From:	Air.Pollution Control
To:	APC Permitting
Subject:	FW: Ultium Air Permit application for crushing
Date:	Friday, October 1, 2021 12:29:12 PM
Attachments:	APC 109 Barton Malow Co.pdf Crusher locations Barton Malow Co.pdf NC quarry and Rock Crushing Barton Malow Co avg.xls NC quarry and Rock Crushing Barton Malow max.xls TDEC Simplified McCloskey machines for layouts Model Clay scalper.pdf TDEC Simplified McCloskey machines for layouts Model Crusher Layout 2.pdf TDEC Simplified McCloskey machines for layouts Model Crusher setup 1.pdf APC 100 Barton Malow Co signed.pdf

60-0361

From: Fenton, Craig <Craig.Fenton@bmco.com>
Sent: Friday, October 1, 2021 12:12 PM
To: Air.Pollution Control <Air.Pollution.Control@tn.gov>
Cc: Edsen, Nick <Nick.Edsen@bmco.com>; Beckman, Ross <Ross.Beckman@bmco.com>; Kaitlyn Miller <kaitlyn.miller@gm.com>; Alonso De Avila Jr. <alonso.deavila@gm.com>; Robert Smith (Robert.6.smith@gm.com) <Robert.6.smith@gm.com>; Kremer, Kurt <Kurt.Kremer@bmco.com>; Kimberly Essenmacher <kim.essenmacher@gm.com>; Jason A Harris <jason.a.harris@gm.com>
Subject: [EXTERNAL] Ultium Air Permit application for crushing

***** This is an EXTERNAL email. Please exercise caution. DO NOT open attachments or click links from unknown senders or unexpected email - STS-Security. *****

To whom it may concern,

Attached is our air permit application along with supporting documents for rock crushing at the Ultium site. We'll be sending in a check for the permit application fee. If you have any questions, please reach out to me.

Thank you,

Craig Fenton
Project Manager | Building Trades
Barton Malow Company | 26500 American Dr. Southfield, MI 48034
m 586.405.6819 | craig.fenton@bmco.com
bartonmalow.com

DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF AIR POLLUTION CONTROL
William R. Snodgrass Tennessee Tower
312 Rosa L. Parks Avenue, 15th Floor, Nashville, TN 37243
Telephone: (615) 532-0554, Email: Air.Pollution.Control@TN.gov

NON-TITLE V PERMIT APPLICATION
FACILITY IDENTIFICATION

Type or print and submit. Attach appropriate source description forms.				
SITE INFORMATION				
1. Organization's legal name and SOS control number [as registered with the TN Secretary of State (SOS)] Barton Malow Company 000113412				
2. Site name (if different from legal name) Ultium Cells/ Nightsky				
3. Is a construction permit application fee being submitted? (see instructions for appropriate fee to submit)	Yes ☑	No ☐		
4. Site address (St./Rd./Hwy.) 301 Donald F Ephlin Parkway			County name Maury	
City Spring Hill		Zip code 37174	**5.** NAICS or SIC code 1422	
6. Site location (in lat. /long.)	Latitude 35.715932		Longitude -86.982667	
CONTACT INFORMATION (RESPONSIBLE PERSON)				
7. Responsible person/Authorized contact Craig Fenton			Phone number with area code 586-405-6819	
Mailing address (St./Rd./Hwy.) 301 Donald F Ephlin Parkway			Fax number with area code	
City Spring Hill	State TN	Zip code 37174	Email address craig.fenton@bmco.com	
CONTACT INFORMATION (TECHNICAL)				
8. Principal technical contact Steven Kovarik			Phone number with area code 470.955.8167	
Mailing address (St./Rd./Hwy.) 301 Donald F Ephlin Parkway			Fax number with area code	
City Spring Hill	State TN	Zip code 37174	Email address steven.kovarik@bmco.com	
CONTACT INFORMATION (BILLING)				
9. Billing contact Michael Salmon			Phone number with area code 219.252.1260	
Mailing address (St./Rd./Hwy.) 301 Donald F Ephlin Parkway			Fax number with area code	
City Spring Hill	State TN	Zip code 37174	Email address michael.salmon@bmco.com	

AIR CONTAMINANT SOURCE(S) INFORMATION

10. Description of air contaminant source(s) and Unique Source ID(s). List, identify, and briefly describe process emission sources, fuel burning installations, and incinerators that are contained in this application and include a Unique Source ID for each source. The Unique Source ID is a name/number/letter, which uniquely identifies the air contaminant source(s), like Boiler #1, Paint Line #1, Engine #1, etc. (see instructions for more details)

J50 Jaw Crusher #1
R230 Screen #1
I44 Impact Crusher #1
80ST Stacker #1
80ST Stacker #2
80ST Stacker #3

J45 Jaw Crusher #2
R155 Screen #2
I44 Impact Crusher #2
80ST Stacker #4
80ST Stacker #5
80ST Stacker #6

R230 Screen #3 - Clay Scalper
100ST Stacker #7

11. Is the air contaminant source(s) in a nonattainment area? If "Yes", then minor source BACT must be addressed. Yes ☐ No ☑

12. Normal operation:	Hours/Day 12	Days/Week 6	Weeks/Year 26	Days/Year 156
13. Percent annual throughput	Dec. – Feb. 25%	March – May 25%	June – August 25%	Sept. – Nov. 25%

TYPE OF PERMIT REQUESTED (check appropriate box)

14. Operating permit ☐	Date construction started	Date completed	Date of ownership change (if applicable)
	Last permit number(s)	Emission Source Reference Number(s)	
Construction permit ☑	Last permit number(s)	Emission Source Reference Number(s)	

If you chose Construction permit above, then choose either New Construction, Modification, or Location Transfer

New Construction ☑	Starting date 10/18/2021	Completion date 12/31/2022
Modification ☐	Date modification started or will start	Date completed or will complete
Location Transfer ☐	Transfer date	Address of last location

15. Describe changes that have been made to this equipment or operation(s) since the last construction or operating permit application:	
N/A	

16. Comments

Facility has two sites for rock crushing that use near identical setups. The two sites are situated near to each other and each has the capability of 400 tons/hr. and 600,000 tons/year.

SIGNATURE

Based upon information and belief formed after a reasonable inquiry, I, as the responsible person of the above mentioned facility, certify that the information contained in this application is accurate and true to the best of my knowledge. As specified in TCA Section 39-16-702(a)(4), this declaration is made under penalty of perjury.

17. Signature (application must be signed before it will be processed)		**Date**
Craig Fenton Digitally signed by Craig Fenton DN: C=US, E=craig.fenton@bmco.com, O=Barton Malow, OU=Self Perform, CN=Craig Fenton Date: 2021.09.28 11:32:01-04'00'		9/28/2021
Signer's name (type or print)	**Title**	**Phone number with area code**
Craig Fenton	Project Manager	586-405-6819

DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF AIR POLLUTION CONTROL
William R. Snodgrass Tennessee Tower
312 Rosa L. Parks Avenue, 15th Floor, Nashville, TN 37243
Telephone: (615) 532-0554, Email: Air.Pollution.Control@TN.gov

NON-TITLE V PERMIT APPLICATION
ROCK CRUSHING SOURCE DESCRIPTION

Type or print. Submit for each rock crushing operation. Submit with the APC 100.

GENERAL IDENTIFICATION AND DESCRIPTION

1. Organization's legal name and SOS control number [as registered with the TN Secretary of State (SOS)]
Barton Malow Company 000113412

2. Emission Source Reference Number

3. Is this air contaminant source subject to an NSPS or NESHAP rule? Yes ☐ No ☑
If Yes, list rule citation, including Part, Subpart, and applicable Sections:

EQUIPMENT INFORMATION

The applicant must submit an equipment list and flow diagram. The applicant may use the table below to list the equipment or attach a separate sheet of paper for the equipment list. The equipment list must include each crusher, screen, conveyor, bin, pugmill, feeder, agricultural lime, etc. The flow diagram must show each piece of equipment labeled with a reference number.

4. Equipment type (Note 1)	Flow diagram reference number (Note 2)	Size (Note 3)	Operating rate (Tons/Hr.) Design	Actual	Date of manufacture
J50 Jaw Crusher #1	Jaw Crusher #1	400tph	400tph	250tph	2018
R230 Screen #1	Screen #1	6x20	400tph	250tph	2019
I44 Impact Crusher #1	Impactor #1	400tph	400tph	250tph	2021
80ST Stacker #1	Stacker #1	36	400tph	250tph	2021
80ST Stacker #2	Stacker #2	36	400tph	250tph	2021
80ST Stacker #3	Stacker #3	36	400tph	250tph	2021
100ST Stacker #7	Stacker #7	36	400tph	250tph	2020
J45 Jaw Crusher #2	Jaw Crusher #2	400tph	400tph	250tph	2021
R155 Screen #2	Screen #2	5x16	400tph	250tph	2021
I44 Impact Crusher #2	Impactor #2	400tph	400tph	250tph	2020
80ST Stacker #4	Stacker #4	36	400tph	250tph	2021
80ST Stacker #5	Stacker #5	36	400tph	250tph	2021
80ST Stacker #6	Stacker #6	36	400tph	250tph	2021
R230 SCREEN #3 - CLAY SCALPER	Screen #3	6x20	400tph	250tph	2017

EMISSION INFORMATION								
5. Air contaminants. Emission estimates for each air contaminant emitted from this point should be based on stack sampling results or engineering calculations. Calculations should be attached on a separate sheet. (see instructions for more details)								
Particulate Matter emission data:	Flow diagram ref. no. (Note 5)	Average Emissions (Lbs./Hr.)	Maximum Emissions (Lbs./Hr.)	Average Emissions (Tons/Yr)	Potential Emissions (Tons/Yr)	Emissions Estimation method (Note 6)	Control devices (Note 6)	Control efficiency (%)
Primary crushing	Jaw Crusher	0.6	0.96	0.72	4.2048	3	061	
Secondary crushing	Impactor	0.6	0.96	0.72	4.2048	3	061	
Tertiary crushing								
Agricultural lime								
Open storage								
Enclosed storage								
Conveying & Transferring	Stacker	0.245	0.392	0.294	1.717	3	061	
Loading out								
Traffic dust								
Other (specify) Screening	Screen	1.65	2.64	1.98	11.5632	3	061	
Other (specify)								
Totals								

Note 1: Equipment type: The applicant must list each crusher, screen, conveyor, bin, pugmill, feeder, agricultural lime, etc.

Note 2: Flow diagram reference number: The applicant must attach a flow diagram. The flow diagram must show each piece of equipment, including each crusher, screen, conveyor, bin, pugmill, feeder, agricultural lime, etc. Each piece of equipment must be labeled with a reference number.

Note 3: Size: For crushers, size is the design operating rate (in ton/hr.). For screens, size is the dimensions of the top deck of the screen. For conveyors, size is the width of the conveyor. For bins, size is the design capacity in tons.

Note 4: Explain in comments, if necessary.

Note 5: As identified on the flow diagram required in item #3

Note 6: Refer to the instructions for the estimation method and control device codes.

6. Control device. Description of proposed monitoring, recordkeeping, and reporting to assure compliance with emission limits. Include operating parameters of control device (flow rate, temperature, pressure drop, etc.).

