons/year
5.8.	Total Hazardous Air Pollutants (HAPs)		**lbs/hour**	**lbs/hour**	tons/year	tons/year

Emissions Information for First Emission Point/Stack					
5.9. CO_2		**lbs/hour**	**lbs/hour**	tons/year	tons/year
5.10. CO_{2e}		**lbs/hour**	**lbs/hour**	tons/year	tons/year
5.11.		**lbs/hour**	**lbs/hour**	tons/year	tons/year
5.12.		**lbs/hour**	**lbs/hour**	tons/year	tons/year
5.13.		**lbs/hour**	**lbs/hour**	tons/year	tons/year
5.14.		**lbs/hour**	**lbs/hour**	tons/year	tons/year
5.15.		**lbs/hour**	**lbs/hour**	tons/year	tons/year
6. Provide Any Additional Information Necessary to Understanding the Emission Rates Provided Above:					
Attach the Basis of Determination or Calculations for each Emission Rate provided above.					

Emissions Information for Second Emission Point/Stack					
7. Emission Point Name: **Caterpillar Engine C9.3B**					
8. Equipment ID Number for all Process Equipment and Control Devices Venting Through Emission Point/Stack: **Engine Stack**					
9. Pollutant Emissions					
If more than 15 pollutants are emitted at this Emission Point/Stack, attach additional copies of this page as needed.					
Pollutant Name (Specify VOCs and HAPs Individually in 9.10 through 9.18)	CAS Number (Not required for 9.1 through 9.10)	Maximum Uncontrolled Emission Rate at Design Capacity	Maximum Controlled Emission Rate at Design Capacity	Annual Potential to Emit (PTE)	Requested Permitted Annual Emissions
9.1. Particulate Matter (PM)		**0.00575 lbs/hour**	**0.00575 lbs/hour**	**0.0252** tons/year	**0.00518** tons/year
9.2. PM_{10}		**0.00575 lbs/hour**	**0.00575 lbs/hour**	**0.0252** tons/year	**0.00518** tons/year

Emissions Information for Second Emission Point/Stack

9.3.	$PM_{2.5}$		**0.00575 lbs/hour**	**0.00575 lbs/hour**	**0.0252** tons/year	**0.00518** tons/year
9.4.	Sulfur Oxides (SO_x)		**0.00390 lbs/hour**	**0.00390 lbs/hour**	**0.0171** tons/year	**0.00351** tons/year
9.5.	Nitrogen Oxides (NO_x)		**0.1093 lbs/hour**	**0.1093 lbs/hour**	**0.479** tons/year	**0.0984** tons/year
9.6.	Carbon Monoxide (CO)		**0.0575 lbs/hour**	**0.0575 lbs/hour**	**0.252** tons/year	**0.0518** tons/year
9.7.	Total Volatile Organic Compounds (VOCs)		**0.0230 lbs/hour**	**0.0230 lbs/hour**	**0.101** tons/year	**0.0208** tons/year
9.8.	Total Hazardous Air Pollutants (HAPs)		**0.01541 lbs/hour**	**0.01541 lbs/hour**	**0.06744** tons/year	**0.01387** tons/year
9.9.	CO_2		**384 lbs/hour**	**384 lbs/hour**	**1682** tons/year	**345.62** tons/year
9.10.	CO_{2e}		**lbs/hour**	**lbs/hour**	tons/year	tons/year
9.11.			**lbs/hour**	**lbs/hour**	tons/year	tons/year
9.12.			**lbs/hour**	**lbs/hour**	tons/year	tons/year
9.13.			**lbs/hour**	**lbs/hour**	tons/year	tons/year
9.14.			**lbs/hour**	**lbs/hour**	tons/year	tons/year
9.15.			**lbs/hour**	**lbs/hour**	tons/year	tons/year

10. Provide Any Additional Information Necessary to Understanding the Emission Rates Provided Above:

Attach the Basis of Determination or Calculations for each Emission Rate provided above.

Emissions Information for Third Emission Point/Stack

11. Emission Point Name:

Emissions Information for Third Emission Point/Stack

12. Equipment ID Number for all Process Equipment and Control Devices Venting Through Emission Point/Stack:

13. Pollutant Emissions

If more than 15 pollutants are emitted at this Emission Point/Stack, attach additional copies of this page as needed.

	Pollutant Name (Specify VOCs and HAPs Individually in 13.10 through 13.18)	CAS Number (Not required for 13.1 through 13.10)	Maximum Uncontrolled Emission Rate at Design Capacity	Maximum Controlled Emission Rate at Design Capacity	Annual Potential to Emit (PTE)	Requested Permitted Annual Emissions
13.1.	Particulate Matter (PM)		**lbs/hour**	**lbs/hour**	tons/year	tons/year
13.2.	PM_{10}		**lbs/hour**	**lbs/hour**	tons/year	tons/year
13.3.	$PM_{2.5}$		**lbs/hour**	**lbs/hour**	tons/year	tons/year
13.4.	Sulfur Oxides (SO_X)		**lbs/hour**	**lbs/hour**	tons/year	tons/year
13.5.	Nitrogen Oxides (NO_X)		**lbs/hour**	**lbs/hour**	tons/year	tons/year
13.6.	Carbon Monoxide (CO)		**lbs/hour**	**lbs/hour**	tons/year	tons/year
13.7.	Total Volatile Organic Compounds (VOCs)		**lbs/hour**	**lbs/hour**	tons/year	tons/year
13.8.	Total Hazardous Air Pollutants (HAPs)		**lbs/hour**	**lbs/hour**	tons/year	tons/year
13.9.	CO_2		**lbs/hour**	**lbs/hour**	tons/year	tons/year
13.10.	CO_{2e}		**lbs/hour**	**lbs/hour**	tons/year	tons/year
13.11.			**lbs/hour**	**lbs/hour**	tons/year	tons/year
13.12.			**lbs/hour**	**lbs/hour**	tons/year	tons/year
13.13.			**lbs/hour**	**lbs/hour**	tons/year	tons/year
13.14.			**lbs/hour**	**lbs/hour**	tons/year	tons/year
13.15.			**lbs/hour**	**lbs/hour**	tons/year	tons/year

Emissions Information for Third Emission Point/Stack

14. Provide Any Additional Information Necessary to Understanding the Emission Rates Provided Above:

Attach the Basis of Determination or Calculations for each Emission Rate provided above.

Emissions Information for Fourth Emission Point/Stack

15. Emission Point Name:

16. Equipment ID Number for all Process Equipment and Control Devices Venting Through Emission Point/Stack:

17. Pollutant Emissions

If more than 15 pollutants are emitted at this Emission Point/Stack, attach additional copies of this page as needed.

	Pollutant Name (Specify VOCs and HAPs Individually in 17.10 through 17.18)	CAS Number (Not required for 17.1 through 17.10)	Maximum Uncontrolled Emission Rate at Design Capacity	Maximum Controlled Emission Rate at Design Capacity	Annual Potential to Emit (PTE)	Requested Permitted Annual Emissions
17.1.	Particulate Matter (PM)		**lbs/hour**	**lbs/hour**	tons/year	tons/year
17.2.	PM_{10}		**lbs/hour**	**lbs/hour**	tons/year	tons/year
17.3.	$PM_{2.5}$		**lbs/hour**	**lbs/hour**	tons/year	tons/year
17.4.	Sulfur Oxides (SO_X)		**lbs/hour**	**lbs/hour**	tons/year	tons/year
17.5.	Nitrogen Oxides (NO_X)		**lbs/hour**	**lbs/hour**	tons/year	tons/year
17.6.	Carbon Monoxide (CO)		**lbs/hour**	**lbs/hour**	tons/year	tons/year
17.7.	Volatile Organic Compounds (VOCs)		**lbs/hour**	**lbs/hour**	tons/year	tons/year
17.8.	Total Hazardous Air Pollutants (HAPs)		**lbs/hour**	**lbs/hour**	tons/year	tons/year
17.9.	CO_2		**lbs/hour**	**lbs/hour**	tons/year	tons/year

Emissions Information for Fourth Emission Point/Stack					
17.10. CO_{2e}		**lbs/hour**	**lbs/hour**	tons/year	tons/year
17.11.		**lbs/hour**	**lbs/hour**	tons/year	tons/year
17.12.		**lbs/hour**	**lbs/hour**	tons/year	tons/year
17.13.		**lbs/hour**	**lbs/hour**	tons/year	tons/year
17.14.		**lbs/hour**	**lbs/hour**	tons/year	tons/year
17.15.		**lbs/hour**	**lbs/hour**	tons/year	tons/year
18. Provide Any Additional Information Necessary to Understanding the Emission Rates Provided Above:					
Attach the Basis of Determination or Calculations for each Emission Rate provided above.					
If there are more than four Emission Points/Stacks, attach additional copies of this form as needed.					

Overall Process Emissions						
19. Pollutant Emissions						
If more than 15 pollutants are emitted from this Process, attach additional copies of this page as needed.						
	Pollutant Name (Specify VOCs and HAPs Individually in 19.10 through 19.18)	CAS Number (Not required for 19.1 through 19.10)	Maximum Uncontrolled Emission Rate at Design Capacity	Maximum Controlled Emission Rate at Design Capacity	Annual Potential to Emit (PTE)	Requested Permitted Annual Emissions
19.1.	Particulate Matter (PM)		**22.166 lbs/hour**	**1.866 lbs/hour**	**97.086** tons/year	**1.675** tons/year
19.2.	PM_{10}		**7.757 lbs/hour**	**0.632 lbs/hour**	**33.954** tons/year	**0.568** tons/year
19.3.	$PM_{2.5}$		**0.485 lbs/hour**	**0.056 lbs/hour**	**2.101** tons/year	**0.051** tons/year
19.4.	Sulfur Oxides (SO_X)		**0.00390 lbs/hour**	**0.0039 lbs/hour**	**0.0171** tons/year	**0.00351** tons/year
19.5.	Nitrogen Oxides (NO_X)		**0.1093 lbs/hour**	**0.1093 lbs/hour**	**0.479** tons/year	**0.0984** tons/year

Overall Process Emissions

19.6.	Carbon Monoxide (CO)		**0.0575 lbs/hour**	**0.0575 lbs/hour**	**0.252** tons/year	**0.0518** tons/year
19.7.	Total Volatile Organic Compounds (VOCs)		**0.0230 lbs/hour**	**0.0230 lbs/hour**	**0.101** tons/year	**0.0208** tons/year
19.8.	Total Hazardous Air Pollutants (HAPs)		**0.0154 lbs/hour**	**0.0154 lbs/hour**	**0.0674** tons/year	**0.0139** tons/year
19.9.	CO_2		**384 lbs/hour**	**384 lbs/hour**	**1682** tons/year	**345.62** tons/year
19.10.	CO_{2e}		**lbs/hour**	**lbs/hour**	tons/year	tons/year
19.12.			**lbs/hour**	**lbs/hour**	tons/year	tons/year
19.13.			**lbs/hour**	**lbs/hour**	tons/year	tons/year
19.14.			**lbs/hour**	**lbs/hour**	tons/year	tons/year
19.15.			**lbs/hour**	**lbs/hour**	tons/year	tons/year

20. Provide Any Additional Information Necessary to Understanding the Emission Rates Provided Above:

Attach the Basis of Determination or Calculations for each Emission Rate provided above.

Minor New Source Review Information

21. Does the Process Have the Potential to Emit More Than Five Tons Per Year of Any Pollutant? ☒ YES ☐ NO

22. Is the Source New or Existing? ☒ NEW ☐ EXISTING
See Question 11 of AQM-1

If the Process has the Potential to Emit more than five tons per year of any pollutant, and is a New Source, a Control Technology Analysis pursuant to Regulation No. 1125 Section 4 must be conducted and attached to this application.

Major New Source Review Information

23. Does the Process Have the Potential to Emit More Than the Significance Level for Any Pollutant? *(Check All That Apply)*

- ☒ Greater Than 25 Tons Per Year of Particulate Matter (PM)
- ☒ Greater Than 15 Tons Per Year of PM_{10}
- ☐ Greater Than 10 Tons Per Year of $PM_{2.5}$
- ☐ Greater Than 40 Tons Per Year of Sulfur Dioxide(SO_2)
- ☐ Greater Than 25 Tons Per Year of Nitrogen Oxides (NO_X) in New Castle and Kent County
- ☐ Greater Than 100 Tons Per Year of Nitrogen Oxides (NO_X) in Sussex County
- ☐ Greater Than 100 Tons Per Year of Carbon Monoxide (CO)
- ☐ Greater Than 25 Tons Per Year of Total Volatile Organic Compounds (VOCs) in New Castle and Kent County
- ☐ Greater Than 50 Tons Per Year of Total Volatile Organic Compounds (VOCs) in Sussex County
- ☐ Greater Than 75,000 Tons Per Year of Equivalent Carbon Dioxide (CO_{2e})

If the Process has the Potential to Emit greater than any of the amounts listed above 7 DE Admin. Code 1125 Sections 2 and/or 3 apply. Contact the Department at (302) 323-4542 or (302) 739-9402 for additional information

Additional Information

24. Is There Any Additional Information Pertinent to this Application? ☒ YES ☐ NO

If YES, complete the rest of Question 24.

24.1. Describe: **Restricting the hours of operation have reduced emissions to below major source thresholds.**

McCloskey 144Rv3HD Impact Crusher with C9.3B Caterpillar Engine (GCS-32)

The McCloskey 144Rv3HD Impact Crusher (Serial No. 903718) is equipped with a Caterpillar C9.3B (350 hp) diesel engine manufactured in 2025. Based on the engine model year and horsepower rating, the engine is classified as an EPA Tier 4 nonroad compression ignition engine.

MCCLOSKEY Impact Crusher– GCS-32				
Make/Model	**Serial No.**	**Process Rate**	**Conveyors**	**Dust Suppression**
McCloskey 144Rv3HD	903718	400 tph	3	Yes
ENGINE INFORMATION				
Make	**Model**	**Serial No.**	**Engine Arrangement No.**	**Engine Tier**
Caterpillar	C9.3B	NGH07749	539-5436	Tier 4

Process emissions were modeled as one impact crusher, one onboard screen, one oversize/recirculating conveyor stream equivalent to one transfer point at 20 percent of feed, and one product stream equivalent to two transfer points at 80 percent of feed. Secondary crushing/screening emission factors were applied to the crusher and screen. Miscellaneous handling emission factors were applied only to the conveyor transfer/discharge streams.

Uncontrolled combined process factors

Component group	PM	PM10	PM2.5
Crusher	0.025000	0.008700	0.0005880
Screen	0.025000	0.008700	0.0005880
Oversize stream = 2 × 20% × misc. handling	0.001200	0.000440	0.0000052
Product stream = 1 × 80% × misc. handling	0.007200	0.002640	0.0000312
Total uncontrolled EF	**0.058400**	**0.020480**	**0.0012124**

Controlled combined process factors

Component group	PM	PM10	PM2.5
Crusher	0.002200	0.000740	0.0000500
Screen	0.002200	0.000740	0.0000500
Oversize stream = 2 × 20% × misc. handling	0.000056	0.0000184	0.0000058
Product stream = 3 × 80% × misc. handling	0.000336	0.0001104	0.0000348
Total controlled EF	**0.004792**	**0.0016088**	**0.0001406**

McCloskey 144Rv3HD Impact Crusher with C9.3B Caterpillar Engine (GCS-32)

Using:

- lb/hr = EF × 400 tph
- tpy = lb/hr × 8,760 / 2,000

Pollutant	Uncontrolled EF (lb/ton)	Controlled EF (lb/ton)	Uncontrolled lb/hr	Controlled lb/hr	Uncontrolled tpy @ 8,760	Controlled tpy @ 8,760
PM	0.055400	0.0046520	22.1600	1.8608	97.061	8.151
PM10	0.019380	0.0015628	7.7520	0.6251	33.954	2.738
PM2.5	0.0011994	0.0001261	0.4798	0.0504	2.101	0.221

Engine PTE Calculations:

- **Caterpillar C9.3B**
- **350 hp**
- **diesel fuel**
- **18.3 gal/hr**
- **0.0015 wt% sulfur**

Used EPA Certificate of Conformity for engine family RCPXL09.3NTF, which explicitly provides:

- **PM FEL = 0.01 g/kW-hr**

PM emissions were estimated using the EPA Certificate of Conformity for Caterpillar engine family RCPXL09.3NTF, which specifies a PM Family Emission Limit of 0.01 g/kW-hr. NOx, CO, and VOC emissions were estimated using EPA Tier 4 nonroad compression-ignition engine emission factors for engines in the applicable power category, because manufacturer-certified emission factors for those pollutants were not available in the application package. SO_2 emissions were estimated by sulfur mass balance assuming ultra-low sulfur diesel containing 0.0015 wt% sulfur.

McCloskey 144Rv3HD Impact Crusher with C9.3B Caterpillar Engine (GCS-32)

For a full **8,760-hour PTE**, the annual fuel usage:

18.3 gal/hr × 8,760 hr/yr =
160,308 gal/yr

Pollutant	EF (g/bhp-hr)
NOx	**0.1417**
CO	**0.0746**
VOC	**0.0298**
PM	**0.00746**
PM10	**0.00746**
PM2.5	**0.00746**

PTE Engine

Pollutant	EF (g/bhp-hr)	lb/hr	lb/day	PTE (tpy) @ 8,760 hr
NOx	0.1417	0.1093	2.62	0.479
CO	0.0746	0.0575	1.38	0.252
VOC	0.0298	0.0230	0.552	0.101
PM (Total)	0.007457	0.00575	0.138	0.0252
PM10	0.007457	0.00575	0.138	0.0252
PM2.5	0.007457	0.00575	0.138	0.0252
SOx (as SO2)	—	0.00390	0.0936	0.0171
Benzene	0.002848	0.00220	0.0527	0.00962
Toluene	0.001248	0.000963	0.0231	0.00422
Xylenes (total)	0.000870	0.000671	0.0161	0.00294
Propylene	0.007875	0.00608	0.146	0.0266
1,3-Butadiene	0.000119	0.000092	0.00221	0.00040
Formaldehyde	0.003602	0.00278	0.0667	0.0122
Acetaldehyde	0.002341	0.00181	0.0434	0.00791
Acrolein	0.000282	0.000218	0.00523	0.00095
Naphthalene	0.000259	0.000200	0.00479	0.00087
Total PAH	0.000513	0.000396	0.00950	0.00173
CO2	497.7	384	9,216	1,682

McCloskey 144Rv3HD Impact Crusher with C9.3B Caterpillar Engine (GCS-32)

Combined Emissions PTE (Crusher and Engine)

Pollutant	Process Uncontrolled (tpy)	Process Controlled (tpy)	Engine (tpy)	Combined Uncontrolled (tpy)	Combined Controlled (tpy)
PM	97.061	8.151	0.0252	97.086	8.176
PM10	33.954	2.738	0.0252	33.979	2.763
PM2.5	2.101	0.221	0.0252	2.126	0.246
SOx	0.000	0.000	0.0171	0.0171	0.0171
NOx	0.000	0.000	0.479	0.479	0.479
CO	0.000	0.000	0.252	0.252	0.252
VOC	0.000	0.000	0.101	0.101	0.101
Benzene	0.000	0.000	0.00962	0.00962	0.00962
Toluene	0.000	0.000	0.00422	0.00422	0.00422
Xylenes (total)	0.000	0.000	0.00294	0.00294	0.00294
Propylene	0.000	0.000	0.0266	0.0266	0.0266
1,3-Butadiene	0.000	0.000	0.00040	0.00040	0.00040
Formaldehyde	0.000	0.000	0.0122	0.0122	0.0122
Acetaldehyde	0.000	0.000	0.00791	0.00791	0.00791
Acrolein	0.000	0.000	0.00095	0.00095	0.00095
Naphthalene	0.000	0.000	0.00087	0.00087	0.00087
Total PAH	0.000	0.000	0.00173	0.00173	0.00173
CO2	0.000	0.000	1,682	1,682	1,682

Pollutant	Process Controlled (tpy) @ 1,800 hr	Engine (tpy) @ 1,800 hr	Combined Controlled (tpy) @ 1,800 hr
PM	1.675	0.00518	1.680
PM10	0.563	0.00518	0.568
PM2.5	0.045	0.00518	0.051
SOx	0.000	0.00351	0.00351
NOx	0.000	0.0984	0.0984
CO	0.000	0.0518	0.0518
VOC	0.000	0.0208	0.0208
Benzene	0.000	0.00198	0.00198
Toluene	0.000	0.000867	0.000867

McCloskey 144Rv3HD Impact Crusher with C9.3B Caterpillar Engine (GCS-32)

Pollutant	Process Uncontrolled (tpy)	Process Controlled (tpy)	Engine (tpy)	Combined Uncontrolled (tpy)	Combined Controlled (tpy)
Xylenes (total)	0.000		0.000604		0.000604
Propylene	0.000		0.00547		0.00547
1,3-Butadiene	0.000		0.0000822		0.0000822
Formaldehyde	0.000		0.00251		0.00251
Acetaldehyde	0.000		0.00163		0.00163
Acrolein	0.000		0.000195		0.000195
Naphthalene	0.000		0.000179		0.000179
Total PAH	0.000		0.000355		0.000355
CO2	0.000		345.62		345.62

Combined emissions were calculated for the McCloskey I44R impact crusher using one crusher, one onboard screen, and three integral conveyors (fines/side conveyor, radial return conveyor, and main discharge conveyor). Controlled process emissions reflect wet suppression. Engine emissions at 1,800 hours were calculated by proportionally scaling the annual engine PTE values from the 8,760-hour basis.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
2024 MODEL YEAR
CERTIFICATE OF CONFORMITY
WITH THE CLEAN AIR ACT

OFFICE OF TRANSPORTATION AND AIR QUALITY
ANN ARBOR, MICHIGAN 48105

Certificate Issued To: Caterpillar Inc.
(U.S. Manufacturer or Importer)

Certificate Number: RCPXL09.3NTF-001

Effective Date: 04/18/2023

Expiration Date: 12/31/2024

Byron J. Bunker, Division Director
Compliance Division

Issue Date: 04/18/2023

Revision Date: N/A

Model Year: 2024
Manufacturer Type: Original Engine Manufacturer
Engine Family: RCPXL09.3NTF

Mobile/Stationary Indicator: Both
Emissions Power Category: 130<=kW<=560
Fuel Type: Diesel
After Treatment Devices: Diesel Oxidation Catalyst, PTOX-DPF-Active, Ammonia Slip Catalyst, Selective Catalytic Reduction
Non-after Treatment Devices: Electronic Control, Engine Design Modification
FELs: PM 0.01 g/kW-hr

Pursuant to Section 111 and Section 213 of the Clean Air Act (42 U.S.C. sections 7411 and 7547) and 40 CFR Parts 60 and 1039, and subject to the terms and conditions prescribed in those provisions, this certificate of conformity is hereby issued with respect to the test engines which have been found to conform to applicable requirements and which represent the following engines, by engine family, more fully described in the documentation required by 40 CFR Parts 60 and 1039 and produced in the stated model year.

This certificate of conformity covers only those new compression-ignition engines which conform in all material respects to the design specifications that applied to those engines described in the documentation required by 40 CFR Parts 60 and 1039 and which are produced during the model year stated on this certificate of the said manufacturer, as defined in 40 CFR Parts 60 and 1039.

It is a term of this certificate that the manufacturer shall consent to all inspections described in 40 CFR 1068 and authorized in a warrant or court order. Failure to comply with the requirements of such a warrant or court order may lead to revocation or suspension of this certificate for reasons specified in 40 CFR Parts 60 and 1039. It is also a term of this certificate that this certificate may be revoked or suspended or rendered void *ab initio* for other reasons specified in 40 CFR Parts 60 and 1039.

This certificate does not cover engines sold, offered for sale, or introduced, or delivered for introduction, into commerce in the U.S. prior to the effective date of the certificate.

This certificate of conformity is conditional upon compliance of said manufacturer with the averaging, banking and trading provisions of 40 CFR Part 1039, Subpart H. Failure to comply with these provisions may render this certificate void *ab initio*.

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I44R IMPACT CRUSHER

The I44R Recirculating Impact Crusher continues to bring high quality and high production capacity and offers exceptional versatility, making it suitable for a wide range of applications. It can handle various materials, including aggregates, concrete, asphalt, and recycling materials, making it ideal for construction, demolition, and quarrying operations.

FEATURES

- ✓ 1050mm (41.3") diameter x 1125mm (44.3") wide Impactor
- ✓ 268kW (360Hp) engine
- ✓ Integrated hydraulic folding hopper
- ✓ I-beam plate fabricated chassis construction
- ✓ Open chassis design for ease of maintenance
- ✓ Fast setup time
- ✓ Integrated hydraulic folding stockpiling conveyors
- ✓ 365SiteConnex Telematics enabled.

For more information, contact your dealer: mccloskeyinternational.com/dealer-map

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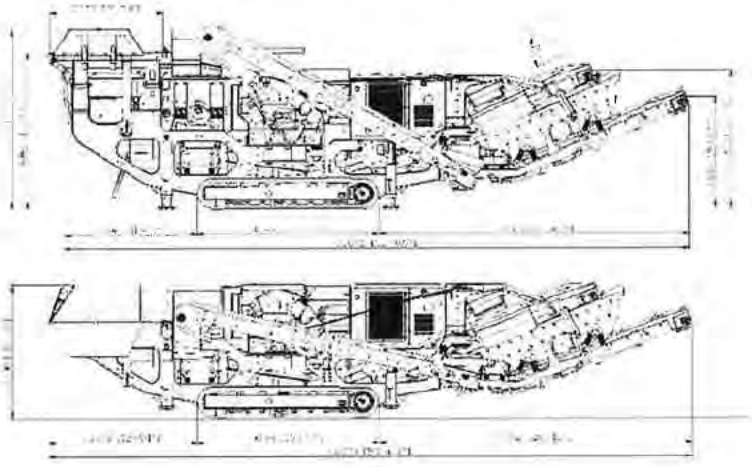
The I44R features a large impact chamber with a 4-bar rotor and a 45.6" x 32" feed opening. This design enables excellent crushing performance and ensures consistent product shape and size.

Efficiency is boosted with the I44R crusher design, particularly in the material flow path. Each sectional component is wider than the last to allow an unrestricted flow without funneling or narrowing, eliminating material bridging.

Additional stockpiling is made possible with the swing out radial return conveyor. The I44R's exceptional crushing capabilities, integrated two-deck screen, and thoughtful design make it a highly efficient and productive solution for a wide range of crushing applications.



I44R TECH SPECS

Engine	268 kW (360 Hp)
Impact Rotor	1050mm x 1125mm (41.3" x 44.3")
Double Deck Grizzly Pre-Screen	
Width*	1064mm (41.9")
Length (overall)	2015mm (6' 7.3")
Section Opening**	40-70mm (1.6" - 2.8")
Section Length	2113mm (83.2")
Pan Feeder	1064mm x 2460mm (41.8" x 96.9")
Hopper Volume	6.0m^3 (7.8 yd^3)
Stockpile Height	
Main Conveyor	3529mm (11' 6.9")
Side Conveyor	2488mm (8' 2")

TRANSPORT

Transport Height	3.40m (11' 1.8")
Transport Length	16.330m (53' 6.9")
Transport Width (500)	3.262m (10' 8.4")
Transpot Width (650)	3.412m (11' 2.2")
Weight - w/ magnet & dirt conveyor	53,408 kg (117,744 lb)

OPTIONS

Main Conveyor Variable Speed Control | Hopper Extensions | Overband Magnet | Water Pump & Dust Suppression System | Various Blow Bar Material Options | Work Lights | Belt Scale

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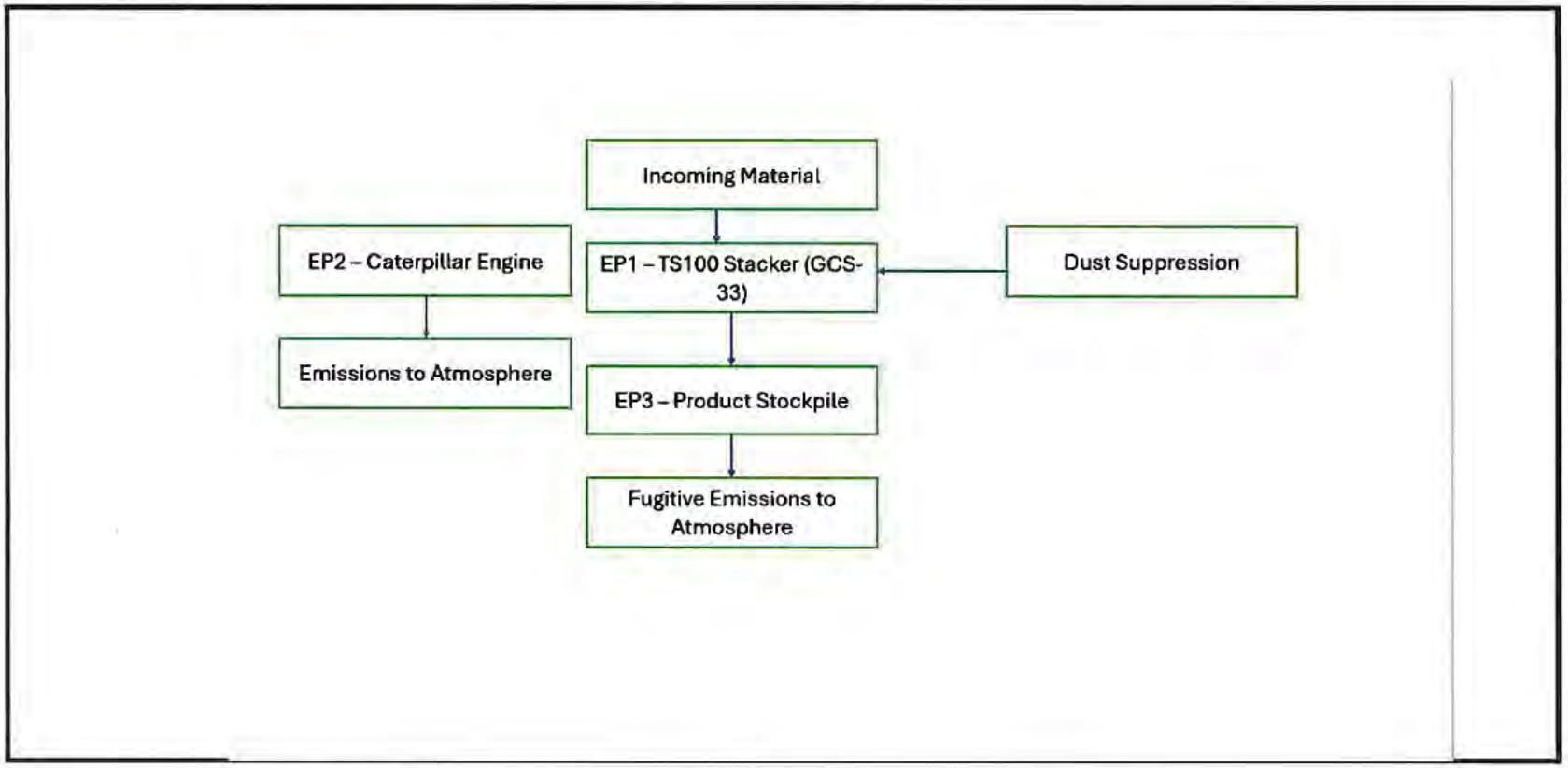
GCS-33

EDGE TS100 STACKER WITH C3.4 CATERPILLAR ENGINE

Process Flow Diagram

Sketch the Process Flow Diagram for the equipment or process being applied for. Include each emission unit and control device (even existing emission units that will not be modified by this application). You may identify each emission unit with a simple shape. Label each emission unit and control device with a unique identifier. Show the relationship between each emission unit and/or control device by drawing arrows between them to indicate the flow of air pollutants. List which application forms are included for each emission unit or control device below the shape representing each emission unit or control device . See http://www.delaware.gov/reg2/default.htm for example Process Flow Diagrams for common processes. If you already have a Process Flow Diagram for the equipment or process being applied for, you may attach it to the application instead of using this form.



Crushed Stone Equipment Application

If you are using this form electronically, press F1 at any time for help

General Information

1. Facility Name: **Middletown Materials**
2. Equipment ID Number: **GCS-33**
3. Where Does the Stone Originate: ☐ On-Site ☒ Off-Site (Specify): **Road Pavement Materials and Clean Reclaimed Concrete**
4. Locations Where Crusher Will Operate:

If the Crusher will operate at more than five locations, attach additional copies of this page as needed. Note that state law requires that a public notice for each location be made.

	Street Address	City	County	Zip Code	Condition of Roads at Location
4.1.	**Middletown Materials 1559 Cedar Lane Road**	**Middletown**	**New Castle**	**19709**	☐ Paved ☐ Unpaved ☒ Both
4.2.	**Adel Construction 10 Adel Dr.**	**Newark**	**New Castle**	**19702**	☐ Paved ☐ Unpaved ☒ Both
4.3.	**Adel Construction 20139 Lowes Rd.**	**Gumboro**	**Sussex**	**19966**	☐ Paved ☐ Unpaved ☒ Both
4.4.	**Heritage Concrete 376 Holly Oak Lane**	**Cheswold**	**Kent**	**19936**	☐ Paved ☐ Unpaved ☒ Both
4.5.	**Oyster Cove Old Orchard Rd.**	**Lewes**	**DE**	**19958**	☐ Paved ☐ Unpaved ☒ Both

Attach Proof of Local Zoning for each location.

5. Material Crushed:

If more than five Materials are crushed, attach additional copies of this page as needed.

	Material Name	Material Description
5.1.	**Reclaimed Asphalt Pavement**	**Roadway Pavements**
5.2.	**Reclaimed Concrete**	**Clean Reclaimed Concrete**
5.3.	**Soil/Sand/Aggregate/Similar Material**	**Construction Debris/Site Development**
5.4.		
5.5.		

6. Is a Feeder Used to Sort the Material Before Crushing? ☒ YES ☐ NO

If YES, complete the rest of Question 6. If NO, proceed to Question 7.

6.1. Is a Wet Suppression System Used to Control Emissions From the Feeder? ☒ YES ☐ NO

Crushed Stone Equipment Application

If you are using this form electronically, press F1 at any time for help

General Information

1. Facility Name: **Middletown Materials**
2. Equipment ID Number: **GCS-33**
3. Where Does the Stone Originate: ☐ On-Site
   ☒ Off-Site (Specify): **Road Pavement Materials and Clean Reclaimed Concrete**
4. Locations Where Crusher Will Operate:

If the Crusher will operate at more than five locations, attach additional copies of this page as needed. Note that state law requires that a public notice for each location be made.

	Street Address	City	County	Zip Code	Condition of Roads at Location
4.1.	**T201412701 - US113 at sr18/sr404 Grade Separated Intersection**	**Georgetown**	**Sussex**	**19947**	☐ Paved ☐ Unpaved ☒ Both
4.2.					☐ Paved ☐ Unpaved ☐ Both
4.3.					☐ Paved ☐ Unpaved ☐ Both
4.4.					☐ Paved ☐ Unpaved ☐ Both
4.5.					☐ Paved ☐ Unpaved ☐ Both

Attach Proof of Local Zoning for each location.

5. Material Crushed:

If more than five Materials are crushed, attach additional copies of this page as needed.

	Material Name	Material Description
5.1.	**Reclaimed Asphalt Pavement**	**Roadway Pavements**
5.2.	**Reclaimed Concrete**	**Clean Reclaimed Concrete**
5.3.	**Soil/Sand/Aggregate/Similar Material**	**Construction Debris/Site Development**
5.4.		
5.5.		

6. Is a Feeder Used to Sort the Material Before Crushing? ☒ YES ☐ NO

If YES, complete the rest of Question 6. If NO, proceed to Question 7.

6.1. Is a Wet Suppression System Used to Control Emissions From the Feeder? ☒ YES ☐ NO

General Information

6.2. Feeder Power Provided By: ☒ Generator/Engine ☐ Utility ☐ Other (Specify):

If a Generator/Engine is used, include completed Form AQM-3.3 with this application.

Crusher Information

7. Number of Crushers: **Belt Feeder Only (Conveyer)**

If there are more than two Crushers, attach additional copies of this page as needed.

For Primary Crusher

8. Primary Crusher Identification:

8.1. Primary Crusher Manufacturer:

8.2. Primary Crusher Model:

8.3. Primary Crusher Serial Number:

8.4. Maximum Amount of Material Processed in Primary Crusher: **ton/hr**

8.5. Is a Wet Suppression System Used to Control Emissions from the Crusher? ☐ YES ☐ NO

8.6. Primary Crusher Power Provided By: ☐ Generator/Engine ☐ Utility ☐ Other (Specify):

If a Generator/Engine is Used, Include Completed Form AQM-3.3 With this Application

8.7. Is a Screen Used to Sort Crushed Material? ☐ YES ☐ NO

If YES, complete the rest of Question 8.7. If NO, proceed to Question 9.

8.7.1. Is a Wet Suppression System Used to Control Emissions from the Screen? ☐ YES ☐ NO

8.7.2. Screen Power Provided By: ☐ Generator/Engine ☐ Utility ☐ Other (Specify):

If a Generator/Engine is used, include completed Form AQM-3.3 with this application.

For the Secondary Crusher. If There is No Secondary Crusher, Proceed to Question 10.

9. Secondary Crusher Identification:

9.1. Manufacturer:

9.2. Model:

9.3. Serial Number:

9.4. Maximum Amount of Material Processed: **ton/hr**

9.5. Is a Wet Suppression System Used to Control Emissions from the Crusher? ☐ YES ☐ NO

9.6. Power Provided By: ☐ Generator/Engine ☐ Utility ☐ Other (Specify):

If a Generator/Engine is used, include completed Form AQM-3.3 with this application.

Crusher Information

9.7. Is a Screen Used to Sort Crushed Material? ☐ YES ☐ NO

If YES, complete the rest of Question 9.7. If NO, proceed to Question 10.

9.7.1. Is a Wet Suppression System Used to Control Emissions From the Screen? ☐ YES ☐ NO

9.7.2. Screen Power Provided By: ☐ Generator/Engine
☐ Utility
☐ Other (Specify):

If a Generator/Engine is used, include completed Form AQM-3.3 with this application.

Conveyor Information

10. Are Conveyors Used in the Process? ☒ YES ☐ NO

If YES, proceed to Question 11. If NO, proceed to Question 15.

11. Number of Conveyors in Process: **1**

If more than three Conveyors are used, attach additional copies of this page as needed.

