990409717

THE TIMES

an edition of the St. Petersburg Times
Published Daily
Tampa, Hillsborough, Florida

STATE OF FLORIDA
COUNTY OF HILLSBOROUGH } S.S.

Before the undersigned authority personally appeared C. Egan
who on oath says that he is Legal Clerk
of the The Times, an edition of the St. Petersburg Times
a daily newspaper published at Tampa, in Hillsborough County, Florida: that the attached copy of advertisement, being a Legal Notice
in the matter RE: DEP Notice of Intent to Issue Air Permit

in the Court
was published in said newspaper in the issues of October 26, 1999

Affiant further says the said The Times, an edition of the St. Petersburg Times is a newspaper published at Tampa, in said Hillsborough County, Florida, and that the said newspaper has heretofore been continuously published in said Hillsborough County, Florida, each day and has been entered as second class mail matter at the post office in Tampa, in said Hillsborough County, Florida, for a period of one year next preceding the first publication of the attached copy of advertisement (the current second class permit has been issued to the St. Petersburg Times for all regional editions of Hillsborough, Pinellas, Pasco, Citrus and Hernando Counties), and affiant further says that he has neither paid nor promised any person, firm, or corporation any discount, rebate, commission or refund for the purpose of securing this advertisement for publication in the said newspaper.

C. Egan
Signature of Affiant

Sworn to and subscribed before
me this 28th day of
October A.D. 1999

June E. Pfirrman
Notary Public

NOTARY PUBLIC STATE OF FLORIDA
OFFICIAL NOTARY SEAL
JUNE E PFIRRMAN
COMMISSION NUMBER
CC709627
MY COMMISSION EXPIRES
FEB. 14,2002
(SEAL)

Personally known ✓ or produced identification
Type of identification produced

C+S-403

PUBLIC NOTICE OF INTENT TO ISSUE AIR PERMIT
STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DRAFT Permit No.: 7775092-001-AC
Angelo's Recycled Materials, Inc.

The Department of Environmental Protection (Department) gives notice of its intent to issue an air construction permit to Angelo's Recycled Materials, Inc. for a diesel engine powered portable concrete and asphalt material crusher that will be operated at construction and industrial sites throughout Florida. The crusher is a minor source of air pollution and not subject to the Prevention of Significant Deterioration (PSD) regulations, Rule 62-212.400, F.A.C. A Best Available Control Technology determination was not required for this facility. The applicant's name and address are: Angelo's Recycled Materials, Inc., Post Office Box 1493, Largo, Florida 33779.

The facility has been reviewed for potential operation in all counties of Florida. The unit will emit fugitive particulate matter and the products of combustion from the diesel fuel. Control of fugitive particulate matter is accomplished by wetting as needed.

Total emissions of pollutants from this facility are estimated to be:

Pollutant	Hourly Emissions pounds per hour	Annual Emissions tons per year
Particulate Matter (PM/PM10)	7.5	11.7
Nitrogen Oxides (NOx)	15.2	23.7
Carbon Monoxide (CO)	3.3	5.1
Sulfur Dioxide (SO2)	1.0	1.6
Volatile Organic Compounds (VOC)		1.2 1.9

Because of the low emissions and limited time of operation at any one site, the crusher will not cause or contribute to any violation of an ambient air quality standard.

The Department will issue the FINAL Permit, in accordance with the conditions of the DRAFT Permit unless a response received in accordance with the following procedures results in a different decision or significant change of terms or conditions.

The Department will accept written comments concerning the proposed DRAFT Permit issuance action for a period of 14 (fourteen) days from the date of publication of this Notice. Written comments should be provided to the Department's Bureau of Air Regulation, 2600 Blair Stone Road, Mail Station #5505, Tallahassee, Florida 32399-2400. Any written comments filed shall be made available for public inspection. If written comments received result in a significant change in this DRAFT Permit, the Department shall issue a Revised DRAFT Permit and require, if applicable, another Public Notice.

The Department will issue the FINAL Permit with the conditions of the DRAFT Permit unless a timely petition for an administrative hearing is filed pursuant to Sections 120.569 and 120.57 F.S. Mediation is not available for this action. The procedures for petitioning for a hearing are set forth below.