WEIGHSHARK SCALES TO BE USED AT STOCKPILING CONVEYOR OF EACH CRUSHING SOURCE TO DETERMINE TPH AND TONS PER DAY. DATA WILL BE RECORDED DAILY

ROAD INFORMATION

7. Roads:	Paved (Miles of road)	Unpaved (Miles of road)	Watered (Miles & frequency)	Other control (specify)
Plant yard	0	.2	.2, as needed	
Access roads	1	1.5	2.5, as needed	

STOCKPILE INFORMATION

8. Stockpiles:	Estimated annual tons	Turnover rate (Tons/Month)	Wetted as piled	No. of sides enclosed	Other dust control	Loading method (e.g. loader, conveyor) Load in	Load out
Coarse: Over 1”	600,000	50,000	Yes	0	dust boss	Conveyor	Loader
Fine: 1” to 1/4”							
1/4” and less							
MFG. Sand							
Other (specify)							

9. Comments

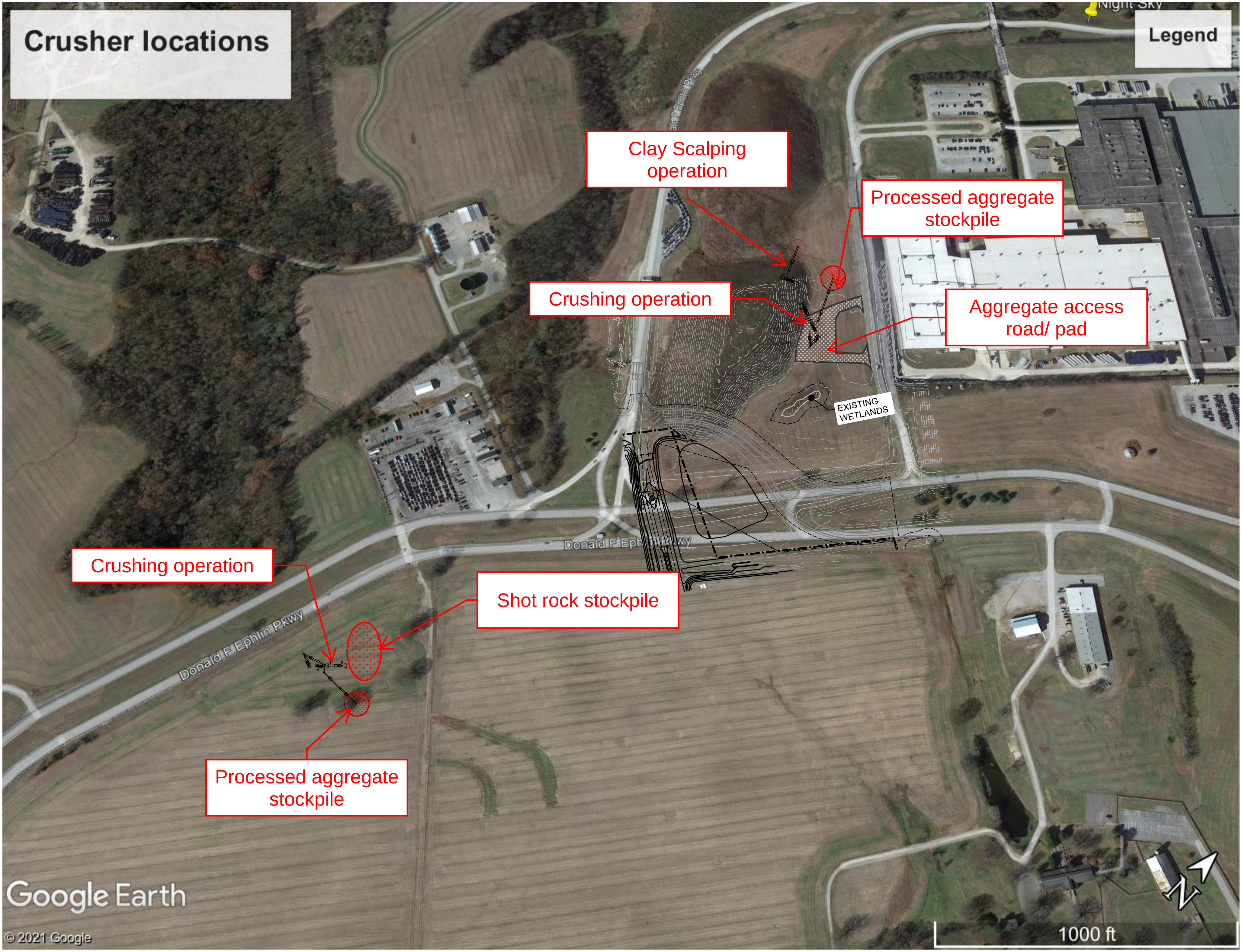
BOSSTEK DB-60 DUST CONTROL
WWW.BOSTEK .COM
THROW 200' DUST TRAPPING MIST
Facility has two sites for rock crushing that use near identical setups. The two sites are situated near to each other and each has the capability of 400 tons/hr. and 600,000 tons/year. Because of proximity, the two sites were considered as one facility application for purposes of calculations. Calculations used NCDNER calculator which uses AP-42 emission factors. One shows average emissions and the other maximum.

SIGNATURE

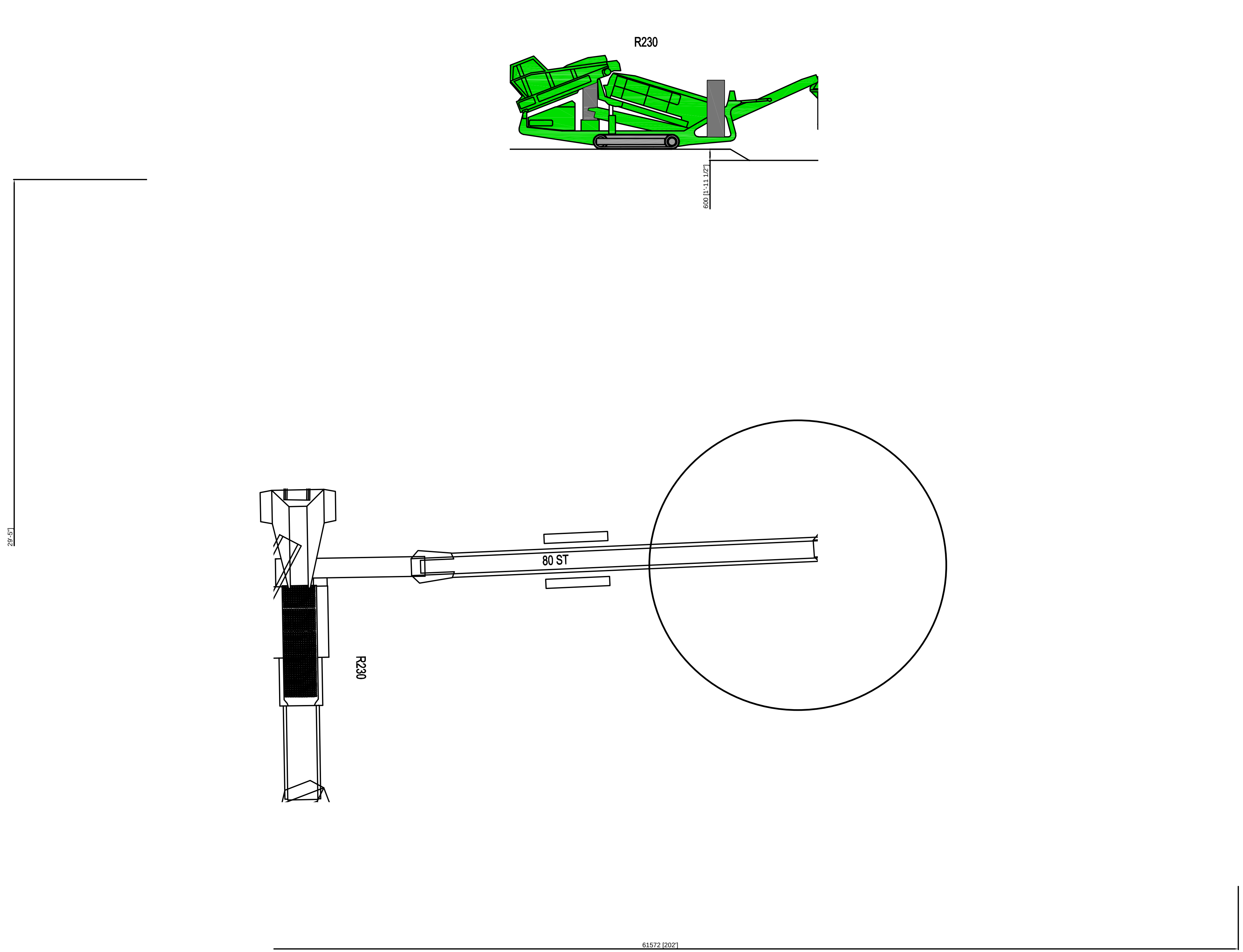
If this form is being submitted at the same time as an APC 100 form, then a signature is not required on this form. Date this form regardless of whether a signature is provided. If this form is NOT being submitted at the same time as an APC 100 form, then a signature is required.

Based upon information and belief formed after a reasonable inquiry, I, as the responsible person of the above mentioned facility, certify that the information contained in this application is accurate and true to the best of my knowledge. As specified in TCA Section 39-16-702(a)(4), this declaration is made under penalty of perjury.

10. Signature		**Date**
Signer’s name (type or print)	**Title**	**Phone number with area code**


Crusher locations
Legend
Clay Scalping operation
Processed aggregate stockpile
Crushing operation
Aggregate access road/ pad
EXISTING WETLANDS
Donald F Ephlin Pkwy
Crushing operation
Shot rock stockpile
Processed aggregate stockpile
Google Earth
© 2021 Google
1000 ft

Clay Scalper



McCloskey INTERNATIONAL

	NAME	SIGNATURE	DATE
DRAWN	XX		XXXXX
CHK'D			
APPV'D			

QUANTITY:

MATERIAL:

NOTES:
Information required to produce this part/assembly that is not contained within this drawing notify drawing office not plasma office

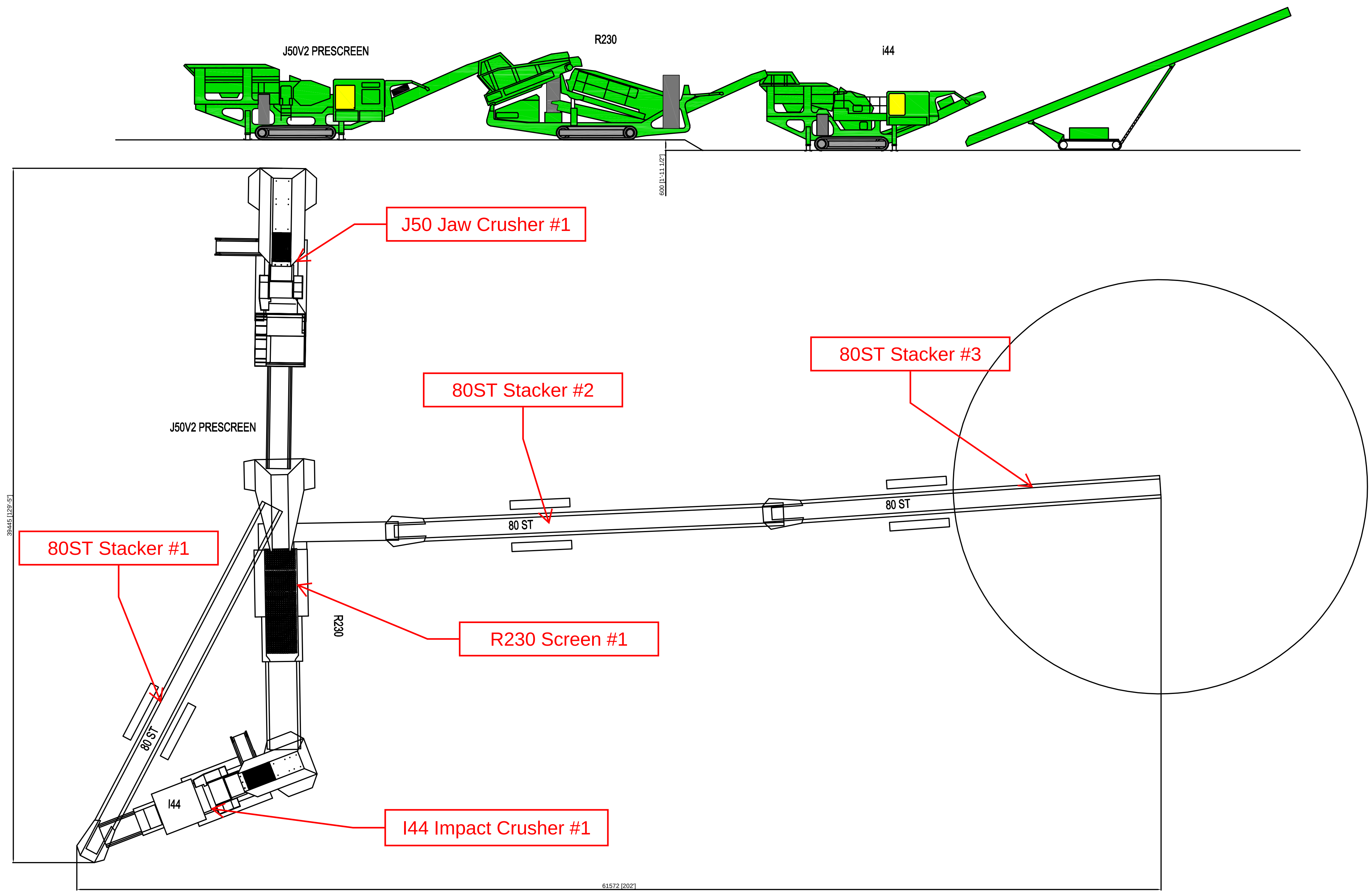
This material is the exclusive property of McCLOSKEY INTERNATIONAL LTD. All information contained herein is not to be used directly or indirectly in any way whatsoever detrimental to our interests and shall be subject to return upon demand