For the First Conveyor

12. Conveyor Identification: **Edge TS100 Stacker**

12.1. Location: ☐ Before (Specify Equipment):
☒ After (Specify Equipment): **Downstream stockpiling conveyor receiving material from crushers, screens, trommels, or other processing equipment; throughput limited by upstream equipment.**
☐ Between (Specify Equipment):

12.2. Maximum Amount of Material Conveyed: **400 ton/hr**

12.3. Is a Wet Suppression System Used to Control Emissions? ☐ YES ☒ NO

12.4. Conveyor Power Provided By: ☒ Generator/Engine
☐ Utility
☐ Other (Specify):

If a Generator/Engine is used, include completed Form AQM-3.3 with this application.

For the Second Conveyor. If There Is No Second Conveyor, Proceed to Question 15.

13. Conveyor Identification:

13.1. Location ☐ Before (Specify Equipment):
☐ After (Specify Equipment):
☐ Between (Specify Equipment):

13.2. Maximum Amount of Material Conveyed: **ton/hr**

13.3. Is a Wet Suppression System Used to Control Emissions? ☐ YES ☐ NO

13.4. Conveyor Power Provided By: ☐ Generator/Engine
☐ Utility
☐ Other (Specify):

If a Generator/Engine is used, include completed Form AQM-3.3 with this application.

For the Third Conveyor. If There Is No Third Conveyor, Proceed to Question 15.

Conveyor Information

14. Conveyor Identification:

14.1. Location: ☐ Before (Specify Equipment):
☐ After (Specify Equipment):
☐ Between (Specify Equipment):

14.2. Maximum Amount of Material Conveyed: **ton/hr**

14.3. Is a Wet Suppression System Used to Control Emissions? ☐ YES ☐ NO

14.4. Conveyor Power Provided By: ☐ Generator/Engine
☐ Utility
☐ Other (Specify):

If a Generator/Engine is used, include completed Form AQM-3.3 with this application.

Fines Crushing Information

15. Do you perform any of the following activities at your facility: ☐ Pulverize Minerals
☐ Produce Sand
☐ Crush Stone Into a Fine Product

If you checked any of the boxes above, include complete Form AQM-3.10 with this application.

Visible Emissions Monitoring Information

16. Proposed Technique Used to Monitor Visible Emissions: ☐ Opacity Monitor (COM)
☐ Manual (Method 9)
☐ Manual (Method 22)
☐ Other (Describe):

If an Opacity Monitor (COM) is used, complete the rest of Question 16. If not, proceed to Question 17.

16.1. Describe the Continuous Opacity Monitoring System:

16.2. Manufacturer:

16.3. Model:

16.4. Serial Number:

17. Proposed Frequency of Opacity Monitoring:

Voluntary Emissions Limitation Request Information

18. Are You Requesting Any Voluntary Emission Limitations to Avoid Major Source Status, Minor New Source Review, MACT, NSPS, etc.? ☐ YES ☒ NO

If YES, complete the rest of Question 18. If NO, proceed to Question 19.

Voluntary Emissions Limitation Request Information

19.1. Describe Any Proposed Emission Limitations:

Voluntary Operating Limitation Request Information

19. Are You Requesting Any Voluntary Operating Limitations to Avoid Major Source Status, Minor New Source Review, MACT, NSPS, etc.? ☒ YES ☐ NO

If YES, complete the rest of Question 19. If NO, proceed to Question 20.

19.1. Describe Any Proposed Operating Limitations: **Limit operation to 1,800 hours per consecutive 12-month period.**

Additional Information

20. Is There Any Additional Information Pertinent to this Application? ☒ YES ☐ NO

If YES, complete the rest of Question 20.

Additional Information

20.1. Describe: **GCS-33 (EDGE TS100 stacker) functions solely as downstream material handling equipment. The unit does not independently process material and cannot exceed the throughput of upstream processing equipment. Maximum throughput is limited to the rated capacity of the associated upstream unit. Water spray dust suppression is utilized at material transfer points and crusher discharge. Wet suppression is used to minimize fugitive particulate emissions. The system operates during material processing and represents Best Available Control Technology (BACT) for particulate emissions from conveying equipment.**

Generator/Engine Application

If you are using this form electronically, press F1 at any time for help

General Information

1.	Facility Name: **Middletown Materials**
2.	Equipment ID: **GCS-33 Edge TS100 STACKER-ENGINE**
3.	Manufacturer: **Caterpillar**
4.	Model: **C3.4**
5.	Serial Number: **CJ702289**
6.	Maximum Power Rating of Engine: **115** horsepower
7.	Standby Power Rating of Generator: **86** kilowatt
8.	Date of Manufacture: **2023**
9.	Installation Date: **As soon as possible**
10.	Is the Equipment Being Applied For a Generator or an Engine? ☐ Generator ☒ Engine
If the equipment is a Generator, complete the rest of Question 10. If not, proceed to Question 11.	
10.1.	Is the Generator Existing or New? ☐ Existing ☐ New
10.2.	Will the Generator Be Classified as an Emergency Generator or a Distributed Generator? ☐ Emergency ☐ Distributed
10.3.	Has an Initial Notification Pursuant to 7 **DE Admin. Code** 1144 Been Submitted for this Generator? ☐ YES ☐ NO
If NO, include a copy of the Initial Notification with this application.	
10.4.	Have the Emissions From the Generator Been Certified to Meet the Currently Applicable US EPA Non-Road Emission Standards? ☐ YES ☐ NO
If YES, attach a copy of the Manufacturer's Certification. If NO, attach copies of any/all of the following: any maintenance or operating requirements/instructions provided by the generator manufacturer; the type, or a description, of any emission control equipment use; and/or emissions test data for the generator (such as a manufacturer's technical data sheet), any supporting documentation for any emission control equipment used, any supporting calculations, any quality control or assurance information, and any other information needed to demonstrate compliance with the requirements. Proceed to Question 11.	
11.	Primary Fuel: ☐ Natural Gas ☒ Diesel ☐ Propane ☐ Biodiesel ☐ Other (specify):
11.1.	Maximum Annual Primary Fuel Consumption: **9,792 gal**
11.2.	Heat Content of Primary Fuel: **128,700 BTU/gal**
11.3.	Maximum Firing Rate: **5.44 gallons/hr**
11.4.	Percent Sulfur of Primary Fuel: **0.0015** %
12.	Secondary Fuel: ☐ Natural Gas ☐ Diesel ☐ Propane ☐ Biodiesel ☐ Other (specify):

General Information

12.1.	Maximum Annual Secondary Fuel Consumption: **MMCF**
12.2.	Heat Content of Secondary Fuel: **BTU/CF**
12.3.	Maximum Firing Rate: **MMCF/hr**
12.4.	Percent Sulfur of Secondary Fuel: %
13.	Is SCR/NSCR/SNCR/Ammonia Injection Used: ☐ YES ☐ NO

Stack Information

14. How Does the Process Equipment Vent:
(check all that apply)
☒ Directly to the Atmosphere
☐ Through a Control Device Covered by Forms AQM-4.1 through 4.12

If any of the process equipment vents directly to the atmosphere proceed to Question 15. If the process equipment vents through a control device, provide the stack parameters on the control device form and proceed to Question 16.

15. Emission Point Name: **Diesel Engine Exhaust Stack**

15.1. Stack Height Above Grade: **8 feet**

15.2. Stack Exit Diameter: **0.3 feet**
(Provide Stack Dimensions If Rectangular Stack)

15.3. Is a Stack Cap Present? ☐ YES ☒ NO

15.4. Stack Configuration: ☒ Vertical ☐ Horizontal ☐ Downward-Venting
(check all that apply) ☐ Other (Specify):

15.5. Stack Exit Gas Temperature: **700 °F**

15.6. Stack Exit Gas Flow Rate: **150 ACFM**

15.7. Distance to Nearest Property Line: **200 ft**

15.8. Describe Nearest Obstruction: **Soil Stockpile**

15.9. Height of Nearest Obstruction: **40 ft**

15.10. Distance to Nearest Obstruction: **145 ft**

15.11. Are Stack Sampling Ports Provided? ☐ YES ☒ NO

Monitoring Information

16. Will Emissions Data be Recorded by a Continuous Emission Monitoring System? ☐ YES ☒ NO

If Yes, Attach a Copy of the Continuous Emission Monitoring System Manufacturer's Specification Sheets

If YES, complete the rest of Question 16. If NO, proceed to Question 17.

16.1. Pollutants Monitored: ☐ VOCs ☐ HAPs ☐ PM ☐ PM_{10} ☐ $PM_{2.5}$ ☐ NO_X ☐ SO_X ☐ Metals
☐ Other (Specify):

16.2. Describe the Continuous Emission Monitoring System:

Monitoring Information
16.3. Manufacturer:
16.4. Model:
16.5. Serial Number:
16.6. Will Multiple Emission Units Be Monitored at the Same Point? ☐ YES ☐ NO
If YES, complete the rest of Question 16. If NO, proceed to Question 17.
16.7. Emission Units Monitored:
16.8. Will More Than One Emission Unit be Emitting From the Combined Point At Any Time? ☐ YES ☐ NO
If YES, complete the rest of Question 15. If NO, proceed to Question 17.
16.9. Emission Units Emitting Simultaneously:

Visible Emissions Monitoring Information
For Primary Fuel
17. Proposed Technique Used to Monitor Visible Emissions: ☐ Opacity Monitor (COM) ☒ Manual (Method 9) ☐ Manual (Method 22) ☐ Other (Describe):
If an Opacity Monitor (COM) is used, complete the rest of Question 17. If not, proceed to Question 18.
17.1. Describe the Continuous Opacity Monitoring System:
17.2. Manufacturer:
17.3. Model:
17.4. Serial Number:
18. Proposed Frequency of Opacity Monitoring: **Annual**
For Secondary Fuel. If no Secondary Fuel is used, proceed to Question 20.
19. Proposed Technique Used to Monitor Visible Emissions: ☐ Opacity Monitor (COMs) ☐ Manual (Method 9) ☐ Manual (Method 22) ☐ Other (Describe):
If an Opacity Monitor (COMs) is used, complete the rest of Question 19. If not, proceed to Question 20.
19.1. Describe the Continuous Opacity Monitoring System:
19.2. Manufacturer:
19.3. Model:
19.4. Serial Number:
20. Proposed Frequency of Opacity Monitoring:

Voluntary Emission Limitation Request Information

21.	Are You Requesting Any Voluntary Emission Limitations to Avoid Major Source Status, Minor New Source Review, MACT, NSPS, etc.?	☐ YES ☒ NO
If YES, complete the rest of Question 21. If NO, proceed to Question 22.		
21.1.	Describe Any Proposed Emission Limitations:	

Voluntary Operating Limitation Request Information

22.	Are You Requesting Any Voluntary Operating Limitations to Avoid Major Source Status, Minor New Source Review, MACT, NSPS, etc.?	☒ YES ☐ NO
If YES, complete the rest of Question 22. If NO, proceed to Question 23.		
22.1.	Describe Any Proposed Operating Limitations: **Request restriction on annual hours of operation. Request limit of 1,800 hours per year.**	

Additional Information

23.	Is There Any Additional Information Pertinent to this Application?	☐ YES ☒ NO
If YES, complete the rest of Question 23.		
22.1.	Describe:	

Emissions Information Application

If you are using this form electronically, press F1 at any time for help

Process Information	
1.	Number of Individual Pieces of Process Equipment in Process: **GCS-33 Edge TS100 Stacker and Caterpillar Engine**
2.	Number of Individual Control Devices in Process: **1 - Water Suppression**

Emissions Information for First Emission Point/Stack

3. Emission Point Name: **GCS-33 Edge Stacker**

4. Equipment ID Number for all Process Equipment and Control Devices Venting Through Emission Point/Stack: **GCS-33 Edge Stacker with Water Suppression**

5. Pollutant Emissions

If more than 15 pollutants are emitted at this Emission Point/Stack, attach additional copies of this page as needed.

	Pollutant Name (Specify VOCs and HAPs Individually in 5.10 through 5.18)	CAS Number (Not required for 5.1 through 5.10)	Maximum Uncontrolled Emission Rate at Design Capacity	Maximum Controlled Emission Rate at Design Capacity	Annual Potential to Emit (PTE)	Requested Permitted Annual Emissions
5.1.	Particulate Matter (PM)		**1.2 lbs/hour**	**0.056 lbs/hour**	**5.256** tons/year	**0.0503** tons/year
5.2.	PM_{10}		**0.440 lbs/hour**	**0.0184 lbs/hour**	**1.927** tons/year	**0.0166** tons/year
5.3.	$PM_{2.5}$		**0.0052 lbs/hour**	**0.0026 lbs/hour**	**0.0228** tons/year	**0.00267** tons/year
5.4.	Sulfur Oxides (SO_X)		**lbs/hour**	**lbs/hour**	tons/year	tons/year
5.5.	Nitrogen Oxides (NO_X)		**lbs/hour**	**lbs/hour**	tons/year	tons/year
5.6.	Carbon Monoxide (CO)		**lbs/hour**	**lbs/hour**	tons/year	tons/year
5.7.	Total Volatile Organic Compounds (VOCs)		**lbs/hour**	**lbs/hour**	tons/year	tons/year

Emissions Information for First Emission Point/Stack

5.8.	Total Hazardous Air Pollutants (HAPs)		**lbs/hour**	**lbs/hour**	tons/year	tons/year
5.9.	CO_2		**lbs/hour**	**lbs/hour**	tons/year	tons/year
5.10.	CO_{2e}		**lbs/hour**	**lbs/hour**	tons/year	tons/year
5.11.			**lbs/hour**	**lbs/hour**	tons/year	tons/year
5.12.			**lbs/hour**	**lbs/hour**	tons/year	tons/year
5.13.			**lbs/hour**	**lbs/hour**	tons/year	tons/year
5.14.			**lbs/hour**	**lbs/hour**	tons/year	tons/year
5.15.			**lbs/hour**	**lbs/hour**	tons/year	tons/year

6. Provide Any Additional Information Necessary to Understanding the Emission Rates Provided Above:

Attach the Basis of Determination or Calculations for each Emission Rate provided above.

Emissions Information for Second Emission Point/Stack

7. Emission Point Name: **Caterpillar Engine**

8. Equipment ID Number for all Process Equipment and Control Devices Venting Through Emission Point/Stack: **Engine Stack**

9. Pollutant Emissions

If more than 15 pollutants are emitted at this Emission Point/Stack, attach additional copies of this page as needed.

	Pollutant Name (Specify VOCs and HAPs Individually in 9.10 through 9.18)	CAS Number (Not required for 9.1 through 9.10)	Maximum Uncontrolled Emission Rate at Design Capacity	Maximum Controlled Emission Rate at Design Capacity	Annual Potential to Emit (PTE)	Requested Permitted Annual Emissions
9.1.	Particulate Matter (PM)		**0.003792 lbs/hour**	**0.003792 lbs/hour**	**0.01661** tons/year	**0.00341** tons/year

Emissions Information for Second Emission Point/Stack						
9.2.	PM_{10}		**0.003792 lbs/hour**	**0.003792 lbs/hour**	**0.01661** tons/year	**0.00341** tons/year
9.3.	$PM_{2.5}$		**0.003792 lbs/hour**	**0.003792 lbs/hour**	**0.01661** tons/year	**0.00341** tons/year
9.4.	Sulfur Oxides (SO_x)		**0.001248 lbs/hour**	**0.001248 lbs/hour**	**0.00547** tons/year	**0.00112** tons/year
9.5.	Nitrogen Oxides (NO_x)		**0.07584 lbs/hour**	**0.07584 lbs/hour**	**0.332** tons/year	**0.0683** tons/year
9.6.	Carbon Monoxide (CO)		**0.94799 lbs/hour**	**0.94799 lbs/hour**	**4.1522** tons/year	**0.8531** tons/year
9.7.	Total Volatile Organic Compounds (VOCs)		**0.03602 lbs/hour**	**0.03602 lbs/hour**	**0.1578** tons/year	**0.0324** tons/year
9.8.	Total Hazardous Air Pollutants (HAPs)		**0.00458 lbs/hour**	**0.00458 lbs/hour**	**0.02** tons/year	**0.00412** tons/year
9.9.	CO_2		**126.18 lbs/hour**	**126.18 lbs/hour**	**552.68** tons/year	**113.56** tons/year
9.10.	CO_{2e}		**lbs/hour**	**lbs/hour**	tons/year	tons/year
9.11.			**lbs/hour**	**lbs/hour**	tons/year	tons/year
9.12.			**lbs/hour**	**lbs/hour**	tons/year	tons/year
9.13.			**lbs/hour**	**lbs/hour**	tons/year	tons/year
9.14.			**lbs/hour**	**lbs/hour**	tons/year	tons/year
9.15.			**lbs/hour**	**lbs/hour**	tons/year	tons/year

10. Provide Any Additional Information Necessary to Understanding the Emission Rates Provided Above:

Attach the Basis of Determination or Calculations for each Emission Rate provided above.

Emissions Information for Third Emission Point/Stack

Emissions Information for Third Emission Point/Stack

11. Emission Point Name:

12. Equipment ID Number for all Process Equipment and Control Devices Venting Through Emission Point/Stack:

13. Pollutant Emissions

If more than 15 pollutants are emitted at this Emission Point/Stack, attach additional copies of this page as needed.

	Pollutant Name (Specify VOCs and HAPs Individually in 13.10 through 13.18)	CAS Number (Not required for 13.1 through 13.10)	Maximum Uncontrolled Emission Rate at Design Capacity	Maximum Controlled Emission Rate at Design Capacity	Annual Potential to Emit (PTE)	Requested Permitted Annual Emissions
13.1.	Particulate Matter (PM)		**lbs/hour**	**lbs/hour**	tons/year	tons/year
13.2.	PM_{10}		**lbs/hour**	**lbs/hour**	tons/year	tons/year
13.3.	$PM_{2.5}$		**lbs/hour**	**lbs/hour**	tons/year	tons/year
13.4.	Sulfur Oxides (SO_x)		**lbs/hour**	**lbs/hour**	tons/year	tons/year
13.5.	Nitrogen Oxides (NO_x)		**lbs/hour**	**lbs/hour**	tons/year	tons/year
13.6.	Carbon Monoxide (CO)		**lbs/hour**	**lbs/hour**	tons/year	tons/year
13.7.	Total Volatile Organic Compounds (VOCs)		**lbs/hour**	**lbs/hour**	tons/year	tons/year
13.8.	Total Hazardous Air Pollutants (HAPs)		**lbs/hour**	**lbs/hour**	tons/year	tons/year
13.9.	CO_2		**lbs/hour**	**lbs/hour**	tons/year	tons/year
13.10.	CO_{2e}		**lbs/hour**	**lbs/hour**	tons/year	tons/year
13.11.			**lbs/hour**	**lbs/hour**	tons/year	tons/year
13.12.			**lbs/hour**	**lbs/hour**	tons/year	tons/year
13.13.			**lbs/hour**	**lbs/hour**	tons/year	tons/year
13.14.			**lbs/hour**	**lbs/hour**	tons/year	tons/year
13.15.			**lbs/hour**	**lbs/hour**	tons/year	tons/year

Emissions Information for Third Emission Point/Stack

14. Provide Any Additional Information Necessary to Understanding the Emission Rates Provided Above:

Attach the Basis of Determination or Calculations for each Emission Rate provided above.

Emissions Information for Fourth Emission Point/Stack

15. Emission Point Name:

16. Equipment ID Number for all Process Equipment and Control Devices Venting Through Emission Point/Stack:

17. Pollutant Emissions

If more than 15 pollutants are emitted at this Emission Point/Stack, attach additional copies of this page as needed.

	Pollutant Name (Specify VOCs and HAPs Individually in 17.10 through 17.18)	CAS Number (Not required for 17.1 through 17.10)	Maximum Uncontrolled Emission Rate at Design Capacity	Maximum Controlled Emission Rate at Design Capacity	Annual Potential to Emit (PTE)	Requested Permitted Annual Emissions
17.1.	Particulate Matter (PM)		**lbs/hour**	**lbs/hour**	tons/year	tons/year
17.2.	PM_{10}		**lbs/hour**	**lbs/hour**	tons/year	tons/year
17.3.	$PM_{2.5}$		**lbs/hour**	**lbs/hour**	tons/year	tons/year
17.4.	Sulfur Oxides (SO_x)		**lbs/hour**	**lbs/hour**	tons/year	tons/year
17.5.	Nitrogen Oxides (NO_x)		**lbs/hour**	**lbs/hour**	tons/year	tons/year
17.6.	Carbon Monoxide (CO)		**lbs/hour**	**lbs/hour**	tons/year	tons/year
17.7.	Volatile Organic Compounds (VOCs)		**lbs/hour**	**lbs/hour**	tons/year	tons/year
17.8.	Total Hazardous Air Pollutants (HAPs)		**lbs/hour**	**lbs/hour**	tons/year	tons/year
17.9.	CO_2		**lbs/hour**	**lbs/hour**	tons/year	tons/year

Emissions Information for Fourth Emission Point/Stack					
17.10. CO_{2e}		**lbs/hour**	**lbs/hour**	tons/year	tons/year
17.11.		**lbs/hour**	**lbs/hour**	tons/year	tons/year
17.12.		**lbs/hour**	**lbs/hour**	tons/year	tons/year
17.13.		**lbs/hour**	**lbs/hour**	tons/year	tons/year
17.14.		**lbs/hour**	**lbs/hour**	tons/year	tons/year
17.15.		**lbs/hour**	**lbs/hour**	tons/year	tons/year
18. Provide Any Additional Information Necessary to Understanding the Emission Rates Provided Above:					
Attach the Basis of Determination or Calculations for each Emission Rate provided above.					
If there are more than four Emission Points/Stacks, attach additional copies of this form as needed.					

Overall Process Emissions

19. Pollutant Emissions

If more than 15 pollutants are emitted from this Process, attach additional copies of this page as needed.

Pollutant Name (Specify VOCs and HAPs Individually in 19.10 through 19.18)	CAS Number (Not required for 19.1 through 19.10)	Maximum Uncontrolled Emission Rate at Design Capacity	Maximum Controlled Emission Rate at Design Capacity	Annual Potential to Emit (PTE)	Requested Permitted Annual Emissions
19.1. Particulate Matter (PM)		**1.20379 lbs/hour**	**0.05979 lbs/hour**	**5.273** tons/year	**0.0537** tons/year
19.2. PM_{10}		**0.44379 lbs/hour**	**0.02219 lbs/hour**	**1.944** tons/year	**0.020** tons/year
19.3. $PM_{2.5}$		**0.00899 lbs/hour**	**0.00639 lbs/hour**	**0.0394** tons/year	**0.00683** tons/year
19.4. Sulfur Oxides (SO_X)		**0.001248 lbs/hour**	**0.001248 lbs/hour**	**0.00547** tons/year	**0.00112** tons/year
19.5. Nitrogen Oxides (NO_X)		**0.07584 lbs/hour**	**0.07584 lbs/hour**	**0.332** tons/year	**0.0683**

Overall Process Emissions

						tons/year
19.6.	Carbon Monoxide (CO)		**0.94799 lbs/hour**	**0.94799 lbs/hour**	**4.1522** tons/year	**0.8531** tons/year
19.7.	Total Volatile Organic Compounds (VOCs)		**0.03602 lbs/hour**	**0.03602 lbs/hour**	**0.1578** tons/year	**0.0324** tons/year
19.8.	Total Hazardous Air Pollutants (HAPs)		**0.00458 lbs/hour**	**0.00458 lbs/hour**	**0.02** tons/year	**0.00412** tons/year
19.9.	CO_2		**126.18 lbs/hour**	**126.18 lbs/hour**	**552.68** tons/year	**113.56** tons/year
19.10.	CO_{2e}		**lbs/hour**	**lbs/hour**	tons/year	tons/year
19.12.			**lbs/hour**	**lbs/hour**	tons/year	tons/year
19.13.			**lbs/hour**	**lbs/hour**	tons/year	tons/year
19.14.			**lbs/hour**	**lbs/hour**	tons/year	tons/year
19.15.			**lbs/hour**	**lbs/hour**	tons/year	tons/year

20. Provide Any Additional Information Necessary to Understanding the Emission Rates Provided Above:

Attach the Basis of Determination or Calculations for each Emission Rate provided above.

Minor New Source Review Information

21. Does the Process Have the Potential to Emit More Than Five Tons Per Year of Any Pollutant? ☒ YES ☐ NO

22. Is the Source New or Existing? ☒ NEW ☐ EXISTING
See Question 11 of AQM-1

If the Process has the Potential to Emit more than five tons per year of any pollutant, and is a New Source, a Control Technology Analysis pursuant to Regulation No. 1125 Section 4 must be conducted and attached to this application.

Major New Source Review Information

23. Does the Process Have the Potential to Emit More Than the Significance Level for Any Pollutant? *(Check All That Apply)*

- ☐ Greater Than 25 Tons Per Year of Particulate Matter (PM)
- ☐ Greater Than 15 Tons Per Year of PM_{10}
- ☐ Greater Than 10 Tons Per Year of $PM_{2.5}$
- ☐ Greater Than 40 Tons Per Year of Sulfur Dioxide(SO_2)
- ☐ Greater Than 25 Tons Per Year of Nitrogen Oxides (NO_X) in New Castle and Kent County
- ☐ Greater Than 100 Tons Per Year of Nitrogen Oxides (NO_X) in Sussex County
- ☐ Greater Than 100 Tons Per Year of Carbon Monoxide (CO)
- ☐ Greater Than 25 Tons Per Year of Total Volatile Organic Compounds (VOCs) in New Castle and Kent County
- ☐ Greater Than 50 Tons Per Year of Total Volatile Organic Compounds (VOCs) in Sussex County
- ☐ Greater Than 75,000 Tons Per Year of Equivalent Carbon Dioxide (CO_{2e})

If the Process has the Potential to Emit greater than any of the amounts listed above 7 DE Admin. Code 1125 Sections 2 and/or 3 apply. Contact the Department at (302) 323-4542 or (302) 739-9402 for additional information

Additional Information

24. Is There Any Additional Information Pertinent to this Application? ☒ YES ☐ NO

If YES, complete the rest of Question 24.

24.1. Describe: **Restricting the hours of operation have reduced emissions to below major source thresholds.**

Edge TS100 Stacker and 115 hp Caterpillar Engine (GCS-33)

The Edge TS100 Belt Feeder (stacker), (serial No. 23TS10048225) is equipped with a Caterpillar C3.4 (115 hp) diesel engine manufactured in 2023. Based on the engine model year and horsepower rating, the engine is classified as an EPA Tier 4 nonroad compression ignition engine.

Edge TS100 Stacker and 115 hp Caterpillar Engine (GCS-33)				
Make	**Serial No.**	**Process Rate**	**Conveyers**	**Dust Suppression**
Edge	23TS10048225	400 tph	1	Yes
ENGINE INFORMATION				
Make	**Model**	**Serial No.**	**Engine Arrangement No.**	**Engine Tier**
Caterpillar	C3.4	CJ702289	483-3549	Tier 4

- Conveyor/handling (uncontrolled): PM 0.0030, PM10 0.0011, PM2.5 0.000013 lb/ton.
- Conveyor/handling (controlled/wet suppression): PM 0.000140, PM10 0.000046, PM2.5 0.0000065 lb/ton.
- PM2.5 emissions for the stacker were estimated using an uncontrolled transfer-point factor of 0.000013 lb/ton derived from AP-42 methodology. For the controlled case, a 50 percent reduction was applied to reflect wet suppression, resulting in a controlled PM2.5 emission factor of 0.0000065 lb/ton.

TS100 stacker process emission factors

Pollutant	Uncontrolled EF (lb/ton)	Controlled EF (lb/ton)	Basis
PM	0.0030	0.000140	AP-42 transfer point / controlled handling factor consistent with attached calc
PM10	0.0011	0.000046	AP-42 transfer point / controlled handling factor consistent with attached calc
PM2.5	0.000013	0.0000065	PM2.5 derived from AP-42 methodology; controlled case revised to 50% reduction

TS100 stacker process PTE

400 tph, 8,760 hr/yr

Pollutant	Uncontrolled EF (lb/ton)	Controlled EF (lb/ton)	Uncontrolled lb/hr	Controlled lb/hr	Uncontrolled lb/day	Controlled lb/day	Uncontrolled tpy @ 8760	Controlled tpy @ 8760
PM	0.0030	0.000140	1.2000	0.0560	28.800	1.344	5.256	0.245

Edge TS100 Stacker and 115 hp Caterpillar Engine (GCS-33)

Pollutant	Uncontrolled EF (lb/ton)	Controlled EF (lb/ton)	Uncontrolled lb/hr	Controlled lb/hr	Uncontrolled lb/day	Controlled lb/day	Uncontrolled tpy @ 8760	Controlled tpy @ 8760
PM10	0.0011	0.000046	0.4400	0.0184	10.560	0.442	1.927	0.081
PM2.5	0.000013	0.0000065	0.0052	0.0026	0.125	0.062	0.0228	0.0114

TS100 engine emission factors

For the engine, Tier 4 standards for the appropriate power category for an **86 kW / 115 hp** engine were applied:

Pollutant	EF basis	Converted EF
NOx	0.40 g/kW-hr	0.2983 g/bhp-hr
CO	5.0 g/kW-hr	3.7285 g/bhp-hr
VOC (NMHC)	0.19 g/kW-hr	0.1417 g/bhp-hr
PM	0.02 g/kW-hr	0.0149 g/bhp-hr
PM10	assume = PM	0.0149 g/bhp-hr
PM2.5	assume = PM	0.0149 g/bhp-hr
SOx	sulfur mass balance	—

TS100 engine PTE

115 hp, 8,760 hr/yr

Pollutant	EF basis	lb/hr	lb/day	PTE (tpy) @ 8760
NOx	0.40 g/kW-hr	0.07584	1.820	0.3322
CO	5.0 g/kW-hr	0.94799	22.752	4.1522
VOC (NMHC)	0.19 g/kW-hr	0.03602	0.865	0.1578
PM (Total)	0.02 g/kW-hr	0.003792	0.0910	0.01661
PM10	assume = PM	0.003792	0.0910	0.01661
PM2.5	assume = PM	0.003792	0.0910	0.01661
SOx (as SO2)	sulfur mass balance	0.001248	0.0300	0.00547

Edge TS100 Stacker and 115 hp Caterpillar Engine (GCS-33)

Combined PTE TS100 stacker and engine

Pollutant	Process Uncontrolled tpy	Process Controlled tpy	Engine tpy	Combined Uncontrolled tpy	Combined Controlled tpy
PM	5.256	0.245	0.01661	5.273	0.262
PM10	1.927	0.081	0.01661	1.944	0.097
PM2.5	0.0228	0.0114	0.01661	0.0394	0.0280
NOx	—	—	0.3322	0.3322	0.3322
CO	—	—	4.1522	4.1522	4.1522
VOC (NMHC)	—	—	0.1578	0.1578	0.1578
SOx	—	—	0.00547	0.00547	0.00547

Pollutant	Maximum Uncontrolled Emission Rate at Design Capacity (lb/hr)	Maximum Controlled Emission Rate at Design Capacity (lb/hr)	Annual PTE (tpy)	Requested Permitted Annual Emissions (tpy @ 1,800 hr)
Total HAPs	0.00458	0.00458	0.0200	0.00412
CO2	126.18	126.18	552.68	113.56

Pollutant	Stacker lb/hr	Engine lb/hr	Combined lb/hr	Stacker tpy @ 1,800 hr	Engine tpy @ 1,800 hr	Combined tpy @ 1,800 hr
PM	0.0560	0.003792	0.05979	0.0503	0.00341	0.0537
PM10	0.0184	0.003792	0.02219	0.0166	0.00341	0.0200
PM2.5	0.0026	0.003792	0.00639	0.00267	0.00341	0.00608
NOx	0.0000	0.07584	0.07584	0.0000	0.0683	0.0683
CO	0.0000	0.94799	0.94799	0.0000	0.8531	0.8531
VOC (NMHC)	0.0000	0.03602	0.03602	0.0000	0.0324	0.0324
SOx	0.0000	0.001248	0.001248	0.0000	0.00112	0.00112
Total HAPs	0.0000	0.00458	0.00458	0.0000	0.00412	0.00412
CO2	0.0000	126.18	126.18	0.0000	113.56	113.56

Edge TS100 Stacker and 115 hp Caterpillar Engine (GCS-33)

The Edge TS100 stacker (GCS-33) was evaluated as one conveyor/discharge point operating at a maximum throughput of 400 tons per hour, consistent with the application, which identifies one conveyor in process and states that the stacker does not independently process material and therefore cannot exceed the crusher throughput. Uncontrolled PM and PM10 emission factors for the stacker were based on AP-42 transfer-point factors. Controlled emissions were estimated using controlled handling factors for PM and PM10 and a 50 percent reduction assumption for PM2.5. The associated engine was evaluated as a 115-hp Caterpillar C3.4/C3.4B diesel engine using Tier 4 emission standards for the applicable power category, with SOx based on sulfur mass balance using a fuel firing rate of 5.44 gal/hr and sulfur content of 0.0015 wt%.

Cat® C3.4B Diesel Engine

Industrial



Cat® C3.4B Industrial Diesel Engines offer the perfect balance of durability, fuel efficiency and low emissions. The C3.4B Industrial Engine is offered in ratings ranging from 45 -55.4 bkW (60-74.3 bhp) @ 2200-2500 rpm, which meet U.S. EPA Tier 4 Final, EU Stage IIIB emission standards. Industries and applications powered by C3.4B engines include: Agriculture, Aerial Lifts, Aircraft Ground Support, Bore/Drill Rigs, Chippers/Grinders, Compactors/Rollers, Compressors, Construction, Forestry, General Industrial, Irrigation Equipment, Material Handling, Mining, Mobile Earthmoving Equipment, Mobile Light Towers, Mobile Sweepers, Paving Equipment, Pumps, Specialty Ag Equipment, Trenchers, Turf and Landscaping and Underground Mining Equipment.

Specifications

Power Rating		
Minimum Power	45 bkW	60.3 bhp
Maximum Power	55.4 bkW	74.3 bhp
Rated Speed		2200 & 2500 rpm

Emission Standards	
Emissions	U.S. EPA Tier 4 Final, EU Stage IIIB Nonroad Emission Standards

General	
Engine Configuration	In-Line 4, 4-Stroke-Cycle Diesel
Bore	99 mm (3.9 in)
Stroke	110 mm (4.3 in)
Displacement	3.4 L (207.5 in³)
Aspiration	Turbocharged (T)
Compression Ratio	17:1
Combustion System	Direct Injection
Rotation (from flywheel end)	Counterclockwise
Cooling System Capacity	6 L (6.3 qt)

Engine Dimensions (Approximate. Final dimensions dependent on selected options)	
Length	610 mm (24 in)
Width	653 mm (25.7 in)
Height	829.5 mm (32.6 in)
Weight - Net Dry (Basic Operating Engine Without Optional Attachments)	251 kg (553.4 lb)

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Aftertreatment Dimensions (Approximate. Final dimensions dependent on selected options)	
Length	Wall Flow: 541 mm (21.3 in). Through Flow: 509 mm (20 in)
Weight	Wall Flow: 20 kg (44 lb). Through Flow: 14 kg (30.8 lb)
Diameter	Wall-Flow: 180 mm (7.1 in). Through Flow: 149 mm (5.8 in)

Benefits and Features

Emissions

U.S. EPA Tier 4 Final, EU Stage IIIB emission standards.

Reliable, Quiet and Durable Power

World-class manufacturing capability and processes coupled with proven core engine designs assure reliability, quiet operation, and many hours of productive life.

High Performance

Leading-edge technology provides significant improvements in power, torque, fuel consumption and response. Technology includes single smart wastegated turbo systems, durable high pressure common rail technology, and closed circuit breathing system.

Fuel Efficiency

Fuel consumption optimized to match operating cycles of a wide range of equipment and applications while maintaining low operating costs.

Fuel & Oil

Tier 4 Interim or Tier 4 Final, Stage IIIB or Stage IV engines require Ultra Low Sulfur Diesel (ULSD) fuel containing a maximum of 15 ppm sulfur, and new oil formulations to support the new technology. Cat® engines are designed to accommodate B20 biofuel. Your Cat dealer can provide more information regarding fuel and oil.

Broad Application Range

Industry leading range of factory configurable ratings and options for agricultural, material handling, construction, mining, aircraft ground support, and other industrial applications.

Low Cost Maintenance

Worldwide service delivers ease of maintenance and simplifies the servicing routine. Capable of optimal oil change intervals of 500 hours. Service-free through-flow diesel particulate filter (DPF) for Tier 4 Final, Stage IIIB. The S·O·S℠ program is available from your Cat dealer to determine oil change intervals and provide optimal performance.

Quality

Every Cat engine is manufactured to stringent quality standards in order to assure customer satisfaction.

World-class Product Support Offered Through Global Cat Dealer Network

- Scheduled maintenance, including SOS℠ sample
- Customer Support Agreements (CSA)
- Caterpillar Extended Service Coverage (ESC)
- Superior dealer service network
- Extended dealer service network through the Cat Industrial Service Distributor (ISD) program

Tier 4 Final, Stage IIIB Aftertreatment Features

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Technology and Power. The Diesel Particulate Filter (DPF) technology chosen performs through the work cycle of the engine, allowing it to work efficiently. Engine performance has been optimized to provide maximum power, and the emissions module is invisible to the operator in most duty cycles. **Mounting.** Multiple off and on engine installation options provide customers with simple and flexible solutions for many applications.**Service.** Minimum 3,000 hour DPF ash service intervals for wall-flow DPF. Through-flow DPF is service-free for the emissions life of the engine.

Standard Equipment

Air Inlet System

- Induction manifolds
- Exhaust manifolds

Control System

- Starter motor
- Alternator
- Electronic Control Unit
- Sensors for: engine speed, oil pressure, and coolant temperature

Cooling System

- Cooling packs

Flywheels and Flywheel Housing

- Flywheel housings
- Flywheel and starter rings

Fuel System

- Fuel filter positions
- Common rail fuel pump and injectors

Lube System

- Lubricating oil filters

General

- Cold start capability to -20° C (-4° F)
- Paint: Caterpillar yellow, with optional colors available at request

U.S. EPA Tier 4 Final, EU Stage IIIB Aftertreatment/Clean Emissions Control Equipment

- Diesel Particulate Filter (DPF)
- Diesel Oxidation Catalyst (DOC)
- Flex pipe connection kit with straight and 90° options for flexibility

The International System of Units (SI) is used in this publication. CAT, CATERPILLAR, their respective logos, ADEM, EUI, S•O•S, "Caterpillar Yellow" and the "Power Edge" trade dress, as well as corporate and product identity used herein, are trademarks of Caterpillar and may not be used without permission.

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EDGE INNOVATION AT WORK

STACK MORE *FOR LESS*



PRODUCT BROCHURE

EDGE TS100
TRACKED STOCKPILER

+44(0)2887 740525 info@edgeinnovate.com edgeinnovate.com

FEATURES AND BENEFITS



EDGE Innovate has taken decades of experience in manufacturing conveyors and created a 100' (30m) track stacker series that offers operators an efficient, reliable and robust material handling solution. Designed to work in the harshest of environments the TS100 ensures that screeners and crushers operate at maximum capacity by freeing up excavators and wheel loaders to continuously load rather than creating stockpiles.