A person whose substantial interests are affected by the Department's proposed permitting decision may petition for an administrative hearing in accordance with Sections 120.569 and 120.57 F.S. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department, 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida 32399-3000, telephone: 850/488-9370, fax: 850/487-4938. Petitions must be filed within fourteen days of publication of the public notice or within fourteen days of receipt of this notice of intent, whichever occurs first. A petitioner must mail a copy of the petition to the applicant at the address indicated above, at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under Section 120.569 and 120.57 F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention will be only at the approval of the presiding officer and participate as a party to it. Any subsequent intervention will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28.-5.207 of the Florida Administrative Code.

A petition must contain the following information: (a) The name, address, and telephone number of each petitioner, the applicant's name and address, the Permit File Numbers and the county in which the project is proposed; (b) A statement of how and when each petitioner received notice of the Department's action or proposed action; (c) A statement of how each petitioner's substantial interests are affected by the Department's action or proposed action; (d) a statement of the material facts disputed by petitioner, if any; (e) A statement of the facts that the petitioner contends warrant reversal or modification of the Department's action or proposed action; (f) A statement identifying the rules or statutes that the petitioner contends require reversal or modification of the Department's action or proposed action; and (g) A statement of the relief sought by the petitioner, stating precisely the action that the petitioner wants the Department to take with respect to the Department's action or proposed action addressed in this notice of intent.

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Department's final action may be different from the position taken by it in this notice of intent. Persons whose substantial interests will be affected by any such final decision of the Department on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

Copies of the proposed construction permit and the technical evaluation are available for public inspection during normal business hours, 8:00 a.m. to 5:00 p.m., Mandoy through Friday, except legal holidoys, at:

Florida Dept. of Environmental Protection
Bureau of Air Regulation
111 S. Magnolia Drive, Suite 4
Tallahassee, Florida 32301
Telephone: 850/488-0114

Florida Dept. of Environmental Protection
Northwest District Office
160 Governmental Center
Pensacola, Florida 32501
Telephone: 850/595-8300

Florida Dept. of Environmental Protection
Central District Office
3319 Maguire Boulevard, Suite 232
Orlando, Florido 32803
Telephone: 407/894-7555

Florida Dept. of Environmental Protection
Northeast District Office
7825 Baymeadows Way, Suite 200B

Orange County Environmental Protection
Department - Air Program Section
800 Mercy Drive
Orlando, Florida 32808
Telephone: 407/836-1400

Florida Dept. of Environmental Protection
Southwest District Office
3804 Coconut Palm Drive
Tampa, Florida 33619
Telephone: 813/744-6100

Florida Dept. of Environmental Protection
Southeast District Officer
400 North Congress Avenue
West Palm Beach, Florida 33416
Telephone: 561/681-6755

Dode County Department of Environmental
Resources Management
33 Southwest Second Avenue, Suite 900
Miami, Florida 33130
Telephone: 305/372-6925

Polm Beach County Heolth Deportment
901 Evernia Street
Post Office Box 29
West Palm Beach, Florida 33401
Telephone: 561/355-3070

Jacksonville, Florida 32256
Telephone: 904/448-4300

Florida Dept. of Environmental Protection
South District Office
2295 Victoria Avenue, Suite 364
Fort Myers, Florida 33902
Telephone: 941/332-6975

Regulatory and Environmental Services
Department
117 West Duval Street, Suite 225
Jacksonville, Florida 32202
Telephone: 904/630-3484

Pinellas County Department of Environmental Management
300 South Garden Avenue
Clearwater, Florida 33756
Telephone: 727/464-4422

Broward County Deportment of Natural
Resource Protection
218 Southwest First Avenue
Fort Lauderdale, Florida 33301
Telephone: 954/519-1202

Hillsborough County Environmental
Protection Commission
1410 North 21 Street
Tampa, Florida 33605
Telephone: 813/272-5530

Sarasota County Naturol Resources
Department
1301 Cattleman Raad, Building A
Sarasota, Florida 34232
Telephone: 941/378-6128