TITLE: J50 R230 2P I44 ST80T

DWG NO. XXXXXXX | A1

SHEET 1 OF 1 | DO NOT SCALE | 3rd ANGLE PROJECTION

Crusher Setup 1



	NAME	SIGNATURE	DATE
DRAWN	XX		XXXXX
CHK'D			
APPV'D			

QUANTITY:

MATERIAL:

NOTES:
Information required to produce this part/assembly that is not contained within this drawing notify drawing office not plasma office

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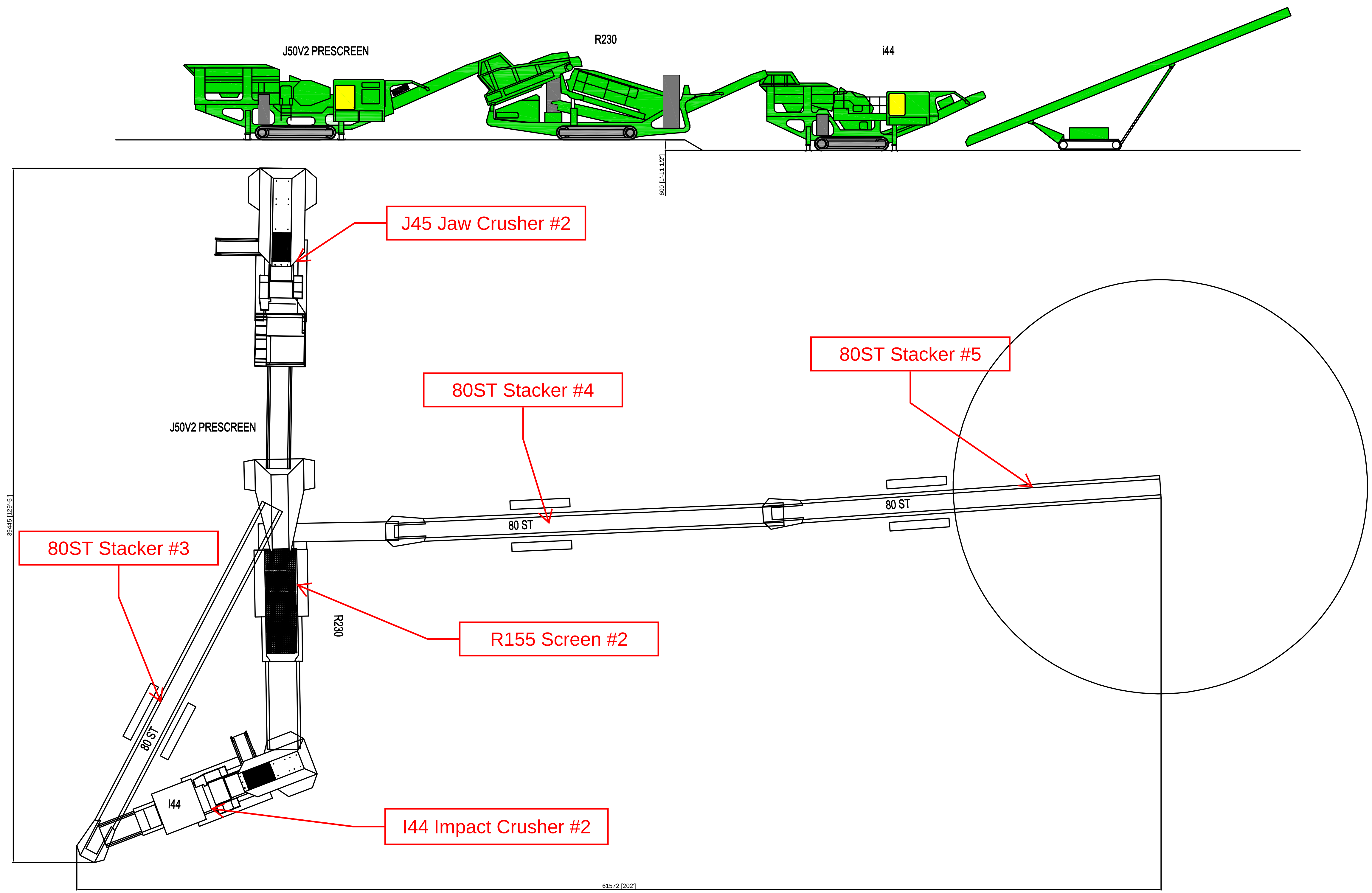
TITLE: J50 R230 2P I44 ST80T

DWG NO. XXXXXXX

A1

SHEET 1 OF 1 | DO NOT SCALE | 3rd ANGLE PROJECTION

Crusher Setup 2



McCloskey INTERNATIONAL

	NAME	SIGNATURE	DATE
DRAWN	XX		XXXXX
CHK'D			
APPV'D			

QUANTITY:

MATERIAL:

NOTES:
Information required to produce this part/assembly that is not contained within this drawing notify drawing office not plasma office

This material is the exclusive property of McCLOSKEY INTERNATIONAL LTD. All information contained herein is not to be used directly or indirectly in any way whatsoever detrimental to our intersets and shall be subject to return upon demand

TITLE: J50 R230 2P I44 ST80T

DWG NO. XXXXXXX

A1

SHEET 1 OF 1 | DO NOT SCALE | 3rd ANGLE PROJECTION

STONE CRUSHING EMISSIONS CALCULATOR REVISION C 05/23/2011
PERMITTING AND MODELING INPUT SCREEN

NCDENR

NOTICE:
This spreadsheet is for your use only and should be used with caution. DENR does not guarantee the accuracy of the information contained. This spreadsheet is subject to continual revision and updating. It is your responsibility to be aware of the most current information available. DENR is not responsible for errors or omissions that may be contained herein.

Instructions:
1. Enter emission source / facility data on this sheet *for permitting and/or modeling*. The air emission results and summary for each type of equipment will be on its own sheet (e.g., crushers output, screens output). The facility-wide totals are summarized on the "OUTPUT" sheet. The different tabs are on the bottom of this screen.
2. For each type of equipment fill in all *BLUE* fields.

Company Name:	Barton Malow Company
Facility ID No.:	
Permit No.:	
Facility City:	Spring Hill
Facility County:	Maury
Spreadsheet Prepared by:	

Actual hours of operation:	12	hours
Total Plant Maximum Rated Capacity:	800	tons per hour
Actual Annual Total Plant Production:	468000	tons
Potential Annual Total Plant Production:	1200000	tons

Crusher Input

How many crushers total ? 4

***Note**: If wet supression is not applied on an automatic and continuous basis during the operation of the crusher, answer "no" for "wet supression (Y/N)?".*

Crusher ID No.	Type of crusher	Maximum Rated Capacity (tons/hr)	*wet supression (Y/N) ?	actual yearly throughput (tons)
CR-1	Primary	250	wet	600,000
CR-2	Secondary or Tertiary	250	wet	600,000
CR-3	Primary	250	wet	600,000
CR-4	Secondary or Tertiary	250	wet	600,000
CR-5	Primary	0	wet	0

CR-6	Secondary or Tertiary	0	wet	0
CR-7	Secondary or Tertiary	0	dry	0
CR-8	Secondary or Tertiary	0	wet	0
CR-9	Primary	0	dry	0
CR-10	Primary	0	wet	0
CR-11	Primary	0	wet	0
CR-12	Primary	0	wet	0
CR-13	Primary	0	wet	0
CR-14	Primary	0	dry	0
CR-15	Fines	0	dry	0

Screens Input

How many screens total ? 3

Screen ID No.	Type of screen	Maximum Rated Capacity (tons/hr)	wet supression (Y/N) ?	actual yearly throughput (tons)
SCR-1	Normal	250	wet	600,000
SCR-2	Normal	250	wet	600,000
SCR-3	Normal	250	wet	600,000
SCR-4	Normal	0	wet	0
SCR-5	Normal	0	wet	0
SCR-6	Normal	0	wet	0
SCR-7	Normal	0	wet	0
SCR-8	Normal	0	wet	0
SCR-9	Normal	0	wet	0
SCR-10	Normal	0	wet	0
SCR-11	Normal	0	wet	0
SCR-12	Normal	0	wet	0
SCR-13	Normal	0	wet	0
SCR-14	Normal	0	wet	0
SCR-15	Normal	0	wet	0

Conveyor Input

How many conveyors total ? 7

***NOTE:** Each conveyor will have one transfer point, the point where it **drops** product, not receives product. Answer **"no"** if the conveyor drops to a screen or a crusher. The transfer points to the crushers and screens are already accounted for in the emission factors for these units.**

Conveyor ID No.	*Conveyor transfer point ?	Maximum Rated Capacity (tons/hr)	wet supression (Y/N) ?	actual yearly throughput (tons)
C-1	yes	250	wet	600,000
C-2	yes	250	wet	600,000
C-3	yes	250	wet	600,000
C-4	yes	250	wet	600,000
C-5	yes	250	wet	600,000
C-6	yes	250	wet	600,000
C-7	yes	250	wet	600,000
C-8	yes	0	wet	0
C-9	yes	0	wet	0
C-10	yes	0	wet	0
C-11	yes	0	wet	0
C-12	yes	0	wet	0
C-13	yes	0	wet	0
C-14	yes	0	wet	0
C-15	yes	0	wet	0
C-16	yes	0	wet	0
C-17	yes	0	wet	0
C-18	yes	0	wet	0
C-19	yes	0	wet	0
C-20	yes	0	wet	0
C-21	yes	0	wet	0
C-22	yes	0	wet	0
C-23	yes	0	wet	0
C-24	yes	0	wet	0
C-25	yes	0	wet	0

STONE QUARRY EMISSIONS CALCULATOR REVISION C 05/23/2011 - OUTPUT SCREEN

NCDENR

Instructions: Enter emission source / facility data on the "INPUT" tab/screen. The air emission results and summary of input data are viewed / printed on the "OUTPUT" tab/screen. The different tabs are on the bottom of this screen.

This spreadsheet is for your use only and should be used with caution. DENR does not guarantee the accuracy of the information contained. This spreadsheet is subject to continual revision and updating. It is your responsibility to be aware of the most current information available. DENR is not responsible for errors or omissions that may be contained herein.

SOURCE / FACILITY / USER INPUT SUMMARY (FROM INPUT SCREEN)

COMPANY:	**Barton Malow Company**	FACILITY ID NO.:	0
		PERMIT NUMBER:	0
		FACILITY CITY:	Spring Hill
		FACILITY COUNTY:	Maury
SPREADSHEET PREPARED BY:	0		

CRITERIA AIR POLLUTANT EMISSIONS INFORMATION

AIR POLLUTANT EMITTED	ACTUAL EMISSIONS (AFTER CONTROLS / LIMITS) lb/hr	ACTUAL EMISSIONS tons/yr	POTENTIAL EMSSIONS lb/hr	POTENTIAL EMSSIONS tons/yr
PARTICULATE MATTER (PM)	1.86E-03	3.71	3.10	13.56
PARTICULATE MATTER<10 MICRONS (PM_{10})	7.05E-04	1.41	1.18	5.15
PARTICULATE MATTER<2.5 MICRONS ($PM_{2.5}$)	9.62E-05	0.19	0.16	0.70
DIOXIDE (SO2)				
N OXIDES (NOx)				
MONOXIDE (CO)				
IC COMPOUNDS (VOC)				
LEAD				

TOXIC / HAZARDOUS AIR POLLUTANT EMISSIONS INFORMATION

OUS AIR POLLUTANT	CAS NUMBER	ACTUAL EMISSIONS (BEFORE CONTROLS / LIMITS) lb/hr	tons/yr	POTENTIAL EMSSIONS (AFTER CONTROLS / LIMITS) lb/hr	tons/yr	lb/hr	tons/yr	EMISSION FACTOR lb/mmBtu uncontrolled	controlled

TOXIC AIR POLLUTANT EMISSIONS INFORMATION (FOR PERMITTING PURPOSES)

S AFTER CONTROLS / LIMITATIONS

R POLLUTANT	CAS Num.	lb/hr	lb/day	lb/yr	EMISSION FACTOR lb/mmBtu uncontrolled	controlled

STONE CRUSHING EMISSIONS CALCULATOR REVISION C 05/23/2011 **EMISSIONS**

INVENTORY INPUT SCREEN

NOTICE:

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Instructions:

1. Use this sheet for EMISSION INVENTORY PURPOSES ONLY.
2. For each product fill in all BLUE cells.

Company Name:	Stoney Curtis Crushing
Facility ID No.:	123456789
Permit No.:	99999R09
Facility City:	Bedrock
Facility County:	HollyRock
Spreadsheet Prepared by:	Barney Rubble

Actual plant hours of operation:	2000	hours
How many products did you produce ?	1	

Facility-wide Emissions Summary

yearly actual TSP emissions (tpy)	yearly actual PM_{10} emissions (tpy)	yearly actual PM2.5 emissions (tpy)	yearly potential TSP emissions (tpy)	yearly potential PM_{10} emissions (tpy)	yearly potential PM2.5 emissions (tpy)
0.0	0.0	0.0	0.0	0.0	0.0

Product A

Product A Process Information

Actual annual production of A:	0	tons

CRUSHERS Information

No. of primary crushers with no suppression:	0
No. of primary crushers with wet suppression:	0
No. of secondary / tertiary crushers with no suppression:	0
No. of secondary / tertiary crushers with wet suppression:	0
No. of fines crushers with no suppression:	0
No. of fines crushers with wet suppression:	0

SCREENS Information

No. of normal screens with no suppression:	0
No. of normal screens with wet suppression:	0
No. of fines screens with no suppression:	0
No. of fines screens with wet suppression:	0

CONVEYOR TRANSFER POINTS Information

*No. of conveyor transport points with no suppression:	0

*No. of conveyor transport points with wet suppression: 0

*NOTE: Each conveyor will have only one transfer point, the point where a conveyor drops product, not recieves product. Do not include conveyors that drop to screens or crushers. The transfer points to the crushers and screens are already accounted for in the emission factors for these units.