Boasting an array of design features, the TS100 includes a highly efficient hydraulic drive system, a 1200 (48") wide conveyor with variable belt speed, low fuel consumption, adjustable feed and discharge heights. It's simple "Track in / Track out" set up from containerisation to operation mode allows ease of set-up for operators.

Whether it is: sand and gravel pits operators, aggregate producers, mulch yards or waste management facilities; the EDGE TS100 is the perfect stockpiling solution for a vast range of applications and material types.

KEY HIGHLIGHTS

- Can reduce fuel, maintenance and labour costs by up to
- 80%.
- Hydraulic adjustable feed height reduces impact and dust creation.
- Eliminates material segregation and ensures stockpile meets required specification.
- Discharge height of up to 13.2m (43'4")
- Create conical stockpiles of up to 1472m^3 (1925yds^3)



DESIGN FEATURES



PRODUCT SPECIFICATIONS

TRANSPORT DIMENSIONS	
Length:	12640mm (41'5")
Width:	2820mm (9'3")
Height:	3359mm (11')
Container Shipping Method:	40' X 9'6" Container
Gross Weight (Est):	21000KG / 23.1UST

CONVEYOR DATA	
Belt Width:	1200mm (48")
Conveyor Length:	30514mm (100'1")
Hopper Capacity:	3.2m³ (4.2yd³) *(can be extended)*
Max. Discharge Height:	13196mm (43'4")
Minimum Feed In Height:	1388mm (4'6")
Max. Operating Angle:	26°

POWERUNIT DATA	
Tier 3 Engine:	CAT4.4 76Kw (100Hp)
Tier 4 Final Engine:	CAT3.4B 86Kw (115Hp)
Hydraulic Tank Capacity:	270L (60USG)
Fuel Tank Capacity:	410L (90USG)

PERFORMANCE	
Throughput/hr:	1300m³ (1700yd³)
Maximum Stockpile Volume:	1472m³ (1925yd³)
Maximum Stockpile Height:	11332mm (37'2")
Maximum Feed Size:	250mm (10")

AVAILABLE OPTIONS

Tier 3 Diesel / Hydraulic	Chevron Belt	Overband Magnet	Variable Belt Speed
Tier 4 Diesel / Hydraulic	Heavy Duty Ply Belt	Magnetic Head Drum	Rockshelf
80KVA Diesel Genset	Emergency Pull Cord	Hydraulic Jacklegs	Crash Box
Dual Power Diesel / Hydraulic	Isolator Box	Extended Feedboot	Roller Guarding (Complete Conv.)
Electric Drive (Conveyor Only)	Manual Jackleg System	Impact Bars - Feedboot	Central Auto-lube System
Radio Remote Tracks	Full Conveyor Skirting	Feedboot wear liners	Grease Hoses

EDGE INNOVATION AT WORK

2019.01



CONTACT US TODAY.

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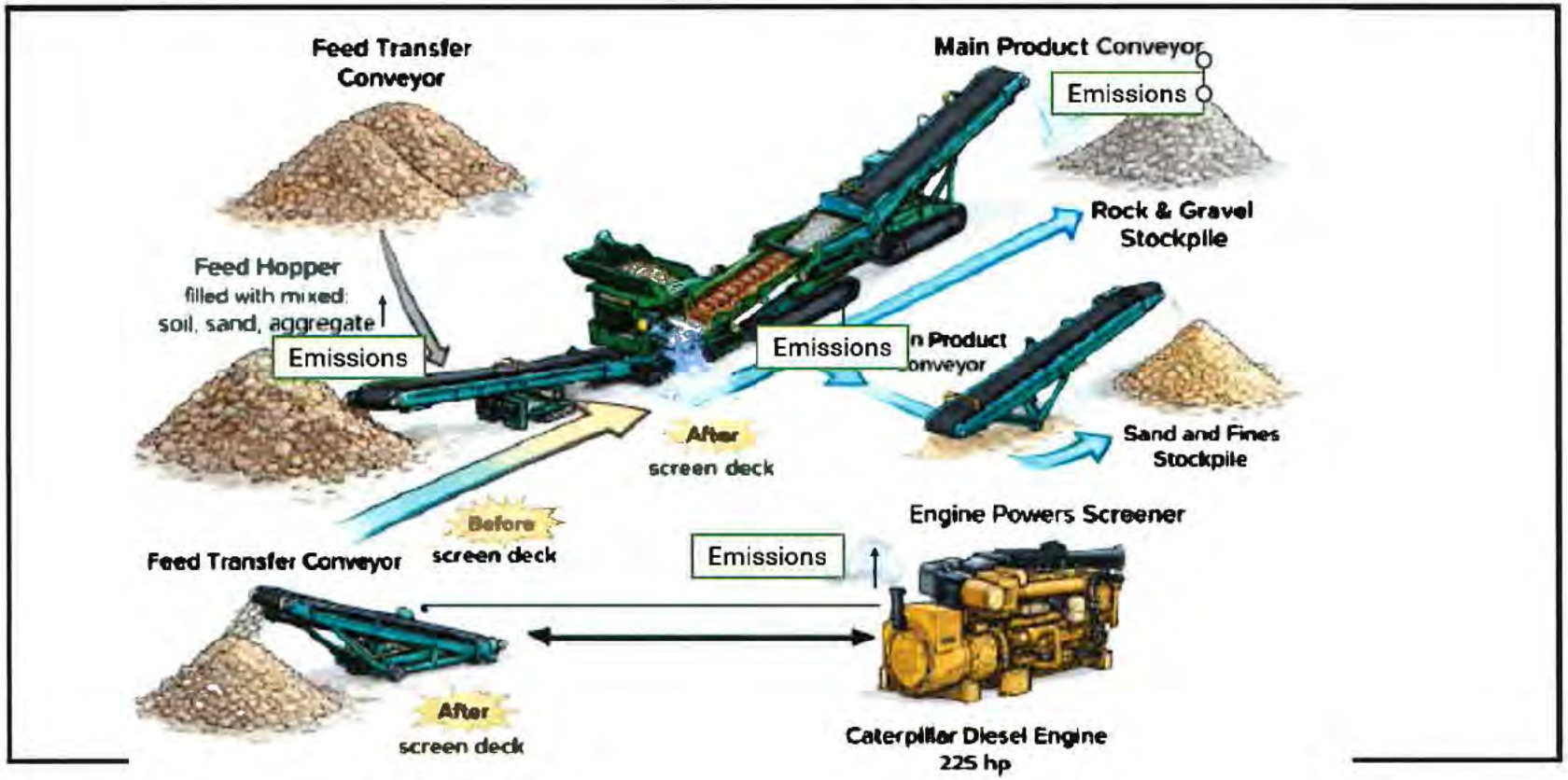
GCS-29

McCloskey R230 Tracked Screen with C6.6 Caterpillar Engine

DNREC – Air Quality Management Section
Application to Construct, Operate, or Modify Stationary Sources

Process Flow Diagram

Sketch the Process Flow Diagram for the equipment or process being applied for. Include each emission unit and control device (even existing emission units that will not be modified by this application). You may identify each emission unit with a simple shape. Label each emission unit and control device with a unique identifier. Show the relationship between each emission unit and/or control device by drawing arrows between them to indicate the flow of air pollutants. List which application forms are included for each emission unit or control device below the shape representing each emission unit or control device . See http://www.delaware.gov/reg2/default.htm for example Process Flow Diagrams for common processes. If you already have a Process Flow Diagram for the equipment or process being applied for, you may attach it to the application instead of using this form.



Crushed Stone Equipment Application

If you are using this form electronically, press F1 at any time for help

General Information

1. Facility Name: **Middletown Materials**
2. Equipment ID Number: **GCS-29**
3. Where Does the Stone Originate: ☐ On-Site ☒ Off-Site (Specify):
4. Locations Where Crusher Will Operate:

If the Crusher will operate at more than five locations, attach additional copies of this page as needed. Note that state law requires that a public notice for each location be made.

	Street Address	City	County	Zip Code	Condition of Roads at Location
4.1.	**Middletown Materials 1559 Cedar Lane Road**	**Middletown**	**New Castle**	**19709**	☐ Paved ☐ Unpaved ☒ Both
4.2.	**Adel Construction 10 Adel Dr.**	**Newark**	**New Castle**	**19702**	☐ Paved ☐ Unpaved ☒ Both
4.3.	**Adel Construction 20139 Lowes Rd.**	**Gumboro**	**Sussex**	**19966**	☐ Paved ☐ Unpaved ☒ Both
4.4.	**Heritage Concrete 376 Holly Oak Lane**	**Cheswold**	**Kent**		☐ Paved ☐ Unpaved ☒ Both
4.5.	**Oyster Cove Old Orchard Road, Lewes, DE**	**Lewes**	**Sussex**		☐ Paved ☐ Unpaved ☒ Both

Attach Proof of Local Zoning for each location.

5. Material Crushed:

If more than five Materials are crushed, attach additional copies of this page as needed.

	Material Name	Material Description
5.1.	**Reclaimed Asphalt Pavement**	**Roadway Pavements**
5.2.	**Reclaimed Concrete**	**Clean reclaimed concrete for crushing into recycled aggregate**
5.3.	**Dirt/Topsoil/Recycled Material/Aggregate**	**Construction Debris/Site Development**
5.4.		
5.5.		

6. Is a Feeder Used to Sort the Material Before Crushing? ☒ YES ☐ NO

If YES, complete the rest of Question 6. If NO, proceed to Question 7.

6.1. Is a Wet Suppression System Used to Control Emissions From the Feeder? ☐ YES ☒ NO

General Information

6.2. Feeder Power Provided By: ☒ Generator/Engine ☐ Utility ☐ Other (Specify):

If a Generator/Engine is used, include completed Form AQM-3.3 with this application.

Crusher Information

7. Number of Crushers: **SCREENER ONLY**

If there are more than two Crushers, attach additional copies of this page as needed.

For Primary Crusher

8. Primary Crusher Identification:

8.1. Primary Crusher Manufacturer:

8.2. Primary Crusher Model:

8.3. Primary Crusher Serial Number:

8.4. Maximum Amount of Material Processed in Primary Crusher: **400 ton/hr**

8.5. Is a Wet Suppression System Used to Control Emissions from the Crusher? ☐ YES ☐ NO

8.6. Primary Crusher Power Provided By: ☐ Generator/Engine ☐ Utility ☐ Other (Specify):

If a Generator/Engine is Used, Include Completed Form AQM-3.3 With this Application

8.7. Is a Screen Used to Sort Crushed Material? ☒ YES ☐ NO

If YES, complete the rest of Question 8.7. If NO, proceed to Question 9.

8.7.1. Is a Wet Suppression System Used to Control Emissions from the Screen? ☒ YES ☐ NO

8.7.2. Screen Power Provided By: ☒ Generator/Engine ☐ Utility ☐ Other (Specify):

If a Generator/Engine is used, include completed Form AQM-3.3 with this application.

For the Secondary Crusher. If There is No Secondary Crusher, Proceed to Question 10.

9. Secondary Crusher Identification:

9.1. Manufacturer:

9.2. Model:

9.3. Serial Number:

9.4. Maximum Amount of Material Processed: **ton/hr**

9.5. Is a Wet Suppression System Used to Control Emissions from the Crusher? ☐ YES ☐ NO

9.6. Power Provided By: ☐ Generator/Engine ☐ Utility ☐ Other (Specify):

If a Generator/Engine is used, include completed Form AQM-3.3 with this application.

Crusher Information

9.7. Is a Screen Used to Sort Crushed Material? ☐ YES ☐ NO

If YES, complete the rest of Question 9.7. If NO, proceed to Question 10.

9.7.1. Is a Wet Suppression System Used to Control Emissions From the Screen? ☐ YES ☐ NO

9.7.2. Screen Power Provided By: ☐ Generator/Engine
☐ Utility
☐ Other (Specify):

If a Generator/Engine is used, include completed Form AQM-3.3 with this application.

Conveyor Information

10. Are Conveyors Used in the Process? ☒ YES ☐ NO

If YES, proceed to Question 11. If NO, proceed to Question 15.

11. Number of Conveyors in Process: **3: 1 main product conveyor; 1 side fines conveyor; 1 feeder/transfer conveyor**

If more than three Conveyors are used, attach additional copies of this page as needed.

For the First Conveyor

12. Conveyor Identification: **1 main conveyor**

12.1. Location: ☐ Before (Specify Equipment):
☒ After (Specify Equipment): **screen deck**
☐ Between (Specify Equipment):

12.2. Maximum Amount of Material Conveyed: **400 ton/hr**

12.3. Is a Wet Suppression System Used to Control Emissions? ☐ YES ☒ NO

12.4. Conveyor Power Provided By: ☒ Generator/Engine
☐ Utility
☐ Other (Specify):

If a Generator/Engine is used, include completed Form AQM-3.3 with this application.

For the Second Conveyor. If There Is No Second Conveyor, Proceed to Question 15.

13. Conveyor Identification: **Side Fines Conveyer**

13.1. Location ☐ Before (Specify Equipment):
☒ After (Specify Equipment): **screen**
☐ Between (Specify Equipment):

13.2. Maximum Amount of Material Conveyed: **400 ton/hr**

13.3. Is a Wet Suppression System Used to Control Emissions? ☐ YES ☒ NO

13.4. Conveyor Power Provided By: ☒ Generator/Engine
☐ Utility
☐ Other (Specify):

If a Generator/Engine is used, include completed Form AQM-3.3 with this application.

For the Third Conveyor. If There Is No Third Conveyor, Proceed to Question 15.

14. Conveyor Identification: **Feed Transfer Conveyer**

Conveyor Information

14.1. Location: ☒ Before (Specify Equipment): **screen deck**
☐ After (Specify Equipment):
☐ Between (Specify Equipment):

14.2. Maximum Amount of Material Conveyed: **400 ton/hr**

14.3. Is a Wet Suppression System Used to Control Emissions? ☐ YES ☐ NO

14.4. Conveyor Power Provided By: ☒ Generator/Engine
☐ Utility
☐ Other (Specify):

If a Generator/Engine is used, include completed Form AQM-3.3 with this application.

Fines Crushing Information

15. Do you perform any of the following activities at your facility: ☐ Pulverize Minerals
☐ Produce Sand
☐ Crush Stone Into a Fine Product

If you checked any of the boxes above, include complete Form AQM-3.10 with this application.

Visible Emissions Monitoring Information

16. Proposed Technique Used to Monitor Visible Emissions: ☐ Opacity Monitor (COM)
☒ Manual (Method 9)
☐ Manual (Method 22)
☐ Other (Describe):

If an Opacity Monitor (COM) is used, complete the rest of Question 16. If not, proceed to Question 17.

16.1. Describe the Continuous Opacity Monitoring System:

16.2. Manufacturer:

16.3. Model:

16.4. Serial Number:

17. Proposed Frequency of Opacity Monitoring:

Voluntary Emissions Limitation Request Information

18. Are You Requesting Any Voluntary Emission Limitations to Avoid Major Source Status, Minor New Source Review, MACT, NSPS, etc.? ☐ YES ☒ NO

If YES, complete the rest of Question 18. If NO, proceed to Question 19.

19.1. Describe Any Proposed Emission Limitations:

Voluntary Operating Limitation Request Information

19. Are You Requesting Any Voluntary Operating Limitations to Avoid Major Source Status, Minor New Source Review, MACT, NSPS, etc.? ☒ YES ☐ NO

If YES, complete the rest of Question 19. If NO, proceed to Question 20.

19.1. Describe Any Proposed Operating Limitations: **Limit operation to 1,800 hours per consecutive 12-month period.**

Additional Information

20. Is There Any Additional Information Pertinent to this Application? ☐ YES ☒ NO

If YES, complete the rest of Question 20.

20.1. Describe:

Generator/Engine Application

If you are using this form electronically, press F1 at any time for help

General Information

1. Facility Name: **Middletown Materials**
2. Equipment ID: **Engine for CGS-29 McCloskey R230 Tracked Screen**
3. Manufacturer: **Caterpillar**
4. Model: **C6.6**
5. Serial Number: **66623631**
6. Maximum Power Rating of Engine: **225** horsepower
7. Standby Power Rating of Generator: **168** kilowatt
8. Date of Manufacture: **2012**
9. Installation Date: **TBD**
10. Is the Equipment Being Applied For a Generator or an Engine? ☐ Generator ☒ Engine

If the equipment is a Generator, complete the rest of Question 10. If not, proceed to Question 11.

10.1. Is the Generator Existing or New? ☐ Existing ☐ New

10.2. Will the Generator Be Classified as an Emergency Generator or a Distributed Generator? ☐ Emergency ☐ Distributed

10.3. Has an Initial Notification Pursuant to 7 **DE Admin. Code** 1144 Been Submitted for this Generator? ☐ YES ☐ NO

If NO, include a copy of the Initial Notification with this application.

10.4. Have the Emissions From the Generator Been Certified to Meet the Currently Applicable US EPA Non-Road Emission Standards? ☐ YES ☐ NO

If YES, attach a copy of the Manufacturer's Certification. If NO, attach copies of any/all of the following: any maintenance or operating requirements/instructions provided by the generator manufacturer; the type, or a description, of any emission control equipment use; and/or emissions test data for the generator (such as a manufacturer's technical data sheet), any supporting documentation for any emission control equipment used, any supporting calculations, any quality control or assurance information, and any other information needed to demonstrate compliance with the requirements. Proceed to Question 11.

11. Primary Fuel: ☐ Natural Gas ☒ Diesel ☐ Propane ☐ Biodiesel ☐ Other (specify):

11.1. Maximum Annual Primary Fuel Consumption: **12,960 gal**

11.2. Heat Content of Primary Fuel: **128,700 BTU/gal**

11.3. Maximum Firing Rate: **7.201 gallons/hr**

11.4. Percent Sulfur of Primary Fuel: **0.0015** %

12. Secondary Fuel: ☐ Natural Gas ☐ Diesel ☐ Propane ☐ Biodiesel ☐ Other (specify):

General Information

12.1.	Maximum Annual Secondary Fuel Consumption: **MMCF**
12.2.	Heat Content of Secondary Fuel: **BTU/CF**
12.3.	Maximum Firing Rate: **MMCF/hr**
12.4.	Percent Sulfur of Secondary Fuel: %
13.	Is SCR/NSCR/SNCR/Ammonia Injection Used: ☐ YES ☐ NO

Stack Information

14. How Does the Process Equipment Vent:
(check all that apply)
☒ Directly to the Atmosphere
☐ Through a Control Device Covered by Forms AQM-4.1 through 4.12

If any of the process equipment vents directly to the atmosphere proceed to Question 15. If the process equipment vents through a control device, provide the stack parameters on the control device form and proceed to Question 16.

15. Emission Point Name: **Engine Stack**

15.1. Stack Height Above Grade: **10 feet**

15.2. Stack Exit Diameter: **0.5 feet**
(Provide Stack Dimensions If Rectangular Stack)

15.3. Is a Stack Cap Present? ☒ YES ☐ NO

15.4. Stack Configuration: ☒ Vertical ☐ Horizontal ☐ Downward-Venting
(check all that apply) ☐ Other (Specify):

15.5. Stack Exit Gas Temperature: **875 °F**

15.6. Stack Exit Gas Flow Rate: **1681 ACFM**

15.7. Distance to Nearest Property Line: **200 ft**

15.8. Describe Nearest Obstruction: **Soil Stockpile**

15.9. Height of Nearest Obstruction: **40 ft**

15.10. Distance to Nearest Obstruction: **145 ft**

15.11. Are Stack Sampling Ports Provided? ☐ YES ☒ NO

Monitoring Information

16. Will Emissions Data be Recorded by a Continuous Emission Monitoring System? ☐ YES ☒ NO

If Yes, Attach a Copy of the Continuous Emission Monitoring System Manufacturer's Specification Sheets

If YES, complete the rest of Question 16. If NO, proceed to Question 17.

16.1. Pollutants Monitored: ☐ VOCs ☐ HAPs ☐ PM ☐ PM_{10} ☐ $PM_{2.5}$ ☐ NO_X ☐ SO_X ☐ Metals
☐ Other (Specify):

16.2. Describe the Continuous Emission Monitoring System:

Monitoring Information
16.3. Manufacturer:
16.4. Model:
16.5. Serial Number:
16.6. Will Multiple Emission Units Be Monitored at the Same Point? ☐ YES ☐ NO
If YES, complete the rest of Question 16. If NO, proceed to Question 17.
16.7. Emission Units Monitored:
16.8. Will More Than One Emission Unit be Emitting From the Combined Point At Any Time? ☐ YES ☐ NO
If YES, complete the rest of Question 15. If NO, proceed to Question 17.
16.9. Emission Units Emitting Simultaneously:

Visible Emissions Monitoring Information
For Primary Fuel
17. Proposed Technique Used to Monitor Visible Emissions: ☐ Opacity Monitor (COM) ☒ Manual (Method 9) ☐ Manual (Method 22) ☐ Other (Describe):
If an Opacity Monitor (COM) is used, complete the rest of Question 17. If not, proceed to Question 18.
17.1. Describe the Continuous Opacity Monitoring System:
17.2. Manufacturer:
17.3. Model:
17.4. Serial Number:
18. Proposed Frequency of Opacity Monitoring:
For Secondary Fuel. If no Secondary Fuel is used, proceed to Question 20.
19. Proposed Technique Used to Monitor Visible Emissions: ☐ Opacity Monitor (COMs) ☐ Manual (Method 9) ☐ Manual (Method 22) ☐ Other (Describe):
If an Opacity Monitor (COMs) is used, complete the rest of Question 19. If not, proceed to Question 20.
19.1. Describe the Continuous Opacity Monitoring System:
19.2. Manufacturer:
19.3. Model:
19.4. Serial Number:
20. Proposed Frequency of Opacity Monitoring:

Voluntary Emission Limitation Request Information

21.	Are You Requesting Any Voluntary Emission Limitations to Avoid Major Source Status, Minor New Source Review, MACT, NSPS, etc.?	☐ YES ☒ NO
If YES, complete the rest of Question 21. If NO, proceed to Question 22.		
21.1.	Describe Any Proposed Emission Limitations:	

Voluntary Operating Limitation Request Information

22.	Are You Requesting Any Voluntary Operating Limitations to Avoid Major Source Status, Minor New Source Review, MACT, NSPS, etc.?	☒ YES ☐ NO
If YES, complete the rest of Question 22. If NO, proceed to Question 23.		
22.1.	Describe Any Proposed Operating Limitations: **Restrict hours of operation to 1,800 per rolling 12 month period.**	

Additional Information

23.	Is There Any Additional Information Pertinent to this Application?	☐ YES ☒ NO
If YES, complete the rest of Question 23.		
22.1.	Describe:	

Emissions Information Application

If you are using this form electronically, press F1 at any time for help

Process Information

1. Number of Individual Pieces of Process Equipment in Process: **McCloskey R230 Tracked Screen with Caterpillar C6.6 Engine (GCS-29)**
2. Number of Individual Control Devices in Process: **1 - Dust Suppression**

Emissions Information for First Emission Point/Stack

3. Emission Point Name: **GCS-29 McCloskey R230 Tracked Screen**
4. Equipment ID Number for all Process Equipment and Control Devices Venting Through Emission Point/Stack: **GCS-29 McCloskey R230 Screen**
5. Pollutant Emissions

If more than 15 pollutants are emitted at this Emission Point/Stack, attach additional copies of this page as needed.

	Pollutant Name (Specify VOCs and HAPs Individually in 5.10 through 5.18)	CAS Number (Not required for 5.1 through 5.10)	Maximum Uncontrolled Emission Rate at Design Capacity	Maximum Controlled Emission Rate at Design Capacity	Annual Potential to Emit (PTE)	Requested Permitted Annual Emissions
5.1.	Particulate Matter (PM)		**11.20 lbs/hour**	**0.936 lbs/hour**	**49.06** tons/year	**0.842** tons/year
5.2.	PM_{10}		**3.92 lbs/hour**	**0.3144 lbs/hour**	**17.17** tons/year	**0.283** tons/year
5.3.	$PM_{2.5}$		**0.2404 lbs/hour**	**0.0226 lbs/hour**	**1.05** tons/year	**0.0203** tons/year
5.4.	Sulfur Oxides (SO_x)		**lbs/hour**	**lbs/hour**	tons/year	tons/year
5.5.	Nitrogen Oxides (NO_x)		**lbs/hour**	**lbs/hour**	tons/year	tons/year
5.6.	Carbon Monoxide (CO)		**lbs/hour**	**lbs/hour**	tons/year	tons/year
5.7.	Total Volatile Organic Compounds (VOCs)		**lbs/hour**	**lbs/hour**	tons/year	tons/year

Emissions Information for First Emission Point/Stack

5.8.	Total Hazardous Air Pollutants (HAPs)		**lbs/hour**	**lbs/hour**	tons/year	tons/year
5.9.	CO_2		**lbs/hour**	**lbs/hour**	tons/year	tons/year
5.10.	CO_{2e}		**lbs/hour**	**lbs/hour**	tons/year	tons/year
5.11.			**lbs/hour**	**lbs/hour**	tons/year	tons/year
5.12.			**lbs/hour**	**lbs/hour**	tons/year	tons/year
5.13.			**lbs/hour**	**lbs/hour**	tons/year	tons/year
5.14.			**lbs/hour**	**lbs/hour**	tons/year	tons/year
5.15.			**lbs/hour**	**lbs/hour**	tons/year	tons/year

6. Provide Any Additional Information Necessary to Understanding the Emission Rates Provided Above:

Attach the Basis of Determination or Calculations for each Emission Rate provided above.

Emissions Information for Second Emission Point/Stack

7. Emission Point Name: **Caterpillar Engine C6.6 Engine**

8. Equipment ID Number for all Process Equipment and Control Devices Venting Through Emission Point/Stack: **Engine Stack**

9. Pollutant Emissions

If more than 15 pollutants are emitted at this Emission Point/Stack, attach additional copies of this page as needed.

	Pollutant Name (Specify VOCs and HAPs Individually in 9.10 through 9.18)	CAS Number (Not required for 9.1 through 9.10)	Maximum Uncontrolled Emission Rate at Design Capacity	Maximum Controlled Emission Rate at Design Capacity	Annual Potential to Emit (PTE)	Requested Permitted Annual Emissions
9.1.	Particulate Matter (PM)		**0.063 lbs/hour**	**0.063 lbs/hour**	**0.28** tons/year	**0.0567** tons/year

Emissions Information for Second Emission Point/Stack						
9.2.	PM_{10}		**0.063 lbs/hour**	**0.063 lbs/hour**	**0.28** tons/year	**0.0567** tons/year
9.3.	$PM_{2.5}$		**0.063 lbs/hour**	**0.063 lbs/hour**	**0.28** tons/year	**0.0567** tons/year
9.4.	Sulfur Oxides (SO_X)		**0.0015 lbs/hour**	**0.0015 lbs/hour**	**0.007** tons/year	**0.00135** tons/year
9.5.	Nitrogen Oxides (NO_X)		**1.0358 lbs/hour**	**1.0358 lbs/hour**	**4.54** tons/year	**0.932** tons/year
9.6.	Carbon Monoxide (CO)		**0.551 lbs/hour**	**0.551 lbs/hour**	**2.43** tons/year	**0.5** tons/year
9.7.	Total Volatile Organic Compounds (VOCs)		**0.2738 lbs/hour**	**0.2738 lbs/hour**	**1.2** tons/year	**0.246** tons/year
9.8.	Total Hazardous Air Pollutants (HAPs)		**0.0033 lbs/hour**	**0.0033 lbs/hour**	**0.0145** tons/year	**0.003** tons/year
9.9.	CO_2		**161.3 lbs/hour**	**161.3 lbs/hour**	**706.3** tons/year	**145.2** tons/year
9.10.	CO_{2e}		**lbs/hour**	**lbs/hour**	tons/year	tons/year
9.11.			**lbs/hour**	**lbs/hour**	tons/year	tons/year
9.12.			**lbs/hour**	**lbs/hour**	tons/year	tons/year
9.13.			**lbs/hour**	**lbs/hour**	tons/year	tons/year
9.14.			**lbs/hour**	**lbs/hour**	tons/year	tons/year
9.15.			**lbs/hour**	**lbs/hour**	tons/year	tons/year

10. Provide Any Additional Information Necessary to Understanding the Emission Rates Provided Above:

Attach the Basis of Determination or Calculations for each Emission Rate provided above.

Emissions Information for Third Emission Point/Stack
11. Emission Point Name:

Emissions Information for Third Emission Point/Stack

12. Equipment ID Number for all Process Equipment and Control Devices Venting Through Emission Point/Stack:

13. Pollutant Emissions

If more than 15 pollutants are emitted at this Emission Point/Stack, attach additional copies of this page as needed.

	Pollutant Name (Specify VOCs and HAPs Individually in 13.10 through 13.18)	CAS Number (Not required for 13.1 through 13.10)	Maximum Uncontrolled Emission Rate at Design Capacity	Maximum Controlled Emission Rate at Design Capacity	Annual Potential to Emit (PTE)	Requested Permitted Annual Emissions
13.1.	Particulate Matter (PM)		**lbs/hour**	**lbs/hour**	tons/year	tons/year
13.2.	PM_{10}		**lbs/hour**	**lbs/hour**	tons/year	tons/year
13.3.	$PM_{2.5}$		**lbs/hour**	**lbs/hour**	tons/year	tons/year
13.4.	Sulfur Oxides (SO_X)		**lbs/hour**	**lbs/hour**	tons/year	tons/year
13.5.	Nitrogen Oxides (NO_X)		**lbs/hour**	**lbs/hour**	tons/year	tons/year
13.6.	Carbon Monoxide (CO)		**lbs/hour**	**lbs/hour**	tons/year	tons/year
13.7.	Total Volatile Organic Compounds (VOCs)		**lbs/hour**	**lbs/hour**	tons/year	tons/year
13.8.	Total Hazardous Air Pollutants (HAPs)		**lbs/hour**	**lbs/hour**	tons/year	tons/year
13.9.	CO_2		**lbs/hour**	**lbs/hour**	tons/year	tons/year
13.10.	CO_{2e}		**lbs/hour**	**lbs/hour**	tons/year	tons/year
13.11.			**lbs/hour**	**lbs/hour**	tons/year	tons/year
13.12.			**lbs/hour**	**lbs/hour**	tons/year	tons/year
13.13.			**lbs/hour**	**lbs/hour**	tons/year	tons/year
13.14.			**lbs/hour**	**lbs/hour**	tons/year	tons/year
13.15.			**lbs/hour**	**lbs/hour**	tons/year	tons/year

Emissions Information for Third Emission Point/Stack

14. Provide Any Additional Information Necessary to Understanding the Emission Rates Provided Above:

Attach the Basis of Determination or Calculations for each Emission Rate provided above.

Emissions Information for Fourth Emission Point/Stack

15. Emission Point Name:

16. Equipment ID Number for all Process Equipment and Control Devices Venting Through Emission Point/Stack:

17. Pollutant Emissions

If more than 15 pollutants are emitted at this Emission Point/Stack, attach additional copies of this page as needed.

	Pollutant Name (Specify VOCs and HAPs Individually in 17.10 through 17.18)	CAS Number (Not required for 17.1 through 17.10)	Maximum Uncontrolled Emission Rate at Design Capacity	Maximum Controlled Emission Rate at Design Capacity	Annual Potential to Emit (PTE)	Requested Permitted Annual Emissions
17.1.	Particulate Matter (PM)		**lbs/hour**	**lbs/hour**	tons/year	tons/year
17.2.	PM_{10}		**lbs/hour**	**lbs/hour**	tons/year	tons/year
17.3.	$PM_{2.5}$		**lbs/hour**	**lbs/hour**	tons/year	tons/year
17.4.	Sulfur Oxides (SO_x)		**lbs/hour**	**lbs/hour**	tons/year	tons/year
17.5.	Nitrogen Oxides (NO_x)		**lbs/hour**	**lbs/hour**	tons/year	tons/year
17.6.	Carbon Monoxide (CO)		**lbs/hour**	**lbs/hour**	tons/year	tons/year
17.7.	Volatile Organic Compounds (VOCs)		**lbs/hour**	**lbs/hour**	tons/year	tons/year
17.8.	Total Hazardous Air Pollutants (HAPs)		**lbs/hour**	**lbs/hour**	tons/year	tons/year
17.9.	CO_2		**lbs/hour**	**lbs/hour**	tons/year	tons/year

Emissions Information for Fourth Emission Point/Stack

17.10. CO_{2e}		**lbs/hour**	**lbs/hour**	tons/year	tons/year
17.11.		**lbs/hour**	**lbs/hour**	tons/year	tons/year
17.12.		**lbs/hour**	**lbs/hour**	tons/year	tons/year
17.13.		**lbs/hour**	**lbs/hour**	tons/year	tons/year
17.14.		**lbs/hour**	**lbs/hour**	tons/year	tons/year
17.15.		**lbs/hour**	**lbs/hour**	tons/year	tons/year

18. Provide Any Additional Information Necessary to Understanding the Emission Rates Provided Above:

Attach the Basis of Determination or Calculations for each Emission Rate provided above.

If there are more than four Emission Points/Stacks, attach additional copies of this form as needed.

Overall Process Emissions

19. Pollutant Emissions

If more than 15 pollutants are emitted from this Process, attach additional copies of this page as needed.

Pollutant Name (Specify VOCs and HAPs Individually in 19.10 through 19.18)	CAS Number (Not required for 19.1 through 19.10)	Maximum Uncontrolled Emission Rate at Design Capacity	Maximum Controlled Emission Rate at Design Capacity	Annual Potential to Emit (PTE)	Requested Permitted Annual Emissions
19.1. Particulate Matter (PM)		**11.263 lbs/hour**	**0.999 lbs/hour**	**49.34** tons/year	**0.899** tons/year
19.2. PM_{10}		**3.983 lbs/hour**	**0.3774 lbs/hour**	**17.45** tons/year	**0.340** tons/year
19.3. $PM_{2.5}$		**0.3034 lbs/hour**	**0.0856 lbs/hour**	**1.33** tons/year	**0.0770** tons/year
19.4. Sulfur Oxides (SO_X)		**0.0015 lbs/hour**	**0.0015 lbs/hour**	**0.007** tons/year	**0.00135** tons/year
19.5. Nitrogen Oxides (NO_X)		**1.0358 lbs/hour**	**1.0358 lbs/hour**	**4.54** tons/year	**0.932** tons/year

Overall Process Emissions

19.6.	Carbon Monoxide (CO)		**0.555 lbs/hour**	**0.555 lbs/hour**	**2.43** tons/year	**0.500** tons/year
19.7.	Total Volatile Organic Compounds (VOCs)		**0.2738 lbs/hour**	**0.2738 lbs/hour**	**1.2** tons/year	**0.246** tons/year
19.8.	Total Hazardous Air Pollutants (HAPs)		**0.0033 lbs/hour**	**0.0033 lbs/hour**	**0.0145** tons/year	**0.0030** tons/year
19.9.	CO_2		**161.3 lbs/hour**	**161.3 lbs/hour**	**706.3** tons/year	**145.2** tons/year
19.10.	CO_{2e}		**lbs/hour**	**lbs/hour**	tons/year	tons/year
19.12.			**lbs/hour**	**lbs/hour**	tons/year	tons/year
19.13.			**lbs/hour**	**lbs/hour**	tons/year	tons/year
19.14.			**lbs/hour**	**lbs/hour**	tons/year	tons/year
19.15.			**lbs/hour**	**lbs/hour**	tons/year	tons/year

20. Provide Any Additional Information Necessary to Understanding the Emission Rates Provided Above:

Attach the Basis of Determination or Calculations for each Emission Rate provided above.

Minor New Source Review Information

21. Does the Process Have the Potential to Emit More Than Five Tons Per Year of Any Pollutant? ☒ YES ☐ NO

22. Is the Source New or Existing? ☒ NEW ☐ EXISTING
See Question 11 of AQM-1

If the Process has the Potential to Emit more than five tons per year of any pollutant, and is a New Source, a Control Technology Analysis pursuant to Regulation No. 1125 Section 4 must be conducted and attached to this application.

Major New Source Review Information

23. Does the Process Have the Potential to Emit More Than the Significance Level for Any Pollutant? *(Check All That Apply)*

- ☒ Greater Than 25 Tons Per Year of Particulate Matter (PM)
- ☒ Greater Than 15 Tons Per Year of PM_{10}
- ☐ Greater Than 10 Tons Per Year of $PM_{2.5}$
- ☐ Greater Than 40 Tons Per Year of Sulfur Dioxide(SO_2)
- ☐ Greater Than 25 Tons Per Year of Nitrogen Oxides (NO_X) in New Castle and Kent County
- ☐ Greater Than 100 Tons Per Year of Nitrogen Oxides (NO_X) in Sussex County
- ☐ Greater Than 100 Tons Per Year of Carbon Monoxide (CO)
- ☐ Greater Than 25 Tons Per Year of Total Volatile Organic Compounds (VOCs) in New Castle and Kent County
- ☐ Greater Than 50 Tons Per Year of Total Volatile Organic Compounds (VOCs) in Sussex County
- ☐ Greater Than 75,000 Tons Per Year of Equivalent Carbon Dioxide (CO_{2e})

If the Process has the Potential to Emit greater than any of the amounts listed above 7 DE Admin. Code 1125 Sections 2 and/or 3 apply. Contact the Department at (302) 323-4542 or (302) 739-9402 for additional information

Additional Information

24. Is There Any Additional Information Pertinent to this Application? ☒ YES ☐ NO

If YES, complete the rest of Question 24.

24.1. Describe: **Restricting the hours of operation have reduced emissions to below major source thresholds. Restrict hours of operation to 1800 per rolling 12 month period.**

McCloskey R230 Tracked Screen with Caterpillar C6.6 Engine (GCS-29)

The McCloskey R230 tracked screen (Serial No. 80898) is equipped with a Caterpillar C6.6 (225 hp) diesel engine manufactured in 2012. Based on the engine model year and horsepower rating, the engine is classified as an EPA Tier 3 nonroad compression ignition engine.

MCCLOSKEY R230 TRACKED SCREEN – GCS-29				
Make	**Serial No.**	**Process Rate**	**Conveyers**	**Dust Suppression**
McCloskey	80898	400 tph	3	Yes
ENGINE INFORMATION				
Make	**Model**	**Serial No.**	**Engine Arrangement No.**	**Engine Tier**
Caterpillar	C6.6/225 hp (168 kw)	66623631	373-8069	Tier 3

The McCloskey R230 tracked screener includes three product conveyors (fines, mids, and overs), each receiving material directly from the screening deck. Therefore, three material transfer/drop points were assumed for emission calculations. In the absence of site-specific product split data for the McCloskey R230 screener, emissions from the three integrated product conveyors were estimated using conveyor/drop-point factors with the combined conveyor throughput capped at the maximum plant throughput of 400 tph. These factors come from EPA AP-42 Section 11.19.2 – Crushed Stone Processing and Pulverized Mineral Processing, specifically:

- **Table 11.19.2-2** (Uncontrolled screening)
- **Table 11.19.2-3** (Uncontrolled conveyor transfer points)

PM2.5 emission factors were derived using particle size multipliers consistent with AP-42 methodology. This approach is consistent with the methodology used in previously approved DNREC air permit applications for similar screening equipment.