The complete project file, which includes the application, technical evaluation, proposed construction permit, and the information submitted by the responsible official, exclusive of confidential records under Section 403.111, F.S., is available in the office of the permitting authority in Tallahassee. Interested persons may contact either Jonathan Holtom, P.E., or Ross Pollock, project engineer, at 111 South Magnolia Drive, Suite 4, Tallahassee, Florida 32301, or coll 850/488-0114, for additional information.
(990409717) 10/26/99

52230m

Department of Environmental Protection

Jeb Bush
Governor

Marjory Stoneman Douglas Building
3900 Commonwealth Boulevard
Tallahassee, Florida 32399-3000

David B. Struhs
Secretary

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Richard A. Bazinet
Angelo's Recycled Materials, Inc., Plant No. 4
Post Office Box 1493
Largo, Florida 33779

Re: Revision to Permit 7775092-001-AC

Dear Mr. Bazinet:

The Department has received a letter, dated November 24, from the Environmental Protection Commission of Hillsborough County, in response to our issuance of the construction permit for your No. 4 crushing plant. Mr. Dennis Price also received a copy of this letter, which states that the issued construction permit did not correctly impose the allowable visible emissions limitation contained in 1-3.61, Rules of the Environmental Protection Commission of Hillsborough County. Because of this, the Department is revising specific condition III.3. of permit 7775092-001-AC, as follows:

FROM:

EMISSION LIMITATIONS AND PERFORMANCE STANDARDS

3. Visible Emissions: The emission points described in unit 001 are subject to the visible emission limits of 40 CFR 60 Subpart OOO, as outlined below in Table 1.

Table 1: Process Emission Source Visible Emission Limits

Emission Source	VE Limit (% Opacity)
Receiving Hopper/Grizzly Feeder	10
Crusher	15*
Portable Belt Conveyor(s)	10**
Screen(s)	15
Truck Loading/Unloading	<20

* This limit applies since no capture system is used.
** This limit applies to transfer points onto conveyor belts only.

[40 CFR 60.672]

TO:

EMISSION LIMITATIONS AND PERFORMANCE STANDARDS

3. Visible Emissions: The emission points described in unit 001 are subject to the visible emission limits of 40 CFR 60 Subpart OOO, as outlined below in Table 1.

Table 1: Process Emission Source Visible Emission Limits

Emission Source	VE Limit † (% Opacity)
Receiving Hopper/Grizzly Feeder	10
Crusher	15*
Portable Belt Conveyor(s)	10**
Screen(s)	15
Truck Loading/Unloading	<20

* This limit applies since no capture system is used.
** This limit applies to transfer points onto conveyor belts only.

† **Note**: When operating in Hillsborough County, the permittee shall not cause, permit, or allow any visible emissions (five percent opacity). This includes, but is not limited to, the receiving hopper, crushers, belt conveyors, screens, and truck loading/unloading.

[40 CFR 60.672; and, 1-3.61, Rules of the Environmental Protection Commission of Hillsborough County.]

A copy of this letter shall be filed with the referenced permit and shall become part of the permit. This permitting decision is issued pursuant to Chapter 403, Florida Statutes.

A person whose substantial interests are affected by the proposed permitting decision may petition for an administrative proceeding (hearing) under sections 120.569 and 120.57 of the Florida Statutes. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida, 32399-3000. Petitions filed by the permit applicant or any of the parties listed below must be filed within fourteen days of receipt of this notice of intent. Petitions filed by any persons other than those entitled to written notice under section 120.60(3) of the Florida Statutes must be filed within fourteen days of publication of the public notice or within fourteen days of receipt of this notice of intent, whichever occurs first. Under section 120.60(3), however, any person who asked the Department for notice of agency action may file a petition within fourteen days of receipt of that notice, regardless of the date of publication. A petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under sections 120.569 and 120.57 F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205 of the Florida Administrative Code.