Product A Emissions Summary

A product crushers TSP emissions:	0.0	tons
A product screens TSP emissions:	0.0	tons
A product conveyor transfer points TSP emissions:	0.0	tons
A product total TSP emissions:	0.0	tons
A product crushers PM10 emissions:	0.0	tons
A product screens PM10 emissions:	0.0	tons
A product conveyor transfer points PM10 emissions:	0.0	tons
A product total PM10 emissions:	0.0	tons
A product crushers PM2.5 emissions:	0.0	tons
A product screens PM2.5 emissions:	0.0	tons
A product conveyor transfer points PM2.5 emissions:	0.0	tons
A product total PM2.5 emissions:	0.0	tons

Product B

Product B Process Information

Actual annual production of B: 0 tons

CRUSHERS Information

No. of primary crushers with no suppression:	0
No. of primary crushers with wet suppression:	0
No. of secondary / tertiary crushers with no suppression:	0
No. of secondary / tertiary crushers with wet suppression:	0
No. of fines crushers with no suppression:	0
No. of fines crushers with wet suppression:	0

SCREENS Information

No. of normal screens with no suppression:	0
No. of normal screens with wet suppression:	0
No. of fines screens with no suppression:	0
No. of fines screens with wet suppression:	0

CONVEYOR TRANSFER POINTS Information

*No. of conveyor transport points with no suppression:	0
*No. of conveyor transport points with wet suppression:	0

*NOTE: Each conveyor will have only one transfer point, the point where a conveyor drops product, not recieves product. Do not include conveyors that drop to screens or crushers. The transfer points to the crushers and screens are already accounted for in the emission factors for these units.

Product B Emissions Summary

B product crushers TSP emissions:	0.0	tons
B product screens TSP emissions:	0.0	tons
B product conveyor transfer points TSP emissions:	0.0	tons
B product total TSP emissions:	0.0	tons

B product crushers PM10 emissions:	0.0	tons
B product screens PM10 emissions:	0.0	tons
B product conveyor transfer points PM10 emissions:	0.0	tons
B product total PM10 emissions:	0.0	tons
B product crushers PM2.5 emissions:	0.0	tons
B product screens PM2.5 emissions:	0.0	tons
B product conveyor transfer points PM2.5 emissions:	0.0	tons
B product total PM2.5 emissions:	0.0	tons

Product C

Product C Process Information

Actual annual production of C: 0 tons

CRUSHERS Information

No. of primary crushers with no suppression:	0
No. of primary crushers with wet suppression:	0
No. of secondary / tertiary crushers with no suppression:	0
No. of secondary / tertiary crushers with wet suppression:	0
No. of fines crushers with no suppression:	0
No. of fines crushers with wet suppression:	0

SCREENS Information

No. of normal screens with no suppression:	0
No. of normal screens with wet suppression:	0
No. of fines screens with no suppression:	0
No. of fines screens with wet suppression:	0

CONVEYOR TRANSFER POINTS Information

*No. of conveyor transport points with no suppression:	0
*No. of conveyor transport points with wet suppression:	0

*NOTE: Each conveyor will have only one transfer point, the point where a conveyor drops product, not recieves product. Do not include conveyors that drop to screens or crushers. The transfer points to the crushers and screens are already accounted for in the emission factors for these units.

Product C Emissions Summary

C product crushers TSP emissions:	0.0	tons
C product screens TSP emissions:	0.0	tons
C product conveyor transfer points TSP emissions:	0.0	tons
C product total TSP emissions:	0.0	tons
C product crushers PM10 emissions:	0.0	tons
C product screens PM10 emissions:	0.0	tons
C product conveyor transfer points PM10 emissions:	0.0	tons
C product total PM10 emissions:	0.0	tons
C product crushers PM2.5 emissions:	0.0	tons
C product screens PM2.5 emissions:	0.0	tons
C product conveyor transfer points PM2.5 emissions:	0.0	tons
C product total PM2.5 emissions:	0.0	tons

Product D

Product D Process Information

Actual annual production of D: 0 tons

CRUSHERS Information

No. of primary crushers with no suppression:	0
No. of primary crushers with wet suppression:	0
No. of secondary / tertiary crushers with no suppression:	0
No. of secondary / tertiary crushers with wet suppression:	0
No. of fines crushers with no suppression:	0
No. of fines crushers with wet suppression:	0

SCREENS Information

No. of normal screens with no suppression:	0
No. of normal screens with wet suppression:	0
No. of fines screens with no suppression:	0
No. of fines screens with wet suppression:	0

CONVEYOR TRANSFER POINTS Information

*No. of conveyor transport points with no suppression:	0
*No. of conveyor transport points with wet suppression:	0

*NOTE: Each conveyor will have only one transfer point, the point where a conveyor drops product, not recieves product. Do not include conveyors that drop to screens or crushers. The transfer points to the crushers and screens are already accounted for in the emission factors for these units.

Product D Emissions Summary

D product crushers TSP emissions:	0.0	tons
D product screens TSP emissions:	0.0	tons
D product conveyor transfer points TSP emissions:	0.0	tons
D product total TSP emissions:	0.0	tons
D product crushers PM10 emissions:	0.0	tons
D product screens PM10 emissions:	0.0	tons
D product conveyor transfer points PM10 emissions:	0.0	tons
D product total PM10 emissions:	0.0	tons
D product crushers PM2.5 emissions:	0.0	tons
D product screens PM2.5 emissions:	0.0	tons
D product conveyor transfer points PM2.5 emissions:	0.0	tons
D product total PM2.5 emissions:	0.0	tons

Product E

Product E Process Information

Actual annual production of E: 0 tons

CRUSHERS Information

No. of primary crushers with no suppression:	1
No. of primary crushers with wet suppression:	0
No. of secondary / tertiary crushers with no suppression:	0
No. of secondary / tertiary crushers with wet suppression:	0
No. of fines crushers with no suppression:	0
No. of fines crushers with wet suppression:	0

SCREENS Information

No. of normal screens with no suppression:	0
No. of normal screens with wet suppression:	0

No. of fines screens with no suppression:	0
No. of fines screens with wet suppression:	0

CONVEYOR TRANSFER POINTS Information

*No. of conveyor transport points with no suppression:	0
*No. of conveyor transport points with wet suppression:	0

*NOTE: Each conveyor will have only one transfer point, the point where a conveyor drops product, not recieves product. Do not include conveyors that drop to screens or crushers. The transfer points to the crushers and screens are already accounted for in the emission factors for these units.

Product E Emissions Summary

E product crushers TSP emissions:	0.0	tons
E product screens TSP emissions:	0.0	tons
E product conveyor transfer points TSP emissions:	0.0	tons
E product total TSP emissions:	0.0	tons
E product crushers PM10 emissions:	0.0	tons
E product screens PM10 emissions:	0.0	tons
E product conveyor transfer points PM10 emissions:	0.0	tons
E product total PM10 emissions:	0.0	tons
E product crushers PM2.5 emissions:	0.0	tons
E product screens PM2.5 emissions:	0.0	tons
E product conveyor transfer points PM2.5 emissions:	0.0	tons
E product total PM2.5 emissions:	0.0	tons

Product F

Product F Process Information

Actual annual production of F: 0 tons

CRUSHERS Information

No. of primary crushers with no suppression:	0
No. of primary crushers with wet suppression:	0
No. of secondary / tertiary crushers with no suppression:	0
No. of secondary / tertiary crushers with wet suppression:	0
No. of fines crushers with no suppression:	0
No. of fines crushers with wet suppression:	0

SCREENS Information

No. of normal screens with no suppression:	0
No. of normal screens with wet suppression:	0
No. of fines screens with no suppression:	0
No. of fines screens with wet suppression:	0

CONVEYOR TRANSFER POINTS Information

*No. of conveyor transport points with no suppression:	0
*No. of conveyor transport points with wet suppression:	0

*NOTE: Each conveyor will have only one transfer point, the point where a conveyor drops product, not recieves product. Do not include conveyors that drop to screens or crushers. The transfer points to the crushers and screens are already accounted for in the emission factors for these units.

Product F Emissions Summary

F product crushers TSP emissions:	0.0	tons

F product screens TSP emissions:	0.0	tons
F product conveyor transfer points TSP emissions:	0.0	tons
F product total TSP emissions:	0.0	tons
F product crushers PM10 emissions:	0.0	tons
F product screens PM10 emissions:	0.0	tons
F product conveyor transfer points PM10 emissions:	0.0	tons
F product total PM10 emissions:	0.0	tons
F product crushers PM2.5 emissions:	0.0	tons
F product screens PM2.5 emissions:	0.0	tons
F product conveyor transfer points PM2.5 emissions:	0.0	tons
F product total PM2.5 emissions:	0.0	tons

Product G

Product G Process Information

Actual annual production of G: 0 tons

CRUSHERS Information

No. of primary crushers with no suppression:	1
No. of primary crushers with wet suppression:	0
No. of secondary / tertiary crushers with no suppression:	0
No. of secondary / tertiary crushers with wet suppression:	0
No. of fines crushers with no suppression:	0
No. of fines crushers with wet suppression:	0

SCREENS Information

No. of normal screens with no suppression:	0
No. of normal screens with wet suppression:	0
No. of fines screens with no suppression:	0
No. of fines screens with wet suppression:	0

CONVEYOR TRANSFER POINTS Information

*No. of conveyor transport points with no suppression:	0
*No. of conveyor transport points with wet suppression:	0

*NOTE: Each conveyor will have only one transfer point, the point where a conveyor drops product, not recieves product. Do not include conveyors that drop to screens or crushers. The transfer points to the crushers and screens are already accounted for in the emission factors for these units.

Product G Emissions Summary

G product crushers TSP emissions:	0.0	tons
G product screens TSP emissions:	0.0	tons
G product conveyor transfer points TSP emissions:	0.0	tons
G product total TSP emissions:	0.0	tons
G product crushers PM10 emissions:	0.0	tons
G product screens PM10 emissions:	0.0	tons
G product conveyor transfer points PM10 emissions:	0.0	tons
G product total PM10 emissions:	0.0	tons
G product crushers PM2.5 emissions:	0.0	tons
G product screens PM2.5 emissions:	0.0	tons
G product conveyor transfer points PM2.5 emissions:	0.0	tons
G product total PM2.5 emissions:	0.0	tons

Product H

Product H Process Information

Actual annual production of H:	0	tons

CRUSHERS Information

No. of primary crushers with no suppression:	0
No. of primary crushers with wet suppression:	0
No. of secondary / tertiary crushers with no suppression:	0
No. of secondary / tertiary crushers with wet suppression:	0
No. of fines crushers with no suppression:	0
No. of fines crushers with wet suppression:	0

SCREENS Information

No. of normal screens with no suppression:	0
No. of normal screens with wet suppression:	0
No. of fines screens with no suppression:	0
No. of fines screens with wet suppression:	0

CONVEYOR TRANSFER POINTS Information

*No. of conveyor transport points with no suppression:	0
*No. of conveyor transport points with wet suppression:	0

*NOTE: Each conveyor will have only one transfer point, the point where a conveyor drops product, not recieves product. Do not include conveyors that drop to screens or crushers. The transfer points to the crushers and screens are already accounted for in the emission factors for these units.