Screening Operation Emission Factors

Source: AP-42 Section 11.19.2, Table 11.19.2-2 (Uncontrolled)

Pollutant	Emission Factor (lb/ton)	AP-42 Reference	Notes
Total PM	0.025	Table 11.19.2-2	Uncontrolled screening
PM10	0.0087	Table 11.19.2-2	Uncontrolled screening
PM2.5	0.000588	Derived from AP-42	Particle size multipliers

McCloskey R230 Tracked Screen with Caterpillar C6.6 Engine (GCS-29)

Conveyor Transfer / Drop Points Emission Factors

Source: AP-42 Section 11.19.2, Table 11.19.2-3 (Uncontrolled)

Pollutant	Emission Factor (lb/ton)	AP-42 Reference	Notes
Total PM	0.0030	Table 11.19.2-3	Conveyor transfer
PM10	0.0011	Table 11.19.2-3	Conveyor transfer
PM2.5	0.000013	Derived from AP-42	Particle size multipliers

Final Factors Used for PTE Calculation

Emission Source	Total PM	PM10	PM2.5	AP-42 Section
Screening	0.025	0.0087	0.000588	11.19.2 Table 2
Conveyor Drop Points	0.0030	0.0011	0.000013	11.19.2 Table 3

Potential to Emit Calculations

- **screen deck at 400 tph**
- **three conveyor drop points total capped at 400 tph combined**

Uncontrolled:

Pollutant	Uncontrolled EF (lb/ton)	Controlled EF (lb/ton)	Uncontrolled lb/hr	Controlled lb/hr	Uncontrolled PTE @ 8,760 (tpy)	Controlled PTE @ 8,760 (tpy)	Controlled emissions @ 1,800 hr (tpy)
PM	0.0280	0.00234	11.20	0.9360	49.06	4.100	0.842
PM10	0.0098	0.000786	3.92	0.3144	17.17	1.377	0.283
PM2.5	0.000601	0.0000565	0.2404	0.0226	1.05	0.0990	0.0203

Caterpillar C6.6 Engine — PTE Emissions Table

Assumptions:

Engine: Caterpillar C6.6
Rating: 225 bhp
Tier: Tier 3
Fuel use: 7.201 gal/hr
Heat input: 0.927 MMBtu/hr
Operating hours: 8,760 hr/yr
Annual fuel use: 63,081 gal/yr

McCloskey R230 Tracked Screen with Caterpillar C6.6 Engine (GCS-29)

Annual heat input: 8,118 MMBtu/yr

Pollutant Source

PM, PM10, PM2.5 EPA nonroad diesel engine certification / WebFIRE Tier 3

NOx EPA NONROAD Tier 3 emission factors

CO EPA NONROAD Tier 3 emission factors

VOC EPA NONROAD Tier 3 emission factors

SO_2 EPA WebFIRE sulfur content calculation

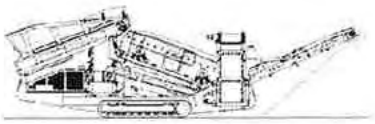
Pollutant	**Emission Factor**	**Units**	**lb/hr**	**PTE @ 8,760 (tpy)**	**Emissions @ 1,800 hr (tpy)**
PM	0.127	g/bhp-hr	0.0630	0.28	0.0567
PM10	0.127	g/bhp-hr	0.0630	0.28	0.0567
PM2.5	0.127	g/bhp-hr	0.0630	0.28	0.0567
CO	1.119	g/bhp-hr	0.5551	2.43	0.500
VOC	0.552	g/bhp-hr	0.2738	1.20	0.246
NOx	2.088	g/bhp-hr	1.0358	4.54	0.932
SO2	0.00020829	lb/gal	0.00150	0.007	0.00135
Total HAPs	—	—	0.0033	0.0145	0.0030
CO2	—	—	161.3	706.3	145.2

McCloskey R230 Tracked Screen with Caterpillar C6.6 Engine (GCS-29)

Pollutant	Process lb/hr (controlled)	Engine lb/hr	Combined lb/hr	Combined PTE @ 8,760 hr (tpy)	Combined PTE @ 1,800 hr (tpy)
PM	0.9360	0.0630	0.9990	4.38	0.899
PM10	0.3144	0.0630	0.3774	1.66	0.340
PM2.5	0.0226	0.0630	0.0856	0.379	0.0770

Pollutant	Combined PTE @ 8,760	Combined PTE @ 1,800
PM	4.38 tpy	0.899 tpy
PM10	1.66 tpy	0.340 tpy
PM2.5	0.379 tpy	0.077 tpy

Process emissions for the McCloskey R230 tracked screen were calculated using screening factors for the screen deck and conveyor/drop-point handling factors for the three product conveyors. Because the three product conveyors represent split product streams from the same screener feed, the combined conveyor throughput was capped at the maximum plant throughput of 400 tph. Engine emissions were added separately using the Caterpillar C6.6 engine PTE values in the application materials.

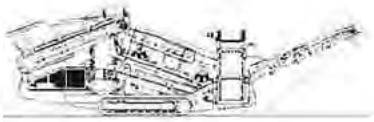


SPECIFICATIONS



McCloskey R230

All specifications are current as of this printing, but are subject to change



DESCRIPTION

Heavy duty mobile screener with following features:

- 20x6 heavy duty high energy 2 bearing screenbox.
- 180Hp 6 cylinder Cat diesel engine.
- Track mobile.
- Direct feed Hardox lined hopper.
- Travel out fixed walkways.
- Integrated hydraulic folding stockpiling conveyors.
- Fast on site setup time – 10 minutes.
- Screen raises at lower end for easy bottom deck access.
- Service standing room inside Powerpack.

DIMENSIONS AND WEIGHTS

Length – working	16.49m (54' – 1")
Width – working	14.00m (45' – 11")
Length – transport	16.76m (54' – 11.7")
Width – transport	3.00m (9' – 10")
Height – transport	3.50m (11' – 5.8")
Weight – track	40,000 Kgs *estimated*

CAPACITIES

Diesel tank capacity	485 L (128 US gal)
Hydraulic tank capacity	800 L (211.3 US gal)
Capacity – hopper (level)	11.50 m^3 calculation required

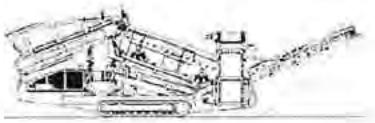
BELT FEED CONVEYOR

Belt width	1500mm (60")
Belt spec	Heavy Duty Plain 500/4 8+2
Drive drum dia.	335mm (13.1")
Tail drum dia.	320mm (12.5")
Gearbox	Bonfig 805 W2 x 2 off
Gearbox ratio	24.2 : 1
Gearbox torque	14,000Nm cont, 25,000Nm max
Motor	Danfoss OMSS125 x 2 off
Flow rate	101.2 Lpm (26.7 US gpm)
Adjustable speed	YES
Maximum speed	16.7 rpm

COLLECTION CONVEYOR

Belt width	1400mm (55")
Belt spec	Plain 400/3 4+2
Drive drum dia.	285mm (11.2")
Tail drum dia.	270mm (10.6")
Motor	Danfoss OMV800
Flow rate	101.2 Lpm (66.6gpm)
Adjustable speed	YES
Maximum speed	126.5 rpm

All specifications are current as of this printing, but are subject to change



TAIL CONVEYOR

Stockpile height	3.83m (12' – 6")
Angle	12 to 24 degrees adjustable
Belt width	1600mm (64")
Belt spec	Heavy Duty Chevron – 500/3 5+1.5
Drive drum dia.	285mm (11.2")
Tail drum dia.	270mm (10.6")
Motor	Danfoss OMV500 dual drive
Flow rate	79.2 Lpm (20.9 US gpm)
Adjustable speed	YES
Maximum speed	79.2 rpm

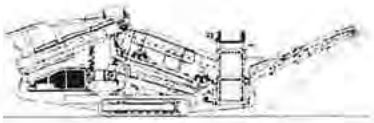
FINE PRODUCT SIDE CONVEYOR

Stockpile height	4.10m (13' – 5.3")
Angle	20 to 25 degrees adjustable
Belt width	1050mm (42")
Belt spec	Plain - 400/3 4+2
Drive drum dia.	285mm (11.2")
Tail drum dia.	270mm (10.6")
Motor	Danfoss OMV630
Flow rate	101.2 Lpm (26.7 US gpm)
Adjustable speed	YES
Maximum speed	160.6 rpm

MID PRODUCT SIDE CONVEYOR

Stockpile height	3.66m (12')
Angle	14 to 25 degrees adjustable
Belt width	900mm (36")
Belt spec	Plain - 400/3 4+2
Drive drum dia.	270mm (10.6")
Tail drum dia.	200mm (8")
Motor	Danfoss OMT400
Flow rate	50.6 Lpm (13.4 US gpm)
Adjustable speed	YES
Maximum speed	126.5 rpm

All specifications are current as of this printing, but are subject to change



SCREENBOX

Dimensions – top deck	6.1m x 1.83m (20' x 6')
Dimensions – bottom deck	5.49m x 1.83m (18' x 6')
Bearing type	NSK 150mm bore – 22330 EVBC4
Screens – top deck	6' x 4' side tension – 5 off
Screens – bottom deck	6' x 6' end tension – 3 off
Tensioning – top deck	Quick release pin and wedge
Tensioning – bottom deck	Curved tension bar and adjuster
Screen angle	13 to 17 degrees adjustable
Screen motor	David Brown Hyd. MCC2216 (110.8cc/rev)
Drive system	Direct drive with HRC180 coupling
Hydraulic flowrate	138.6 Lpm (36.6gpm)
Speed adjustable	YES – Pressure compensated FCV
Screen stroke adjustable	8 – 10mm maximum
Screen shaft speed	950 rpm
Screen 'g' force	4.95 - 5.05 g

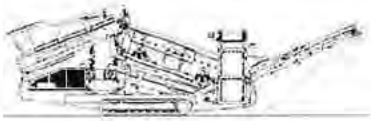
POWERUNIT AND HYDRAULICS

Engine	CAT C6.6 (Teir III)
Engine power	180 HP
Engine speed	2200 rpm
Flywheel Pump 1	David Brown Hyd. 5063,5046,5046
LH PTO Pump 2	David Brown Hyd. 5036,5023
Total system flow	470.8 Lpm (124.4 US Gpm)
Hydraulic tank capacity	800 L (211.3 US Gal)
Hydraulic tank ratio	1.70 : 1
Hydraulic Oil cooler	YES

ELECTRICS

Emergency stops	4 off, 2 powerunit RH&LH, 2 chassis front sides RH&LH.
Chassis cabling	Armored cable
Start Siren	YES – 10 sec delay
Engine shutdowns:	Low oil pressure
	High water temp
	Air filter blockage (selectable)
	Fuel contamination
	Low hydraulic tank level
Engine room light	YES
Radio control tracks	optional – Hetronic system
Pendant track control	YES – plugged in at feeder end

All specifications are current as of this printing, but are subject to change



TRACKS

Width	500mm (19.7")
Length	3800mm (12' – 6") crs.
Height	798mm (31.4")
Gearbox	Bonfiglioli 709
Ratio	142:1
Motor	Rexroth A2FE 90
Speed max	1.14 Kph (0.71 Mph)
Flow rate	101.2 Lpm (26.7 US Gpm)
Attachment to chassis	Bolt On for quick change

OPTIONS

Heavy duty top deck finger screen.
Bottom deck finger screen.
Top deck punch plate screen.
Bottom deck punch plate
Top deck Bofor screen.
Radio remote control for tracks.
Plate Apron Feeder instead of Belt Feeder.

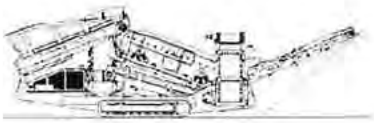
APRON FEED CONVEYOR

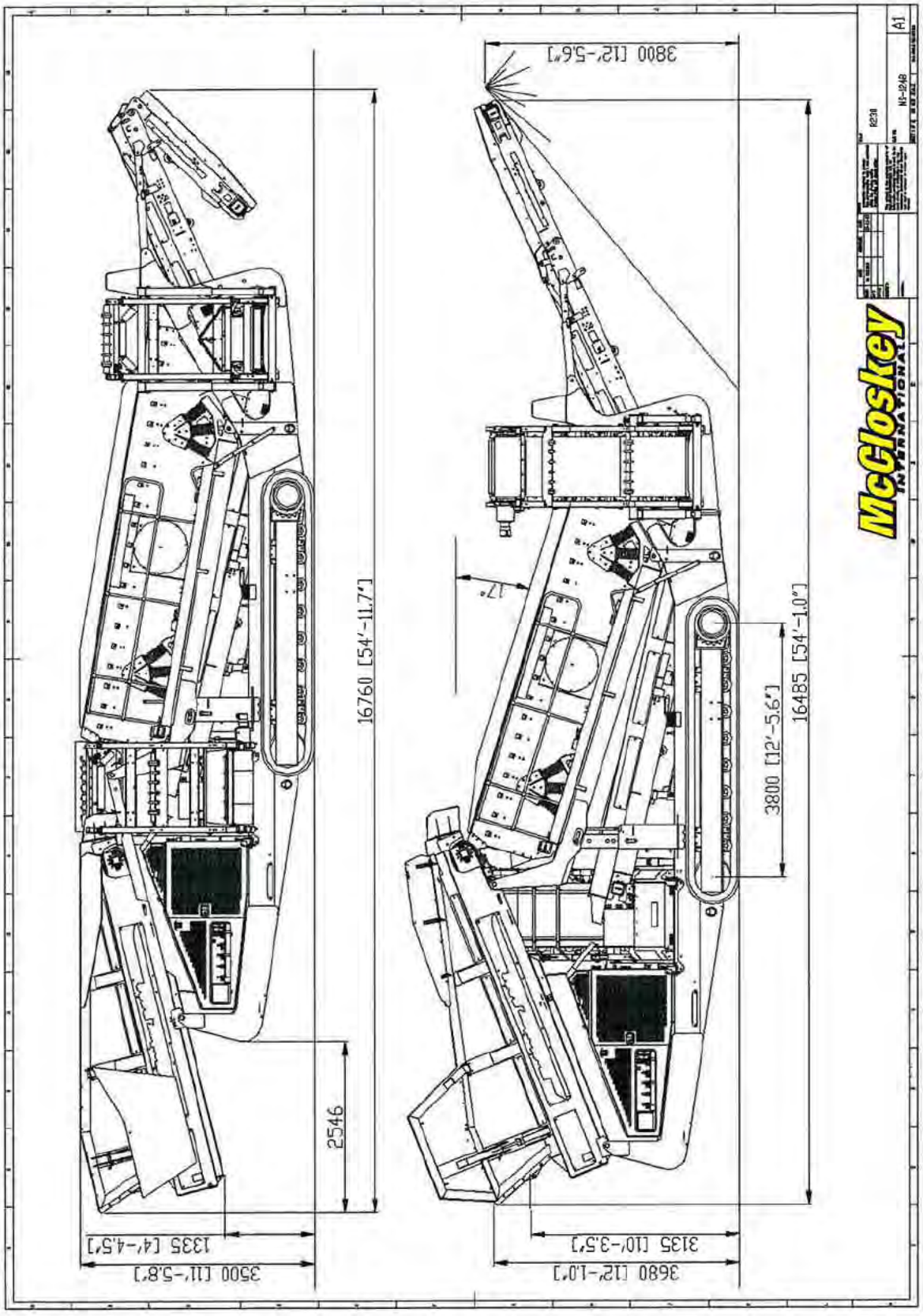
Apron width	1500mm (60")
Apron spec	12mm Hardox upper surface
Gearbox	Brevini 2090FP
Gearbox ratio	16:1
Gearbox torque	10,000Nm cont, 15,000Nm max
Motor	Danfoss OMTS400
Flow rate	101.2 Lpm (26.7 US gpm)
Adjustable speed	YES
Maximum speed	15.8 rpm

SAFETY FEATURES

External belt alignment points.
External grease points.
Engine safety shutdown systems.
Full safety guarding for nip points.
CE compliance.

All specifications are current as of this printing, but are subject to change





All specifications are current as of this printing, but are subject to change

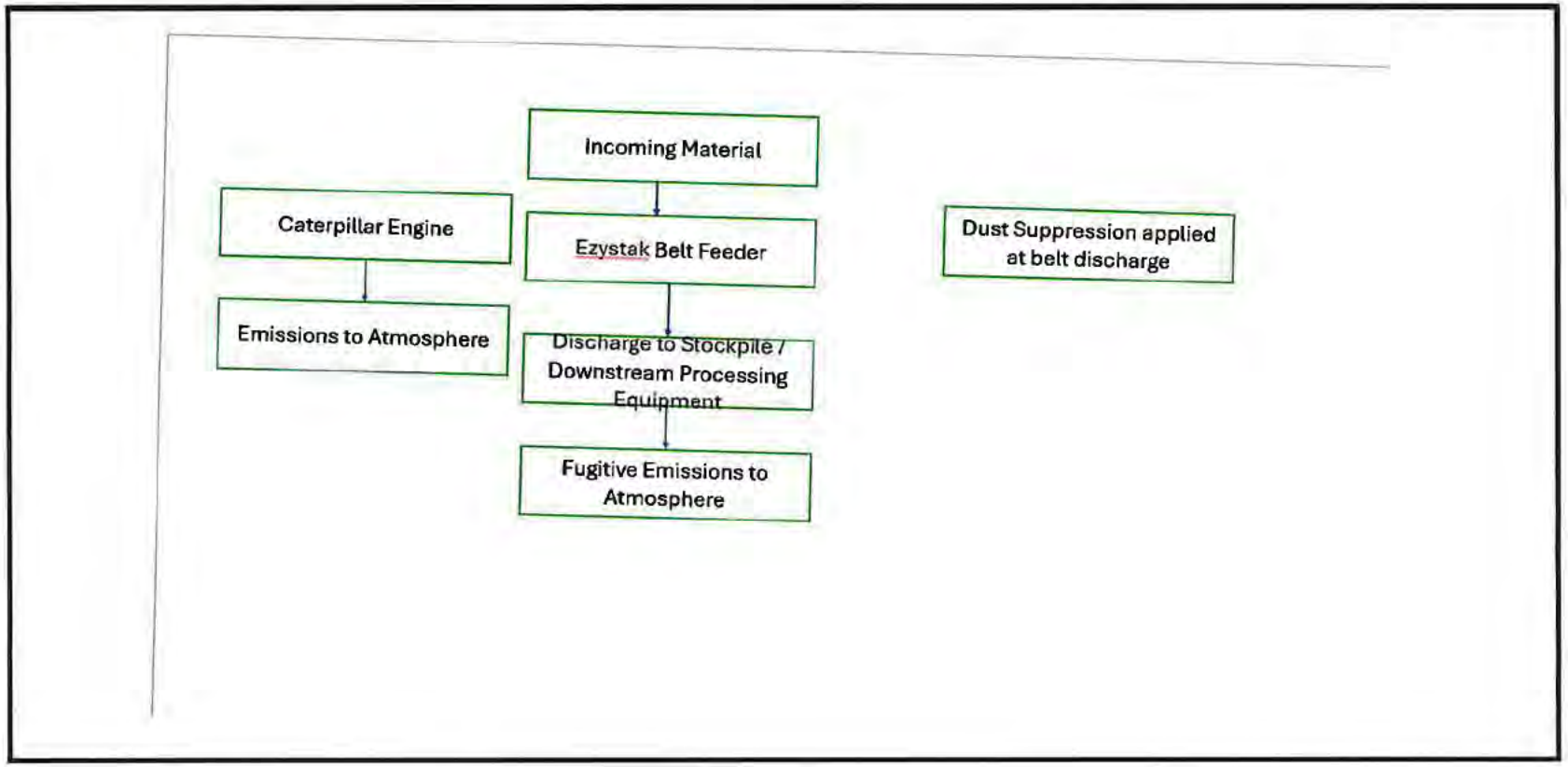
GCS-25

EZYSTAK BF7042 BELT FEEDER WITH Caterpillar C4.4 Engine

DNREC – Air Quality Management Section
Application to Construct, Operate, or Modify Stationary Sources

Process Flow Diagram

Sketch the Process Flow Diagram for the equipment or process being applied for. Include each emission unit and control device (even existing emission units that will not be modified by this application). You may identify each emission unit with a simple shape. Label each emission unit and control device with a unique identifier. Show the relationship between each emission unit and/or control device by drawing arrows between them to indicate the flow of air pollutants. List which application forms are included for each emission unit or control device below the shape representing each emission unit or control device . See http://www.delaware.gov/reg2/default.htm for example Process Flow Diagrams for common processes. If you already have a Process Flow Diagram for the equipment or process being applied for, you may attach it to the application instead of using this form.



Crushed Stone Equipment Application

If you are using this form electronically, press F1 at any time for help

General Information

1. Facility Name: **Middletown Materials**
2. Equipment ID Number: **GCS-25**
3. Where Does the Stone Originate: ☐ On-Site ☒ Off-Site (Specify): **Road Pavement Materials and Clean Reclaimed Concrete**
4. Locations Where Crusher Will Operate:

If the Crusher will operate at more than five locations, attach additional copies of this page as needed. Note that state law requires that a public notice for each location be made.

	Street Address	City	County	Zip Code	Condition of Roads at Location
4.1.	**Middletown Materials 1559 Cedar Lane Road**	**Middletown**	**New Castle**	**19709**	☐ Paved ☐ Unpaved ☒ Both
4.2.					☐ Paved ☐ Unpaved ☐ Both
4.3.					☐ Paved ☐ Unpaved ☐ Both
4.4.					☐ Paved ☐ Unpaved ☐ Both
4.5.					☐ Paved ☐ Unpaved ☐ Both

Attach Proof of Local Zoning for each location.

5. Material Crushed:

If more than five Materials are crushed, attach additional copies of this page as needed.

	Material Name	Material Description
5.1.	**Reclaimed Asphalt Pavement**	**Roadway Pavements**
5.2.	**Reclaimed Concrete**	**Clean Reclaimed Concrete**
5.3.	**Soil/Sand/Aggregate/Similar Material**	**Construction Debris/Site Development**
5.4.		
5.5.		

6. Is a Feeder Used to Sort the Material Before Crushing? ☒ YES ☐ NO

If YES, complete the rest of Question 6. If NO, proceed to Question 7.

6.1. Is a Wet Suppression System Used to Control Emissions From the Feeder? ☒ YES ☐ NO

General Information

6.2. Feeder Power Provided By: ☒ Generator/Engine ☐ Utility ☐ Other (Specify):

If a Generator/Engine is used, include completed Form AQM-3.3 with this application.

Crusher Information

7. Number of Crushers: **Belt Feeder Only**

If there are more than two Crushers, attach additional copies of this page as needed.

For Primary Crusher

8. Primary Crusher Identification:

8.1. Primary Crusher Manufacturer:

8.2. Primary Crusher Model:

8.3. Primary Crusher Serial Number:

8.4. Maximum Amount of Material Processed in Primary Crusher: **400 ton/hr**

8.5. Is a Wet Suppression System Used to Control Emissions from the Crusher? ☐ YES ☐ NO

8.6. Primary Crusher Power Provided By: ☐ Generator/Engine ☐ Utility ☐ Other (Specify):

If a Generator/Engine is Used, Include Completed Form AQM-3.3 With this Application

8.7. Is a Screen Used to Sort Crushed Material? ☐ YES ☐ NO

If YES, complete the rest of Question 8.7. If NO, proceed to Question 9.

8.7.1. Is a Wet Suppression System Used to Control Emissions from the Screen? ☐ YES ☐ NO

8.7.2. Screen Power Provided By: ☐ Generator/Engine ☐ Utility ☐ Other (Specify):

If a Generator/Engine is used, include completed Form AQM-3.3 with this application.

For the Secondary Crusher. If There is No Secondary Crusher, Proceed to Question 10.

9. Secondary Crusher Identification:

9.1. Manufacturer:

9.2. Model:

9.3. Serial Number:

9.4. Maximum Amount of Material Processed: **ton/hr**

9.5. Is a Wet Suppression System Used to Control Emissions from the Crusher? ☐ YES ☐ NO

9.6. Power Provided By: ☐ Generator/Engine ☐ Utility ☐ Other (Specify):

If a Generator/Engine is used, include completed Form AQM-3.3 with this application.

Crusher Information

9.7. Is a Screen Used to Sort Crushed Material? ☐ YES ☐ NO

If YES, complete the rest of Question 9.7. If NO, proceed to Question 10.

9.7.1. Is a Wet Suppression System Used to Control Emissions From the Screen? ☐ YES ☐ NO

9.7.2. Screen Power Provided By: ☐ Generator/Engine
☐ Utility
☐ Other (Specify):

If a Generator/Engine is used, include completed Form AQM-3.3 with this application.

Conveyor Information

10. Are Conveyors Used in the Process? ☒ YES ☐ NO

If YES, proceed to Question 11. If NO, proceed to Question 15.

11. Number of Conveyors in Process: **1**

If more than three Conveyors are used, attach additional copies of this page as needed.

For the First Conveyor

12. Conveyor Identification: **Ezystak BF7042 Belt Feeder**

12.1. Location: ☐ Before (Specify Equipment):
☒ After (Specify Equipment): **Downstream stockpiling conveyor receiving material from crushers, screens, trommels, or other processing equipment; throughput limited by upstream equipment.**
☐ Between (Specify Equipment):

12.2. Maximum Amount of Material Conveyed: **400 ton/hr**

12.3. Is a Wet Suppression System Used to Control Emissions? ☐ YES ☒ NO

12.4. Conveyor Power Provided By: ☒ Generator/Engine
☐ Utility
☐ Other (Specify):

If a Generator/Engine is used, include completed Form AQM-3.3 with this application.

For the Second Conveyor. If There Is No Second Conveyor, Proceed to Question 15.

13. Conveyor Identification:

13.1. Location ☐ Before (Specify Equipment):
☐ After (Specify Equipment):
☐ Between (Specify Equipment):

13.2. Maximum Amount of Material Conveyed: **ton/hr**

13.3. Is a Wet Suppression System Used to Control Emissions? ☐ YES ☐ NO

13.4. Conveyor Power Provided By: ☐ Generator/Engine
☐ Utility
☐ Other (Specify):

If a Generator/Engine is used, include completed Form AQM-3.3 with this application.

For the Third Conveyor. If There Is No Third Conveyor, Proceed to Question 15.

Conveyor Information

14. Conveyor Identification:

14.1. Location: ☐ Before (Specify Equipment):
☐ After (Specify Equipment):
☐ Between (Specify Equipment):

14.2. Maximum Amount of Material Conveyed: **ton/hr**

14.3. Is a Wet Suppression System Used to Control Emissions? ☐ YES ☐ NO

14.4. Conveyor Power Provided By: ☐ Generator/Engine
☐ Utility
☐ Other (Specify):

If a Generator/Engine is used, include completed Form AQM-3.3 with this application.

Fines Crushing Information

15. Do you perform any of the following activities at your facility: ☐ Pulverize Minerals
☐ Produce Sand
☐ Crush Stone Into a Fine Product

If you checked any of the boxes above, include complete Form AQM-3.10 with this application.

Visible Emissions Monitoring Information

16. Proposed Technique Used to Monitor Visible Emissions: ☐ Opacity Monitor (COM)
☐ Manual (Method 9)
☐ Manual (Method 22)
☐ Other (Describe):

If an Opacity Monitor (COM) is used, complete the rest of Question 16. If not, proceed to Question 17.

16.1. Describe the Continuous Opacity Monitoring System:

16.2. Manufacturer:

16.3. Model:

16.4. Serial Number:

17. Proposed Frequency of Opacity Monitoring:

Voluntary Emissions Limitation Request Information

18. Are You Requesting Any Voluntary Emission Limitations to Avoid Major Source Status, Minor New Source Review, MACT, NSPS, etc.? ☐ YES ☒ NO

If YES, complete the rest of Question 18. If NO, proceed to Question 19.

Voluntary Emissions Limitation Request Information

19.1. Describe Any Proposed Emission Limitations:

Voluntary Operating Limitation Request Information

19. Are You Requesting Any Voluntary Operating Limitations to Avoid Major Source Status, Minor New Source Review, MACT, NSPS, etc.? ☒ YES ☐ NO

If YES, complete the rest of Question 19. If NO, proceed to Question 20.

19.1. Describe Any Proposed Operating Limitations: **Limit operation to 1,800 hours per consecutive 12-month period.**

Additional Information

20. Is There Any Additional Information Pertinent to this Application? ☒ YES ☐ NO

If YES, complete the rest of Question 20.

Additional Information

20.1. Describe: **GCS-25 functions solely as downstream material handling equipment. The unit does not independently process material and cannot exceed the throughput of upstream processing equipment. Maximum throughput is limited to the rated capacity of the associated upstream unit. Water spray dust suppression is utilized at material transfer points and crusher discharge. Wet suppression is used to minimize fugitive particulate emissions. The system operates during material processing and represents Best Available Control Technology (BACT) for particulate emissions from conveying equipment.**

DNREC – Division of Air Quality
Application to Construct, Operate, or Modify Stationary Sources

Generator/Engine Application

If you are using this form electronically, press F1 at any time for help

General Information

1.	Facility Name: **Middletown Materials**
2.	Equipment ID: **GCS-25 Ezystak BF7042 Belt Feeder-ENGINE**
3.	Manufacturer: **Caterpillar**
4.	Model: **C4.4**
5.	Serial Number: **2613**
6.	Maximum Power Rating of Engine: **100** horsepower
7.	Standby Power Rating of Generator: kilowatt
8.	Date of Manufacture: **2017**
9.	Installation Date: **As soon as possible**
10.	Is the Equipment Being Applied For a Generator or an Engine? ☐ Generator ☒ Engine
If the equipment is a Generator, complete the rest of Question 10. If not, proceed to Question 11.	
10.1.	Is the Generator Existing or New? ☐ Existing ☐ New
10.2.	Will the Generator Be Classified as an Emergency Generator or a Distributed Generator? ☐ Emergency ☐ Distributed
10.3.	Has an Initial Notification Pursuant to 7 **DE Admin. Code** 1144 Been Submitted for this Generator? ☐ YES ☐ NO
If NO, include a copy of the Initial Notification with this application.	
10.4.	Have the Emissions From the Generator Been Certified to Meet the Currently Applicable US EPA Non-Road Emission Standards? ☐ YES ☐ NO
If YES, attach a copy of the Manufacturer's Certification. If NO, attach copies of any/all of the following: any maintenance or operating requirements/instructions provided by the generator manufacturer; the type, or a description, of any emission control equipment use; and/or emissions test data for the generator (such as a manufacturer's technical data sheet), any supporting documentation for any emission control equipment used, any supporting calculations, any quality control or assurance information, and any other information needed to demonstrate compliance with the requirements. Proceed to Question 11.	
11.	Primary Fuel: ☐ Natural Gas ☒ Diesel ☐ Propane ☐ Biodiesel ☐ Other (specify):
11.1.	Maximum Annual Primary Fuel Consumption: **9,000 gal**
11.2.	Heat Content of Primary Fuel: **128,700 BTU/gal**
11.3.	Maximum Firing Rate: **5 gallons/hr**
11.4.	Percent Sulfur of Primary Fuel: **0.0015** %
12.	Secondary Fuel: ☐ Natural Gas ☐ Diesel ☐ Propane ☐ Biodiesel ☐ Other (specify):

General Information

12.1. Maximum Annual Secondary Fuel Consumption: **MMCF**

12.2. Heat Content of Secondary Fuel: **BTU/CF**

12.3. Maximum Firing Rate: **MMCF/hr**

12.4. Percent Sulfur of Secondary Fuel: %

13. Is SCR/NSCR/SNCR/Ammonia Injection Used: ☐ YES ☐ NO

Stack Information

14. How Does the Process Equipment Vent:
(check all that apply)
☒ Directly to the Atmosphere
☐ Through a Control Device Covered by Forms AQM-4.1 through 4.12

If any of the process equipment vents directly to the atmosphere proceed to Question 15. If the process equipment vents through a control device, provide the stack parameters on the control device form and proceed to Question 16.

15. Emission Point Name: **Diesel Engine Exhaust Stack**

15.1. Stack Height Above Grade: **8 feet**

15.2. Stack Exit Diameter: **0.3 feet**
(Provide Stack Dimensions If Rectangular Stack)

15.3. Is a Stack Cap Present? ☐ YES ☒ NO

15.4. Stack Configuration: ☒ Vertical ☐ Horizontal ☐ Downward-Venting
(check all that apply) ☐ Other (Specify):

15.5. Stack Exit Gas Temperature: **850 °F**

15.6. Stack Exit Gas Flow Rate: **350 ACFM**

15.7. Distance to Nearest Property Line: **200 ft**

15.8. Describe Nearest Obstruction: **Soil Stockpile**

15.9. Height of Nearest Obstruction: **40 ft**

15.10. Distance to Nearest Obstruction: **145 ft**

15.11. Are Stack Sampling Ports Provided? ☐ YES ☒ NO

Monitoring Information

16. Will Emissions Data be Recorded by a Continuous Emission Monitoring System? ☐ YES ☒ NO

If Yes, Attach a Copy of the Continuous Emission Monitoring System Manufacturer's Specification Sheets

If YES, complete the rest of Question 16. If NO, proceed to Question 17.

16.1. Pollutants Monitored: ☐ VOCs ☐ HAPs ☐ PM ☐ PM_{10} ☐ $PM_{2.5}$ ☐ NO_X ☐ SO_X ☐ Metals
☐ Other (Specify):

16.2. Describe the Continuous Emission Monitoring System:

Monitoring Information

16.3. Manufacturer:

16.4. Model:

16.5. Serial Number:

16.6. Will Multiple Emission Units Be Monitored at the Same Point? ☐ YES ☐ NO

If YES, complete the rest of Question 16. If NO, proceed to Question 17.

16.7. Emission Units Monitored:

16.8. Will More Than One Emission Unit be Emitting From the Combined Point At Any Time? ☐ YES ☐ NO

If YES, complete the rest of Question 15. If NO, proceed to Question 17.

16.9. Emission Units Emitting Simultaneously:

Visible Emissions Monitoring Information

For Primary Fuel

17. Proposed Technique Used to Monitor Visible Emissions:
☐ Opacity Monitor (COM)
☒ Manual (Method 9)
☐ Manual (Method 22)
☐ Other (Describe):

If an Opacity Monitor (COM) is used, complete the rest of Question 17. If not, proceed to Question 18.

17.1. Describe the Continuous Opacity Monitoring System:

17.2. Manufacturer:

17.3. Model:

17.4. Serial Number:

18. Proposed Frequency of Opacity Monitoring: **Annual**

For Secondary Fuel. If no Secondary Fuel is used, proceed to Question 20.

19. Proposed Technique Used to Monitor Visible Emissions:
☐ Opacity Monitor (COMs)
☐ Manual (Method 9)
☐ Manual (Method 22)
☐ Other (Describe):

If an Opacity Monitor (COMs) is used, complete the rest of Question 19. If not, proceed to Question 20.

19.1. Describe the Continuous Opacity Monitoring System:

19.2. Manufacturer:

19.3. Model:

19.4. Serial Number:

20. Proposed Frequency of Opacity Monitoring:

Voluntary Emission Limitation Request Information

21.	Are You Requesting Any Voluntary Emission Limitations to Avoid Major Source Status, Minor New Source Review, MACT, NSPS, etc.?	☐ YES ☒ NO
If YES, complete the rest of Question 21. If NO, proceed to Question 22.		
21.1.	Describe Any Proposed Emission Limitations:	

Voluntary Operating Limitation Request Information

22.	Are You Requesting Any Voluntary Operating Limitations to Avoid Major Source Status, Minor New Source Review, MACT, NSPS, etc.?	☒ YES ☐ NO
If YES, complete the rest of Question 22. If NO, proceed to Question 23.		
22.1.	Describe Any Proposed Operating Limitations: **Request restriction on annual hours of operation. Request limit of 1,800 hours per rolling-12month period.**	

Additional Information

23.	Is There Any Additional Information Pertinent to this Application?	☐ YES ☒ NO
If YES, complete the rest of Question 23.		
22.1.	Describe:	

Emissions Information Application

If you are using this form electronically, press F1 at any time for help

Process Information

1. Number of Individual Pieces of Process Equipment in Process: **GCS-25 Ezystak BF7042 Belt Feeder**
2. Number of Individual Control Devices in Process: **1 - Water Suppression**

Emissions Information for First Emission Point/Stack

3. Emission Point Name: **GCS-25 Ezystak Belt Feeder**
4. Equipment ID Number for all Process Equipment and Control Devices Venting Through Emission Point/Stack: **GCS-25 Ezystak Belt Feeder**
5. Pollutant Emissions

If more than 15 pollutants are emitted at this Emission Point/Stack, attach additional copies of this page as needed.

	Pollutant Name (Specify VOCs and HAPs Individually in 5.10 through 5.18)	CAS Number (Not required for 5.1 through 5.10)	Maximum Uncontrolled Emission Rate at Design Capacity	Maximum Controlled Emission Rate at Design Capacity	Annual Potential to Emit (PTE)	Requested Permitted Annual Emissions
5.1.	Particulate Matter (PM)		**13.6 lbs/hour**	**0.168 lbs/hour**	**15.77** tons/year	**0.151** tons/year
5.2.	PM_{10}		**1.32 lbs/hour**	**0.0552 lbs/hour**	**5.78** tons/year	**0.0497** tons/year
5.3.	$PM_{2.5}$		**0.0156 lbs/hour**	**0.0078 lbs/hour**	**0.07** tons/year	**0.0070** tons/year
5.4.	Sulfur Oxides (SO_x)		**lbs/hour**	**lbs/hour**	tons/year	tons/year
5.5.	Nitrogen Oxides (NO_x)		**lbs/hour**	**lbs/hour**	tons/year	tons/year
5.6.	Carbon Monoxide (CO)		**lbs/hour**	**lbs/hour**	tons/year	tons/year
5.7.	Total Volatile Organic Compounds (VOCs)		**lbs/hour**	**lbs/hour**	tons/year	tons/year

Emissions Information for First Emission Point/Stack

5.8.	Total Hazardous Air Pollutants (HAPs)		**lbs/hour**	**lbs/hour**	tons/year	tons/year
5.9.	CO_2		**lbs/hour**	**lbs/hour**	tons/year	tons/year
5.10.	CO_{2e}		**lbs/hour**	**lbs/hour**	tons/year	tons/year
5.11.			**lbs/hour**	**lbs/hour**	tons/year	tons/year
5.12.			**lbs/hour**	**lbs/hour**	tons/year	tons/year
5.13.			**lbs/hour**	**lbs/hour**	tons/year	tons/year
5.14.			**lbs/hour**	**lbs/hour**	tons/year	tons/year
5.15.			**lbs/hour**	**lbs/hour**	tons/year	tons/year

6. Provide Any Additional Information Necessary to Understanding the Emission Rates Provided Above:

Attach the Basis of Determination or Calculations for each Emission Rate provided above.