A petition that disputes the material facts on which the Department's action is based must contain the following information: (a) The name and address of each agency affected and each agency's file or identification number, if known; (b) The name, address, and telephone number of the petitioner, the name, address, and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during

the course of the proceeding; and an explanation of how the petitioner's substantial interests will be affected by the agency determination; (c) A statement of how and when petitioner received notice of the agency action or proposed action; (d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate; (e) A concise statement of the ultimate facts alleged, including the specific facts the petitioner contends warrant reversal or modification of the agency's proposed action; (f) A statement of the specific rules or statutes the petitioner contends require reversal or modification of the agency's proposed action; and (g) A statement of the relief sought by the petitioner, stating precisely the action petitioner wishes the agency to take with respect to the agency's proposed action.

A petition that does not dispute the material facts upon which the Department's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as required by Rule 28-106.301.

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Department's final action may be different from the position taken by it in this notice. Persons whose substantial interests will be affected by any such final decision of the Department on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

Mediation is not available in this proceeding.

In addition to the above, a person subject to regulation has a right to apply for a variance from or waiver of the requirements of particular rules, on certain conditions, under Section 120.542 F.S. The relief provided by this state statute applies only to state rules, not statutes, and not to any federal regulatory requirements. Applying for a variance or waiver does not substitute or extend the time for filing a petition for an administrative hearing or exercising any other right that a person may have in relation to the action proposed in this notice of intent.

The application for a variance or waiver is made by filing a petition with the Office of General Counsel of the Department, 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida 32399-3000. The petition must specify the following information: (a) The name, address, and telephone number of the petitioner; (b) The name, address, and telephone number of the attorney or qualified representative of the petitioner, if any; (c) Each rule or portion of a rule from which a variance or waiver is requested; (d) The citation to the statute underlying (implemented by) the rule identified in (c) above; (e) The type of action requested; (f) The specific facts that would justify a variance or waiver for the petitioner; (g) The reason why the variance or waiver would serve the purposes of the underlying statute (implemented by the rule); and (h) A statement whether the variance or waiver is permanent or temporary and, if temporary, a statement of the dates showing the duration of the variance or waiver requested.

The Department will grant a variance or waiver when the petition demonstrates both that the application of the rule would create a substantial hardship or violate principles of fairness, as each of those terms is defined in Section 120.542(2) F.S., and that the purpose of the underlying statute will be or has been achieved by other means by the petitioner.

Persons subject to regulation pursuant to any federally delegated or approved air program should be aware that Florida is specifically not authorized to issue variances or waivers from any requirements of any such federally delegated or approved program. The requirements of the program remain fully enforceable by the Administrator of the EPA and by any person under the Clean Air Act unless and until the Administrator separately approves any variance or waiver in accordance with the procedures of the federal program.

This permitting decision is final and effective on the date filed with the clerk of the Department unless a petition is filed in accordance with the above paragraphs or unless a request for extension of time in which to file a petition is filed within the time specified for filing a petition pursuant to Rule 62-110.106, F.A.C., and the petition conforms to the content requirements of Rules 28-106.201 and 28-106.301, F.A.C. Upon timely filing of a petition or a request for extension of time, this order will not be effective until further order of the Department.

Any party to this permitting decision (order) has the right to seek judicial review of it under section 120.68 of the Florida Statutes, by filing a notice of appeal under Rule 9.110 of the Florida Rules of Appellate Procedure with the clerk of the Department of Environmental Protection in the Office of General Counsel, Mail Station #35, 3900 Commonwealth Boulevard, Tallahassee, Florida, 32399-3000, and by filing a copy of the notice of appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The notice must be filed within thirty days after this order is filed with the clerk of the Department.

Executed in Tallahassee, Florida.

Howard L. Rhodes, Director
Division of Air Resources
Management

HLR/jh

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this REVISION was sent by certified mail (*) and copies were mailed by U.S. Mail before the close of business on 12/13/99 to the person(s) listed:

Mr. Richard Bazinet, Angelo's Recycled Materials, Inc. *
Mr. Dennis Price, Angelo's Recycled Materials, Inc.
Mr. Bernie Ball, Central Florida Testing Labs, Inc.
Mr. Rick Kirby, HCEPC

Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED, on this date, pursuant to §120.52(7), Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

Barbara J. Boutwell (Clerk) 12/13/99 (Date)

Memorandum

Florida Department of
Environmental Protection

TO: Howard L. Rhodes

THRU: Clair Fancy

FROM: Jonathan Holtom

DATE: December 8, 1999

SUBJECT: Angelo's Recycled Materials, Inc., Plant No. 4
Relocatable Concrete and Asphalt Crusher
Minor Revision to Final Permit No. 7775092-001-AC

Attached is a letter of revision to the Final air construction permit for a portable concrete and asphalt material crusher with a diesel powered generator to be used at industrial and construction sites in Florida.