Product H Emissions Summary

H product crushers TSP emissions:	0.0	tons
H product screens TSP emissions:	0.0	tons
H product conveyor transfer points TSP emissions:	0.0	tons
H product total TSP emissions:	0.0	tons
H product crushers PM10 emissions:	0.0	tons
H product screens PM10 emissions:	0.0	tons
H product conveyor transfer points PM10 emissions:	0.0	tons
H product total PM10 emissions:	0.0	tons
H product crushers PM2.5 emissions:	0.0	tons
H product screens PM2.5 emissions:	0.0	tons
H product conveyor transfer points PM2.5 emissions:	0.0	tons
H product total PM2.5 emissions:	0.0	tons

Product I

Product I Process Information

Actual annual production of I:	0	tons

CRUSHERS Information

No. of primary crushers with no suppression:	1
No. of primary crushers with wet suppression:	0
No. of secondary / tertiary crushers with no suppression:	0
No. of secondary / tertiary crushers with wet suppression:	0
No. of fines crushers with no suppression:	0
No. of fines crushers with wet suppression:	0

SCREENS Information

No. of normal screens with no suppression:	0
No. of normal screens with wet suppression:	0
No. of fines screens with no suppression:	0
No. of fines screens with wet suppression:	0

CONVEYOR TRANSFER POINTS Information

*No. of conveyor transport points with no suppression:	0
*No. of conveyor transport points with wet suppression:	0

*NOTE: Each conveyor will have only one transfer point, the point where a conveyor drops product, not recieves product. Do not include conveyors that drop to screens or crushers. The transfer points to the crushers and screens are already accounted for in the emission factors for these units.

Product I Emissions Summary

I product crushers TSP emissions:	0.0	tons
I product screens TSP emissions:	0.0	tons
I product conveyor transfer points TSP emissions:	0.0	tons
I product total TSP emissions:	0.0	tons
I product crushers PM10 emissions:	0.0	tons
I product screens PM10 emissions:	0.0	tons
I product conveyor transfer points PM10 emissions:	0.0	tons
I product total PM10 emissions:	0.0	tons
I product crushers PM2.5 emissions:	0.0	tons
I product screens PM2.5 emissions:	0.0	tons
I product conveyor transfer points PM2.5 emissions:	0.0	tons
I product total PM2.5 emissions:	0.0	tons

Product J

Product J Process Information

Actual annual production of J: 0 tons

CRUSHERS Information

No. of primary crushers with no suppression:	1
No. of primary crushers with wet suppression:	0
No. of secondary / tertiary crushers with no suppression:	0
No. of secondary / tertiary crushers with wet suppression:	0
No. of fines crushers with no suppression:	0
No. of fines crushers with wet suppression:	0

SCREENS Information

No. of normal screens with no suppression:	0
No. of normal screens with wet suppression:	0
No. of fines screens with no suppression:	0
No. of fines screens with wet suppression:	0

CONVEYOR TRANSFER POINTS Information

*No. of conveyor transport points with no suppression:	0
*No. of conveyor transport points with wet suppression:	0

*NOTE: Each conveyor will have only one transfer point, the point where a conveyor drops product, not recieves product. Do not include conveyors that drop to screens or crushers. The transfer points to the crushers and screens are already accounted for in the emission factors for these units.

Product J Emissions Summary

J product crushers TSP emissions:	0.0	tons
J product screens TSP emissions:	0.0	tons
J product conveyor transfer points TSP emissions:	0.0	tons
J product total TSP emissions:	0.0	tons
J product crushers PM10 emissions:	0.0	tons
J product screens PM10 emissions:	0.0	tons
J product conveyor transfer points PM10 emissions:	0.0	tons
J product total PM10 emissions:	0.0	tons
J product crushers PM2.5 emissions:	0.0	tons
J product screens PM2.5 emissions:	0.0	tons
J product conveyor transfer points PM2.5 emissions:	0.0	tons
J product total PM2.5 emissions:	0.0	tons

Crusher Calculations and Output

Company Name:	Barton Malow Company	1.20	0.54	0.10	5.26	2.37	0.44	1.44	0.65	0.12	
Facility ID No.:	0										
Permit No.:	0	hourly potential	hourly potential	hourly potential	yearly potential	yearly potential	yearly potential	yearly actual	yearly actual	yearly actual	
Facility City:	Spring Hill	TSP emissions	PM_{10} emissions	PM2.5 emissions	TSP emissions	PM_{10} emissions	PM2.5 emissions	TSP emissions	PM_{10} emissions	PM2.5 emissions	TSP emission	PM_{10} emission
Facility County:	Maury	(lb/hr)	(lb/hr)	(lb/hr)	(tpy)	(tpy)	(tpy)	(tpy)	(tpy)	(tpy)	factor (lb/ton)	factor (lb/ton)

Crusher	hourly potential TSP emissions (lb/hr)	hourly potential PM_{10} emissions (lb/hr)	hourly potential PM2.5 emissions (lb/hr)	yearly potential TSP emissions (tpy)	yearly potential PM_{10} emissions (tpy)	yearly potential PM2.5 emissions (tpy)	yearly actual TSP emissions (tpy)	yearly actual PM_{10} emissions (tpy)	yearly actual PM2.5 emissions (tpy)	TSP emission factor (lb/ton)	PM_{10} emission factor (lb/ton)
Primary Crusher ID No. CR-1 with wet supression Maximum Rated Capacity 250 tons/hour Actual annual throughput 600,000 tons	0.3	0.135	0.025	1.314	0.5913	0.1095	0.36	0.162	0.03	0.0012	0.00054
Secondary or Tertiary Crusher ID No. CR-2 with wet supression Maximum Rated Capacity 250 tons/hour Actual annual throughput 600,000 tons	0.3	0.135	0.025	1.314	0.5913	0.1095	0.36	0.162	0.03	0.0012	0.00054
Primary Crusher ID No. CR-3 with wet supression Maximum Rated Capacity 250 tons/hour Actual annual throughput 600,000 tons	0.3	0.135	0.025	1.314	0.5913	0.1095	0.36	0.162	0.03	0.0012	0.00054
Secondary or Tertiary Crusher ID No. CR-4 with wet supression Maximum Rated Capacity 250 tons/hour Actual annual throughput 600,000 tons	0.3	0.135	0.025	1.314	0.5913	0.1095	0.36	0.162	0.03	0.0012	0.00054
			0						0		
			0						0		
			0						0		
			0						0		
			0						0		
			0						0		
			0						0		
			0						0		
			0						0		
			0						0		
			0						0		

Screens Calculations and Output

Company Name: Barton Malow Company
Facility ID No.: 0
Permit No.: 0
Facility City: Spring Hill
Facility County: Maury

	hourly potential TSP emissions (lb/hr)	hourly potential PM_{10} emissions (lb/hr)	hourly potential PM_{10} emissions (lb/hr)	yearly potential TSP emissions (tpy)	yearly potential PM_{10} emissions (tpy)	yearly potential PM2.5 emissions (tpy)	yearly actual TSP emissions (tpy)	yearly actual PM_{10} emissions (tpy)	yearly actual PM2.5 emissions (tpy)	TSP emission factor (lb/ton)	PM_{10} emission factor (lb/ton)
	1.65	0.56	0.04	7.23	2.43	0.16	1.98	0.67	0.05		
Normal Screen ID No. SCR-1 with wet supression Maximum Rated Capacity 250 tons/hour Actual annual throughput 600,000 tons	0.55	0.185	0.0125	2.409	0.8103	0.05475	0.66	0.222	0.015	0.0022	0.00074
Normal Screen ID No. SCR-2 with wet supression Maximum Rated Capacity 250 tons/hour Actual annual throughput 600,000 tons	0.55	0.185	0.0125	2.409	0.8103	0.05475	0.66	0.222	0.015	0.0022	0.00074
Normal Screen ID No. SCR-3 with wet supression Maximum Rated Capacity 250 tons/hour Actual annual throughput 600,000 tons	0.55	0.185	0.0125	2.409	0.8103	0.05475	0.66	0.222	0.015	0.0022	0.00074
			0						0		
			0						0		
			0						0		
			0						0		
			0						0		
			0						0		
			0						0		
			0						0		
			0						0		
			0						0		
			0						0		
			0						0		

Conveyors Calculations and Output

Company Name:	Barton Malow Company
Facility ID No.:	0
Permit No.:	0
Facility City:	Spring Hill
Facility County:	Maury

	0.25	0.08	0.02	1.07	0.35	0.10	0.29	0.10	0.03		
	hourly potential TSP emissions (lb/hr)	hourly potential PM_{10} emissions (lb/hr)	hourly potential PM2.5 emissions (lb/hr)	yearly potential TSP emissions (tpy)	yearly potential PM_{10} emissions (tpy)	yearly potential PM2.5 emissions (tpy)	yearly actual TSP emissions (tpy)	yearly actual PM_{10} emissions (tpy)	yearly actual PM2.5 emissions (tpy)	TSP emission factor (lb/ton)	PM_{10} emission factor (lb/ton)
Conveyor ID No. C-1 with wet supression Maximum Rated Capacity 250 tons/hour Actual annual throughput 600,000 tons	0.035	0.0115	0.00325	0.1533	0.05037	0.014235	0.042	0.0138	0.0039	0.00014	0.000046
Conveyor ID No. C-2 with wet supression Maximum Rated Capacity 250 tons/hour Actual annual throughput 600,000 tons	0.035	0.0115	0.00325	0.1533	0.05037	0.014235	0.042	0.0138	0.0039	0.00014	0.000046
Conveyor ID No. C-3 with wet supression Maximum Rated Capacity 250 tons/hour Actual annual throughput 600,000 tons	0.035	0.0115	0.00325	0.1533	0.05037	0.014235	0.042	0.0138	0.0039	0.00014	0.000046
Conveyor ID No. C-4 with wet supression Maximum Rated Capacity 250 tons/hour Actual annual throughput 600,000 tons	0.035	0.0115	0.00325	0.1533	0.05037	0.014235	0.042	0.0138	0.0039	0.00014	0.000046
Conveyor ID No. C-5 with wet supression Maximum Rated Capacity 250 tons/hour Actual annual throughput 600,000 tons	0.035	0.0115	0.00325	0.1533	0.05037	0.014235	0.042	0.0138	0.0039	0.00014	0.000046
Conveyor ID No. C-6 with wet supression Maximum Rated Capacity 250 tons/hour Actual annual throughput 600,000 tons	0.035	0.0115	0.00325	0.1533	0.05037	0.014235	0.042	0.0138	0.0039	0.00014	0.000046
Conveyor ID No. C-7 with wet supression Maximum Rated Capacity 250 tons/hour Actual annual throughput 600,000 tons	0.035	0.0115	0.00325	0.1533	0.05037	0.014235	0.042	0.0138	0.0039	0.00014	0.000046
			0						0	0.00014	0.000046
			0						0	0.00014	0.000046
			0						0	0.00014	0.000046
			0						0	0.00014	0.000046
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			0						0	0.00014	0.000046
			0						0	0.00014	0.000046
			0						0	0.00014	0.000046
			0						0	0.00014	0.000046
			0						0	0.00014	0.000046
			0						0	0.00014	0.000046
			0						0	0.00014	0.000046
			0						0	0.00014	0.000046

Conveyors Calculations and Output

Company Name:	Barton Malow Company
Facility ID No.:	0
Permit No.:	0
Facility City:	Spring Hill
Facility County:	Maury

hourly potential TSP emissions (lb/hr)	hourly potential PM_{10} emissions (lb/hr)	hourly potential PM2.5 emissions (lb/hr)	yearly potential TSP emissions (tpy)	yearly potential PM_{10} emissions (tpy)	yearly potential PM2.5 emissions (tpy)	yearly actual TSP emissions (tpy)	yearly actual PM_{10} emissions (tpy)	yearly actual PM2.5 emissions (tpy)	TSP emission factor (lb/ton)	PM_{10} emission factor (lb/ton)
0.25	0.08	0.02	1.07	0.35	0.10	0.29	0.10	0.03		
		0						0	0.00014	0.000046
		0						0	0.00014	0.000046
		0						0	0.00014	0.000046
		0						0	0.00014	0.000046
		0						0	0.00014	0.000046

Emission Factors
Taken from AP-42, Crushed Stone Processing, 08/04. Table 11.19.2-2