Emissions Information for Second Emission Point/Stack

7. Emission Point Name: **Caterpillar Engine**

8. Equipment ID Number for all Process Equipment and Control Devices Venting Through Emission Point/Stack: **Engine Stack**

9. Pollutant Emissions

If more than 15 pollutants are emitted at this Emission Point/Stack, attach additional copies of this page as needed.

	Pollutant Name (Specify VOCs and HAPs Individually in 9.10 through 9.18)	CAS Number (Not required for 9.1 through 9.10)	Maximum Uncontrolled Emission Rate at Design Capacity	Maximum Controlled Emission Rate at Design Capacity	Annual Potential to Emit (PTE)	Requested Permitted Annual Emissions
9.1.	Particulate Matter (PM)		**0.00329 lbs/hour**	**0.00329 lbs/hour**	**0.01** tons/year	**0.0030** tons/year

Emissions Information for Second Emission Point/Stack						
9.2.	PM_{10}		**0.00329 lbs/hour**	**0.00329 lbs/hour**	**0.01** tons/year	**0.0030** tons/year
9.3.	$PM_{2.5}$		**0.00329 lbs/hour**	**0.00329 lbs/hour**	**0.01** tons/year	**0.0030** tons/year
9.4.	Sulfur Oxides (SO_X)		**0.00104 lbs/hour**	**0.00104 lbs/hour**	**0.0046** tons/year	**0.00094** tons/year
9.5.	Nitrogen Oxides (NO_X)		**0.06576 lbs/hour**	**0.065756 lbs/hour**	**0.29** tons/year	**0.0592** tons/year
9.6.	Carbon Monoxide (CO)		**0.822 lbs/hour**	**0.822 lbs/hour**	**3.6** tons/year	**0.7398** tons/year
9.7.	Total Volatile Organic Compounds (VOCs)		**0.03124 lbs/hour**	**0.03124 lbs/hour**	**0.14** tons/year	**0.0281** tons/year
9.8.	Total Hazardous Air Pollutants (HAPs)		**0.000375 lbs/hour**	**0.000375 lbs/hour**	**0.00164** tons/year	**0.00034** tons/year
9.9.	CO_2		**112 lbs/hour**	**112 lbs/hour**	**490** tons/year	**100.8** tons/year
9.10.	CO_{2e}		**lbs/hour**	**lbs/hour**	tons/year	tons/year
9.11.			**lbs/hour**	**lbs/hour**	tons/year	tons/year
9.12.			**lbs/hour**	**lbs/hour**	tons/year	tons/year
9.13.			**lbs/hour**	**lbs/hour**	tons/year	tons/year
9.14.			**lbs/hour**	**lbs/hour**	tons/year	tons/year
9.15.			**lbs/hour**	**lbs/hour**	tons/year	tons/year

10. Provide Any Additional Information Necessary to Understanding the Emission Rates Provided Above:

Attach the Basis of Determination or Calculations for each Emission Rate provided above.

Emissions Information for Third Emission Point/Stack

Emissions Information for Third Emission Point/Stack

11. Emission Point Name:

12. Equipment ID Number for all Process Equipment and Control Devices Venting Through Emission Point/Stack:

13. Pollutant Emissions

If more than 15 pollutants are emitted at this Emission Point/Stack, attach additional copies of this page as needed.

	Pollutant Name (Specify VOCs and HAPs Individually in 13.10 through 13.18)	CAS Number (Not required for 13.1 through 13.10)	Maximum Uncontrolled Emission Rate at Design Capacity	Maximum Controlled Emission Rate at Design Capacity	Annual Potential to Emit (PTE)	Requested Permitted Annual Emissions
13.1.	Particulate Matter (PM)		**lbs/hour**	**lbs/hour**	tons/year	tons/year
13.2.	PM_{10}		**lbs/hour**	**lbs/hour**	tons/year	tons/year
13.3.	$PM_{2.5}$		**lbs/hour**	**lbs/hour**	tons/year	tons/year
13.4.	Sulfur Oxides (SO_X)		**lbs/hour**	**lbs/hour**	tons/year	tons/year
13.5.	Nitrogen Oxides (NO_X)		**lbs/hour**	**lbs/hour**	tons/year	tons/year
13.6.	Carbon Monoxide (CO)		**lbs/hour**	**lbs/hour**	tons/year	tons/year
13.7.	Total Volatile Organic Compounds (VOCs)		**lbs/hour**	**lbs/hour**	tons/year	tons/year
13.8.	Total Hazardous Air Pollutants (HAPs)		**lbs/hour**	**lbs/hour**	tons/year	tons/year
13.9.	CO_2		**lbs/hour**	**lbs/hour**	tons/year	tons/year
13.10.	CO_{2e}		**lbs/hour**	**lbs/hour**	tons/year	tons/year
13.11.			**lbs/hour**	**lbs/hour**	tons/year	tons/year
13.12.			**lbs/hour**	**lbs/hour**	tons/year	tons/year
13.13.			**lbs/hour**	**lbs/hour**	tons/year	tons/year
13.14.			**lbs/hour**	**lbs/hour**	tons/year	tons/year
13.15.			**lbs/hour**	**lbs/hour**	tons/year	tons/year

Emissions Information for Third Emission Point/Stack

14. Provide Any Additional Information Necessary to Understanding the Emission Rates Provided Above:

Attach the Basis of Determination or Calculations for each Emission Rate provided above.

Emissions Information for Fourth Emission Point/Stack

15. Emission Point Name:

16. Equipment ID Number for all Process Equipment and Control Devices Venting Through Emission Point/Stack:

17. Pollutant Emissions

If more than 15 pollutants are emitted at this Emission Point/Stack, attach additional copies of this page as needed.

	Pollutant Name (Specify VOCs and HAPs Individually in 17.10 through 17.18)	CAS Number (Not required for 17.1 through 17.10)	Maximum Uncontrolled Emission Rate at Design Capacity	Maximum Controlled Emission Rate at Design Capacity	Annual Potential to Emit (PTE)	Requested Permitted Annual Emissions
17.1.	Particulate Matter (PM)		**lbs/hour**	**lbs/hour**	tons/year	tons/year
17.2.	PM_{10}		**lbs/hour**	**lbs/hour**	tons/year	tons/year
17.3.	$PM_{2.5}$		**lbs/hour**	**lbs/hour**	tons/year	tons/year
17.4.	Sulfur Oxides (SO_X)		**lbs/hour**	**lbs/hour**	tons/year	tons/year
17.5.	Nitrogen Oxides (NO_X)		**lbs/hour**	**lbs/hour**	tons/year	tons/year
17.6.	Carbon Monoxide (CO)		**lbs/hour**	**lbs/hour**	tons/year	tons/year
17.7.	Volatile Organic Compounds (VOCs)		**lbs/hour**	**lbs/hour**	tons/year	tons/year
17.8.	Total Hazardous Air Pollutants (HAPs)		**lbs/hour**	**lbs/hour**	tons/year	tons/year
17.9.	CO_2		**lbs/hour**	**lbs/hour**	tons/year	tons/year

Emissions Information for Fourth Emission Point/Stack

17.10. CO_{2e}		**lbs/hour**	**lbs/hour**	tons/year	tons/year
17.11.		**lbs/hour**	**lbs/hour**	tons/year	tons/year
17.12.		**lbs/hour**	**lbs/hour**	tons/year	tons/year
17.13.		**lbs/hour**	**lbs/hour**	tons/year	tons/year
17.14.		**lbs/hour**	**lbs/hour**	tons/year	tons/year
17.15.		**lbs/hour**	**lbs/hour**	tons/year	tons/year

18. Provide Any Additional Information Necessary to Understanding the Emission Rates Provided Above:

Attach the Basis of Determination or Calculations for each Emission Rate provided above.

If there are more than four Emission Points/Stacks, attach additional copies of this form as needed.

Overall Process Emissions

19. Pollutant Emissions

If more than 15 pollutants are emitted from this Process, attach additional copies of this page as needed.

Pollutant Name (Specify VOCs and HAPs Individually in 19.10 through 19.18)	CAS Number (Not required for 19.1 through 19.10)	Maximum Uncontrolled Emission Rate at Design Capacity	Maximum Controlled Emission Rate at Design Capacity	Annual Potential to Emit (PTE)	Requested Permitted Annual Emissions
19.1. Particulate Matter (PM)		**3.6 lbs/hour**	**0.17 lbs/hour**	**15.78** tons/year	**0.154** tons/year
19.2. PM_{10}		**1.32 lbs/hour**	**0.05849 lbs/hour**	**5.79** tons/year	**0.0526** tons/year
19.3. $PM_{2.5}$		**0.01889 lbs/hour**	**0.01109 lbs/hour**	**0.08** tons/year	**0.0100** tons/year
19.4. Sulfur Oxides (SO_x)		**0.00104 lbs/hour**	**0.00104 lbs/hour**	**0.005** tons/year	**0.00094** tons/year
19.5. Nitrogen Oxides (NO_x)		**0.06576 lbs/hour**	**0.06576 lbs/hour**	**0.29** tons/year	**0.0592**

Overall Process Emissions

						tons/year
19.6.	Carbon Monoxide (CO)		**0.8220 lbs/hour**	**0.822 lbs/hour**	**3.6** tons/year	**0.7398** tons/year
19.7.	Total Volatile Organic Compounds (VOCs)		**0.03124 lbs/hour**	**0.03124 lbs/hour**	**0.14** tons/year	**0.0281** tons/year
19.8.	Total Hazardous Air Pollutants (HAPs)		**0.000375 lbs/hour**	**0.000375 lbs/hour**	**0.00164** tons/year	**0.00034** tons/year
19.9.	CO_2		**112 lbs/hour**	**112 lbs/hour**	**490.6** tons/year	**100.8** tons/year
19.10.	CO_{2e}		**lbs/hour**	**lbs/hour**	tons/year	tons/year
19.12.			**lbs/hour**	**lbs/hour**	tons/year	tons/year
19.13.			**lbs/hour**	**lbs/hour**	tons/year	tons/year
19.14.			**lbs/hour**	**lbs/hour**	tons/year	tons/year
19.15.			**lbs/hour**	**lbs/hour**	tons/year	tons/year

20. Provide Any Additional Information Necessary to Understanding the Emission Rates Provided Above:

Attach the Basis of Determination or Calculations for each Emission Rate provided above.

Minor New Source Review Information

21. Does the Process Have the Potential to Emit More Than Five Tons Per Year of Any Pollutant? ☒ YES ☐ NO

22. Is the Source New or Existing? ☒ NEW ☐ EXISTING
See Question 11 of AQM-1

If the Process has the Potential to Emit more than five tons per year of any pollutant, and is a New Source, a Control Technology Analysis pursuant to Regulation No. 1125 Section 4 must be conducted and attached to this application.

Major New Source Review Information

23. Does the Process Have the Potential to Emit More Than the Significance Level for Any Pollutant? *(Check All That Apply)*

- ☐ Greater Than 25 Tons Per Year of Particulate Matter (PM)
- ☐ Greater Than 15 Tons Per Year of PM_{10}
- ☐ Greater Than 10 Tons Per Year of $PM_{2.5}$
- ☐ Greater Than 40 Tons Per Year of Sulfur Dioxide(SO_2)
- ☐ Greater Than 25 Tons Per Year of Nitrogen Oxides (NO_X) in New Castle and Kent County
- ☐ Greater Than 100 Tons Per Year of Nitrogen Oxides (NO_X) in Sussex County
- ☐ Greater Than 100 Tons Per Year of Carbon Monoxide (CO)
- ☐ Greater Than 25 Tons Per Year of Total Volatile Organic Compounds (VOCs) in New Castle and Kent County
- ☐ Greater Than 50 Tons Per Year of Total Volatile Organic Compounds (VOCs) in Sussex County
- ☐ Greater Than 75,000 Tons Per Year of Equivalent Carbon Dioxide (CO_{2e})

If the Process has the Potential to Emit greater than any of the amounts listed above 7 DE Admin. Code 1125 Sections 2 and/or 3 apply. Contact the Department at (302) 323-4542 or (302) 739-9402 for additional information

Additional Information

24. Is There Any Additional Information Pertinent to this Application? ☒ YES ☐ NO

If YES, complete the rest of Question 24.

24.1. Describe: **Restricting the hours of operation have reduced emissions to below major source thresholds.**

EZYSTAK BF7042 BELT FEEDER WITH CATERPILLAR C4.4 ENGINE-GCS-25

The Ezystak Model BF7042 Belt Feeder is equipped with a Caterpillar C4.4 (100 hp) diesel engine manufactured in 2017. Based on the engine model year and horsepower rating, the engine is classified as an EPA Tier 4 nonroad compression ignition engine.

EZYSTAK BF7042 BELT FEEDER-GCS-25				
Make	**Serial No.**	**Process Rate**	**Material Transfer Points**	**Dust Suppression**
Ezystak	2613	400 TPH	1 conveyer. Hopper Dump point, feeder belt loading and discharge transfer to crusher/screener	Yes
ENGINE INFORMATION				
Make	**Model**	**Serial No.**	**Engine Arrangement No.**	**Engine Tier**
Caterpillar	C4.4/100 HP	unknown	unknown	Tier 4

These factors come from EPA AP-42 Section 11.19.2 – Crushed Stone Processing and Pulverized Mineral Processing, specifically:

- **Table 11.19.2-2** (Uncontrolled screening)
- **Table 11.19.2-3** (Uncontrolled conveyor transfer points)

PM2.5 emission factors were derived using particle size multipliers consistent with AP-42 methodology. This approach is consistent with the methodology used in previously approved DNREC air permit applications for similar screening equipment.

Conveyor Transfer / Drop Points Emission Factors

Source: AP-42 Section 11.19.2, Table 11.19.2-3 (Uncontrolled)

Pollutant	Emission Factor (lb/ton)	AP-42 Reference	Notes
Total PM	0.0030	Table 11.19.2-3	Conveyor transfer
PM10	0.0011	Table 11.19.2-3	Conveyor transfer
PM2.5	0.000013	Derived from AP-42	Particle size multipliers

Wet Suppression:

Emission Source	Total PM	PM10	PM2.5
Conveyor/handling, controlled	0.000140	0.000046	0.0000065

EZYSTAK BF7042 BELT FEEDER WITH CATERPILLAR C4.4 ENGINE-GCS-25

Potential to Emit Calculations

Pollutant	Uncontrolled lb/hr	Controlled lb/hr	Uncontrolled PTE @ 8,760 hr (tpy)	Controlled PTE @ 8,760 hr (tpy)	Uncontrolled @ 1,800 hr (tpy)	Controlled @ 1,800 hr (tpy)
PM	3.6000	0.1680	15.77	0.736	3.24	0.151
PM10	1.3200	0.0552	5.78	0.242	1.19	0.0497
PM2.5	0.0156	0.0078	0.07	0.034	0.014	0.0070

Total Process PTE

The Ezystak 2613 was conservatively modeled as having three material transfer points consisting of the hopper dump point, feeder belt loading point, and discharge transfer to downstream crushing/screening equipment. Each transfer point was assumed to operate at the maximum process rate of 400 tph for 8,760 hours per year for purposes of estimating potential particulate emissions.

Caterpillar C4.4 Engine — PTE Emissions Table

Assumptions:

Assumptions:

- Engine = **Cat C4.4**
- Power = **100 hp**
- Tier = **Tier 4 Final assumed**
- Hours = **8,760 hr/yr**
- Fuel Rate: 5 gal/hr

Pollutant	EPA Std. (g/kWh)	Converted EF (g/bhp-hr)	g/hr @ 100 hp	lb/hr	PTE (tpy)
PM	0.02	0.0149	1.49	0.00329	0.01
PM10*	0.02	0.0149	1.49	0.00329	0.01
PM2.5*	0.02	0.0149	1.49	0.00329	0.01
NOx	0.40	0.2983	29.83	0.06576	0.29
VOC (NMHC)	0.19	0.1417	14.17	0.03124	0.14
CO	5.0	3.7285	372.85	0.8220	3.60

EZYSTAK BF7042 BELT FEEDER WITH CATERPILLAR C4.4 ENGINE-GCS-25

Pollutant	Uncontrolled lb/hr	Controlled lb/hr	PTE @ 8,760 hr (tpy)	TPY @ 1,800 hr
PM	0.00329	0.00329	0.01	0.0030
PM10	0.00329	0.00329	0.01	0.0030
PM2.5	0.00329	0.00329	0.01	0.0030
NOx	0.06576	0.06576	0.29	0.0592
CO	0.8220	0.8220	3.60	0.7398
VOC (NMHC)	0.03124	0.03124	0.14	0.0281
SO2	0.00104	0.00104	0.0046	0.00094
Total HAPs	0.000375	0.000375	0.00164	0.00034
CO2	112.0	112.0	490.6	100.8

SOx PTE

Parameter	Value
Fuel rate	5.0 gal/hr
Emission factor	0.00020829 lb/gal
SO_2 (lb/hr)	0.00104
SO_2 (tpy @ 8,760 hr)	**0.0046 tpy**

Total PTE — Ezystak Stacker and Engine Potential particulate emissions for the Ezystak 2613 were calculated by treating the hopper dump point, feeder belt loading point, and discharge transfer to downstream crushing/screening equipment as three separate uncontrolled material transfer points. Transfer-point emissions were estimated using AP-42 Section 11.19.2, Table 11.19.2-3 at a maximum process rate of 400 tph and 8,760 hours per year. Engine exhaust emissions were estimated for a 100 hp Caterpillar C4.4 diesel engine assuming Tier 4 emission factors. SO_2 emissions were calculated using a sulfur-based factor of 0.00020829 lb SO_2/gal and an assumed fuel consumption rate of 5.0 gal/hr.

Total Controlled PTE (Process + Engine)

Pollutant	Uncontrolled lb/hr	Controlled lb/hr	TPY @ 8,760 hr	Controlled TPY @ 1,800 hr
PM	3.60329	0.17129	15.78	0.154
PM10	1.32329	0.05849	5.79	0.0526
PM2.5	0.01889	0.01109	0.08	0.0100
NOx	0.06576	0.06576	0.29	0.0592
CO	0.8220	0.8220	3.60	0.7398

EZYSTAK BF7042 BELT FEEDER WITH CATERPILLAR C4.4 ENGINE-GCS-25

Pollutant	Uncontrolled lb/hr	Controlled lb/hr	TPY @ 8,760 hr	Controlled TPY @ 1,800 hr
VOC (NMHC)	0.03124	0.03124	0.14	0.0281
SO2	0.00104	0.00104	0.005	0.00094
Total HAPs	0.000375	0.000375	0.00164	0.00034
CO2	112.0	112.0	490.6	100.8

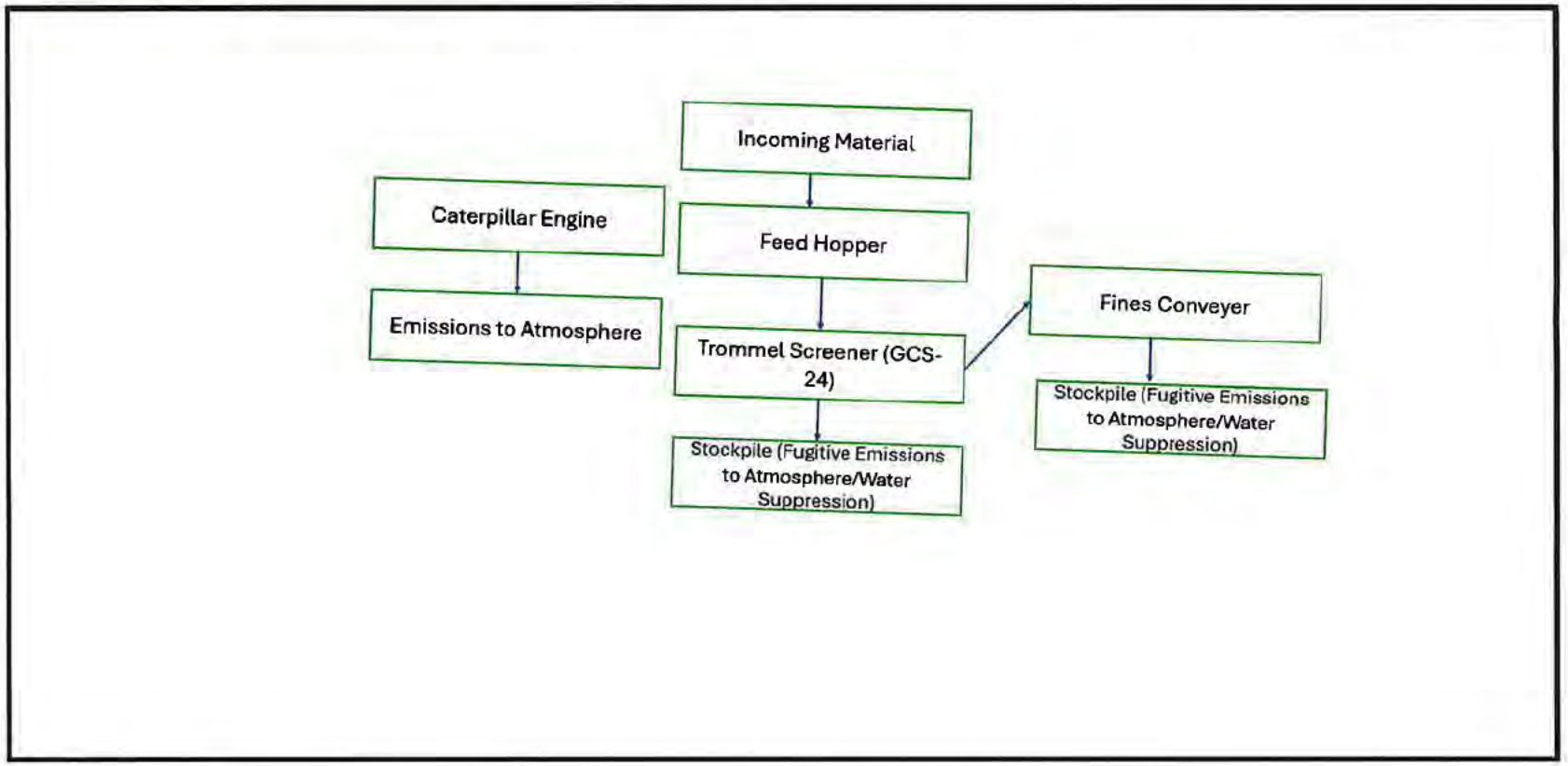
GCS-24

MCCLOSKEY 621 RE TROMMEL SCREENER WITH Caterpillar C6.6 Engine

DNREC – Air Quality Management Section
Application to Construct, Operate, or Modify Stationary Sources

Process Flow Diagram

Sketch the Process Flow Diagram for the equipment or process being applied for. Include each emission unit and control device (even existing emission units that will not be modified by this application). You may identify each emission unit with a simple shape. Label each emission unit and control device with a unique identifier. Show the relationship between each emission unit and/or control device by drawing arrows between them to indicate the flow of air pollutants. List which application forms are included for each emission unit or control device below the shape representing each emission unit or control device . See http://www.delaware.gov/reg2/default.htm for example Process Flow Diagrams for common processes. If you already have a Process Flow Diagram for the equipment or process being applied for, you may attach it to the application instead of using this form.



Crushed Stone Equipment Application

If you are using this form electronically, press F1 at any time for help

General Information

1. Facility Name: **Middletown Materials**

2. Equipment ID Number: **GCS-24**

3. Where Does the Stone Originate: ☐ On-Site ☒ Off-Site (Specify):

4. Locations Where Crusher Will Operate:

If the Crusher will operate at more than five locations, attach additional copies of this page as needed. Note that state law requires that a public notice for each location be made.

	Street Address	City	County	Zip Code	Condition of Roads at Location
4.1.	**Middletown Materials 1559 Cedar Lane Road**	**Middletown**	**New Castle**	**19709**	☐ Paved ☐ Unpaved ☒ Both
4.2.					☐ Paved ☐ Unpaved ☐ Both
4.3.					☐ Paved ☐ Unpaved ☐ Both
4.4.					☐ Paved ☐ Unpaved ☐ Both
4.5.					☐ Paved ☐ Unpaved ☐ Both

Attach Proof of Local Zoning for each location.

5. Material Crushed:

If more than five Materials are crushed, attach additional copies of this page as needed.

	Material Name	Material Description
5.1.	**Reclaimed Asphalt Pavement**	**Roadway Pavements**
5.2.	**Reclaimed Concrete**	**Clean reclaimed concrete for crushing into recycled aggregate**
5.3.	**Dirt/Topsoil/Recycled Material/Aggregate**	**Construction Debris/Site Development**
5.4.		
5.5.		

6. Is a Feeder Used to Sort the Material Before Crushing? ☒ YES ☐ NO

If YES, complete the rest of Question 6. If NO, proceed to Question 7.

6.1. Is a Wet Suppression System Used to Control Emissions From the Feeder? ☒ YES ☐ NO

General Information

6.2. Feeder Power Provided By: ☒ Generator/Engine ☐ Utility ☐ Other (Specify):

If a Generator/Engine is used, include completed Form AQM-3.3 with this application.

Crusher Information

7. Number of Crushers: **SCREENER ONLY**

If there are more than two Crushers, attach additional copies of this page as needed.

For Primary Crusher

8. Primary Crusher Identification:

8.1. Primary Crusher Manufacturer:

8.2. Primary Crusher Model:

8.3. Primary Crusher Serial Number:

8.4. Maximum Amount of Material Processed in Primary Crusher: **300 ton/hr**

8.5. Is a Wet Suppression System Used to Control Emissions from the Crusher? ☐ YES ☐ NO

8.6. Primary Crusher Power Provided By: ☐ Generator/Engine ☐ Utility ☐ Other (Specify):

If a Generator/Engine is Used, Include Completed Form AQM-3.3 With this Application

8.7. Is a Screen Used to Sort Crushed Material? ☒ YES ☐ NO

If YES, complete the rest of Question 8.7. If NO, proceed to Question 9.

8.7.1. Is a Wet Suppression System Used to Control Emissions from the Screen? ☒ YES ☐ NO

8.7.2. Screen Power Provided By: ☒ Generator/Engine ☐ Utility ☐ Other (Specify):

If a Generator/Engine is used, include completed Form AQM-3.3 with this application.

For the Secondary Crusher. If There is No Secondary Crusher, Proceed to Question 10.

9. Secondary Crusher Identification:

9.1. Manufacturer:

9.2. Model:

9.3. Serial Number:

9.4. Maximum Amount of Material Processed: **ton/hr**

9.5. Is a Wet Suppression System Used to Control Emissions from the Crusher? ☐ YES ☐ NO

9.6. Power Provided By: ☐ Generator/Engine ☐ Utility ☐ Other (Specify):

If a Generator/Engine is used, include completed Form AQM-3.3 with this application.

Crusher Information

9.7. Is a Screen Used to Sort Crushed Material? ☐ YES ☐ NO

If YES, complete the rest of Question 9.7. If NO, proceed to Question 10.

9.7.1. Is a Wet Suppression System Used to Control Emissions From the Screen? ☐ YES ☐ NO

9.7.2. Screen Power Provided By: ☐ Generator/Engine
☐ Utility
☐ Other (Specify):

If a Generator/Engine is used, include completed Form AQM-3.3 with this application.

Conveyor Information

10. Are Conveyors Used in the Process? ☒ YES ☐ NO

If YES, proceed to Question 11. If NO, proceed to Question 15.

11. Number of Conveyors in Process: **2**

If more than three Conveyors are used, attach additional copies of this page as needed.

For the First Conveyor

12. Conveyor Identification: **1 main conveyor**

12.1. Location: ☐ Before (Specify Equipment):
☒ After (Specify Equipment): **after the trommel drum**
☐ Between (Specify Equipment):

12.2. Maximum Amount of Material Conveyed: **300 ton/hr**

12.3. Is a Wet Suppression System Used to Control Emissions? ☐ YES ☒ NO

12.4. Conveyor Power Provided By: ☒ Generator/Engine
☐ Utility
☐ Other (Specify):

If a Generator/Engine is used, include completed Form AQM-3.3 with this application.

For the Second Conveyor. If There Is No Second Conveyor, Proceed to Question 15.

13. Conveyor Identification: **Side Fines Conveyer**

13.1. Location ☐ Before (Specify Equipment):
☒ After (Specify Equipment): **after the trommel drum**
☐ Between (Specify Equipment):

13.2. Maximum Amount of Material Conveyed: **300 ton/hr**

13.3. Is a Wet Suppression System Used to Control Emissions? ☐ YES ☒ NO

13.4. Conveyor Power Provided By: ☒ Generator/Engine
☐ Utility
☐ Other (Specify):

If a Generator/Engine is used, include completed Form AQM-3.3 with this application.

For the Third Conveyor. If There Is No Third Conveyor, Proceed to Question 15.

14. Conveyor Identification:

Conveyor Information

14.1. Location: ☐ Before (Specify Equipment):
☐ After (Specify Equipment):
☐ Between (Specify Equipment):

14.2. Maximum Amount of Material Conveyed: **ton/hr**

14.3. Is a Wet Suppression System Used to Control Emissions? ☐ YES ☐ NO

14.4. Conveyor Power Provided By: ☐ Generator/Engine
☐ Utility
☐ Other (Specify):

If a Generator/Engine is used, include completed Form AQM-3.3 with this application.

Fines Crushing Information

15. Do you perform any of the following activities at your facility: ☐ Pulverize Minerals
☐ Produce Sand
☐ Crush Stone Into a Fine Product

If you checked any of the boxes above, include complete Form AQM-3.10 with this application.

Visible Emissions Monitoring Information

16. Proposed Technique Used to Monitor Visible Emissions: ☐ Opacity Monitor (COM)
☒ Manual (Method 9)
☐ Manual (Method 22)
☐ Other (Describe):

If an Opacity Monitor (COM) is used, complete the rest of Question 16. If not, proceed to Question 17.

16.1. Describe the Continuous Opacity Monitoring System:

16.2. Manufacturer:

16.3. Model:

16.4. Serial Number:

17. Proposed Frequency of Opacity Monitoring:

Voluntary Emissions Limitation Request Information

18. Are You Requesting Any Voluntary Emission Limitations to Avoid Major Source Status, Minor New Source Review, MACT, NSPS, etc.? ☐ YES ☒ NO

If YES, complete the rest of Question 18. If NO, proceed to Question 19.

19.1. Describe Any Proposed Emission Limitations:

Voluntary Operating Limitation Request Information

19.	Are You Requesting Any Voluntary Operating Limitations to Avoid Major Source Status, Minor New Source Review, MACT, NSPS, etc.?	☒ YES ☐ NO
If YES, complete the rest of Question 19. If NO, proceed to Question 20.		
19.1.	Describe Any Proposed Operating Limitations: **Limit operation to 1,800 hours per consecutive 12-month period. Water suppression used to control emissions.**	

Additional Information

20.	Is There Any Additional Information Pertinent to this Application?	☐ YES ☒ NO
If YES, complete the rest of Question 20.		
20.1.	Describe:	

Generator/Engine Application

If you are using this form electronically, press F1 at any time for help

General Information

1.	Facility Name: **Middletown Materials**
2.	Equipment ID: **Engine for CGS-24 McCloskey 621 RE Trommel Screener**
3.	Manufacturer: **Caterpillar**
4.	Model: **C6.6**
5.	Serial Number: **6661427**
6.	Maximum Power Rating of Engine: **174** horsepower
7.	Standby Power Rating of Generator: **130** kilowatt
8.	Date of Manufacture: **2010**
9.	Installation Date: **TBD**
10.	Is the Equipment Being Applied For a Generator or an Engine? ☐ Generator ☒ Engine
If the equipment is a Generator, complete the rest of Question 10. If not, proceed to Question 11.	
10.1.	Is the Generator Existing or New? ☐ Existing ☐ New
10.2.	Will the Generator Be Classified as an Emergency Generator or a Distributed Generator? ☐ Emergency ☐ Distributed
10.3.	Has an Initial Notification Pursuant to 7 **DE Admin. Code** 1144 Been Submitted for this Generator? ☐ YES ☐ NO
If NO, include a copy of the Initial Notification with this application.	
10.4.	Have the Emissions From the Generator Been Certified to Meet the Currently Applicable US EPA Non-Road Emission Standards? ☐ YES ☐ NO
If YES, attach a copy of the Manufacturer's Certification. If NO, attach copies of any/all of the following: any maintenance or operating requirements/instructions provided by the generator manufacturer; the type, or a description, of any emission control equipment use; and/or emissions test data for the generator (such as a manufacturer's technical data sheet), any supporting documentation for any emission control equipment used, any supporting calculations, any quality control or assurance information, and any other information needed to demonstrate compliance with the requirements. Proceed to Question 11.	
11.	Primary Fuel: ☐ Natural Gas ☒ Diesel ☐ Propane ☐ Biodiesel ☐ Other (specify):
11.1.	Maximum Annual Primary Fuel Consumption: **12,962 gal**
11.2.	Heat Content of Primary Fuel: **128,700 BTU/gal**
11.3.	Maximum Firing Rate: **7.201 gallons/hr**
11.4.	Percent Sulfur of Primary Fuel: **0.0015** %
12.	Secondary Fuel: ☐ Natural Gas ☐ Diesel ☐ Propane ☐ Biodiesel ☐ Other (specify):

General Information

12.1.	Maximum Annual Secondary Fuel Consumption: **MMCF**
12.2.	Heat Content of Secondary Fuel: **BTU/CF**
12.3.	Maximum Firing Rate: **MMCF/hr**
12.4.	Percent Sulfur of Secondary Fuel: %
13.	Is SCR/NSCR/SNCR/Ammonia Injection Used: ☐ YES ☐ NO

Stack Information

14. How Does the Process Equipment Vent:
(check all that apply)
☒ Directly to the Atmosphere
☐ Through a Control Device Covered by Forms AQM-4.1 through 4.12

If any of the process equipment vents directly to the atmosphere proceed to Question 15. If the process equipment vents through a control device, provide the stack parameters on the control device form and proceed to Question 16.

15. Emission Point Name: **Engine Stack**

15.1. Stack Height Above Grade: **10 feet**

15.2. Stack Exit Diameter: **0.5 feet**
(Provide Stack Dimensions If Rectangular Stack)

15.3. Is a Stack Cap Present? ☒ YES ☐ NO

15.4. Stack Configuration: ☒ Vertical ☐ Horizontal ☐ Downward-Venting
(check all that apply) ☐ Other (Specify):

15.5. Stack Exit Gas Temperature: **700 °F**

15.6. Stack Exit Gas Flow Rate: **1681 ACFM**

15.7. Distance to Nearest Property Line: **200 ft**

15.8. Describe Nearest Obstruction: **Soil Stockpile**

15.9. Height of Nearest Obstruction: **40 ft**

15.10. Distance to Nearest Obstruction: **145 ft**

15.11. Are Stack Sampling Ports Provided? ☐ YES ☒ NO

Monitoring Information

16. Will Emissions Data be Recorded by a Continuous Emission Monitoring System? ☐ YES ☒ NO

If Yes, Attach a Copy of the Continuous Emission Monitoring System Manufacturer's Specification Sheets

If YES, complete the rest of Question 16. If NO, proceed to Question 17.

16.1. Pollutants Monitored: ☐ VOCs ☐ HAPs ☐ PM ☐ PM_{10} ☐ $PM_{2.5}$ ☐ NO_x ☐ SO_x ☐ Metals
☐ Other (Specify):

16.2. Describe the Continuous Emission Monitoring System:

Monitoring Information
16.3. Manufacturer:
16.4. Model:
16.5. Serial Number:
16.6. Will Multiple Emission Units Be Monitored at the Same Point? ☐ YES ☐ NO
If YES, complete the rest of Question 16. If NO, proceed to Question 17.
16.7. Emission Units Monitored:
16.8. Will More Than One Emission Unit be Emitting From the Combined Point At Any Time? ☐ YES ☐ NO
If YES, complete the rest of Question 15. If NO, proceed to Question 17.
16.9. Emission Units Emitting Simultaneously:

Visible Emissions Monitoring Information
For Primary Fuel
17. Proposed Technique Used to Monitor Visible Emissions: ☐ Opacity Monitor (COM) ☒ Manual (Method 9) ☐ Manual (Method 22) ☐ Other (Describe):
If an Opacity Monitor (COM) is used, complete the rest of Question 17. If not, proceed to Question 18.
17.1. Describe the Continuous Opacity Monitoring System:
17.2. Manufacturer:
17.3. Model:
17.4. Serial Number:
18. Proposed Frequency of Opacity Monitoring:
For Secondary Fuel. If no Secondary Fuel is used, proceed to Question 20.
19. Proposed Technique Used to Monitor Visible Emissions: ☐ Opacity Monitor (COMs) ☐ Manual (Method 9) ☐ Manual (Method 22) ☐ Other (Describe):
If an Opacity Monitor (COMs) is used, complete the rest of Question 19. If not, proceed to Question 20.
19.1. Describe the Continuous Opacity Monitoring System:
19.2. Manufacturer:
19.3. Model:
19.4. Serial Number:
20. Proposed Frequency of Opacity Monitoring:

Voluntary Emission Limitation Request Information

21.	Are You Requesting Any Voluntary Emission Limitations to Avoid Major Source Status, Minor New Source Review, MACT, NSPS, etc.?	☐ YES ☒ NO

If YES, complete the rest of Question 21. If NO, proceed to Question 22.

21.1. Describe Any Proposed Emission Limitations:

Voluntary Operating Limitation Request Information

22.	Are You Requesting Any Voluntary Operating Limitations to Avoid Major Source Status, Minor New Source Review, MACT, NSPS, etc.?	☒ YES ☐ NO

If YES, complete the rest of Question 22. If NO, proceed to Question 23.

22.1. Describe Any Proposed Operating Limitations: **Restrict hours of operation to 1,800 per rolling 12 month period.**

Additional Information

23. Is There Any Additional Information Pertinent to this Application? ☐ YES ☒ NO

If YES, complete the rest of Question 23.