This revision is being made at the request of the Hillsborough County Environmental Protection Commission. We received a comment letter from them, after the Final permit had been issued, stating that we had not imposed the correct visible emissions standard for particulate sources operating within Hillsborough county. Their letter explained that their county Rules have imposed the PM RACT standards (Rule 62-296.711, F.A.C.) to new, as well as existing, sources. The State Rule only applies to existing sources. HCEPC sent a letter to the permittee stating that a 5% VE standard would be applied to the unit while operating within Hillsborough county, regardless of whether the permit is revised. Since the Rules of the Environmental Protection Commission of Hillsborough County are part of our SOA, we felt it best to go ahead and revise the permit to reflect the county VE standard of 5%. A Public Notice of this change is not required since it is a decrease in allowable emissions, rather than an increase.

I recommend your approval and signature of this minor revision.

Enclosures

/jh

SENDER:
- Complete items 1 and/or 2 for additional services.
- Complete items 3, 4a, and 4b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write *"Return Receipt Requested"* on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):
1. ☐ Addressee's Address
2. ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:
Mr. Dennis Price, Environmental Manager
Angelo's Recycled Materials, Inc.
Plant No. 4
1755 20th Avenue S.E.
Largo, Florida 33771

4a. Article Number
Z 094 212 815

4b. Service Type
☐ Registered ☒ Certified
☐ Express Mail ☐ Insured
☐ Return Receipt for Merchandise ☐ COD

7. Date of Delivery
2-23-00

5. Received By: *(Print Name)*

8. Addressee's Address *(Only if requested and fee is paid)*

6. Signature: *(Addressee or Agent)*
X

PS Form **3811**, December 1994 229

Is your RETURN ADDRESS completed on the reverse side?

Thank you for using Return Receipt Service.

Z 094 212 815

US Postal Service
Receipt for Certified Mail
No Insurance Coverage Provided.
Do not use for International Mail *(See reverse)*

Sent to Mr. Dennis Price	
Street & Number 1755 20th Avenue S.E.	
Post Office, State, & ZIP Code Largo, Florida 33771	
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, & Addressee's Address	
TOTAL Postage & Fees	$
Postmark or Date 2/17/00	

Revision to Permit
7775092-001-AC

PS Form **3800**, April 1995

Z 094 212 730

US Postal Service

Receipt for Certified Mail

No Insurance Coverage Provided.

Do not use for International Mail *(See reverse)*

Sent to Mr. Richard A. Bazinet	
Street & Number Post Office Box 1493	
Post Office, State, & ZIP Code Largo, Florida 33779	
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, & Addressee's Address	
TOTAL Postage & Fees	$
Postmark or Date 1/19/00	

Revision to Permit 7775092-001-
AC
Angelo's Recycled Materials

PS Form **3800**, April 1995

Z 094 212 706

US Postal Service

Receipt for Certified Mail

No Insurance Coverage Provided.

Do not use for International Mail *(See reverse)*

Sent to Mr. Richard A. Bazinet	
Street & Number Post Office Box 1493	
Post Office, State, & ZIP Code Largo, Florida 33779	
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, & Addressee's Address	
TOTAL Postage & Fees	$
Postmark or Date 12/13/99	

Angelo's Recycled Materials
Revision to Permit 7775092-001-
AC

PS Form **3800**, April 1995

Department of Environmental Protection

Jeb Bush
Governor

Marjory Stoneman Douglas Building
3900 Commonwealth Boulevard
Tallahassee, Florida 32399-3000

David B. Struhs
Secretary

In the Matter of an
Application for Permit

Mr. Richard A. Bazinet, Director of Florida Operations
Angelo's Recycled Materials, Inc., Plant No. 4
Post Office Box 1493
Largo, Florida 33779

DEP File No. 7775092-001-AC

NOTICE OF FINAL PERMIT

Enclosed is Final Permit Number 7775092-001-AC for a diesel engine powered portable concrete and asphalt material crusher that will be operated at construction and industrial sites throughout Florida. This permit is issued pursuant to Chapter 403, Florida Statutes.