Source	SCC	TPM lb/ton	emission factor rating	PM-10 lb/ton	emission factor rating	PM-2.5 lb/ton	emission factor rating
screening	3-05-020-02,03	**0.025**	E	**0.0087**	C	**0.0087**	ND
screening (controlled)	3-05-020-02,03	**0.0022**	E	**0.00074**	C	**0.000050**	E
primary crushing	3-05-020-01	**0.0054**	ND[g]	**0.0024**	ND[g]	**0.0024**	ND[g]
primary crushing (controlled)	3-05-020-01	**0.0012**	ND[g]	**0.00054**	ND[g]	**0.00010**	ND[g]
secondary crushing	3-05-020-02	**0.0054**	ND[g]	**0.0024**	ND[g]	**0.0024**	ND[g]
secondary crushing (controlled)	3-05-020-02	**0.0012**	ND[g]	**0.00054**	ND[g]	**0.00010**	ND[g]
tertiary crushing	3-05-020-03	**0.0054**	E	**0.0024**	C	**0.0024**	ND
tertiary crushing (controlled)	3-05-020-03	**0.0012**	E	**0.00054**	C	**0.00010**	E
fines crushing	3-05-020-05	**0.0390**	E	**0.0150**	E	**0.0150**	ND
fines crushing (controlled)	3-05-020-05	**0.0030**	E	**0.0012**	E	**0.000070**	E
fines screening	3-05-020-21	**0.30**	E	**0.072**	E	**0.072**	ND
fines screening (controlled)	3-05-020-21	**0.0036**	E	**0.0022**	E	**0.0022**	ND
conveyor transfer point	3-05-020-06	**0.0030**	E	**0.00110**	D	**0.00110**	ND
conveyor transport (controlled)	3-05-020-06	**0.00014**	E	**4.60E-05**	D	**1.30E-05**	D
wet drilling: unfragmented stone	3-05-020-10	**0.000168**	d, ND1	**8.00E-05**	E	**8.00E-05**	ND
truck unloading: fragmented stone	3-05-020-31	**0.0000336**	d, ND1	**1.60E-05**	E	**1.60E-05**	ND
truck loading-conveyor:crushed stone	3-05-020-32	**0.00021**	d, ND1	**0.00010**	E	**0.00010**	ND

C,D,E - emission factor rating
d - Emission factors for total particulate are not presented pending a reevaluation of the EPA method 201A test data and/or results of emission testing. This re-evaluation is expected to be completed by July 1995. Without this re-evaluation this emission factor is simply 2.1 * emission factor for PM-10 (consistent with previous spreadsheet revision 5b-1.0a, updated 06/05/97).
ND1 - No data available
ND[g] - No data available, but emissions factors for PM-10 from tertiary crushing can be used as an upper limit for primary and secondary crushing.
e - PM-10 emission factor is TSP emission factor divided by 2.1

Revision	Date	Author	Comments
A	3/28/2002	Joe Voelker	Creation
B	11/18/2009	Joe Voelker	The summation calculations on the "conveyor output" sheet was corrected. The existing version only summed the first 15 conveyors, even if more than 15 were indicated on the "permit input" sheet.
C	5/23/2011	Dena Pittman	Emission factors updated using AP-42, 8/04 emission factors and PM-2.5 emissions added to the spreadsheet.

STONE CRUSHING EMISSIONS CALCULATOR REVISION C 05/23/2011
PERMITTING AND MODELING INPUT SCREEN

NCDENR

NOTICE:
This spreadsheet is for your use only and should be used with caution. DENR does not guarantee the accuracy of the information contained. This spreadsheet is subject to continual revision and updating. It is your responsibility to be aware of the most current information available. DENR is not responsible for errors or omissions that may be contained herein.

Instructions:
1. Enter emission source / facility data on this sheet *for permitting and/or modeling*. The air emission results and summary for each type of equipment will be on its own sheet (e.g., crushers output, screens output). The facility-wide totals are summarized on the "OUTPUT" sheet. The different tabs are on the bottom of this screen.
2. For each type of equipment fill in all *BLUE* fields.

Company Name:	Barton Malow Company
Facility ID No.:	
Permit No.:	
Facility City:	Spring Hill
Facility County:	Maury
Spreadsheet Prepared by:	

Actual hours of operation:	12	hours
Total Plant Maximum Rated Capacity:	800	tons per hour
Actual Annual Total Plant Production:	468000	tons
Potential Annual Total Plant Production:	1200000	tons

Crusher Input

How many crushers total ? 4

***Note**: If wet supression is not applied on an automatic and continuous basis during the operation of the crusher, answer "no" for "wet supression (Y/N)?".*

Crusher ID No.	Type of crusher	Maximum Rated Capacity (tons/hr)	*wet supression (Y/N) ?	actual yearly throughput (tons)
CR-1	Primary	400	wet	600,000
CR-2	Secondary or Tertiary	400	wet	600,000
CR-3	Primary	400	wet	600,000
CR-4	Secondary or Tertiary	400	wet	600,000
CR-5	Primary	0	wet	0

CR-6	Secondary or Tertiary	0	wet	0
CR-7	Secondary or Tertiary	0	dry	0
CR-8	Secondary or Tertiary	0	wet	0
CR-9	Primary	0	dry	0
CR-10	Primary	0	wet	0
CR-11	Primary	0	wet	0
CR-12	Primary	0	wet	0
CR-13	Primary	0	wet	0
CR-14	Primary	0	dry	0
CR-15	Fines	0	dry	0

Screens Input

How many screens total ? 3

Screen ID No.	Type of screen	Maximum Rated Capacity (tons/hr)	wet supression (Y/N) ?	actual yearly throughput (tons)
SCR-1	Normal	400	wet	600,000
SCR-2	Normal	400	wet	600,000
SCR-3	Normal	400	wet	600,000
SCR-4	Normal	0	wet	0
SCR-5	Normal	0	wet	0
SCR-6	Normal	0	wet	0
SCR-7	Normal	0	wet	0
SCR-8	Normal	0	wet	0
SCR-9	Normal	0	wet	0
SCR-10	Normal	0	wet	0
SCR-11	Normal	0	wet	0
SCR-12	Normal	0	wet	0
SCR-13	Normal	0	wet	0
SCR-14	Normal	0	wet	0
SCR-15	Normal	0	wet	0

Conveyor Input

How many conveyors total ? 7

***NOTE:** **Each conveyor will have one transfer point, the point where it drops product, not receives product. Answer "no" if the conveyor drops to a screen or a crusher. The transfer points to the crushers and screens are already accounted for in the emission factors for these units.**

Conveyor ID No.	*Conveyor transfer point ?	Maximum Rated Capacity (tons/hr)	wet supression (Y/N) ?	actual yearly throughput (tons)
C-1	yes	400	wet	600,000
C-2	yes	400	wet	600,000
C-3	yes	400	wet	600,000
C-4	yes	400	wet	600,000
C-5	yes	400	wet	600,000
C-6	yes	400	wet	600,000
C-7	yes	400	wet	600,000
C-8	yes	0	wet	0
C-9	yes	0	wet	0
C-10	yes	0	wet	0
C-11	yes	0	wet	0
C-12	yes	0	wet	0
C-13	yes	0	wet	0
C-14	yes	0	wet	0
C-15	yes	0	wet	0
C-16	yes	0	wet	0
C-17	yes	0	wet	0
C-18	yes	0	wet	0
C-19	yes	0	wet	0
C-20	yes	0	wet	0
C-21	yes	0	wet	0
C-22	yes	0	wet	0
C-23	yes	0	wet	0
C-24	yes	0	wet	0
C-25	yes	0	wet	0

STONE QUARRY EMISSIONS CALCULATOR REVISION C 05/23/2011 - OUTPUT SCREEN

NCDENR

Instructions: Enter emission source / facility data on the "INPUT" tab/screen. The air emission results and summary of input data are viewed / printed on the "OUTPUT" tab/screen. The different tabs are on the bottom of this screen.

This spreadsheet is for your use only and should be used with caution. DENR does not guarantee the accuracy of the information contained. This spreadsheet is subject to continual revision and updating. It is your responsibility to be aware of the most current information available. DENR is not responsible for errors or omissions that may be contained herein.

SOURCE / FACILITY / USER INPUT SUMMARY (FROM INPUT SCREEN)

COMPANY:	**Barton Malow Company**	FACILITY ID NO.:	0
		PERMIT NUMBER:	0
		FACILITY CITY:	Spring Hill
		FACILITY COUNTY:	Maury
SPREADSHEET PREPARED BY:	0		

CRITERIA AIR POLLUTANT EMISSIONS INFORMATION

AIR POLLUTANT EMITTED	ACTUAL EMISSIONS (AFTER CONTROLS / LIMITS) lb/hr	ACTUAL EMISSIONS tons/yr	POTENTIAL EMSSIONS lb/hr	POTENTIAL EMSSIONS tons/yr
PARTICULATE MATTER (PM)	1.86E-03	3.71	4.95	21.69
PARTICULATE MATTER<10 MICRONS (PM_{10})	7.05E-04	1.41	1.88	8.24
PARTICULATE MATTER<2.5 MICRONS ($PM_{2.5}$)	9.62E-05	0.19	0.26	1.12
DIOXIDE (SO2)				
N OXIDES (NOx)				
MONOXIDE (CO)				
IC COMPOUNDS (VOC)				
LEAD				

TOXIC / HAZARDOUS AIR POLLUTANT EMISSIONS INFORMATION

		ACTUAL EMISSIONS		POTENTIAL EMSSIONS				EMISSION FACTOR	
	CAS	ONTROLS (BEFORE CONTROLS (AFTER CONTROLS / LIMITS)						lb/mmBtu	
OUS AIR POLLUTANT	NUMBER	lb/hr	tons/yr	lb/hr	tons/yr	lb/hr	tons/yr	uncontrolled	controlled

TOXIC AIR POLLUTANT EMISSIONS INFORMATION (FOR PERMITTING PURPOSES)

S AFTER CONTROLS / LIMITATIONS					EMISSION FACTOR	
					lb/mmBtu	
R POLLUTANT	CAS Num.	lb/hr	lb/day	lb/yr	uncontrolled	controlled

STONE CRUSHING EMISSIONS CALCULATOR REVISION C 05/23/2011 **EMISSIONS**

INVENTORY INPUT SCREEN

NOTICE:

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Instructions:

1. Use this sheet for EMISSION INVENTORY PURPOSES ONLY.
2. For each product fill in all BLUE cells.

Company Name:	Stoney Curtis Crushing
Facility ID No.:	123456789
Permit No.:	99999R09
Facility City:	Bedrock
Facility County:	HollyRock
Spreadsheet Prepared by:	Barney Rubble

Actual plant hours of operation:	2000	hours
How many products did you produce ?	1	

Facility-wide Emissions Summary

yearly actual TSP emissions (tpy)	yearly actual PM_{10} emissions (tpy)	yearly actual PM2.5 emissions (tpy)	yearly potential TSP emissions (tpy)	yearly potential PM_{10} emissions (tpy)	yearly potential PM2.5 emissions (tpy)
0.0	0.0	0.0	0.0	0.0	0.0

Product A

Product A Process Information

Actual annual production of A: 0 tons

CRUSHERS Information

No. of primary crushers with no suppression:	0
No. of primary crushers with wet suppression:	0
No. of secondary / tertiary crushers with no suppression:	0
No. of secondary / tertiary crushers with wet suppression:	0
No. of fines crushers with no suppression:	0
No. of fines crushers with wet suppression:	0

SCREENS Information

No. of normal screens with no suppression:	0
No. of normal screens with wet suppression:	0
No. of fines screens with no suppression:	0
No. of fines screens with wet suppression:	0

CONVEYOR TRANSFER POINTS Information

*No. of conveyor transport points with no suppression:	0

*No. of conveyor transport points with wet suppression: 0

*NOTE: Each conveyor will have only one transfer point, the point where a conveyor drops product, not recieves product. Do not include conveyors that drop to screens or crushers. The transfer points to the crushers and screens are already accounted for in the emission factors for these units.

Product A Emissions Summary

A product crushers TSP emissions:	0.0	tons
A product screens TSP emissions:	0.0	tons
A product conveyor transfer points TSP emissions:	0.0	tons
A product total TSP emissions:	0.0	tons
A product crushers PM10 emissions:	0.0	tons
A product screens PM10 emissions:	0.0	tons
A product conveyor transfer points PM10 emissions:	0.0	tons
A product total PM10 emissions:	0.0	tons
A product crushers PM2.5 emissions:	0.0	tons
A product screens PM2.5 emissions:	0.0	tons
A product conveyor transfer points PM2.5 emissions:	0.0	tons
A product total PM2.5 emissions:	0.0	tons

Product B

Product B Process Information

Actual annual production of B: 0 tons

CRUSHERS Information

No. of primary crushers with no suppression:	0
No. of primary crushers with wet suppression:	0
No. of secondary / tertiary crushers with no suppression:	0
No. of secondary / tertiary crushers with wet suppression:	0
No. of fines crushers with no suppression:	0
No. of fines crushers with wet suppression:	0

SCREENS Information

No. of normal screens with no suppression:	0
No. of normal screens with wet suppression:	0
No. of fines screens with no suppression:	0
No. of fines screens with wet suppression:	0

CONVEYOR TRANSFER POINTS Information

*No. of conveyor transport points with no suppression:	0
*No. of conveyor transport points with wet suppression:	0

*NOTE: Each conveyor will have only one transfer point, the point where a conveyor drops product, not recieves product. Do not include conveyors that drop to screens or crushers. The transfer points to the crushers and screens are already accounted for in the emission factors for these units.