22.1. Describe:

Emissions Information Application

If you are using this form electronically, press F1 at any time for help

Process Information	
1.	Number of Individual Pieces of Process Equipment in Process: **McCloskey 621 RE Trommel Screener with Caterpillar C6.6 Engine (GCS-24)**
2.	Number of Individual Control Devices in Process: **1 - Water Suppression**

Emissions Information for First Emission Point/Stack

3. Emission Point Name: **GCS-24 McCloskey 621 RE Trommel Screener**

4. Equipment ID Number for all Process Equipment and Control Devices Venting Through Emission Point/Stack: **GCS-24 McCloskey 621 RE Trommel Screener**

5. Pollutant Emissions

If more than 15 pollutants are emitted at this Emission Point/Stack, attach additional copies of this page as needed.

	Pollutant Name (Specify VOCs and HAPs Individually in 5.10 through 5.18)	CAS Number (Not required for 5.1 through 5.10)	Maximum Uncontrolled Emission Rate at Design Capacity	Maximum Controlled Emission Rate at Design Capacity	Annual Potential to Emit (PTE)	Requested Permitted Annual Emissions
5.1.	Particulate Matter (PM)		**8.4 lbs/hour**	**0.7020 lbs/hour**	**36.79** tons/year	**0.631** tons/year
5.2.	PM_{10}		**2.94 lbs/hour**	**0.2358 lbs/hour**	**12.88** tons/year	**0.212** tons/year
5.3.	$PM_{2.5}$		**0.1803 lbs/hour**	**0.01695 lbs/hour**	**0.79** tons/year	**0.0152** tons/year
5.4.	Sulfur Oxides (SO_x)		**lbs/hour**	**lbs/hour**	tons/year	tons/year
5.5.	Nitrogen Oxides (NO_x)		**lbs/hour**	**lbs/hour**	tons/year	tons/year
5.6.	Carbon Monoxide (CO)		**lbs/hour**	**lbs/hour**	tons/year	tons/year
5.7.	Total Volatile Organic Compounds (VOCs)		**lbs/hour**	**lbs/hour**	tons/year	tons/year

Emissions Information for First Emission Point/Stack						
5.8.	Total Hazardous Air Pollutants (HAPs)		**lbs/hour**	**lbs/hour**	tons/year	tons/year
5.9.	CO_2		**lbs/hour**	**lbs/hour**	tons/year	tons/year
5.10.	CO_{2e}		**lbs/hour**	**lbs/hour**	tons/year	tons/year
5.11.			**lbs/hour**	**lbs/hour**	tons/year	tons/year
5.12.			**lbs/hour**	**lbs/hour**	tons/year	tons/year
5.13.			**lbs/hour**	**lbs/hour**	tons/year	tons/year
5.14.			**lbs/hour**	**lbs/hour**	tons/year	tons/year
5.15.			**lbs/hour**	**lbs/hour**	tons/year	tons/year
6.	Provide Any Additional Information Necessary to Understanding the Emission Rates Provided Above:					
Attach the Basis of Determination or Calculations for each Emission Rate provided above.						

Emissions Information for Second Emission Point/Stack						
7.	Emission Point Name: **Caterpillar Engine C6.6 Engine**					
8.	Equipment ID Number for all Process Equipment and Control Devices Venting Through Emission Point/Stack: **Engine Stack**					
9.	Pollutant Emissions					
If more than 15 pollutants are emitted at this Emission Point/Stack, attach additional copies of this page as needed.						
	Pollutant Name (Specify VOCs and HAPs Individually in 9.10 through 9.18)	CAS Number (Not required for 9.1 through 9.10)	Maximum Uncontrolled Emission Rate at Design Capacity	Maximum Controlled Emission Rate at Design Capacity	Annual Potential to Emit (PTE)	Requested Permitted Annual Emissions
9.1.	Particulate Matter (PM)		**0.04872 lbs/hour**	**0.04872 lbs/hour**	**0.21** tons/year	**0.0438** tons/year

Emissions Information for Second Emission Point/Stack

9.2.	PM_{10}		**0.04872 lbs/hour**	**0.04872 lbs/hour**	**0.21** tons/year	**0.0438** tons/year
9.3.	$PM_{2.5}$		**0.04872 lbs/hour**	**0.04872 lbs/hour**	**0.21** tons/year	**0.0438** tons/year
9.4.	Sulfur Oxides (SO_X)		**0.0015 lbs/hour**	**0.0015 lbs/hour**	**0.007** tons/year	**0.00135** tons/year
9.5.	Nitrogen Oxides (NO_X)		**0.80097 lbs/hour**	**0.80097 lbs/hour**	**3.51** tons/year	**0.7209** tons/year
9.6.	Carbon Monoxide (CO)		**0.42926 lbs/hour**	**0.42926 lbs/hour**	**1.88** tons/year	**0.3863** tons/year
9.7.	Total Volatile Organic Compounds (VOCs)		**0.21175 lbs/hour**	**0.21175 lbs/hour**	**0.93** tons/year	**0.1906** tons/year
9.8.	Total Hazardous Air Pollutants (HAPs)		**0.00254 lbs/hour**	**0.00254 lbs/hour**	**0.0111** tons/year	**0.00229** tons/year
9.9.	CO_2		**161.3 lbs/hour**	**161.3 lbs/hour**	**706.5** tons/year	**145.2** tons/year
9.10.	CO_{2e}		**lbs/hour**	**lbs/hour**	tons/year	tons/year
9.11.			**lbs/hour**	**lbs/hour**	tons/year	tons/year
9.12.			**lbs/hour**	**lbs/hour**	tons/year	tons/year
9.13.			**lbs/hour**	**lbs/hour**	tons/year	tons/year
9.14.			**lbs/hour**	**lbs/hour**	tons/year	tons/year
9.15.			**lbs/hour**	**lbs/hour**	tons/year	tons/year

10. Provide Any Additional Information Necessary to Understanding the Emission Rates Provided Above:

Attach the Basis of Determination or Calculations for each Emission Rate provided above.

Emissions Information for Third Emission Point/Stack

Emissions Information for Third Emission Point/Stack

11. Emission Point Name:

12. Equipment ID Number for all Process Equipment and Control Devices Venting Through Emission Point/Stack:

13. Pollutant Emissions

If more than 15 pollutants are emitted at this Emission Point/Stack, attach additional copies of this page as needed.

	Pollutant Name (Specify VOCs and HAPs Individually in 13.10 through 13.18)	CAS Number (Not required for 13.1 through 13.10)	Maximum Uncontrolled Emission Rate at Design Capacity	Maximum Controlled Emission Rate at Design Capacity	Annual Potential to Emit (PTE)	Requested Permitted Annual Emissions
13.1.	Particulate Matter (PM)		**lbs/hour**	**lbs/hour**	tons/year	tons/year
13.2.	PM_{10}		**lbs/hour**	**lbs/hour**	tons/year	tons/year
13.3.	$PM_{2.5}$		**lbs/hour**	**lbs/hour**	tons/year	tons/year
13.4.	Sulfur Oxides (SO_X)		**lbs/hour**	**lbs/hour**	tons/year	tons/year
13.5.	Nitrogen Oxides (NO_X)		**lbs/hour**	**lbs/hour**	tons/year	tons/year
13.6.	Carbon Monoxide (CO)		**lbs/hour**	**lbs/hour**	tons/year	tons/year
13.7.	Total Volatile Organic Compounds (VOCs)		**lbs/hour**	**lbs/hour**	tons/year	tons/year
13.8.	Total Hazardous Air Pollutants (HAPs)		**lbs/hour**	**lbs/hour**	tons/year	tons/year
13.9.	CO_2		**lbs/hour**	**lbs/hour**	tons/year	tons/year
13.10.	CO_{2e}		**lbs/hour**	**lbs/hour**	tons/year	tons/year
13.11.			**lbs/hour**	**lbs/hour**	tons/year	tons/year
13.12.			**lbs/hour**	**lbs/hour**	tons/year	tons/year
13.13.			**lbs/hour**	**lbs/hour**	tons/year	tons/year
13.14.			**lbs/hour**	**lbs/hour**	tons/year	tons/year
13.15.			**lbs/hour**	**lbs/hour**	tons/year	tons/year

Emissions Information for Third Emission Point/Stack

14. Provide Any Additional Information Necessary to Understanding the Emission Rates Provided Above:

Attach the Basis of Determination or Calculations for each Emission Rate provided above.

Emissions Information for Fourth Emission Point/Stack

15. Emission Point Name:

16. Equipment ID Number for all Process Equipment and Control Devices Venting Through Emission Point/Stack:

17. Pollutant Emissions

If more than 15 pollutants are emitted at this Emission Point/Stack, attach additional copies of this page as needed.

	Pollutant Name (Specify VOCs and HAPs Individually in 17.10 through 17.18)	CAS Number (Not required for 17.1 through 17.10)	Maximum Uncontrolled Emission Rate at Design Capacity	Maximum Controlled Emission Rate at Design Capacity	Annual Potential to Emit (PTE)	Requested Permitted Annual Emissions
17.1.	Particulate Matter (PM)		**lbs/hour**	**lbs/hour**	tons/year	tons/year
17.2.	PM_{10}		**lbs/hour**	**lbs/hour**	tons/year	tons/year
17.3.	$PM_{2.5}$		**lbs/hour**	**lbs/hour**	tons/year	tons/year
17.4.	Sulfur Oxides (SO_x)		**lbs/hour**	**lbs/hour**	tons/year	tons/year
17.5.	Nitrogen Oxides (NO_x)		**lbs/hour**	**lbs/hour**	tons/year	tons/year
17.6.	Carbon Monoxide (CO)		**lbs/hour**	**lbs/hour**	tons/year	tons/year
17.7.	Volatile Organic Compounds (VOCs)		**lbs/hour**	**lbs/hour**	tons/year	tons/year
17.8.	Total Hazardous Air Pollutants (HAPs)		**lbs/hour**	**lbs/hour**	tons/year	tons/year
17.9.	CO_2		**lbs/hour**	**lbs/hour**	tons/year	tons/year

Emissions Information for Fourth Emission Point/Stack

17.10. CO_{2e}		**lbs/hour**	**lbs/hour**	tons/year	tons/year
17.11.		**lbs/hour**	**lbs/hour**	tons/year	tons/year
17.12.		**lbs/hour**	**lbs/hour**	tons/year	tons/year
17.13.		**lbs/hour**	**lbs/hour**	tons/year	tons/year
17.14.		**lbs/hour**	**lbs/hour**	tons/year	tons/year
17.15.		**lbs/hour**	**lbs/hour**	tons/year	tons/year

18. Provide Any Additional Information Necessary to Understanding the Emission Rates Provided Above:

Attach the Basis of Determination or Calculations for each Emission Rate provided above.

If there are more than four Emission Points/Stacks, attach additional copies of this form as needed.

Overall Process Emissions

19. Pollutant Emissions

If more than 15 pollutants are emitted from this Process, attach additional copies of this page as needed.

Pollutant Name (Specify VOCs and HAPs Individually in 19.10 through 19.18)	CAS Number (Not required for 19.1 through 19.10)	Maximum Uncontrolled Emission Rate at Design Capacity	Maximum Controlled Emission Rate at Design Capacity	Annual Potential to Emit (PTE)	Requested Permitted Annual Emissions
19.1. Particulate Matter (PM)		**8.4487 lbs/hour**	**0.7507 lbs/hour**	**37.00** tons/year	**0.676** tons/year
19.2. PM_{10}		**2.9887 lbs/hour**	**0.2845 lbs/hour**	**13.09** tons/year	**0.256** tons/year
19.3. $PM_{2.5}$		**0.2290 lbs/hour**	**0.0657 lbs/hour**	**1.00** tons/year	**0.059** tons/year
19.4. Sulfur Oxides (SO_X)		**0.0015 lbs/hour**	**0.0015 lbs/hour**	**0.007** tons/year	**0.00135** tons/year
19.5. Nitrogen Oxides (NO_X)		**0.8010 lbs/hour**	**0.8010 lbs/hour**	**3.51** tons/year	**0.721** tons/year

Overall Process Emissions

19.6.	Carbon Monoxide (CO)		**0.4293 lbs/hour**	**0.4293 lbs/hour**	**1.88** tons/year	**0.386** tons/year
19.7.	Total Volatile Organic Compounds (VOCs)		**0.2118 lbs/hour**	**0.2118 lbs/hour**	**0.93** tons/year	**0.191** tons/year
19.8.	Total Hazardous Air Pollutants (HAPs)		**0.00254 lbs/hour**	**0.00254 lbs/hour**	**0.011** tons/year	**0.0023** tons/year
19.9.	CO_2		**161.3 lbs/hour**	**161.3 lbs/hour**	**706.3** tons/year	**145.2** tons/year
19.10.	CO_{2e}		**lbs/hour**	**lbs/hour**	tons/year	tons/year
19.12.			**lbs/hour**	**lbs/hour**	tons/year	tons/year
19.13.			**lbs/hour**	**lbs/hour**	tons/year	tons/year
19.14.			**lbs/hour**	**lbs/hour**	tons/year	tons/year
19.15.			**lbs/hour**	**lbs/hour**	tons/year	tons/year

20. Provide Any Additional Information Necessary to Understanding the Emission Rates Provided Above:

Attach the Basis of Determination or Calculations for each Emission Rate provided above.

Minor New Source Review Information

21. Does the Process Have the Potential to Emit More Than Five Tons Per Year of Any Pollutant? ☒ YES ☐ NO

22. Is the Source New or Existing? ☒ NEW ☐ EXISTING
See Question 11 of AQM-1

If the Process has the Potential to Emit more than five tons per year of any pollutant, and is a New Source, a Control Technology Analysis pursuant to Regulation No. 1125 Section 4 must be conducted and attached to this application.

Major New Source Review Information

23. Does the Process Have the Potential to Emit More Than the Significance Level for Any Pollutant? *(Check All That Apply)*

- ☒ Greater Than 25 Tons Per Year of Particulate Matter (PM)
- ☐ Greater Than 15 Tons Per Year of PM_{10}
- ☐ Greater Than 10 Tons Per Year of $PM_{2.5}$
- ☐ Greater Than 40 Tons Per Year of Sulfur Dioxide(SO_2)
- ☐ Greater Than 25 Tons Per Year of Nitrogen Oxides (NO_X) in New Castle and Kent County
- ☐ Greater Than 100 Tons Per Year of Nitrogen Oxides (NO_X) in Sussex County
- ☐ Greater Than 100 Tons Per Year of Carbon Monoxide (CO)
- ☐ Greater Than 25 Tons Per Year of Total Volatile Organic Compounds (VOCs) in New Castle and Kent County
- ☐ Greater Than 50 Tons Per Year of Total Volatile Organic Compounds (VOCs) in Sussex County
- ☐ Greater Than 75,000 Tons Per Year of Equivalent Carbon Dioxide (CO_{2e})

If the Process has the Potential to Emit greater than any of the amounts listed above 7 DE Admin. Code 1125 Sections 2 and/or 3 apply. Contact the Department at (302) 323-4542 or (302) 739-9402 for additional information

Additional Information

24. Is There Any Additional Information Pertinent to this Application? ☒ YES ☐ NO

If YES, complete the rest of Question 24.

24.1. Describe: **Restricting the hours of operation have reduced emissions to below major source thresholds. Restrict hours of operation to 1800 per rolling 12 month period.**

McCloskey 621 RE Trommel Screener with Caterpillar C6.6 Engine (GCS-24)

The McCloskey 621 RE Trommel Screener (Serial No. 70770) is equipped with a Caterpillar C6.6 (174 hp) diesel engine manufactured in 2010. Based on the engine model year and horsepower rating, the engine is classified as an EPA Tier 3 nonroad compression ignition engine.

MCCLOSKEY 621 RE TROMMEL SCREENER – GCS-24				
Make	**Serial No.**	**Process Rate**	**Conveyers**	**Dust Suppression**
McCloskey	70770	300 tph	2	Yes
ENGINE INFORMATION				
Make	**Model**	**Serial No.**	**Engine Arrangement No.**	**Engine Tier**
Caterpillar	C6.6/174 hp (130kw)	66614277	278-4283	Tier 3

- **Table 11.19.2-2** (Uncontrolled screening)
- **Table 11.19.2-3** (Uncontrolled conveyor transfer points)

PM2.5 emission factors were derived using particle size multipliers consistent with AP-42 methodology. This approach is consistent with the methodology used in previously approved DNREC air permit applications for similar screening equipment.

Screening Operation Emission Factors

Source: AP-42 Section 11.19.2, Table 11.19.2-2 (Uncontrolled)

Pollutant	Emission Factor (lb/ton)	AP-42 Reference	Notes
Total PM	0.025	Table 11.19.2-2	Uncontrolled screening
PM10	0.0087	Table 11.19.2-2	Uncontrolled screening
PM2.5	0.000588	Derived from AP-42	Particle size multipliers

Conveyor Transfer / Drop Points Emission Factors

Source: AP-42 Section 11.19.2, Table 11.19.2-3 (Uncontrolled)

Pollutant	Emission Factor (lb/ton)	AP-42 Reference	Notes
Total PM	0.0030	Table 11.19.2-3	Conveyor transfer
PM10	0.0011	Table 11.19.2-3	Conveyor transfer
PM2.5	0.000013	Derived from AP-42	Particle size multipliers

McCloskey 621 RE Trommel Screener with Caterpillar C6.6 Engine (GCS-24)

Final Factors Used for PTE Calculation

Emission Source	Total PM	PM10	PM2.5	AP-42 Section
Screening	0.025	0.0087	0.000588	11.19.2 Table 2
Conveyor Drop Points	0.0030	0.0011	0.000013	11.19.2 Table 3

Potential to Emit Calculations

Pollutant	Uncontrolled lb/hr	Controlled lb/hr	Uncontrolled PTE @ 8,760 hr (tpy)	Controlled PTE @ 8,760 hr (tpy)	Controlled PTE @ 1,800 hr (tpy)
PM	8.4000	0.7020	36.79	3.07	0.631
PM10	2.9400	0.2358	12.88	1.03	0.212
PM2.5	0.1803	0.01695	0.79	0.074	0.0152

Uncontrolled process emissions were calculated using uncontrolled screening factors for the trommel screen and uncontrolled conveyor/drop-point handling factors for the two product conveyors, with the combined conveyor throughput capped at the maximum plant throughput of 300 tph.

Controlled:

- controlled screening factors: **0.00220 / 0.000740 / 0.000050 lb/ton**
- controlled conveyor factors: **0.000140 / 0.000046 / 0.0000065 lb/ton**
- conveyor throughput capped at **300 tph combined**

Pollutant	Screening tpy	Conveyor tpy	Total Controlled Process tpy
PM	2.89	0.184	**3.07**
PM10	0.97	0.060	**1.03**
PM2.5	0.066	0.0085	**0.074**

Caterpillar C6.6 Engine — PTE Emissions Table

Assumptions:

Engine: Caterpillar C6.6
Rating: 174 hp
Tier: Tier 3
Fuel use: 7.201 gal/hr
Heat input: 0.927 MMBtu/hr
Operating hours: 8,760 hr/yr

McCloskey 621 RE Trommel Screener with Caterpillar C6.6 Engine (GCS-24)

Pollutant Source

PM, PM10, PM2.5 EPA nonroad diesel engine certification / WebFIRE Tier 3

NOx EPA NONROAD Tier 3 emission factors

CO EPA NONROAD Tier 3 emission factors

VOC EPA NONROAD Tier 3 emission factors

SO_2 EPA WebFIRE sulfur content calculation

Pollutant	Uncontrolled lb/hr	Controlled lb/hr	PTE @ 8,760 hr (tpy)	Controlled PTE @ 1,800 hr (tpy)
PM	0.04872	0.04872	0.21	0.0438
PM10	0.04872	0.04872	0.21	0.0438
PM2.5	0.04872	0.04872	0.21	0.0438
NOx	0.80097	0.80097	3.51	0.7209
CO	0.42926	0.42926	1.88	0.3863
VOC	0.21175	0.21175	0.93	0.1906
SO2	0.00150	0.00150	0.007	0.00135
Total HAPs	**0.00254**	**0.00254**	**0.0111**	**0.00229**
CO2	**161.30**	**161.30**	**706.5**	**145.2**

Total combined PTE — Process and Engine

Pollutant	Uncontrolled lb/hr	Controlled lb/hr	PTE @ 8760 hr (tpy)	Controlled PTE @ 1800 hr (tpy)
PM	8.4487	0.7507	37.00	0.676
PM10	2.9887	0.2845	13.09	0.256
PM2.5	0.2290	0.0657	1.00	0.059
NOx	0.8010	0.8010	3.51	0.721
CO	0.4293	0.4293	1.88	0.386
VOC	0.2118	0.2118	0.93	0.191
SO_2	0.00150	0.00150	**0.007**	0.00135
Total HAPs	0.00254	0.00254	0.011	0.0023
CO_2	161.3	161.3	706.5	145.2

McCloskey®
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WHEELED & TRACKED TROMMELS

Trommels are where it began 35 years ago for McCloskey. Today the industry's most experienced trommel engineers continue to push the boundaries with a wide range of drum designs and screen sizes, on both tracks and wheels.

Engineered for exceptional performance, these cutting-edge machines are designed to revolutionize your industrial operations. Whether you're in the construction, mining, or recycling industry, our trommels are the ultimate solution for maximizing productivity and mobility.

TROMMEL

Heavy-duty trommel drum with direct drive and adjustable speed, set at a 5-degree angle. Except the 733RE, set at 3-degrees with chain drive.

FEEDER

Feed hopper with adjustable speed conveyor.



CONVEYORS

Integrated hydraulic folding stockpiling conveyors

MOBILITY

Available in either wheeled with air braking system or bolt-on tracked configurations to meet your site requirements.

SAFETY

E-stops located in multiple locations around the trommels.



TROMMELS

McCloskey® INTERNATIONAL

RADIAL CONTROL
Patented remote controlled radial conveyor. Available on most models.

SETUP
Quick 10-minute setup time.



WHEELED VERSION

ENGINE
Diesel engine with hydraulic oil cooler and engine shutdowns in cases of required maintenance.



TRACKED VERSION

FEATURES

- Heavy duty trommel positioned at 5-degrees (3-degrees on the 733RE).
- Drum features direct drive and adjustable speed (chain drive on the 733RE).
- Brushes keep the screen clean and rotate away from drum for ease of drum change.
- Integrated hydraulic folding stockpiling conveyors.
- Remote control radial conveyor on most models.
- Feed hopper with adjustable speed conveyor.
- Fast 10-minute on-site setup time.
- Available in wheeled or tracked configurations.
- Diesel engine with shutdowns in cases of low oil pressure, high water temperature, air filter blockages (selectable), fuel contamination, or low hydraulic tank level.

SAFETY FEATURES

- Multiple e-stop locations.
- External belt alignment points.
- External grease points.
- Full safety guarding for nip points .

McCloskey®
INTERNATIONAL

512A

Drum	1.52 m x 3.66 m (5' x 12')
Screening area	11.8 m^2 (127 ft^2)
Hopper capacity	3.4m^3 (4.5 yd^3)
Fines conveyor stockpile height	2.99m (9' 10")
Engine	55 kW (74 hp) T4F/Stage V diesel engine
Weight (approx.)	9,750kg (21,500lbs)

512R

Drum	1.52 m x 3.66 m (5' x 12')
Screening area	11.8 m^2 (127 ft^2)
Hopper capacity	3.4m^3 (4.5 yd^3)
Fines conveyor stockpile height	4.99m (14' 9")
Engine	55 kW (74 hp) T4F/Stage V diesel engine
Weight (approx.)	12,250kg (27,000 lb)

516RE

Drum	1.52 m x 4.88 m (5' x 16')
Screening area	17.7 m^2 (190 ft^2)
Hopper capacity	3.4 m^3 (4.5 yd^3)
Fines conveyor stockpile height	3.08m (10' 1")
Radial conveyor stockpile height	4.61m (15' 1.5")
Engine	55 kW (74 hp) T4F/Stage V diesel engine
Weight (approx.)	16,330 kg (36,000 lb)

628RE

Drum	1.83 m x 8.53 m (6' x 28')
Screening area	34.5 m^2 (370 ft^2)
Hopper capacity	5.0 m^3 (6.5 yd^3)
Fines conveyor stockpile height	3.49m (11' 5.5")
Radial conveyor stockpile height	4.99m (16' 4.5")
Engine	130 kW (174 hp) CAT T4F/Stage V diesel engine
Weight (approx.)	27,100 kg (59,750 lb)

733RE

Drum	2.13 m x 10.06 m (7' x 33')
Screening area	47 m^2 (510 ft^2)
Hopper capacity	6.9 m^3 (9 yd^3)
Fines conveyor stockpile height	3.50m (11' 6")
Radial conveyor stockpile height	5.09m (16' 8")
Engine	130 kW (174 hp) CAT4.4 T4F/Stage V
Weight (approx.)	36,630 kg (80,750 lb)

512RT

Drum	1.52 m x 3.66 m (5' x 12')
Screening area	11.8 m^2 (127 ft^2)
Hopper capacity	5.25 m^3 (7 yd^3)
Fines conveyor stockpile height	2.63m (8' 7.5")
Radial conveyor stockpile height	3.92m (12' 10.5")
Engine	55 kW (74 hp) T4F/Stage V diesel engine
Weight (approx.)	18,150 kg (40,000 lb)

516AT

Drum	1.52 m x 4.88 m (5' x 16')
Screening area	17.7 m^2 (190 ft^2)
Hopper capacity	5.25 m^3 (7 yd^3)
Fines conveyor stockpile height	2.70m (8' 10")
Side conveyor stockpile height	2.53m (8' 3.5")
Engine	55 kW (74 hp) diesel engine
Weight (approx.)	21,230 kg (46,800 lb)

516RET

Drum	1.52 m x 4.88 m (5' x 16')
Screening area	17.7 m^2 (190 ft^2)
Hopper capacity	3.4 m^3 (4.5 yd^3)
Fines conveyor stockpile height	3.08m (10' 1")
Radial conveyor stockpile height	4.61m (15' 1.5")
Engine	55 kW (74 hp) T4F/Stage V diesel engine
Weight (approx.)	16,330 kg (36,000 lb)

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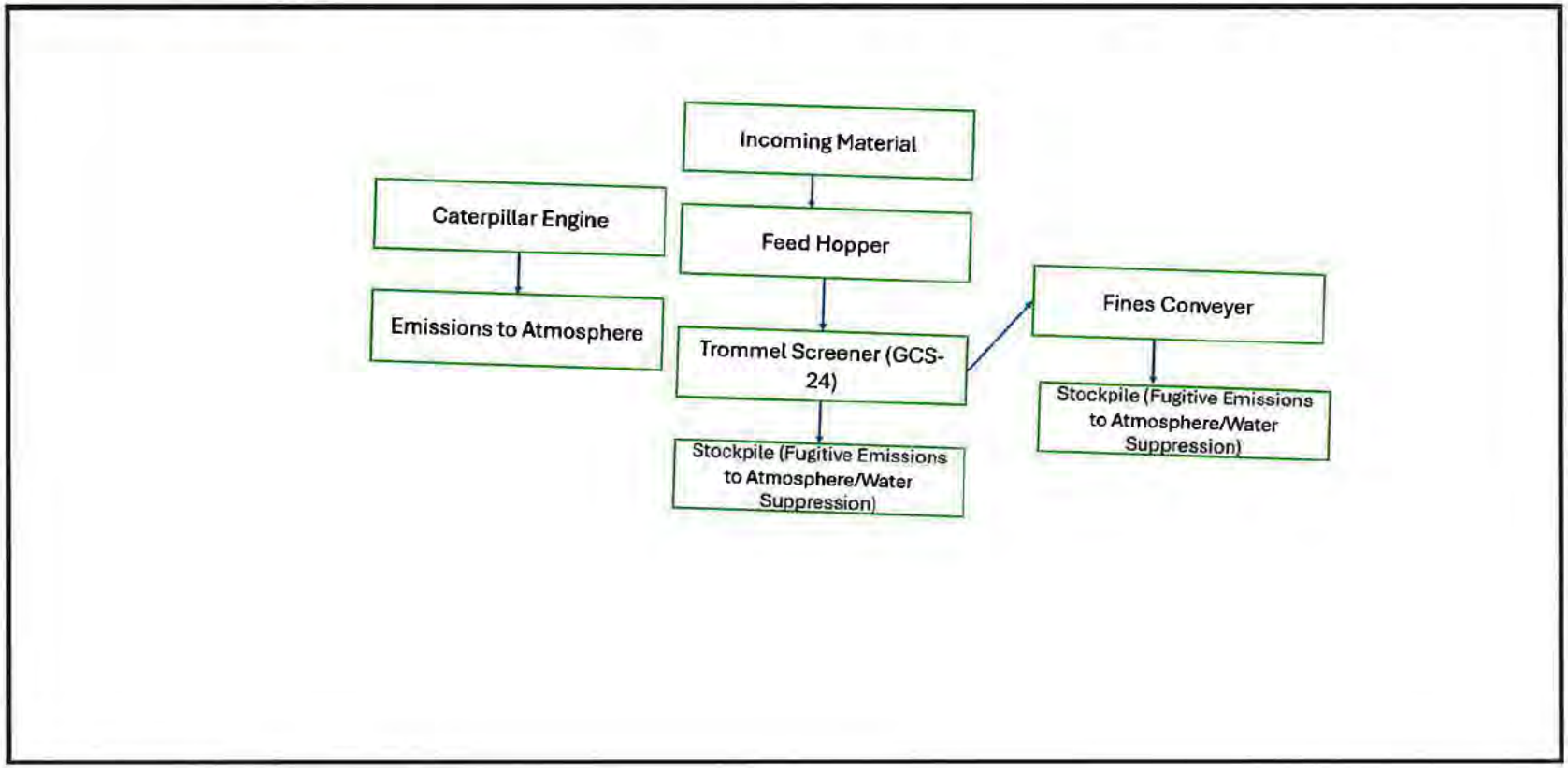
GCS-11

MCCLOSKEY MCB616REG Trommel Screen Plant with Caterpillar Engine

DNREC – Air Quality Management Section
Application to Construct, Operate, or Modify Stationary Sources

Process Flow Diagram

Sketch the Process Flow Diagram for the equipment or process being applied for. Include each emission unit and control device (even existing emission units that will not be modified by this application). You may identify each emission unit with a simple shape. Label each emission unit and control device with a unique identifier. Show the relationship between each emission unit and/or control device by drawing arrows between them to indicate the flow of air pollutants. List which application forms are included for each emission unit or control device below the shape representing each emission unit or control device . See http://www.delaware.gov/reg2/default.htm for example Process Flow Diagrams for common processes. If you already have a Process Flow Diagram for the equipment or process being applied for, you may attach it to the application instead of using this form.



Crushed Stone Equipment Application

If you are using this form electronically, press F1 at any time for help

General Information

1. Facility Name: **Middletown Materials**
2. Equipment ID Number: **GCS-11**
3. Where Does the Stone Originate: ☐ On-Site ☒ Off-Site (Specify):
4. Locations Where Crusher Will Operate:

If the Crusher will operate at more than five locations, attach additional copies of this page as needed. Note that state law requires that a public notice for each location be made.

	Street Address	City	County	Zip Code	Condition of Roads at Location
4.1.	**Middletown Materials 1559 Cedar Lane Road**	**Middletown**	**New Castle**	**19709**	☐ Paved ☐ Unpaved ☒ Both
4.2.					☐ Paved ☐ Unpaved ☐ Both
4.3.					☐ Paved ☐ Unpaved ☐ Both
4.4.					☐ Paved ☐ Unpaved ☐ Both
4.5.					☐ Paved ☐ Unpaved ☐ Both

Attach Proof of Local Zoning for each location.

5. Material Crushed:

If more than five Materials are crushed, attach additional copies of this page as needed.

	Material Name	Material Description
5.1.	**Reclaimed Asphalt Pavement**	**Roadway Pavements**
5.2.	**Reclaimed Concrete**	**Clean reclaimed concrete for crushing into recycled aggregate**
5.3.	**Dirt/Topsoil/Recycled Material/Aggregate**	**Construction Debris/Site Development**
5.4.		
5.5.		

6. Is a Feeder Used to Sort the Material Before Crushing? ☒ YES ☐ NO

If YES, complete the rest of Question 6. If NO, proceed to Question 7.

6.1. Is a Wet Suppression System Used to Control Emissions From the Feeder? ☒ YES ☐ NO

General Information

6.2. Feeder Power Provided By: ☒ Generator/Engine ☐ Utility ☐ Other (Specify):

If a Generator/Engine is used, include completed Form AQM-3.3 with this application.

Crusher Information

7. Number of Crushers: **SCREENER ONLY**

If there are more than two Crushers, attach additional copies of this page as needed.

For Primary Crusher

8. Primary Crusher Identification:

8.1. Primary Crusher Manufacturer:

8.2. Primary Crusher Model:

8.3. Primary Crusher Serial Number:

8.4. Maximum Amount of Material Processed in Primary Crusher: **180 ton/hr**

8.5. Is a Wet Suppression System Used to Control Emissions from the Crusher? ☐ YES ☐ NO

8.6. Primary Crusher Power Provided By: ☐ Generator/Engine ☐ Utility ☐ Other (Specify):

If a Generator/Engine is Used, Include Completed Form AQM-3.3 With this Application

8.7. Is a Screen Used to Sort Crushed Material? ☒ YES ☐ NO

If YES, complete the rest of Question 8.7. If NO, proceed to Question 9.

8.7.1. Is a Wet Suppression System Used to Control Emissions from the Screen? ☒ YES ☐ NO

8.7.2. Screen Power Provided By: ☒ Generator/Engine ☐ Utility ☐ Other (Specify):

If a Generator/Engine is used, include completed Form AQM-3.3 with this application.

For the Secondary Crusher. If There is No Secondary Crusher, Proceed to Question 10.

9. Secondary Crusher Identification:

9.1. Manufacturer:

9.2. Model:

9.3. Serial Number:

9.4. Maximum Amount of Material Processed: **ton/hr**

9.5. Is a Wet Suppression System Used to Control Emissions from the Crusher? ☐ YES ☐ NO

9.6. Power Provided By: ☐ Generator/Engine ☐ Utility ☐ Other (Specify):

If a Generator/Engine is used, include completed Form AQM-3.3 with this application.

Crusher Information

9.7. Is a Screen Used to Sort Crushed Material? ☐ YES ☐ NO

If YES, complete the rest of Question 9.7. If NO, proceed to Question 10.

9.7.1. Is a Wet Suppression System Used to Control Emissions From the Screen? ☐ YES ☐ NO

9.7.2. Screen Power Provided By: ☐ Generator/Engine
☐ Utility
☐ Other (Specify):

If a Generator/Engine is used, include completed Form AQM-3.3 with this application.

Conveyor Information

10. Are Conveyors Used in the Process? ☒ YES ☐ NO

If YES, proceed to Question 11. If NO, proceed to Question 15.

11. Number of Conveyors in Process: **2**

If more than three Conveyors are used, attach additional copies of this page as needed.

For the First Conveyor

12. Conveyor Identification: **fines conveyor**

12.1. Location: ☐ Before (Specify Equipment):
☒ After (Specify Equipment): **after the trommel drum**
☐ Between (Specify Equipment):

12.2. Maximum Amount of Material Conveyed: **180 ton/hr**

12.3. Is a Wet Suppression System Used to Control Emissions? ☐ YES ☒ NO

12.4. Conveyor Power Provided By: ☒ Generator/Engine
☐ Utility
☐ Other (Specify):

If a Generator/Engine is used, include completed Form AQM-3.3 with this application.

For the Second Conveyor. If There Is No Second Conveyor, Proceed to Question 15.

13. Conveyor Identification: **main conveyer**

13.1. Location ☐ Before (Specify Equipment):
☒ After (Specify Equipment): **after the trommel drum**
☐ Between (Specify Equipment):

13.2. Maximum Amount of Material Conveyed: **180 ton/hr**

13.3. Is a Wet Suppression System Used to Control Emissions? ☐ YES ☒ NO

13.4. Conveyor Power Provided By: ☒ Generator/Engine
☐ Utility
☐ Other (Specify):

If a Generator/Engine is used, include completed Form AQM-3.3 with this application.

For the Third Conveyor. If There Is No Third Conveyor, Proceed to Question 15.

14. Conveyor Identification:

Conveyor Information

14.1. Location: ☐ Before (Specify Equipment):
☐ After (Specify Equipment):
☐ Between (Specify Equipment):

14.2. Maximum Amount of Material Conveyed: **ton/hr**

14.3. Is a Wet Suppression System Used to Control Emissions? ☐ YES ☐ NO

14.4. Conveyor Power Provided By: ☐ Generator/Engine
☐ Utility
☐ Other (Specify):

If a Generator/Engine is used, include completed Form AQM-3.3 with this application.

Fines Crushing Information

15. Do you perform any of the following activities at your facility: ☐ Pulverize Minerals
☐ Produce Sand
☐ Crush Stone Into a Fine Product

If you checked any of the boxes above, include complete Form AQM-3.10 with this application.

Visible Emissions Monitoring Information

16. Proposed Technique Used to Monitor Visible Emissions: ☐ Opacity Monitor (COM)
☒ Manual (Method 9)
☐ Manual (Method 22)
☐ Other (Describe):

If an Opacity Monitor (COM) is used, complete the rest of Question 16. If not, proceed to Question 17.

16.1. Describe the Continuous Opacity Monitoring System:

16.2. Manufacturer:

16.3. Model:

16.4. Serial Number:

17. Proposed Frequency of Opacity Monitoring:

Voluntary Emissions Limitation Request Information

18. Are You Requesting Any Voluntary Emission Limitations to Avoid Major Source Status, Minor New Source Review, MACT, NSPS, etc.? ☐ YES ☒ NO

If YES, complete the rest of Question 18. If NO, proceed to Question 19.

19.1. Describe Any Proposed Emission Limitations:

Voluntary Operating Limitation Request Information

19.	Are You Requesting Any Voluntary Operating Limitations to Avoid Major Source Status, Minor New Source Review, MACT, NSPS, etc.?	☒ YES ☐ NO
If YES, complete the rest of Question 19. If NO, proceed to Question 20.		
19.1.	Describe Any Proposed Operating Limitations: **Limit operation to 1,800 hours per consecutive 12-month period. Water suppression used to control emissions.**	

Additional Information

20.	Is There Any Additional Information Pertinent to this Application?	☐ YES ☒ NO
If YES, complete the rest of Question 20.		
20.1.	Describe:	

Generator/Engine Application

If you are using this form electronically, press F1 at any time for help

General Information

1. Facility Name: **Middletown Materials**
2. Equipment ID: **Engine for GCS-11 McCloskey MCB616REG Trommel Screen Plant**
3. Manufacturer: **Caterpillar**
4. Model: **3054**
5. Serial Number: **5YSO2719**
6. Maximum Power Rating of Engine: **174** horsepower
7. Standby Power Rating of Generator: **130** kilowatt
8. Date of Manufacture: **1999**
9. Installation Date: **TBD**
10. Is the Equipment Being Applied For a Generator or an Engine? ☐ Generator ☒ Engine

If the equipment is a Generator, complete the rest of Question 10. If not, proceed to Question 11.