Any party to this order (permit) has the right to seek judicial review of the permits pursuant to Section 120.68, F.S., by the filing of a Notice of Appeal pursuant to Rule 9.110, Florida Rules of Appellate Procedure, with the Clerk of the Department in the Legal Office; and by filing a copy of the Notice of Appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The Notice of Appeal must be filed within 30 (thirty) days from the date this Notice is filed with the Clerk of the Department.

Executed in Tallahassee, Florida.

for C.H. Fancy, P.E., Chief
Bureau of Air Regulation

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this NOTICE OF FINAL PERMIT (including the FINAL permit) was sent by certified mail (*) and copies were mailed by U.S. Mail before the close of business on 11/23/99 to the person(s) listed:

Mr. Richard A. Bazinet, Director of Florida Operations, Angelo's Recycled Materials, Inc.*
Mr. Bernard A. Ball, Central Florida Testing Laboratories, Inc.
Len Kozlov, DEP, Central District
Chris Kirts, DEP, Northeast District
Ed Middleswart, DEP, Northwest District
Bill Thomas, DEP, Southwest District
Phil Barbaccia, DEP, South District
Isidore Goldman, DEP, Southeast District
Daniela Banu, Broward County Department of Natural Resource Protection
H. Patrick Wong, Dade County Department of Environmental Resources Management
Richard Robinson, Regulatory and Environmental Services Department
Jerry Campbell, Hillsborough County Environmental Protection Commission
James E. Stormer, Palm Beach County Health Department
Peter Hessling, Pinellas County Department of Environmental Management
Kent Kimes, Sarasota County Natural Resources Department
Marie Driscoll, Orange County Environmental Protection

DepartmentClerk Stamp

FILING AND ACKNOWLEDGMENT FILED, on this date, pursuant to §120.52(7), Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

Barbara J. Pentuell 11/23/99
(Clerk) (Date)

FINAL DETERMINATION

Angelo's Recycled Materials, Inc.
Relocatable Concrete and Asphalt Material Crushing Plant No. 4

Permit No. 7775092-001-AC

An Intent to Issue an air construction permit for a relocatable concrete and asphalt material crusher belonging to Angelo's Recycled Materials, Inc. was distributed on October 18, 1999. The Public Notice of Intent to Issue Air Construction Permit was published in The Times, an Edition of the St. Petersburg Times at Tampa in Hillsborough County on October 26, 1999. The facility will not be authorized to operate in counties other than Citrus, Hernando, Hillsborough, Pasco, and Pinellas until the public notice requirements are met in the other counties and the permit is amended to authorize operation in the counties.

No comments were submitted by the general public in response to the public notice for this facility. In addition, no comments were submitted by the Department's district offices or any local agencies.

The final action of the Department will be to issue the permit for the counties covered by the public notice as proposed.

Z 094 212 700

US Postal Service

Receipt for Certified Mail

No Insurance Coverage Provided.

Do not use for International Mail *(See reverse)*

Sent to Mr. Richard A. Bazinet	
Street & Number Post Office Box 1493	
Post Office, State, & ZIP Code Largo, Florida 33779	
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, & Addressee's Address	
TOTAL Postage & Fees	$
Postmark or Date 11/23/99 Angelo's Recycled Materials DEP File No. 7775092-001-AC	

PS Form **3800**, April 1995

Z 094 212 716

US Postal Service

Receipt for Certified Mail

No Insurance Coverage Provided.