Product B Emissions Summary

B product crushers TSP emissions:	0.0	tons
B product screens TSP emissions:	0.0	tons
B product conveyor transfer points TSP emissions:	0.0	tons
B product total TSP emissions:	0.0	tons

B product crushers PM10 emissions:	0.0	tons
B product screens PM10 emissions:	0.0	tons
B product conveyor transfer points PM10 emissions:	0.0	tons
B product total PM10 emissions:	0.0	tons
B product crushers PM2.5 emissions:	0.0	tons
B product screens PM2.5 emissions:	0.0	tons
B product conveyor transfer points PM2.5 emissions:	0.0	tons
B product total PM2.5 emissions:	0.0	tons

Product C

Product C Process Information

Actual annual production of C: 0 tons

CRUSHERS Information

No. of primary crushers with no suppression:	0
No. of primary crushers with wet suppression:	0
No. of secondary / tertiary crushers with no suppression:	0
No. of secondary / tertiary crushers with wet suppression:	0
No. of fines crushers with no suppression:	0
No. of fines crushers with wet suppression:	0

SCREENS Information

No. of normal screens with no suppression:	0
No. of normal screens with wet suppression:	0
No. of fines screens with no suppression:	0
No. of fines screens with wet suppression:	0

CONVEYOR TRANSFER POINTS Information

*No. of conveyor transport points with no suppression:	0
*No. of conveyor transport points with wet suppression:	0

*NOTE: Each conveyor will have only one transfer point, the point where a conveyor drops product, not recieves product. Do not include conveyors that drop to screens or crushers. The transfer points to the crushers and screens are already accounted for in the emission factors for these units.

Product C Emissions Summary

C product crushers TSP emissions:	0.0	tons
C product screens TSP emissions:	0.0	tons
C product conveyor transfer points TSP emissions:	0.0	tons
C product total TSP emissions:	0.0	tons
C product crushers PM10 emissions:	0.0	tons
C product screens PM10 emissions:	0.0	tons
C product conveyor transfer points PM10 emissions:	0.0	tons
C product total PM10 emissions:	0.0	tons
C product crushers PM2.5 emissions:	0.0	tons
C product screens PM2.5 emissions:	0.0	tons
C product conveyor transfer points PM2.5 emissions:	0.0	tons
C product total PM2.5 emissions:	0.0	tons

Product D

Product D Process Information

Actual annual production of D: 0 tons

CRUSHERS Information

No. of primary crushers with no suppression:	0
No. of primary crushers with wet suppression:	0
No. of secondary / tertiary crushers with no suppression:	0
No. of secondary / tertiary crushers with wet suppression:	0
No. of fines crushers with no suppression:	0
No. of fines crushers with wet suppression:	0

SCREENS Information

No. of normal screens with no suppression:	0
No. of normal screens with wet suppression:	0
No. of fines screens with no suppression:	0
No. of fines screens with wet suppression:	0

CONVEYOR TRANSFER POINTS Information

*No. of conveyor transport points with no suppression:	0
*No. of conveyor transport points with wet suppression:	0

*NOTE: Each conveyor will have only one transfer point, the point where a conveyor drops product, not recieves product. Do not include conveyors that drop to screens or crushers. The transfer points to the crushers and screens are already accounted for in the emission factors for these units.

Product D Emissions Summary

D product crushers TSP emissions:	0.0	tons
D product screens TSP emissions:	0.0	tons
D product conveyor transfer points TSP emissions:	0.0	tons
D product total TSP emissions:	0.0	tons
D product crushers PM10 emissions:	0.0	tons
D product screens PM10 emissions:	0.0	tons
D product conveyor transfer points PM10 emissions:	0.0	tons
D product total PM10 emissions:	0.0	tons
D product crushers PM2.5 emissions:	0.0	tons
D product screens PM2.5 emissions:	0.0	tons
D product conveyor transfer points PM2.5 emissions:	0.0	tons
D product total PM2.5 emissions:	0.0	tons

Product E

Product E Process Information

Actual annual production of E: 0 tons

CRUSHERS Information

No. of primary crushers with no suppression:	1
No. of primary crushers with wet suppression:	0
No. of secondary / tertiary crushers with no suppression:	0
No. of secondary / tertiary crushers with wet suppression:	0
No. of fines crushers with no suppression:	0
No. of fines crushers with wet suppression:	0

SCREENS Information

No. of normal screens with no suppression:	0
No. of normal screens with wet suppression:	0

No. of fines screens with no suppression:	0
No. of fines screens with wet suppression:	0

CONVEYOR TRANSFER POINTS Information

*No. of conveyor transport points with no suppression:	0
*No. of conveyor transport points with wet suppression:	0

***NOTE:** Each conveyor will have only one transfer point, the point where a conveyor drops product, not recieves product. Do not include conveyors that drop to screens or crushers. The transfer points to the crushers and screens are already accounted for in the emission factors for these units.**

Product E Emissions Summary

E product crushers TSP emissions:	0.0	tons
E product screens TSP emissions:	0.0	tons
E product conveyor transfer points TSP emissions:	0.0	tons
E product total TSP emissions:	0.0	tons
E product crushers PM10 emissions:	0.0	tons
E product screens PM10 emissions:	0.0	tons
E product conveyor transfer points PM10 emissions:	0.0	tons
E product total PM10 emissions:	0.0	tons
E product crushers PM2.5 emissions:	0.0	tons
E product screens PM2.5 emissions:	0.0	tons
E product conveyor transfer points PM2.5 emissions:	0.0	tons
E product total PM2.5 emissions:	0.0	tons

Product F

Product F Process Information

Actual annual production of F: 0 tons

CRUSHERS Information

No. of primary crushers with no suppression:	0
No. of primary crushers with wet suppression:	0
No. of secondary / tertiary crushers with no suppression:	0
No. of secondary / tertiary crushers with wet suppression:	0
No. of fines crushers with no suppression:	0
No. of fines crushers with wet suppression:	0

SCREENS Information

No. of normal screens with no suppression:	0
No. of normal screens with wet suppression:	0
No. of fines screens with no suppression:	0
No. of fines screens with wet suppression:	0

CONVEYOR TRANSFER POINTS Information

*No. of conveyor transport points with no suppression:	0
*No. of conveyor transport points with wet suppression:	0

***NOTE:** Each conveyor will have only one transfer point, the point where a conveyor drops product, not recieves product. Do not include conveyors that drop to screens or crushers. The transfer points to the crushers and screens are already accounted for in the emission factors for these units.**

Product F Emissions Summary

F product crushers TSP emissions:	0.0	tons

F product screens TSP emissions:	0.0	tons
F product conveyor transfer points TSP emissions:	0.0	tons
F product total TSP emissions:	0.0	tons
F product crushers PM10 emissions:	0.0	tons
F product screens PM10 emissions:	0.0	tons
F product conveyor transfer points PM10 emissions:	0.0	tons
F product total PM10 emissions:	0.0	tons
F product crushers PM2.5 emissions:	0.0	tons
F product screens PM2.5 emissions:	0.0	tons
F product conveyor transfer points PM2.5 emissions:	0.0	tons
F product total PM2.5 emissions:	0.0	tons

Product G

Product G Process Information

Actual annual production of G: 0 tons

CRUSHERS Information

No. of primary crushers with no suppression:	1
No. of primary crushers with wet suppression:	0
No. of secondary / tertiary crushers with no suppression:	0
No. of secondary / tertiary crushers with wet suppression:	0
No. of fines crushers with no suppression:	0
No. of fines crushers with wet suppression:	0

SCREENS Information

No. of normal screens with no suppression:	0
No. of normal screens with wet suppression:	0
No. of fines screens with no suppression:	0
No. of fines screens with wet suppression:	0

CONVEYOR TRANSFER POINTS Information

*No. of conveyor transport points with no suppression:	0
*No. of conveyor transport points with wet suppression:	0

*NOTE: Each conveyor will have only one transfer point, the point where a conveyor drops product, not recieves product. Do not include conveyors that drop to screens or crushers. The transfer points to the crushers and screens are already accounted for in the emission factors for these units.

Product G Emissions Summary

G product crushers TSP emissions:	0.0	tons
G product screens TSP emissions:	0.0	tons
G product conveyor transfer points TSP emissions:	0.0	tons
G product total TSP emissions:	0.0	tons
G product crushers PM10 emissions:	0.0	tons
G product screens PM10 emissions:	0.0	tons
G product conveyor transfer points PM10 emissions:	0.0	tons
G product total PM10 emissions:	0.0	tons
G product crushers PM2.5 emissions:	0.0	tons
G product screens PM2.5 emissions:	0.0	tons
G product conveyor transfer points PM2.5 emissions:	0.0	tons
G product total PM2.5 emissions:	0.0	tons

Product H

Product H Process Information

Actual annual production of H: 0 tons

CRUSHERS Information

No. of primary crushers with no suppression:	0
No. of primary crushers with wet suppression:	0
No. of secondary / tertiary crushers with no suppression:	0
No. of secondary / tertiary crushers with wet suppression:	0
No. of fines crushers with no suppression:	0
No. of fines crushers with wet suppression:	0

SCREENS Information

No. of normal screens with no suppression:	0
No. of normal screens with wet suppression:	0
No. of fines screens with no suppression:	0
No. of fines screens with wet suppression:	0

CONVEYOR TRANSFER POINTS Information

*No. of conveyor transport points with no suppression:	0
*No. of conveyor transport points with wet suppression:	0

*NOTE: Each conveyor will have only one transfer point, the point where a conveyor drops product, not recieves product. Do not include conveyors that drop to screens or crushers. The transfer points to the crushers and screens are already accounted for in the emission factors for these units.

Product H Emissions Summary

H product crushers TSP emissions:	0.0	tons
H product screens TSP emissions:	0.0	tons
H product conveyor transfer points TSP emissions:	0.0	tons
H product total TSP emissions:	0.0	tons
H product crushers PM10 emissions:	0.0	tons
H product screens PM10 emissions:	0.0	tons
H product conveyor transfer points PM10 emissions:	0.0	tons
H product total PM10 emissions:	0.0	tons
H product crushers PM2.5 emissions:	0.0	tons
H product screens PM2.5 emissions:	0.0	tons
H product conveyor transfer points PM2.5 emissions:	0.0	tons
H product total PM2.5 emissions:	0.0	tons

Product I

Product I Process Information

Actual annual production of I: 0 tons

CRUSHERS Information

No. of primary crushers with no suppression:	1
No. of primary crushers with wet suppression:	0
No. of secondary / tertiary crushers with no suppression:	0
No. of secondary / tertiary crushers with wet suppression:	0
No. of fines crushers with no suppression:	0
No. of fines crushers with wet suppression:	0

SCREENS Information

No. of normal screens with no suppression:	0
No. of normal screens with wet suppression:	0
No. of fines screens with no suppression:	0
No. of fines screens with wet suppression:	0

CONVEYOR TRANSFER POINTS Information

*No. of conveyor transport points with no suppression:	0
*No. of conveyor transport points with wet suppression:	0

*NOTE: Each conveyor will have only one transfer point, the point where a conveyor drops product, not recieves product. Do not include conveyors that drop to screens or crushers. The transfer points to the crushers and screens are already accounted for in the emission factors for these units.

Product I Emissions Summary

I product crushers TSP emissions:	0.0	tons
I product screens TSP emissions:	0.0	tons
I product conveyor transfer points TSP emissions:	0.0	tons
I product total TSP emissions:	0.0	tons
I product crushers PM10 emissions:	0.0	tons
I product screens PM10 emissions:	0.0	tons
I product conveyor transfer points PM10 emissions:	0.0	tons
I product total PM10 emissions:	0.0	tons
I product crushers PM2.5 emissions:	0.0	tons
I product screens PM2.5 emissions:	0.0	tons
I product conveyor transfer points PM2.5 emissions:	0.0	tons
I product total PM2.5 emissions:	0.0	tons

Product J

Product J Process Information

Actual annual production of J: 0 tons

CRUSHERS Information

No. of primary crushers with no suppression:	1
No. of primary crushers with wet suppression:	0
No. of secondary / tertiary crushers with no suppression:	0
No. of secondary / tertiary crushers with wet suppression:	0
No. of fines crushers with no suppression:	0
No. of fines crushers with wet suppression:	0

SCREENS Information

No. of normal screens with no suppression:	0
No. of normal screens with wet suppression:	0
No. of fines screens with no suppression:	0
No. of fines screens with wet suppression:	0

CONVEYOR TRANSFER POINTS Information

*No. of conveyor transport points with no suppression:	0
*No. of conveyor transport points with wet suppression:	0

*NOTE: Each conveyor will have only one transfer point, the point where a conveyor drops product, not recieves product. Do not include conveyors that drop to screens or crushers. The transfer points to the crushers and screens are already accounted for in the emission factors for these units.