10.1. Is the Generator Existing or New? ☐ Existing ☐ New

10.2. Will the Generator Be Classified as an Emergency Generator or a Distributed Generator? ☐ Emergency ☐ Distributed

10.3. Has an Initial Notification Pursuant to 7 **DE Admin. Code** 1144 Been Submitted for this Generator? ☐ YES ☐ NO

If NO, include a copy of the Initial Notification with this application.

10.4. Have the Emissions From the Generator Been Certified to Meet the Currently Applicable US EPA Non-Road Emission Standards? ☐ YES ☐ NO

If YES, attach a copy of the Manufacturer's Certification. If NO, attach copies of any/all of the following: any maintenance or operating requirements/instructions provided by the generator manufacturer; the type, or a description, of any emission control equipment use; and/or emissions test data for the generator (such as a manufacturer's technical data sheet), any supporting documentation for any emission control equipment used, any supporting calculations, any quality control or assurance information, and any other information needed to demonstrate compliance with the requirements. Proceed to Question 11.

11. Primary Fuel: ☐ Natural Gas ☒ Diesel ☐ Propane ☐ Biodiesel ☐ Other (specify):

11.1. Maximum Annual Primary Fuel Consumption: **13,788 gal**

11.2. Heat Content of Primary Fuel: **128,700 BTU/gal**

11.3. Maximum Firing Rate: **7.66 gallons/hr**

11.4. Percent Sulfur of Primary Fuel: **0.0015** %

12. Secondary Fuel: ☐ Natural Gas ☐ Diesel ☐ Propane ☐ Biodiesel ☐ Other (specify):

General Information

12.1.	Maximum Annual Secondary Fuel Consumption: **MMCF**
12.2.	Heat Content of Secondary Fuel: **BTU/CF**
12.3.	Maximum Firing Rate: **MMCF/hr**
12.4.	Percent Sulfur of Secondary Fuel: %
13.	Is SCR/NSCR/SNCR/Ammonia Injection Used: ☐ YES ☐ NO

Stack Information

14. How Does the Process Equipment Vent:
(check all that apply)
☒ Directly to the Atmosphere
☐ Through a Control Device Covered by Forms AQM-4.1 through 4.12

If any of the process equipment vents directly to the atmosphere proceed to Question 15. If the process equipment vents through a control device, provide the stack parameters on the control device form and proceed to Question 16.

15. Emission Point Name: **Engine Stack**

15.1. Stack Height Above Grade: **8 feet**

15.2. Stack Exit Diameter: **0.3 feet**
(Provide Stack Dimensions If Rectangular Stack)

15.3. Is a Stack Cap Present? ☒ YES ☐ NO

15.4. Stack Configuration: ☒ Vertical ☐ Horizontal ☐ Downward-Venting
(check all that apply) ☐ Other (Specify):

15.5. Stack Exit Gas Temperature: **700 °F**

15.6. Stack Exit Gas Flow Rate: **850 ACFM**

15.7. Distance to Nearest Property Line: **200 ft**

15.8. Describe Nearest Obstruction: **Soil Stockpile**

15.9. Height of Nearest Obstruction: **40 ft**

15.10. Distance to Nearest Obstruction: **145 ft**

15.11. Are Stack Sampling Ports Provided? ☐ YES ☒ NO

Monitoring Information

16. Will Emissions Data be Recorded by a Continuous Emission Monitoring System? ☐ YES ☒ NO

If Yes, Attach a Copy of the Continuous Emission Monitoring System Manufacturer's Specification Sheets

If YES, complete the rest of Question 16. If NO, proceed to Question 17.

16.1. Pollutants Monitored: ☐ VOCs ☐ HAPs ☐ PM ☐ PM_{10} ☐ $PM_{2.5}$ ☐ NO_x ☐ SO_x ☐ Metals
☐ Other (Specify):

16.2. Describe the Continuous Emission Monitoring System:

Monitoring Information
16.3. Manufacturer:
16.4. Model:
16.5. Serial Number:
16.6. Will Multiple Emission Units Be Monitored at the Same Point? ☐ YES ☐ NO
If YES, complete the rest of Question 16. If NO, proceed to Question 17.
16.7. Emission Units Monitored:
16.8. Will More Than One Emission Unit be Emitting From the Combined Point At Any Time? ☐ YES ☐ NO
If YES, complete the rest of Question 15. If NO, proceed to Question 17.
16.9. Emission Units Emitting Simultaneously:

Visible Emissions Monitoring Information
For Primary Fuel
17. Proposed Technique Used to Monitor Visible Emissions: ☐ Opacity Monitor (COM) ☒ Manual (Method 9) ☐ Manual (Method 22) ☐ Other (Describe):
If an Opacity Monitor (COM) is used, complete the rest of Question 17. If not, proceed to Question 18.
17.1. Describe the Continuous Opacity Monitoring System:
17.2. Manufacturer:
17.3. Model:
17.4. Serial Number:
18. Proposed Frequency of Opacity Monitoring:
For Secondary Fuel. If no Secondary Fuel is used, proceed to Question 20.
19. Proposed Technique Used to Monitor Visible Emissions: ☐ Opacity Monitor (COMs) ☐ Manual (Method 9) ☐ Manual (Method 22) ☐ Other (Describe):
If an Opacity Monitor (COMs) is used, complete the rest of Question 19. If not, proceed to Question 20.
19.1. Describe the Continuous Opacity Monitoring System:
19.2. Manufacturer:
19.3. Model:
19.4. Serial Number:
20. Proposed Frequency of Opacity Monitoring:

Voluntary Emission Limitation Request Information

21.	Are You Requesting Any Voluntary Emission Limitations to Avoid Major Source Status, Minor New Source Review, MACT, NSPS, etc.?	☐ YES ☒ NO
If YES, complete the rest of Question 21. If NO, proceed to Question 22.		
21.1.	Describe Any Proposed Emission Limitations:	

Voluntary Operating Limitation Request Information

22.	Are You Requesting Any Voluntary Operating Limitations to Avoid Major Source Status, Minor New Source Review, MACT, NSPS, etc.?	☒ YES ☐ NO
If YES, complete the rest of Question 22. If NO, proceed to Question 23.		
22.1.	Describe Any Proposed Operating Limitations: **Restrict hours of operation to 1,800 per rolling 12 month period.**	

Additional Information

23.	Is There Any Additional Information Pertinent to this Application?	☐ YES ☒ NO
If YES, complete the rest of Question 23.		
22.1.	Describe:	

Emissions Information Application

If you are using this form electronically, press F1 at any time for help

Process Information

1. Number of Individual Pieces of Process Equipment in Process: **McCloskey MCB616REG Trommel Screen Plant GCS-11**
2. Number of Individual Control Devices in Process: **1 - Water Suppression**

Emissions Information for First Emission Point/Stack

3. Emission Point Name: **GCS-11** McCloskey Trommel Screen Plant
4. Equipment ID Number for all Process Equipment and Control Devices Venting Through Emission Point/Stack: **GCS-11 McCloskey Trommel Screen Plant**
5. Pollutant Emissions

If more than 15 pollutants are emitted at this Emission Point/Stack, attach additional copies of this page as needed.

	Pollutant Name (Specify VOCs and HAPs Individually in 5.10 through 5.18)	CAS Number (Not required for 5.1 through 5.10)	Maximum Uncontrolled Emission Rate at Design Capacity	Maximum Controlled Emission Rate at Design Capacity	Annual Potential to Emit (PTE)	Requested Permitted Annual Emissions
5.1.	Particulate Matter (PM)		**5.04 lbs/hour**	**0.42 lbs/hour**	**22.08** tons/year	**0.38** tons/year
5.2.	PM_{10}		**1.76 lbs/hour**	**0.14 lbs/hour**	**7.73** tons/year	**0.13** tons/year
5.3.	$PM_{2.5}$		**0.107 lbs/hour**	**0.01 lbs/hour**	**0.47** tons/year	**0.009** tons/year
5.4.	Sulfur Oxides (SO_X)		**lbs/hour**	**lbs/hour**	tons/year	tons/year
5.5.	Nitrogen Oxides (NO_X)		**lbs/hour**	**lbs/hour**	tons/year	tons/year
5.6.	Carbon Monoxide (CO)		**lbs/hour**	**lbs/hour**	tons/year	tons/year
5.7.	Total Volatile Organic Compounds (VOCs)		**lbs/hour**	**lbs/hour**	tons/year	tons/year
5.8.	Total Hazardous Air		**lbs/hour**	**lbs/hour**	tons/year	tons/year

Emissions Information for First Emission Point/Stack

	Pollutants (HAPs)					
5.9.	CO_2		**lbs/hour**	**lbs/hour**	tons/year	tons/year
5.10.	CO_{2e}		**lbs/hour**	**lbs/hour**	tons/year	tons/year
5.11.			**lbs/hour**	**lbs/hour**	tons/year	tons/year
5.12.			**lbs/hour**	**lbs/hour**	tons/year	tons/year
5.13.			**lbs/hour**	**lbs/hour**	tons/year	tons/year
5.14.			**lbs/hour**	**lbs/hour**	tons/year	tons/year
5.15.			**lbs/hour**	**lbs/hour**	tons/year	tons/year

6. Provide Any Additional Information Necessary to Understanding the Emission Rates Provided Above:

Attach the Basis of Determination or Calculations for each Emission Rate provided above.

Emissions Information for Second Emission Point/Stack

7. Emission Point Name: **Caterpillar Engine**

8. Equipment ID Number for all Process Equipment and Control Devices Venting Through Emission Point/Stack: **Engine Stack**

9. Pollutant Emissions

If more than 15 pollutants are emitted at this Emission Point/Stack, attach additional copies of this page as needed.

	Pollutant Name (Specify VOCs and HAPs Individually in 9.10 through 9.18)	CAS Number (Not required for 9.1 through 9.10)	Maximum Uncontrolled Emission Rate at Design Capacity	Maximum Controlled Emission Rate at Design Capacity	Annual Potential to Emit (PTE)	Requested Permitted Annual Emissions
9.1.	Particulate Matter (PM)		**0.115 lbs/hour**	**0.115 lbs/hour**	**0.50 tons/year**	**0.10 tons/year**
9.2.	PM_{10}		**0.115 lbs/hour**	**0.115 lbs/hour**	**0.5 tons/year**	**0.10 tons/year**

Emissions Information for Second Emission Point/Stack						
9.3.	$PM_{2.5}$		**0.115 lbs/hour**	**0.115 lbs/hour**	**0.5** tons/year	**0.10** tons/year
9.4.	Sulfur Oxides (SO_x)		**0.0016 lbs/hour**	**0.0016 lbs/hour**	**0.007** tons/year	**0.00135** tons/year
9.5.	Nitrogen Oxides (NO_x)		**2.647 lbs/hour**	**2.647 lbs/hour**	**11.59** tons/year	**2.38** tons/year
9.6.	Carbon Monoxide (CO)		**0.997 lbs/hour**	**0.997 lbs/hour**	**4.37** tons/year	**0.90** tons/year
9.7.	Total Volatile Organic Compounds (VOCs)		**0.269 lbs/hour**	**0.269 lbs/hour**	**1.18** tons/year	**0.24** tons/year
9.8.	Total Hazardous Air Pollutants (HAPs)		**0.00326 lbs/hour**	**0.00326 lbs/hour**	**0.0143** tons/year	**0.00293** tons/year
9.9.	CO_2		**171.58 lbs/hour**	**171.58 lbs/hour**	**751.54** tons/year	**154.43** tons/year
9.10.	CO_{2e}		**lbs/hour**	**lbs/hour**	tons/year	tons/year
9.11.			**lbs/hour**	**lbs/hour**	tons/year	tons/year
9.12.			**lbs/hour**	**lbs/hour**	tons/year	tons/year
9.13.			**lbs/hour**	**lbs/hour**	tons/year	tons/year
9.14.			**lbs/hour**	**lbs/hour**	tons/year	tons/year
9.15.			**lbs/hour**	**lbs/hour**	tons/year	tons/year

10. Provide Any Additional Information Necessary to Understanding the Emission Rates Provided Above:

Attach the Basis of Determination or Calculations for each Emission Rate provided above.

Emissions Information for Third Emission Point/Stack	
11.	Emission Point Name:
12.	Equipment ID Number for all Process Equipment and Control Devices Venting Through Emission Point/Stack:

Emissions Information for Third Emission Point/Stack

13. Pollutant Emissions

If more than 15 pollutants are emitted at this Emission Point/Stack, attach additional copies of this page as needed.

	Pollutant Name (Specify VOCs and HAPs Individually in 13.10 through 13.18)	CAS Number (Not required for 13.1 through 13.10)	Maximum Uncontrolled Emission Rate at Design Capacity	Maximum Controlled Emission Rate at Design Capacity	Annual Potential to Emit (PTE)	Requested Permitted Annual Emissions
13.1.	Particulate Matter (PM)		**lbs/hour**	**lbs/hour**	tons/year	tons/year
13.2.	PM_{10}		**lbs/hour**	**lbs/hour**	tons/year	tons/year
13.3.	$PM_{2.5}$		**lbs/hour**	**lbs/hour**	tons/year	tons/year
13.4.	Sulfur Oxides (SO_X)		**lbs/hour**	**lbs/hour**	tons/year	tons/year
13.5.	Nitrogen Oxides (NO_X)		**lbs/hour**	**lbs/hour**	tons/year	tons/year
13.6.	Carbon Monoxide (CO)		**lbs/hour**	**lbs/hour**	tons/year	tons/year
13.7.	Total Volatile Organic Compounds (VOCs)		**lbs/hour**	**lbs/hour**	tons/year	tons/year
13.8.	Total Hazardous Air Pollutants (HAPs)		**lbs/hour**	**lbs/hour**	tons/year	tons/year
13.9.	CO_2		**lbs/hour**	**lbs/hour**	tons/year	tons/year
13.10.	CO_{2e}		**lbs/hour**	**lbs/hour**	tons/year	tons/year
13.11.			**lbs/hour**	**lbs/hour**	tons/year	tons/year
13.12.			**lbs/hour**	**lbs/hour**	tons/year	tons/year
13.13.			**lbs/hour**	**lbs/hour**	tons/year	tons/year
13.14.			**lbs/hour**	**lbs/hour**	tons/year	tons/year
13.15.			**lbs/hour**	**lbs/hour**	tons/year	tons/year

Emissions Information for Third Emission Point/Stack

14. Provide Any Additional Information Necessary to Understanding the Emission Rates Provided Above:

Attach the Basis of Determination or Calculations for each Emission Rate provided above.

Emissions Information for Fourth Emission Point/Stack

15. Emission Point Name:

16. Equipment ID Number for all Process Equipment and Control Devices Venting Through Emission Point/Stack:

17. Pollutant Emissions

If more than 15 pollutants are emitted at this Emission Point/Stack, attach additional copies of this page as needed.

	Pollutant Name (Specify VOCs and HAPs Individually in 17.10 through 17.18)	CAS Number (Not required for 17.1 through 17.10)	Maximum Uncontrolled Emission Rate at Design Capacity	Maximum Controlled Emission Rate at Design Capacity	Annual Potential to Emit (PTE)	Requested Permitted Annual Emissions
17.1.	Particulate Matter (PM)		**lbs/hour**	**lbs/hour**	tons/year	tons/year
17.2.	PM_{10}		**lbs/hour**	**lbs/hour**	tons/year	tons/year
17.3.	$PM_{2.5}$		**lbs/hour**	**lbs/hour**	tons/year	tons/year
17.4.	Sulfur Oxides (SO_x)		**lbs/hour**	**lbs/hour**	tons/year	tons/year
17.5.	Nitrogen Oxides (NO_x)		**lbs/hour**	**lbs/hour**	tons/year	tons/year
17.6.	Carbon Monoxide (CO)		**lbs/hour**	**lbs/hour**	tons/year	tons/year
17.7.	Volatile Organic Compounds (VOCs)		**lbs/hour**	**lbs/hour**	tons/year	tons/year
17.8.	Total Hazardous Air Pollutants (HAPs)		**lbs/hour**	**lbs/hour**	tons/year	tons/year
17.9.	CO_2		**lbs/hour**	**lbs/hour**	tons/year	tons/year

Emissions Information for Fourth Emission Point/Stack					
17.10. CO_{2e}		**lbs/hour**	**lbs/hour**	tons/year	tons/year
17.11.		**lbs/hour**	**lbs/hour**	tons/year	tons/year
17.12.		**lbs/hour**	**lbs/hour**	tons/year	tons/year
17.13.		**lbs/hour**	**lbs/hour**	tons/year	tons/year
17.14.		**lbs/hour**	**lbs/hour**	tons/year	tons/year
17.15.		**lbs/hour**	**lbs/hour**	tons/year	tons/year
18. Provide Any Additional Information Necessary to Understanding the Emission Rates Provided Above:					
Attach the Basis of Determination or Calculations for each Emission Rate provided above.					
If there are more than four Emission Points/Stacks, attach additional copies of this form as needed.					

Overall Process Emissions					
19. Pollutant Emissions					
If more than 15 pollutants are emitted from this Process, attach additional copies of this page as needed.					
Pollutant Name (Specify VOCs and HAPs Individually in 19.10 through 19.18)	CAS Number (Not required for 19.1 through 19.10)	Maximum Uncontrolled Emission Rate at Design Capacity	Maximum Controlled Emission Rate at Design Capacity	Annual Potential to Emit (PTE)	Requested Permitted Annual Emissions
19.1. Particulate Matter (PM)		**5**.155 **lbs/hour**	**0**.536 **lbs/hour**	**22**.58 tons/year	**0**.483 tons/year
19.2. PM_{10}		**1**.879 **lbs/hour**	**0**.25656 **lbs/hour**	**8**.23 tons/year	**0**.231 tons/year
19.3. $PM_{2.5}$		**0.2**232 **lbs/hour**	**0**.12525 **lbs/hour**	**0**.97 tons/year	**0**.1127 tons/year
19.4. Sulfur Oxides (SO_X)		**0**.0015 **lbs/hour**	**0.0015 lbs/hour**	**0.007** tons/year	**0.00144** tons/year
19.5. Nitrogen Oxides (NO_X)		**2**.6468 **lbs/hour**	**2**.6468 **lbs/hour**	**11**.59 tons/year	**2**.382 tons/year

Overall Process Emissions

19.6.	Carbon Monoxide (CO)		**0.9**9737 **lbs/hour**	**0.**99737 **lbs/hour**	**4.**37 tons/year	**0.**8976 tons/year
19.7.	Total Volatile Organic Compounds (VOCs)		**0.26**852 **lbs/hour**	**0.**26852 **lbs/hour**	1.18 tons/year	**0.**2417 tons/year
19.8.	Total Hazardous Air Pollutants (HAPs)		**0.00**326 **lbs/hour**	**0.**00326 **lbs/hour**	**0.**0143 tons/year	**0.**00293 tons/year
19.9.	CO_2		**171.**58 **lbs/hour**	**171.**58 **lbs/hour**	**751.**54 tons/year	**154.**43 tons/year
19.10.	CO_{2e}		**lbs/hour**	**lbs/hour**	tons/year	tons/year
19.12.			**lbs/hour**	**lbs/hour**	tons/year	tons/year
19.13.			**lbs/hour**	**lbs/hour**	tons/year	tons/year
19.14.			**lbs/hour**	**lbs/hour**	tons/year	tons/year
19.15.			**lbs/hour**	**lbs/hour**	tons/year	tons/year

20. Provide Any Additional Information Necessary to Understanding the Emission Rates Provided Above:

Attach the Basis of Determination or Calculations for each Emission Rate provided above.

Minor New Source Review Information

21. Does the Process Have the Potential to Emit More Than Five Tons Per Year of Any Pollutant? ☒ YES ☐ NO

22. Is the Source New or Existing? ☒ NEW ☐ EXISTING
See Question 11 of AQM-1

If the Process has the Potential to Emit more than five tons per year of any pollutant, and is a New Source, a Control Technology Analysis pursuant to Regulation No. 1125 Section 4 must be conducted and attached to this application.

Major New Source Review Information

23. Does the Process Have the Potential to Emit More Than the Significance Level for Any Pollutant? *(Check All That Apply)*

- ☐ Greater Than 25 Tons Per Year of Particulate Matter (PM)
- ☐ Greater Than 15 Tons Per Year of PM_{10}
- ☐ Greater Than 10 Tons Per Year of $PM_{2.5}$
- ☐ Greater Than 40 Tons Per Year of Sulfur Dioxide(SO_2)
- ☐ Greater Than 25 Tons Per Year of Nitrogen Oxides (NO_X) in New Castle and Kent County
- ☐ Greater Than 100 Tons Per Year of Nitrogen Oxides (NO_X) in Sussex County
- ☐ Greater Than 100 Tons Per Year of Carbon Monoxide (CO)
- ☐ Greater Than 25 Tons Per Year of Total Volatile Organic Compounds (VOCs) in New Castle and Kent County
- ☐ Greater Than 50 Tons Per Year of Total Volatile Organic Compounds (VOCs) in Sussex County
- ☐ Greater Than 75,000 Tons Per Year of Equivalent Carbon Dioxide (CO_{2e})

If the Process has the Potential to Emit greater than any of the amounts listed above 7 DE Admin. Code 1125 Sections 2 and/or 3 apply. Contact the Department at (302) 323-4542 or (302) 739-9402 for additional information

Additional Information

24. Is There Any Additional Information Pertinent to this Application? ☒ YES ☐ NO

If YES, complete the rest of Question 24.

24.1. Describe: **Restricting the hours of operation have reduced emissions to below major source thresholds. Restrict hours of operation to 1800 per rolling 12 month period.**

McCloskey MCB616REG Trommel Screen Plant – GCS-11

The McCloskey Trommel Screener is equipped with a Caterpillar 3054 diesel engine identified as a Tier 2 nonroad compression ignition engine. Based on the equipment information provided, the unit has a process rate of 180 tons per hour, includes 2 conveyors, and is operated with dust suppression.

MCCLOSKEY MCB616REG TROMMEL SCREEN PLANT – GCS 11				
Make	**Serial No.**	**Process Rate**	**Conveyers**	**Dust Suppression**
McCloskey	11006-P	180 tph	2	Yes
ENGINE INFORMATION				
Make	**Model**	**Serial No.**	**Engine Arrangement No.**	**Engine Tier**
Caterpillar	3054 (174 hp/130 kw)	5YSO2719	154-9244 (partial number as tag is damaged)	Tier 2

- **Table 11.19.2-2** (Uncontrolled screening)
- **Table 11.19.2-3** (Uncontrolled conveyor transfer points)

PM2.5 emission factors were derived using particle size multipliers consistent with AP-42 methodology. This approach is consistent with the methodology used in previously approved DNREC air permit applications for similar screening equipment.

Screening Operation Emission Factors

Source: AP-42 Section 11.19.2, Table 11.19.2-2 (Uncontrolled)

Pollutant	Emission Factor (lb/ton)	AP-42 Reference	Notes
Total PM	0.025	Table 11.19.2-2	Uncontrolled screening
PM10	0.0087	Table 11.19.2-2	Uncontrolled screening
PM2.5	0.000588	Derived from AP-42	Particle size multipliers

Conveyor Transfer / Drop Points Emission Factors

Source: AP-42 Section 11.19.2, Table 11.19.2-3 (Uncontrolled)

Pollutant	Emission Factor (lb/ton)	AP-42 Reference	Notes
Total PM	0.0030	Table 11.19.2-3	Conveyor transfer
PM10	0.0011	Table 11.19.2-3	Conveyor transfer
PM2.5	0.000013	Derived from AP-42	Particle size multipliers

McCloskey MCB616REG Trommel Screen Plant – GCS-11

Final Factors Used for PTE Calculation

Emission Source	Total PM	PM10	PM2.5	AP-42 Section
Screening	0.025	0.0087	0.000588	11.19.2 Table 2
Conveyor Drop Points	0.0030	0.0011	0.000013	11.19.2 Table 3

Potential to Emit Calculations

Assumptions

- Operating hours = **8,760 hr/yr**
- Process rate = **180 tph**
- conveyor throughput capped at **180 tph combined**

Pollutant	lb/hr Emissions	lb/hr Controlled	PTE @ 8760 (tpy)	PTE @ 8760 Controlled (tpy)	PTE @ 1800 Controlled (tpy)
PM	5.04	0.42	22.08	1.84	0.38
PM10	1.76	0.14	7.73	0.62	0.13
PM2.5	0.107	0.010	0.47	0.044	0.009

Engine PTE

Engine emission factors were obtained from EPA NONROAD compression ignition engine emission factors for Tier 2 engines. These factors are consistent with emission factors published in the EPA NONROAD model and WebFIRE database for diesel engines in the 130–175 horsepower range.

Assumptions: 7.66 gal/hr

Pollutant	lb/hr Emissions	lb/hr Controlled	PTE @ 8760 (tpy)	PTE @ 8760 Controlled (tpy)	PTE @ 1800 Controlled (tpy)
PM	0.115	0.115	0.50	0.50	0.10
PM10	0.115	0.115	0.50	0.50	0.10
PM2.5	0.115	0.115	0.50	0.50	0.10
NOx	2.647	2.647	11.59	11.59	2.38
CO	0.997	0.997	4.37	4.37	0.90
VOC	0.269	0.269	1.18	1.18	0.24
SO2	0.0016	0.0016	0.007	0.007	0.0014

McCloskey MCB616REG Trommel Screen Plant – GCS-11

Pollutant	lb/hr Emissions	lb/hr Controlled	PTE @ 8760 (tpy)	PTE @ 8760 Controlled (tpy)	PTE @ 1800 Controlled (tpy)
Formaldehyde	0.00124	0.00124	0.0054	0.0054	0.0011
Acetaldehyde	0.00081	0.00081	0.0035	0.0035	0.00073
Acrolein	0.000097	0.000097	0.00043	0.00043	0.000088
Benzene	0.00098	0.00098	0.0043	0.0043	0.00088
Naphthalene	0.000089	0.000089	0.00039	0.00039	0.000080
1,3-Butadiene	0.000041	0.000041	0.00018	0.00018	0.000037
Total HAPs*	0.00326	0.00326	0.0143	0.0143	0.00293
CO2	171.584	171.584	751.54	751.54	154.43

SO_2 emissions were calculated based on ultra-low sulfur diesel fuel (15 ppm sulfur) using an emission factor of 0.00020829 lb SO_2 per gallon of diesel fuel and estimated fuel consumption for the Caterpillar 3054 Tier 2 engine.

Pollutant	lb/hr Emissions	lb/hr Controlled	PTE @ 8760 (tpy)	PTE @ 8760 Controlled (tpy)	PTE @ 1800 Controlled (tpy)
PM	5.15508	0.53628	22.58	2.34	0.483
PM10	1.87908	0.25656	8.23	1.12	0.231
PM2.5	0.22326	0.12525	0.97	0.55	0.1127
NOx	2.64687	2.64687	11.59	11.59	2.382
CO	0.99737	0.99737	4.37	4.37	0.8976
VOC	0.26852	0.26852	1.18	1.18	0.2417
SO_2	0.001596	0.001596	0.007	0.007	0.00144
Total HAPs*	0.00326	0.00326	0.0143	0.0143	0.00293
CO_2	171.584	171.584	751.54	751.54	154.43

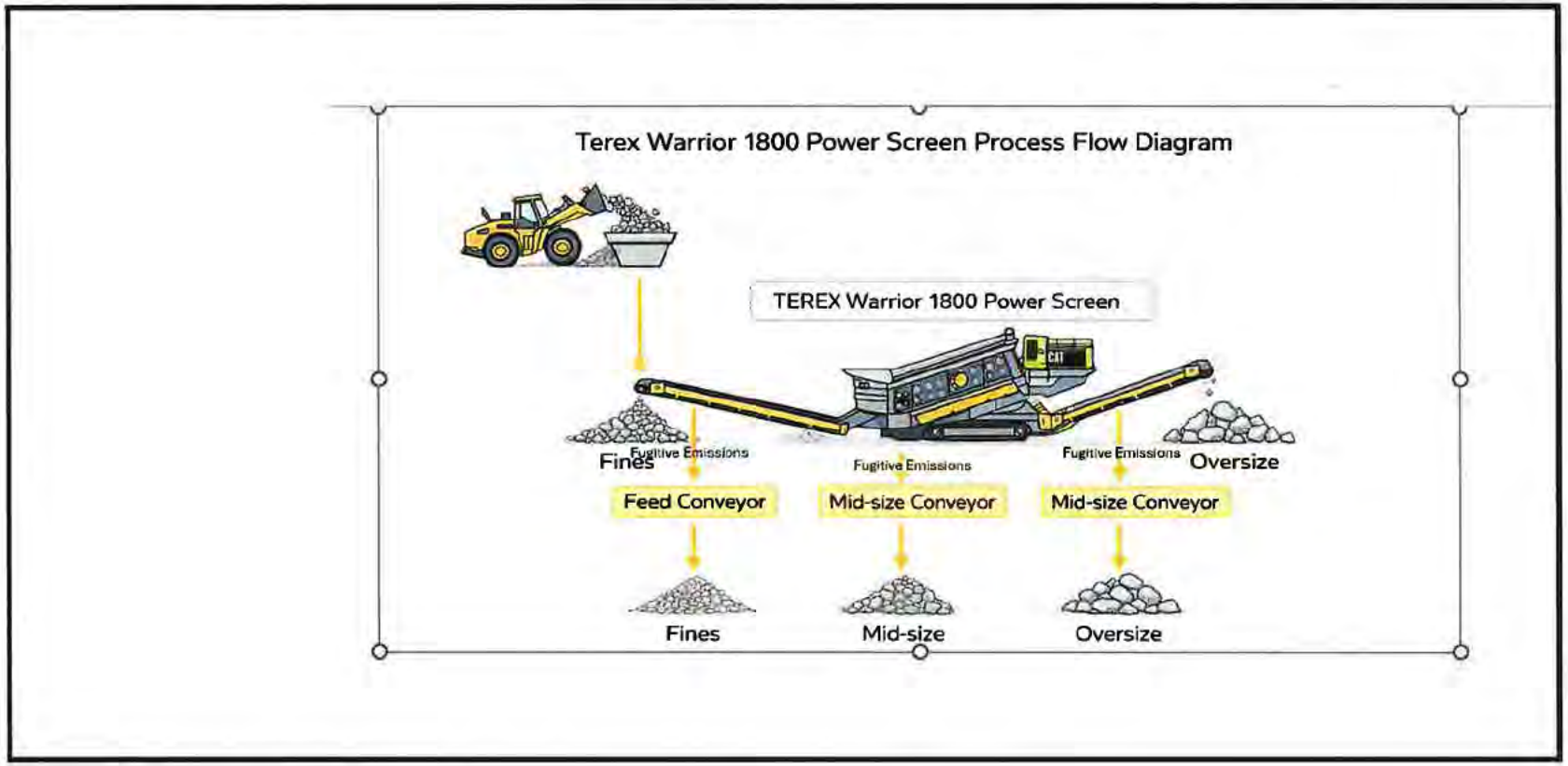
GCS-18

Terex Warrior Power Screen and Caterpillar Engine

DNREC – Air Quality Management Section
Application to Construct, Operate, or Modify Stationary Sources

Process Flow Diagram

Sketch the Process Flow Diagram for the equipment or process being applied for. Include each emission unit and control device (even existing emission units that will not be modified by this application). You may identify each emission unit with a simple shape. Label each emission unit and control device with a unique identifier. Show the relationship between each emission unit and/or control device by drawing arrows between them to indicate the flow of air pollutants. List which application forms are included for each emission unit or control device below the shape representing each emission unit or control device . See http://www.delaware.gov/reg2/default.htm for example Process Flow Diagrams for common processes. If you already have a Process Flow Diagram for the equipment or process being applied for, you may attach it to the application instead of using this form.



Crushed Stone Equipment Application

If you are using this form electronically, press F1 at any time for help

General Information

1. Facility Name: **Middletown Materials**
2. Equipment ID Number: **GCS-18** Terex Warrior 1800 Power Screen
3. Where Does the Stone Originate: ☐ On-Site ☒ Off-Site (Specify):
4. Locations Where Crusher Will Operate:

If the Crusher will operate at more than five locations, attach additional copies of this page as needed. Note that state law requires that a public notice for each location be made.

	Street Address	City	County	Zip Code	Condition of Roads at Location
4.1.	**Middletown Materials 1559 Cedar Lane Road**	**Middletown**	**New Castle**	**19709**	☐ Paved ☐ Unpaved ☒ Both
4.2.	Adel Construction 10 Adel Dr.	Newark	New Castle	19702	☐ Paved ☐ Unpaved ☒ Both
4.3.	Adel Construction 20139 Lowes Rd.	Gumboro	Sussex	19966	☐ Paved ☐ Unpaved ☒ Both
4.4.	Heritage Concrete 376 Holly Oak Lane	Cheswold	Kent	19936	☐ Paved ☐ Unpaved ☒ Both
4.5.	Oyster Cove Old Orchard Road	Lewes	Sussex	19958	☐ Paved ☐ Unpaved ☒ Both

Attach Proof of Local Zoning for each location.

5. Material Crushed:

If more than five Materials are crushed, attach additional copies of this page as needed.

	Material Name	Material Description
5.1.	**Reclaimed Asphalt Pavement**	**Roadway Pavements**
5.2.	**Reclaimed Concrete**	**Clean reclaimed concrete for crushing into recycled aggregate**
5.3.	**Dirt/Topsoil/Recycled Material/Aggregate**	**Construction Debris/Site Development**
5.4.		
5.5.		

6. Is a Feeder Used to Sort the Material Before Crushing? ☒ YES ☐ NO

If YES, complete the rest of Question 6. If NO, proceed to Question 7.

6.1. Is a Wet Suppression System Used to Control Emissions From the Feeder? ☒ YES ☐ NO

General Information

6.2. Feeder Power Provided By: ☒ Generator/Engine ☐ Utility ☐ Other (Specify):

If a Generator/Engine is used, include completed Form AQM-3.3 with this application.

Crusher Information

7. Number of Crushers: **SCREENER ONLY**

If there are more than two Crushers, attach additional copies of this page as needed.

For Primary Crusher

8. Primary Crusher Identification:

8.1. Primary Crusher Manufacturer:

8.2. Primary Crusher Model:

8.3. Primary Crusher Serial Number:

8.4. Maximum Amount of Material Processed in Primary Crusher: **600 ton/hr**

8.5. Is a Wet Suppression System Used to Control Emissions from the Crusher? ☐ YES ☐ NO

8.6. Primary Crusher Power Provided By: ☐ Generator/Engine ☐ Utility ☐ Other (Specify):

If a Generator/Engine is Used, Include Completed Form AQM-3.3 With this Application

8.7. Is a Screen Used to Sort Crushed Material? ☒ YES ☐ NO

If YES, complete the rest of Question 8.7. If NO, proceed to Question 9.

8.7.1. Is a Wet Suppression System Used to Control Emissions from the Screen? ☒ YES ☐ NO

8.7.2. Screen Power Provided By: ☒ Generator/Engine ☐ Utility ☐ Other (Specify):

If a Generator/Engine is used, include completed Form AQM-3.3 with this application.

For the Secondary Crusher. If There is No Secondary Crusher, Proceed to Question 10.

9. Secondary Crusher Identification:

9.1. Manufacturer:

9.2. Model:

9.3. Serial Number:

9.4. Maximum Amount of Material Processed: **ton/hr**

9.5. Is a Wet Suppression System Used to Control Emissions from the Crusher? ☐ YES ☐ NO

9.6. Power Provided By: ☐ Generator/Engine ☐ Utility ☐ Other (Specify):

If a Generator/Engine is used, include completed Form AQM-3.3 with this application.

Crusher Information

9.7. Is a Screen Used to Sort Crushed Material? ☐ YES ☐ NO

If YES, complete the rest of Question 9.7. If NO, proceed to Question 10.

9.7.1. Is a Wet Suppression System Used to Control Emissions From the Screen? ☐ YES ☐ NO

9.7.2. Screen Power Provided By: ☐ Generator/Engine
☐ Utility
☐ Other (Specify):

If a Generator/Engine is used, include completed Form AQM-3.3 with this application.

Conveyor Information

10. Are Conveyors Used in the Process? ☒ YES ☐ NO

If YES, proceed to Question 11. If NO, proceed to Question 15.

11. Number of Conveyors in Process: **4**

If more than three Conveyors are used, attach additional copies of this page as needed.

For the First Conveyor

12. Conveyor Identification: **feed conveyor**

12.1. Location: ☒ Before (Specify Equipment): **screen**
☐ After (Specify Equipment): **a**
☐ Between (Specify Equipment):

12.2. Maximum Amount of Material Conveyed: **600 ton/hr**

12.3. Is a Wet Suppression System Used to Control Emissions? ☒ YES ☐ NO

12.4. Conveyor Power Provided By: ☒ Generator/Engine
☐ Utility
☐ Other (Specify):

If a Generator/Engine is used, include completed Form AQM-3.3 with this application.

For the Second Conveyor. If There Is No Second Conveyor, Proceed to Question 15.

13. Conveyor Identification: **fines conveyer**

13.1. Location ☐ Before (Specify Equipment):
☒ After (Specify Equipment): **screen**
☐ Between (Specify Equipment):

13.2. Maximum Amount of Material Conveyed: **600 ton/hr**

13.3. Is a Wet Suppression System Used to Control Emissions? ☒ YES ☐ NO

13.4. Conveyor Power Provided By: ☒ Generator/Engine
☐ Utility
☐ Other (Specify):

If a Generator/Engine is used, include completed Form AQM-3.3 with this application.

For the Third Conveyor. If There Is No Third Conveyor, Proceed to Question 15.

14. Conveyor Identification: **O**versize and MidSize Conveyors

Conveyor Information

14.1. Location: ☐ Before (Specify Equipment):
☒ After (Specify Equipment): screen
☐ Between (Specify Equipment):

14.2. Maximum Amount of Material Conveyed: **600 ton/hr**

14.3. Is a Wet Suppression System Used to Control Emissions? ☒ YES ☐ NO

14.4. Conveyor Power Provided By: ☒ Generator/Engine
☐ Utility
☐ Other (Specify):

If a Generator/Engine is used, include completed Form AQM-3.3 with this application.

Fines Crushing Information

15. Do you perform any of the following activities at your facility: ☐ Pulverize Minerals
☐ Produce Sand
☐ Crush Stone Into a Fine Product

If you checked any of the boxes above, include complete Form AQM-3.10 with this application.

Visible Emissions Monitoring Information

16. Proposed Technique Used to Monitor Visible Emissions: ☐ Opacity Monitor (COM)
☒ Manual (Method 9)
☐ Manual (Method 22)
☐ Other (Describe):

If an Opacity Monitor (COM) is used, complete the rest of Question 16. If not, proceed to Question 17.