Product J Emissions Summary

J product crushers TSP emissions:	0.0	tons
J product screens TSP emissions:	0.0	tons
J product conveyor transfer points TSP emissions:	0.0	tons
J product total TSP emissions:	0.0	tons
J product crushers PM10 emissions:	0.0	tons
J product screens PM10 emissions:	0.0	tons
J product conveyor transfer points PM10 emissions:	0.0	tons
J product total PM10 emissions:	0.0	tons
J product crushers PM2.5 emissions:	0.0	tons
J product screens PM2.5 emissions:	0.0	tons
J product conveyor transfer points PM2.5 emissions:	0.0	tons
J product total PM2.5 emissions:	0.0	tons

NC quarry and Rock Crushing Barton Malow max INVENTORY INPUT 10 of 10 pages

Crusher Calculations and Output

Company Name: Barton Malow Company	1.92	0.86	0.16	8.41	3.78	0.70	1.44	0.65	0.12		
Facility ID No.: 0											
Permit No.: 0	hourly potential	hourly potential	hourly potential	yearly potential	yearly potential	yearly potential	yearly actual	yearly actual	yearly actual		
Facility City: Spring Hill	TSP emissions	PM_{10} emissions	PM2.5 emissions	TSP emissions	PM_{10} emissions	PM2.5 emissions	TSP emissions	PM_{10} emissions	PM2.5 emissions	TSP emission	PM_{10} emission
Facility County: Maury	(lb/hr)	(lb/hr)	(lb/hr)	(tpy)	(tpy)	(tpy)	(tpy)	(tpy)	(tpy)	factor (lb/ton)	factor (lb/ton)
Primary Crusher ID No. CR-1 with wet supression Maximum Rated Capacity 400 tons/hour Actual annual throughput 600,000 tons	0.48	0.216	0.04	2.1024	0.94608	0.1752	0.36	0.162	0.03	0.0012	0.00054
Secondary or Tertiary Crusher ID No. CR-2 with wet supression Maximum Rated Capacity 400 tons/hour Actual annual throughput 600,000 tons	0.48	0.216	0.04	2.1024	0.94608	0.1752	0.36	0.162	0.03	0.0012	0.00054
Primary Crusher ID No. CR-3 with wet supression Maximum Rated Capacity 400 tons/hour Actual annual throughput 600,000 tons	0.48	0.216	0.04	2.1024	0.94608	0.1752	0.36	0.162	0.03	0.0012	0.00054
Secondary or Tertiary Crusher ID No. CR-4 with wet supression Maximum Rated Capacity 400 tons/hour Actual annual throughput 600,000 tons	0.48	0.216	0.04	2.1024	0.94608	0.1752	0.36	0.162	0.03	0.0012	0.00054
			0						0		
			0						0		
			0						0		
			0						0		
			0						0		
			0						0		
			0						0		
			0						0		
			0						0		
			0						0		
			0						0		

Screens Calculations and Output

Company Name: Barton Malow Company
Facility ID No.: 0
Permit No.: 0
Facility City: Spring Hill
Facility County: Maury

			2.64 hourly potential TSP emissions (lb/hr)	0.89 hourly potential PM_{10} emissions (lb/hr)	0.06 hourly potential PM_{10} emissions (lb/hr)	11.56 yearly potential TSP emissions (tpy)	3.89 yearly potential PM_{10} emissions (tpy)	0.26 yearly potential PM2.5 emissions (tpy)	1.98 yearly actual TSP emissions (tpy)	0.67 yearly actual PM_{10} emissions (tpy)	0.05 yearly actual PM2.5 emissions (tpy)	TSP emission factor (lb/ton)	PM_{10} emission factor (lb/ton)
Normal Screen ID No. SCR-1 with wet supression													
Maximum Rated Capacity	400	tons/hour	0.88	0.296	0.02	3.8544	1.29648	0.0876	0.66	0.222	0.015	0.0022	0.00074
Actual annual throughput	600,000	tons											
Normal Screen ID No. SCR-2 with wet supression													
Maximum Rated Capacity	400	tons/hour	0.88	0.296	0.02	3.8544	1.29648	0.0876	0.66	0.222	0.015	0.0022	0.00074
Actual annual throughput	600,000	tons											
Normal Screen ID No. SCR-3 with wet supression													
Maximum Rated Capacity	400	tons/hour	0.88	0.296	0.02	3.8544	1.29648	0.0876	0.66	0.222	0.015	0.0022	0.00074
Actual annual throughput	600,000	tons											
					0						0		
					0						0		
					0						0		
					0						0		
					0						0		
					0						0		
					0						0		
					0						0		
					0						0		
					0						0		
					0						0		
					0						0		

Conveyors Calculations and Output

Company Name: Barton Malow Company
Facility ID No.: 0
Permit No.: 0
Facility City: Spring Hill
Facility County: Maury

	hourly potential TSP emissions (lb/hr)	hourly potential PM_{10} emissions (lb/hr)	hourly potential PM2.5 emissions (lb/hr)	yearly potential TSP emissions (tpy)	yearly potential PM_{10} emissions (tpy)	yearly potential PM2.5 emissions (tpy)	yearly actual TSP emissions (tpy)	yearly actual PM_{10} emissions (tpy)	yearly actual PM2.5 emissions (tpy)	TSP emission factor (lb/ton)	PM_{10} emission factor (lb/ton)
Totals	0.39	0.13	0.04	1.72	0.56	0.16	0.29	0.10	0.03		
Conveyor ID No. C-1 with wet supression Maximum Rated Capacity 400 tons/hour Actual annual throughput 600,000 tons	0.056	0.0184	0.0052	0.24528	0.080592	0.022776	0.042	0.0138	0.0039	0.00014	0.000046
Conveyor ID No. C-2 with wet supression Maximum Rated Capacity 400 tons/hour Actual annual throughput 600,000 tons	0.056	0.0184	0.0052	0.24528	0.080592	0.022776	0.042	0.0138	0.0039	0.00014	0.000046
Conveyor ID No. C-3 with wet supression Maximum Rated Capacity 400 tons/hour Actual annual throughput 600,000 tons	0.056	0.0184	0.0052	0.24528	0.080592	0.022776	0.042	0.0138	0.0039	0.00014	0.000046
Conveyor ID No. C-4 with wet supression Maximum Rated Capacity 400 tons/hour Actual annual throughput 600,000 tons	0.056	0.0184	0.0052	0.24528	0.080592	0.022776	0.042	0.0138	0.0039	0.00014	0.000046
Conveyor ID No. C-5 with wet supression Maximum Rated Capacity 400 tons/hour Actual annual throughput 600,000 tons	0.056	0.0184	0.0052	0.24528	0.080592	0.022776	0.042	0.0138	0.0039	0.00014	0.000046
Conveyor ID No. C-6 with wet supression Maximum Rated Capacity 400 tons/hour Actual annual throughput 600,000 tons	0.056	0.0184	0.0052	0.24528	0.080592	0.022776	0.042	0.0138	0.0039	0.00014	0.000046
Conveyor ID No. C-7 with wet supression Maximum Rated Capacity 400 tons/hour Actual annual throughput 600,000 tons	0.056	0.0184	0.0052	0.24528	0.080592	0.022776	0.042	0.0138	0.0039	0.00014	0.000046
			0						0	0.00014	0.000046
			0						0	0.00014	0.000046
			0						0	0.00014	0.000046
			0						0	0.00014	0.000046
			0						0	0.00014	0.000046
			0						0	0.00014	0.000046
			0						0	0.00014	0.000046
			0						0	0.00014	0.000046
			0						0	0.00014	0.000046
			0						0	0.00014	0.000046
			0						0	0.00014	0.000046
			0						0	0.00014	0.000046
			0						0	0.00014	0.000046

Conveyors Calculations and Output

		hourly potential TSP emissions (lb/hr)	hourly potential PM_{10} emissions (lb/hr)	hourly potential PM2.5 emissions (lb/hr)	yearly potential TSP emissions (tpy)	yearly potential PM_{10} emissions (tpy)	yearly potential PM2.5 emissions (tpy)	yearly actual TSP emissions (tpy)	yearly actual PM_{10} emissions (tpy)	yearly actual PM2.5 emissions (tpy)	TSP emission factor (lb/ton)	PM_{10} emission factor (lb/ton)
Company Name:	Barton Malow Company	0.39	0.13	0.04	1.72	0.56	0.16	0.29	0.10	0.03		
Facility ID No.:	0											
Permit No.:	0											
Facility City:	Spring Hill											
Facility County:	Maury											
				0						0	0.00014	0.000046
				0						0	0.00014	0.000046
				0						0	0.00014	0.000046
				0						0	0.00014	0.000046
				0						0	0.00014	0.000046

Emission Factors
Taken from AP-42, Crushed Stone Processing, 08/04. Table 11.19.2-2

Source	SCC	TPM lb/ton	emission factor rating	PM-10 lb/ton	emission factor rating	PM-2.5 lb/ton	emission factor rating
screening	3-05-020-02,03	**0.025**	E	**0.0087**	C	**0.0087**	ND
screening (controlled)	3-05-020-02,03	**0.0022**	E	**0.00074**	C	**0.000050**	E
primary crushing	3-05-020-01	**0.0054**	ND[g]	**0.0024**	ND[g]	**0.0024**	ND[g]
primary crushing (controlled)	3-05-020-01	**0.0012**	ND[g]	**0.00054**	ND[g]	**0.00010**	ND[g]
secondary crushing	3-05-020-02	**0.0054**	ND[g]	**0.0024**	ND[g]	**0.0024**	ND[g]
secondary crushing (controlled)	3-05-020-02	**0.0012**	ND[g]	**0.00054**	ND[g]	**0.00010**	ND[g]
tertiary crushing	3-05-020-03	**0.0054**	E	**0.0024**	C	**0.0024**	ND
tertiary crushing (controlled)	3-05-020-03	**0.0012**	E	**0.00054**	C	**0.00010**	E
fines crushing	3-05-020-05	**0.0390**	E	**0.0150**	E	**0.0150**	ND
fines crushing (controlled)	3-05-020-05	**0.0030**	E	**0.0012**	E	**0.000070**	E
fines screening	3-05-020-21	**0.30**	E	**0.072**	E	**0.072**	ND
fines screening (controlled)	3-05-020-21	**0.0036**	E	**0.0022**	E	**0.0022**	ND
conveyor transfer point	3-05-020-06	**0.0030**	E	**0.00110**	D	**0.00110**	ND
conveyor transport (controlled)	3-05-020-06	**0.00014**	E	**4.60E-05**	D	**1.30E-05**	D
wet drilling: unfragmented stone	3-05-020-10	**0.000168**	d, ND1	**8.00E-05**	E	**8.00E-05**	ND
truck unloading: fragmented stone	3-05-020-31	**0.0000336**	d, ND1	**1.60E-05**	E	**1.60E-05**	ND
truck loading-conveyor:crushed stone	3-05-020-32	**0.00021**	d, ND1	**0.00010**	E	**0.00010**	ND

C,D,E - emission factor rating
d - Emission factors for total particulate are not presented pending a reevaluation of the EPA method 201A test data and/or results of emission testing. This re-evaluation is expected to be completed by July 1995. Without this re-evaluation this emission factor is simply 2.1 * emission factor for PM-10 (consistent with previous spreadsheet revision 5b-1.0a, updated 06/05/97).
ND1 - No data available
ND[g] - No data available, but emissions factors for PM-10 from tertiary crushing can be used as an upper limit for primary and secondary crushing.
e - PM-10 emission factor is TSP emission factor divided by 2.1

Revision	Date	Author	Comments
A	3/28/2002	Joe Voelker	Creation
B	11/18/2009	Joe Voelker	The summation calculations on the "conveyor output" sheet was corrected. The existing version only summed the first 15 conveyors, even if more than 15 were indicated on the "permit input" sheet.
C	5/23/2011	Dena Pittman	Emission factors updated using AP-42, 8/04 emission factors and PM-2.5 emissions added to the spreadsheet.