16.1. Describe the Continuous Opacity Monitoring System:

16.2. Manufacturer:

16.3. Model:

16.4. Serial Number:

17. Proposed Frequency of Opacity Monitoring:

Voluntary Emissions Limitation Request Information

18. Are You Requesting Any Voluntary Emission Limitations to Avoid Major Source Status, Minor New Source Review, MACT, NSPS, etc.? ☐ YES ☒ NO

If YES, complete the rest of Question 18. If NO, proceed to Question 19.

19.1. Describe Any Proposed Emission Limitations:

Voluntary Operating Limitation Request Information

19.	Are You Requesting Any Voluntary Operating Limitations to Avoid Major Source Status, Minor New Source Review, MACT, NSPS, etc.?	☒ YES ☐ NO
If YES, complete the rest of Question 19. If NO, proceed to Question 20.		
19.1.	Describe Any Proposed Operating Limitations: **Limit operation to 1,800 hours per consecutive 12-month period. Water suppression used to control emissions.**	

Additional Information

20.	Is There Any Additional Information Pertinent to this Application?	☐ YES ☒ NO
If YES, complete the rest of Question 20.		
20.1.	Describe:	

Generator/Engine Application

If you are using this form electronically, press F1 at any time for help

General Information

1.	Facility Name: **Middletown Materials**
2.	Equipment ID: **E**ngine for GCS-18 Terex Warrior 1800 Power Screen
3.	Manufacturer: **Caterpillar**
4.	Model: **C4.**4
5.	Serial Number: **44**605467
6.	Maximum Power Rating of Engine: **11**0 horsepower
7.	Standby Power Rating of Generator: **8**3 kilowatt
8.	Date of Manufacture: **2**011
9.	Installation Date: **TBD**
10.	Is the Equipment Being Applied For a Generator or an Engine? ☐ Generator ☒ Engine
If the equipment is a Generator, complete the rest of Question 10. If not, proceed to Question 11.	
10.1.	Is the Generator Existing or New? ☐ Existing ☐ New
10.2.	Will the Generator Be Classified as an Emergency Generator or a Distributed Generator? ☐ Emergency ☐ Distributed
10.3.	Has an Initial Notification Pursuant to 7 **DE Admin. Code** 1144 Been Submitted for this Generator? ☐ YES ☐ NO
If NO, include a copy of the Initial Notification with this application.	
10.4.	Have the Emissions From the Generator Been Certified to Meet the Currently Applicable US EPA Non-Road Emission Standards? ☐ YES ☐ NO
If YES, attach a copy of the Manufacturer's Certification. If NO, attach copies of any/all of the following: any maintenance or operating requirements/instructions provided by the generator manufacturer; the type, or a description, of any emission control equipment use; and/or emissions test data for the generator (such as a manufacturer's technical data sheet), any supporting documentation for any emission control equipment used, any supporting calculations, any quality control or assurance information, and any other information needed to demonstrate compliance with the requirements. Proceed to Question 11.	
11.	Primary Fuel: ☐ Natural Gas ☒ Diesel ☐ Propane ☐ Biodiesel ☐ Other (specify):
11.1.	Maximum Annual Primary Fuel Consumption: **9**000 **gal**
11.2.	Heat Content of Primary Fuel: **128,700 BTU/gal**
11.3.	Maximum Firing Rate: **5 gallons/hr**
11.4.	Percent Sulfur of Primary Fuel: **0.0015** %
12.	Secondary Fuel: ☐ Natural Gas ☐ Diesel ☐ Propane ☐ Biodiesel ☐ Other (specify):

General Information

12.1.	Maximum Annual Secondary Fuel Consumption: **MMCF**
12.2.	Heat Content of Secondary Fuel: **BTU/CF**
12.3.	Maximum Firing Rate: **MMCF/hr**
12.4.	Percent Sulfur of Secondary Fuel: %
13.	Is SCR/NSCR/SNCR/Ammonia Injection Used: ☐ YES ☐ NO

Stack Information

14. How Does the Process Equipment Vent:
(check all that apply)
☒ Directly to the Atmosphere
☐ Through a Control Device Covered by Forms AQM-4.1 through 4.12

If any of the process equipment vents directly to the atmosphere proceed to Question 15. If the process equipment vents through a control device, provide the stack parameters on the control device form and proceed to Question 16.

15. Emission Point Name: **Engine Stack**

15.1. Stack Height Above Grade: **8 feet**

15.2. Stack Exit Diameter: **0.3 feet**
(Provide Stack Dimensions If Rectangular Stack)

15.3. Is a Stack Cap Present? ☒ YES ☐ NO

15.4. Stack Configuration: ☒ Vertical ☐ Horizontal ☐ Downward-Venting
(check all that apply) ☐ Other (Specify):

15.5. Stack Exit Gas Temperature: **1000 °F**

15.6. Stack Exit Gas Flow Rate: **500 ACFM**

15.7. Distance to Nearest Property Line: **200 ft**

15.8. Describe Nearest Obstruction: **Soil Stockpile**

15.9. Height of Nearest Obstruction: **40 ft**

15.10. Distance to Nearest Obstruction: **145 ft**

15.11. Are Stack Sampling Ports Provided? ☐ YES ☒ NO

Monitoring Information

16. Will Emissions Data be Recorded by a Continuous Emission Monitoring System? ☐ YES ☒ NO

If Yes, Attach a Copy of the Continuous Emission Monitoring System Manufacturer's Specification Sheets

If YES, complete the rest of Question 16. If NO, proceed to Question 17.

16.1. Pollutants Monitored: ☐ VOCs ☐ HAPs ☐ PM ☐ PM_{10} ☐ $PM_{2.5}$ ☐ NO_X ☐ SO_X ☐ Metals
☐ Other (Specify):

16.2. Describe the Continuous Emission Monitoring System:

Monitoring Information
16.3. Manufacturer:
16.4. Model:
16.5. Serial Number:
16.6. Will Multiple Emission Units Be Monitored at the Same Point? ☐ YES ☐ NO
If YES, complete the rest of Question 16. If NO, proceed to Question 17.
16.7. Emission Units Monitored:
16.8. Will More Than One Emission Unit be Emitting From the Combined Point At Any Time? ☐ YES ☐ NO
If YES, complete the rest of Question 15. If NO, proceed to Question 17.
16.9. Emission Units Emitting Simultaneously:

Visible Emissions Monitoring Information
For Primary Fuel
17. Proposed Technique Used to Monitor Visible Emissions: ☐ Opacity Monitor (COM) ☒ Manual (Method 9) ☐ Manual (Method 22) ☐ Other (Describe):
If an Opacity Monitor (COM) is used, complete the rest of Question 17. If not, proceed to Question 18.
17.1. Describe the Continuous Opacity Monitoring System:
17.2. Manufacturer:
17.3. Model:
17.4. Serial Number:
18. Proposed Frequency of Opacity Monitoring:
For Secondary Fuel. If no Secondary Fuel is used, proceed to Question 20.
19. Proposed Technique Used to Monitor Visible Emissions: ☐ Opacity Monitor (COMs) ☐ Manual (Method 9) ☐ Manual (Method 22) ☐ Other (Describe):
If an Opacity Monitor (COMs) is used, complete the rest of Question 19. If not, proceed to Question 20.
19.1. Describe the Continuous Opacity Monitoring System:
19.2. Manufacturer:
19.3. Model:
19.4. Serial Number:
20. Proposed Frequency of Opacity Monitoring:

Voluntary Emission Limitation Request Information

21.	Are You Requesting Any Voluntary Emission Limitations to Avoid Major Source Status, Minor New Source Review, MACT, NSPS, etc.?	☐ YES ☒ NO
If YES, complete the rest of Question 21. If NO, proceed to Question 22.		
21.1.	Describe Any Proposed Emission Limitations:	

Voluntary Operating Limitation Request Information

22.	Are You Requesting Any Voluntary Operating Limitations to Avoid Major Source Status, Minor New Source Review, MACT, NSPS, etc.?	☒ YES ☐ NO
If YES, complete the rest of Question 22. If NO, proceed to Question 23.		
22.1.	Describe Any Proposed Operating Limitations: **Restrict hours of operation to 1,800 per rolling 12 month period.**	

Additional Information

23.	Is There Any Additional Information Pertinent to this Application?	☐ YES ☒ NO
If YES, complete the rest of Question 23.		
22.1.	Describe:	

Emissions Information Application

If you are using this form electronically, press F1 at any time for help

Process Information	
1.	Number of Individual Pieces of Process Equipment in Process: **Terex Warrior 1800 Power Screen and Engine GCS-18**
2.	Number of Individual Control Devices in Process: **1 - Water Suppression**

Emissions Information for First Emission Point/Stack

3. Emission Point Name: **GCS-18 Terex Warrior 1800 Power Screen**

4. Equipment ID Number for all Process Equipment and Control Devices Venting Through Emission Point/Stack: **GCS-18 Terex Warrior 1800 Power Screen**

5. Pollutant Emissions

If more than 15 pollutants are emitted at this Emission Point/Stack, attach additional copies of this page as needed.

	Pollutant Name (Specify VOCs and HAPs Individually in 5.10 through 5.18)	CAS Number (Not required for 5.1 through 5.10)	Maximum Uncontrolled Emission Rate at Design Capacity	Maximum Controlled Emission Rate at Design Capacity	Annual Potential to Emit (PTE)	Requested Permitted Annual Emissions
5.1.	Particulate Matter (PM)		**20.4 lbs/hour**	**1.572 lbs/hour**	**89.35** tons/year	**1.415** tons/year
5.2.	PM_{10}		**7.2 lbs/hour**	**0.5268 lbs/hour**	**31.54** tons/year	**0.474** tons/year
5.3.	$PM_{2.5}$		**0.3762 lbs/hour**	**0.0417 lbs/hour**	**1.65** tons/year	**0.0375** tons/year
5.4.	Sulfur Oxides (SO_x)		**lbs/hour**	**lbs/hour**	tons/year	tons/year
5.5.	Nitrogen Oxides (NO_x)		**lbs/hour**	**lbs/hour**	tons/year	tons/year
5.6.	Carbon Monoxide (CO)		**lbs/hour**	**lbs/hour**	tons/year	tons/year
5.7.	Total Volatile Organic Compounds (VOCs)		**lbs/hour**	**lbs/hour**	tons/year	tons/year

Emissions Information for First Emission Point/Stack

5.8.	Total Hazardous Air Pollutants (HAPs)		**lbs/hour**	**lbs/hour**	tons/year	tons/year
5.9.	CO_2		**lbs/hour**	**lbs/hour**	tons/year	tons/year
5.10.	CO_{2e}		**lbs/hour**	**lbs/hour**	tons/year	tons/year
5.11.			**lbs/hour**	**lbs/hour**	tons/year	tons/year
5.12.			**lbs/hour**	**lbs/hour**	tons/year	tons/year
5.13.			**lbs/hour**	**lbs/hour**	tons/year	tons/year
5.14.			**lbs/hour**	**lbs/hour**	tons/year	tons/year
5.15.			**lbs/hour**	**lbs/hour**	tons/year	tons/year

6. Provide Any Additional Information Necessary to Understanding the Emission Rates Provided Above:

Attach the Basis of Determination or Calculations for each Emission Rate provided above.

Emissions Information for Second Emission Point/Stack

7. Emission Point Name: **Caterpillar Engine**

8. Equipment ID Number for all Process Equipment and Control Devices Venting Through Emission Point/Stack: **Engine Stack**

9. Pollutant Emissions

If more than 15 pollutants are emitted at this Emission Point/Stack, attach additional copies of this page as needed.

	Pollutant Name (Specify VOCs and HAPs Individually in 9.10 through 9.18)	CAS Number (Not required for 9.1 through 9.10)	Maximum Uncontrolled Emission Rate at Design Capacity	Maximum Controlled Emission Rate at Design Capacity	Annual Potential to Emit (PTE)	Requested Permitted Annual Emissions
9.1.	Particulate Matter (PM)		**0.055 lbs/hour**	**0.055 lbs/hour**	**0.24** tons/year	**0.0495** tons/year

Emissions Information for Second Emission Point/Stack						
9.2.	PM_{10}		**0.055 lbs/hour**	**0.055 lbs/hour**	**0.24** tons/year	**0.0495** tons/year
9.3.	$PM_{2.5}$		**0.055 lbs/hour**	**0.055 lbs/hour**	**0.24** tons/year	**0.0495** tons/year
9.4.	Sulfur Oxides (SO_X)		**0.00104 lbs/hour**	**0.00104 lbs/hour**	**0.0046** tons/year	**0.00094** tons/year
9.5.	Nitrogen Oxides (NO_X)		**0.641 lbs/hour**	**0.641 lbs/hour**	**2.81** tons/year	**0.577** tons/year
9.6.	Carbon Monoxide (CO)		0.915 **lbs/hour**	**0.915 lbs/hour**	**4.01** tons/year	**0.824** tons/year
9.7.	Total Volatile Organic Compounds (VOCs)		**0.092 lbs/hour**	**0.092 lbs/hour**	**0.40** tons/year	**0.0828** tons/year
9.8.	Total Hazardous Air Pollutants (HAPs)		**0.00199 lbs/hour**	**0.00199 lbs/hour**	**0.0087** tons/year	**0.00179** tons/year
9.9.	CO_2		**112 lbs/hour**	**112 lbs/hour**	**490.56** tons/year	**100.80** tons/year
9.10.	CO_{2e}		**lbs/hour**	**lbs/hour**	tons/year	tons/year
9.11.			**lbs/hour**	**lbs/hour**	tons/year	tons/year
9.12.			**lbs/hour**	**lbs/hour**	tons/year	tons/year
9.13.			**lbs/hour**	**lbs/hour**	tons/year	tons/year
9.14.			**lbs/hour**	**lbs/hour**	tons/year	tons/year
9.15.			**lbs/hour**	**lbs/hour**	tons/year	tons/year

10. Provide Any Additional Information Necessary to Understanding the Emission Rates Provided Above:

Attach the Basis of Determination or Calculations for each Emission Rate provided above.

Emissions Information for Third Emission Point/Stack

11. Emission Point Name:

Emissions Information for Third Emission Point/Stack

12. Equipment ID Number for all Process Equipment and Control Devices Venting Through Emission Point/Stack:

13. Pollutant Emissions

If more than 15 pollutants are emitted at this Emission Point/Stack, attach additional copies of this page as needed.

	Pollutant Name (Specify VOCs and HAPs Individually in 13.10 through 13.18)	CAS Number (Not required for 13.1 through 13.10)	Maximum Uncontrolled Emission Rate at Design Capacity	Maximum Controlled Emission Rate at Design Capacity	Annual Potential to Emit (PTE)	Requested Permitted Annual Emissions
13.1.	Particulate Matter (PM)		**lbs/hour**	**lbs/hour**	tons/year	tons/year
13.2.	PM_{10}		**lbs/hour**	**lbs/hour**	tons/year	tons/year
13.3.	$PM_{2.5}$		**lbs/hour**	**lbs/hour**	tons/year	tons/year
13.4.	Sulfur Oxides (SO_X)		**lbs/hour**	**lbs/hour**	tons/year	tons/year
13.5.	Nitrogen Oxides (NO_X)		**lbs/hour**	**lbs/hour**	tons/year	tons/year
13.6.	Carbon Monoxide (CO)		**lbs/hour**	**lbs/hour**	tons/year	tons/year
13.7.	Total Volatile Organic Compounds (VOCs)		**lbs/hour**	**lbs/hour**	tons/year	tons/year
13.8.	Total Hazardous Air Pollutants (HAPs)		**lbs/hour**	**lbs/hour**	tons/year	tons/year
13.9.	CO_2		**lbs/hour**	**lbs/hour**	tons/year	tons/year
13.10.	CO_{2e}		**lbs/hour**	**lbs/hour**	tons/year	tons/year
13.11.			**lbs/hour**	**lbs/hour**	tons/year	tons/year
13.12.			**lbs/hour**	**lbs/hour**	tons/year	tons/year
13.13.			**lbs/hour**	**lbs/hour**	tons/year	tons/year
13.14.			**lbs/hour**	**lbs/hour**	tons/year	tons/year
13.15.			**lbs/hour**	**lbs/hour**	tons/year	tons/year

Emissions Information for Third Emission Point/Stack

14. Provide Any Additional Information Necessary to Understanding the Emission Rates Provided Above:

Attach the Basis of Determination or Calculations for each Emission Rate provided above.

Emissions Information for Fourth Emission Point/Stack

15. Emission Point Name:

16. Equipment ID Number for all Process Equipment and Control Devices Venting Through Emission Point/Stack:

17. Pollutant Emissions

If more than 15 pollutants are emitted at this Emission Point/Stack, attach additional copies of this page as needed.

	Pollutant Name (Specify VOCs and HAPs Individually in 17.10 through 17.18)	CAS Number (Not required for 17.1 through 17.10)	Maximum Uncontrolled Emission Rate at Design Capacity	Maximum Controlled Emission Rate at Design Capacity	Annual Potential to Emit (PTE)	Requested Permitted Annual Emissions
17.1.	Particulate Matter (PM)		**lbs/hour**	**lbs/hour**	tons/year	tons/year
17.2.	PM_{10}		**lbs/hour**	**lbs/hour**	tons/year	tons/year
17.3.	$PM_{2.5}$		**lbs/hour**	**lbs/hour**	tons/year	tons/year
17.4.	Sulfur Oxides (SO_X)		**lbs/hour**	**lbs/hour**	tons/year	tons/year
17.5.	Nitrogen Oxides (NO_X)		**lbs/hour**	**lbs/hour**	tons/year	tons/year
17.6.	Carbon Monoxide (CO)		**lbs/hour**	**lbs/hour**	tons/year	tons/year
17.7.	Volatile Organic Compounds (VOCs)		**lbs/hour**	**lbs/hour**	tons/year	tons/year
17.8.	Total Hazardous Air Pollutants (HAPs)		**lbs/hour**	**lbs/hour**	tons/year	tons/year
17.9.	CO_2		**lbs/hour**	**lbs/hour**	tons/year	tons/year

Emissions Information for Fourth Emission Point/Stack

17.10. CO_{2e}		**lbs/hour**	**lbs/hour**	tons/year	tons/year
17.11.		**lbs/hour**	**lbs/hour**	tons/year	tons/year
17.12.		**lbs/hour**	**lbs/hour**	tons/year	tons/year
17.13.		**lbs/hour**	**lbs/hour**	tons/year	tons/year
17.14.		**lbs/hour**	**lbs/hour**	tons/year	tons/year
17.15.		**lbs/hour**	**lbs/hour**	tons/year	tons/year

18. Provide Any Additional Information Necessary to Understanding the Emission Rates Provided Above:

Attach the Basis of Determination or Calculations for each Emission Rate provided above.

If there are more than four Emission Points/Stacks, attach additional copies of this form as needed.

Overall Process Emissions

19. Pollutant Emissions

If more than 15 pollutants are emitted from this Process, attach additional copies of this page as needed.

Pollutant Name (Specify VOCs and HAPs Individually in 19.10 through 19.18)	CAS Number (Not required for 19.1 through 19.10)	Maximum Uncontrolled Emission Rate at Design Capacity	Maximum Controlled Emission Rate at Design Capacity	Annual Potential to Emit (PTE)	Requested Permitted Annual Emissions
19.1. Particulate Matter (PM)		**20.455 lbs/hour**	**1.627 lbs/hour**	**89.59** tons/year	**1.464** tons/year
19.2. PM_{10}		**7.255 lbs/hour**	**0.5818 lbs/hour**	**31.78** tons/year	**0.524** tons/year
19.3. $PM_{2.5}$		**0.4312 lbs/hour**	**0.0967 lbs/hour**	**1.89** tons/year	**0.0870** tons/year
19.4. Sulfur Oxides (SO_x)		**0.00104 lbs/hour**	**0.00104 lbs/hour**	**0.0046** tons/year	**0.00094** tons/year
19.5. Nitrogen Oxides (NO_x)		**0.641 lbs/hour**	**0.641 lbs/hour**	**2.81** tons/year	**0.577** tons/year

Overall Process Emissions

19.6.	Carbon Monoxide (CO)		**0.915 lbs/hour**	**0.915 lbs/hour**	**4.01** tons/year	**0.824** tons/year
19.7.	Total Volatile Organic Compounds (VOCs)		**0.092 lbs/hour**	**0.092 lbs/hour**	**0.40** tons/year	**0.0828** tons/year
19.8.	Total Hazardous Air Pollutants (HAPs)		**0.00199 lbs/hour**	**0.00199 lbs/hour**	**0.0087** tons/year	**0.00179** tons/year
19.9.	CO_2		**112.0 lbs/hour**	**112.0 lbs/hour**	**490.56** tons/year	**100.80** tons/year
19.10.	CO_{2e}		**lbs/hour**	**lbs/hour**	tons/year	tons/year
19.12.			**lbs/hour**	**lbs/hour**	tons/year	tons/year
19.13.			**lbs/hour**	**lbs/hour**	tons/year	tons/year
19.14.			**lbs/hour**	**lbs/hour**	tons/year	tons/year
19.15.			**lbs/hour**	**lbs/hour**	tons/year	tons/year

20. Provide Any Additional Information Necessary to Understanding the Emission Rates Provided Above:

Attach the Basis of Determination or Calculations for each Emission Rate provided above.

Minor New Source Review Information

21. Does the Process Have the Potential to Emit More Than Five Tons Per Year of Any Pollutant? ☒ YES ☐ NO

22. Is the Source New or Existing? ☒ NEW ☐ EXISTING
See Question 11 of AQM-1

If the Process has the Potential to Emit more than five tons per year of any pollutant, and is a New Source, a Control Technology Analysis pursuant to Regulation No. 1125 Section 4 must be conducted and attached to this application.

Major New Source Review Information

23. Does the Process Have the Potential to Emit More Than the Significance Level for Any Pollutant? *(Check All That Apply)*

- ☐ Greater Than 25 Tons Per Year of Particulate Matter (PM)
- ☐ Greater Than 15 Tons Per Year of PM_{10}
- ☐ Greater Than 10 Tons Per Year of $PM_{2.5}$
- ☐ Greater Than 40 Tons Per Year of Sulfur Dioxide(SO_2)
- ☐ Greater Than 25 Tons Per Year of Nitrogen Oxides (NO_X) in New Castle and Kent County
- ☐ Greater Than 100 Tons Per Year of Nitrogen Oxides (NO_X) in Sussex County
- ☐ Greater Than 100 Tons Per Year of Carbon Monoxide (CO)
- ☐ Greater Than 25 Tons Per Year of Total Volatile Organic Compounds (VOCs) in New Castle and Kent County
- ☐ Greater Than 50 Tons Per Year of Total Volatile Organic Compounds (VOCs) in Sussex County
- ☐ Greater Than 75,000 Tons Per Year of Equivalent Carbon Dioxide (CO_{2e})

If the Process has the Potential to Emit greater than any of the amounts listed above 7 DE Admin. Code 1125 Sections 2 and/or 3 apply. Contact the Department at (302) 323-4542 or (302) 739-9402 for additional information

Additional Information

24. Is There Any Additional Information Pertinent to this Application? ☒ YES ☐ NO

If YES, complete the rest of Question 24.

24.1. Describe: **Restricting the hours of operation have reduced emissions to below major source thresholds. Restrict hours of operation to 1800 per rolling 12 month period.**

TEREX WARRIOR 1800 POWER SCREEN AND C4.4 CATERPILLAR ENGINE
GCS-18

TEREX WARRIOR 1800 POWER SCREEN				
Make	**Serial No.**	**Process Rate**	**Conveyers**	**Dust Suppression**
Terex Warrior	PID00123CDGB22150	600 tph	4	Yes
ENGINE INFORMATION				
Make	**Model**	**Serial No.**	**Engine Arrangement No.**	**Engine Tier**
Caterpillar	C4.4	44605467	321-3042	Tier 3

Maximum throughput for the Warrior 1800 screening plant is **600 tons per hour** based on manufacturer specifications. The Warrior 1800 consists of:

- hopper feed
- feed conveyor
- two-deck screenbox
- discharge conveyors (modeled as equivalent transfer point)

To avoid double counting, emissions are calculated for:

- hopper dump point
- feed conveyor transfer
- screening operation
- equivalent discharge transfer

Uncontrolled emission factors:

Source	PM (lb/ton)	PM10 (lb/ton)	PM2.5 (lb/ton)
Hopper dump transfer point	0.0030	0.0011	0.000013
Feed transfer point	0.0030	0.0011	0.000013
Screening operation	0.0250	0.0087	0.000588
Equivalent discharge transfer	0.0030	0.0011	0.000013

Pollutant	lb/hr Emission Rate	lb/hr Controlled	PTE @ 8760 (tpy)	PTE @ 8760 Controlled (tpy)	PTE @ 1800 Controlled (tpy)
PM	20.40	1.572	89.35	6.89	1.415
PM10	7.20	0.5268	31.54	2.31	0.474
PM2.5	0.3762	0.0417	1.65	0.183	0.0375
CO2	—	—	—	—	—

TEREX WARRIOR 1800 POWER SCREEN AND C4.4 CATERPILLAR ENGINE
GCS-18

Engine Information

Engine: Caterpillar C4.4
Rating: 83 kW (110 hp)

Tier: EPA Tier 3 (2011 model year)

Engine Emission Factors

Pollutant	EF (g/kW-hr)
NOx	3.5
VOC	0.5
CO	5.0
PM	0.30

Engine Emissions

Pollutant	lb/hr Emission Rate	lb/hr Controlled	PTE @ 8760 (tpy)	PTE @ 8760 Controlled (tpy)	PTE @ 1800 Controlled (tpy)
PM	0.055	0.055	0.24	0.24	0.0495
PM10	0.055	0.055	0.24	0.24	0.0495
PM2.5	0.055	0.055	0.24	0.24	0.0495
NOx	0.641	0.641	2.81	2.81	0.577
CO	0.915	0.915	4.01	4.01	0.824
VOC	0.092	0.092	0.40	0.40	0.0828
SOx	0.00104	0.00104	0.0046	0.0046	0.00094
Total HAPs	0.00199	0.00199	0.0087	0.0087	0.00179
CO2	112.0	112.0	490.56	490.56	100.80

Combined Emissions (Process + Engine)

Pollutant	lb/hr Emission Rate	lb/hr Controlled	PTE @ 8760 (tpy)	PTE @ 8760 Controlled (tpy)	PTE @ 1800 Controlled (tpy)
PM	20.455	1.627	89.59	7.13	1.464
PM10	7.255	0.5818	31.78	2.55	0.524

TEREX WARRIOR 1800 POWER SCREEN AND C4.4 CATERPILLAR ENGINE
GCS-18

Pollutant	lb/hr Emission Rate	lb/hr Controlled	PTE @ 8760 (tpy)	PTE @ 8760 Controlled (tpy)	PTE @ 1800 Controlled (tpy)
PM2.5	0.4312	0.0967	1.89	0.423	0.0870
NOx	0.641	0.641	2.81	2.81	0.577
CO	0.915	0.915	4.01	4.01	0.824
VOC	0.092	0.092	0.40	0.40	0.0828
SOx	0.00104	0.00104	0.0046	0.0046	0.00094
Total HAPs	0.00199	0.00199	0.0087	0.0087	0.00179
CO2	112.0	112.0	490.56	490.56	100.80

Combined emissions were calculated by summing the process emissions for the Terex Warrior 1800 screening plant and the exhaust emissions from the Caterpillar C4.4 engine. Process emissions were estimated for one hopper dump point, one feed transfer point, one screening operation, and one equivalent discharge transfer point at a maximum throughput of 600 tph. Controlled emissions reflect wet suppression applied to transfer-point handling and screening operations.

FACILITY WIDE POTENTIAL TO EMIT CALCULATIONS

POTENTIAL TO EMIT (TPY) 8760 HOURS

Unit	PM	PM10	PM2.5	SOx	NOx	CO	VOC	HAPs	CO2
GCS-11	22.58	8.23	0.97	0.007	11.59	4.37	1.18	0.014	751.54
GCS-18	89.59	31.78	1.89	0.0046	2.81	4.01	0.4	0.0087	490.56
GCS-24	37	13.09	1	0.007	3.51	1.88	0.93	0.011	706.3
GCS-25	15.78	5.79	0.08	0.005	0.29	3.6	0.14	0.0016	490.6
GCS-29	49.06	17.17	1.05	0.017	0.29	3.6	0.14	0.0016	490.6
GCS-32	97.086	33.954	2.101	0.0171	0.479	0.252	0.101	0.0674	1682
GCS-33	5.273	1.944	0.0394	0.00547	0.332	4.152	0.158	0.02	552.68
GCS-04	0.5256			0.0438	39.928	4.38	0.6132		
GCS-21	1.314		0.0438		50.9832	8.63			
GCS-15	0.6132			0.0438	44.895	5.0808	0.7446		
GCS-16	0.2628			3.8106	18.133	2.847	0.3504		
GCS-26	3.24			1.62	24.528	3.2412	1.62		
PTE	**322.3246**	**111.958**	**7.1742**	**5.58137**	**197.7682**	**46.043**	**6.3772**	**0.1243**	**5164.28**

*note PTE calc based off permitted emissions for existing sources.

CONTROLLED POTENTIAL TO EMIT (TPY) (DUST SUPPRESSION) and 8750

Unit	PM	PM10	PM2.5	SOx	NOx	CO	VOC	HAPs	CO2
GCS-11	2.348	1.124	0.549	0.0066	11.593	4.369	1.176	0.0143	751.52
GCS-18	7.126	2.548	0.424	0.0046	2.808	4.008	0.403	0.0087	490.56
GCS-24	3.288	1.246	0.288	0.0066	3.508	1.88	0.928	0.0111	706.49
GCS-25	0.745	0.256	0.049	0.0046	0.288	3.6	0.137	0.0016	490.56
GCS-29	4.09	1.37	0.098	0.0046	0.288	3.6	0.137	0.0016	490.56
GCS-32	8.173	2.768	0.245	0.0171	0.479	0.252	0.101	0.0675	1681.92
GCS-33	0.262	0.097	0.028	0.0055	0.332	4.152	0.158	0.0201	552.67

HOURS RESTRICTION 1800/CONTROLLED EMISSIONS (DUST SUPPRESSION) UNLESS OTHERWISE NOTED

Unit	PM	PM10	PM2.5	SOx	NOx	CO	VOC	HAPs	CO2	Restriction
GCS-11	0.483	0.231	0.113	0.00144	2.382	0.898	0.242	0.00293	154.43	1800 hrs and Dust Suppression
GCS-18	1.464	0.524	0.087	0.00094	0.577	0.824	0.083	0.00179	100.8	1800 hrs and Dust Suppression
GCS-24	0.676	0.256	0.059	0.00135	0.721	0.386	0.191	0.0023	145.2	1800 hrs and Dust Suppression
GCS-25	0.154	0.053	0.01	0.00094	0.059	0.74	0.028	0.00034	100.8	1800 hrs and Dust Suppression
GCS-29	**0.842**	**0.283**	**0.0203**	0.00094	0.059	0.74	0.028	0.00034	100.8	1800 hrs and Dust Suppression

GCS-32	1.675	0.568	0.051	0.00351	0.098	0.052	0.0208	0.0139	345.62	1800 hrs and Dust Suppression
GCS-33	0.0537	0.02	0.0068	0.00112	0.068	0.853	0.032	0.00412	113.56	1800 hrs and Dust Suppression
GCS-04	0.066			0.0055	4.8895	0.55	0.077			1100 hours as permitted
GCS-21	0.1253			0.0042	4.8597	0.8225	0			835 hours as permitted
GCS-15	0.0665			0.0048	4.8688	0.551	0.0808			950 hours as permitted
GCS-16	0.06			0.87	4.14	0.65	0.08			2000 hours as permitted
GCS-26	0.2			0.1	1.5	0.2	0.1			10,000 gallons fuel as permitted

PTE	5.8655			0.99474	24.222	7.2665	0.9626			

GCS-04 (650 Horsepower Morbark Tub Grinder)				Permit Restriction (hrs/year)
	g/hp-hr	lb/hr (=EF (g/hp-hr)×hp×0.002205)	PTE TPY (8760 hrs)	1100
NOx	6.203	8.89	38.9382	4.8895
CO	0.698	1	4.38	0.55
THC	0.098	0.14	0.6132	0.077
PM	0.084	0.12	0.5256	0.066
SO2	0.007	0.01	0.0438	0.0055

1200 Horsepower Morbark Tub Grinder (GCS-21)				Permit Restriction
	g/hp-hr	lb/hr (=EF (g/hp-hr)×hp×0.002205)	PTE TPY (8760 hr)	835
NOx	4.4	11.64	50.9832	4.8597
	0.745			
CO		1.97	8.6286	0.822475
THC				0
PM	0.113	0.3	1.314	0.12525
SO2	0.0038	0.01	0.0438	0.004175

750 Horsepower Morbark Tub Grinder (GCS-15)				Permit Restriction (hrs/year)
	g/hp-hr	lb/hr (=EF (g/hp-hr)×hp×0.002205)	PTE TPY (8760 hr)	950
NOx	6.2	10.25	44.895	4.86875
CO	0.7	1.16	5.0808	0.551
THC	0.1	0.17	0.7446	0.08075
PM	0.085	0.14	0.6132	0.0665
SO2	0.006	0.01	0.0438	0.00475

425 Horsepower Portable Nordberg Lokotrack Crusher (GCS-16)				Permit Restriction
	g/hp-hr	lb/hr (=EF (g/hp-hr)×hp×0.002205)	PTE TPY (8760 hr)	2000
NOx	4.42	4.14	18.1332	4.14
CO	0.69	0.65	2.847	0.65
THC	0.085	0.08	0.3504	0.08
PM	0.064	0.06	0.2628	0.06
SO2	0.93	0.87	3.8106	0.87

GCS-28				
Pollutant	**Uncontrolled lb/hr**	**Controlled lb/hr**	**Uncontrolled tpy**	**Controlled tpy**
NOx	0.233	0.233	1.023	1.023
CO	2.043	2.043	8.947	8.947
VOC	0.11	0.11	0.486	0.486
SO_2	0.00378	0.00378	0.0166	0.0166
PM	0.4317	0.0957	1.891	0.419
PM10	0.1812	0.0456	0.794	0.794
PM2.5	0.0492	0.0192	0.215	0.215

	Nox	CO	THC	PM	Sox
GCS-26	24.528	3.2412	1.6206	3.2412	1.6206
Fuel Restriction	1.5	0.2	0.1	0.2	0.1

ZONING APPROVAL

PLANNING & ZONING

[redacted]

(302) 855-7878 T
(302) 854-5079 F

Sussex County
DELAWARE
sussexcountyde.gov

Sussex County Zoning Verification

This form is to provide the current zoning for the following parcel of land located within Sussex County. This form does not grant approval for any current or future use of the property.

Tax Parcel Number: 333-14.00-23.00

Location: 20139 Lowes Road Gumboro, DE 19966 (Adel Construction)

Current Zoning: AR-1

Owner: (from assessment records):

Term 2, LLC

Owner Mailing Address (from assessment records):

10 Adel Dr.

Newark, DE 19958

The zoning for this property has been confirmed from the Official Sussex County Zoning Map by:

Sussex Cou[redacted]mber

Date

See attached email.

Gmail [redacted]

Zoning Verification Request-Adel Construction 20139 Lowes Road Gumboro, DE 19966

3 messages

[redacted] Wed, Feb 11, 2026 at 8:23 AM
To: PandZ@sussexcountyde.gov

Hello,

On behalf of Adel Construction, I am writing to request written verification of the current zoning designation and approved uses for the subject property (Adel Construction - 20139 Lowes Road Gumboro, DE 19966).

The site is in the process of seeking an air permit from the Delaware Department of Natural Resources and Environmental Control (DNREC) that will allow for temporary crushing operations using a mobile crusher unit that is operated statewide. As part of the DNREC air permit application, we are required to provide proof of zoning and confirmation that the proposed activity is consistent with the County's approvals.

The property received a Conditional Use approval in June 2017 for a recycling center and weight scale operation. The Conditional Use decision also identified that temporary crushing activities would be performed onsite as part of the approved operations.

Accordingly, we are requesting written verification of the following:

1. The current zoning classification of the property; and
2. Confirmation that limited or temporary crushing activities are allowed onsite pursuant to the June 2017 Conditional Use approval.

Please let me know if you need any additional information. I have attached the required Zoning Verification Request Form.

Thank you for your assistance.

[redacted]
Program Manager
RainWise Environmental Solutions, LLC.
302.423.8137
www.rainwiseenviro.com.
[redacted]

ZoningVerificationFormAdelConstruction_Gumboro.pdf
100K

Planning and Zoning <pandz@sussexcountyde.gov> Wed, Feb 11, 2026 at 8:58 AM
To: [redacted]

Good Morning,

The property is zoned AR-1 with a Conditional Use. The ordinance for which is attached.

Please let me know if you need anything else.

Thank you,

Amy Hollis

Planning Technician

Sussex County Planning and Zoning

2 The Circle,

Georgetown, DE 19947

302-855-7878

Amy.Hollis@sussexcountyde.gov

From: [redacted]
Sent: Wednesday, February 11, 2026 8:24 AM
To: Planning and Zoning <pandz@sussexcountyde.gov>
Subject: Zoning Verification Request-Adel Construction 20139 Lowes Road Gumboro, DE 19966

CAUTION: This email originated from outside of the organization. Do not click links, open attachments, or reply unless you recognize the sender and know the content is safe. Contact the IT Helpdesk if you need assistance.

Hello,

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Please let me know if you need any additional information. I have attached the required Zoning Verification Request Form.

Thank you for your assistance.

[redacted]

Program Manager

RainWise Environmental Solutions, LLC.

302.423.8137

www.rainwiseenviro.com.

[redacted]

[redacted]

o2511.pdf
24K

[redacted] Wed, Feb 11, 2026 at 9:03 AM

To: Planning and Zoning <pandz@sussexcountyde.gov>

Thank you for the quick response!

[redacted]
Program Manager
RainWise Environmental Solutions, LLC.
302.423.8137
www.rainwiseenviro.com.
[redacted]

[Quoted text hidden]

05/23/2026 10:55

◂ Insert shipping document here.

[redacted] (302) 453-8286
ADEL CONSTRUCTION
10 ADEL DR.
NEWARK, DE 19702
UNITED STATES US

SHIP DATE: 05MAY26
ACTWGT: 2.20 LB
CAD: 112900989/INET4535

BILL SENDER

TO **DNREC**
DIVISION OF AIR QUALITY
715 GRANTHAM LN

NEW CASTLE DE 19720
(302) 739-9402 REF:
INV:
PO: DEPT:

58KJ2/20651/4848

FedEx Express

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can help make Earth a priority together.

4197 WED 05/06 0746
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718-75
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