Do not use for International Mail *(See reverse)*

Sent to MR. Richard A. Bazinet	
Street & Number Angelos recycled materials plant 4	
Post Office, State, & ZIP Code 1493 Largo FL. 33779	
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, & Addressee's Address	
TOTAL Postage & Fees	$
Postmark or Date 12/28/99 7775092-001-AC	

PS Form **3800**, April 1995

Department of Environmental Protection

Jeb Bush
Governor

Marjory Stoneman Douglas Building
3900 Commonwealth Boulevard
Tallahassee, Florida 32399-3000

David B. Struhs
Secretary

PERMITTEE

Angelo's Recycled Materials, Inc.
Post Office Box 1493
Largo, Florida 33779

FID No.: 7775092
Permit No.: 7775092-001-AC
SIC No.: 1795
Expires: May 31, 2000

AUTHORIZED REPRESENTATIVE

Mr. Richard Bazinet, Director of Florida Operations

PROJECT

This permit allows the applicant to construct a diesel engine powered portable concrete and asphalt material crushing plant, which will be designated as Aggregate Processing Plant No. 4.

STATEMENT OF BASIS

This construction permit is issued under the provisions of Chapter 403 of the Florida Statutes (F.S.), and the Florida Administrative Code (F.A.C.) Chapters 62-4, 62-204, 62-210, 62-212, 62-296, and 62-297. The above named permittee is authorized to construct the facility in accordance with the conditions of this permit and as described in the application, approved drawings, plans, and other documents on file with the Department of Environmental Protection (Department).

APPENDICES

The attached appendices are a part of this permit:

Appendix GC – General Permit Conditions
Appendix PC – Permitted Counties

Howard L. Rhodes, Director
Division of Air Resources
Management

SECTION II. FACILITY-WIDE SPECIFIC CONDITIONS

FACILITY DESCRIPTION

This facility consists of a 200 ton per hour (TPH) Cedarapids, Inc. Model 3054 portable jaw crusher, and a Cedarapids, Inc. Model RC5411 cone crusher. The facility also includes equipment associated with the crushers (feeders, screens, and conveyors) and a 910 KW Caterpillar Model 3512 generator driven by a 325 hp Caterpillar diesel motor. Fugitive particulate matter emissions throughout the crushing unit are controlled by a water suppression system.

REGULATORY CLASSIFICATION

The crusher portion of this facility is subject to regulation under 40 CFR 60, Subpart OOO, Standards of Performance for Nonmetallic Mineral Processing Plants. The generator portion of the facility is regulated under Rule 62-210.300, F.A.C., Permits Required, however there are no unit specific regulatory requirements that apply.

RELEVANT DOCUMENTS

The documents listed below are the basis of the permit. They are specifically related to this permitting action. These documents are on file with the Department.

- Application received (Bureau of Air Regulation) September 2, 1999
- Draft Permit issued October 18, 1999
- Public Notice of Intent published October 26, 1999 in The Times, an edition of the St. Petersburg Times

PERMITTED COUNTIES

(Please see Appendix PC – Permitted Counties for a list of counties in which the facility is currently permitted to operate)

OPERATING LOCATION

The facility will begin initial operation at 1201 East 148th Avenue, Tampa, Hillsborough County. The UTM coordinates of this location are Zone 17; 357.8 km E; 3107.2 km N.

SECTION II. FACILITY-WIDE SPECIFIC CONDITIONS

The following specific conditions apply to all emissions units at this facility.

ADMINISTRATIVE

1. Regulating Agencies: All documents relating to the initial application for a permit to operate and all initial compliance tests shall be submitted to the Department's Bureau of Air Regulation in Tallahassee. Subsequent applications for permit renewals, reports, tests, minor modifications, and notifications shall be submitted to the district office or local program that has permitting/compliance jurisdiction over the current or proposed operating location.

2. General Conditions: In addition to the specific conditions of this permit, the owner and operator are subject to and shall operate under the General Permit Conditions G.1 through G.15, contained in the attached Appendix GC – General Permit Conditions of this permit. General Permit Conditions are binding and enforceable pursuant to Chapter 403 of the Florida Statutes.
[Rule 62-4.160, F.A.C.]

3. Terminology: The terms used in this permit have specific meanings as defined in the corresponding chapters of the Florida Administrative Code.

4. Forms and Application Procedures: The permittee shall use the applicable forms listed in Rule 62-210.900, F.A.C., and follow the application procedures in Chapter 62-4, F.A.C.
[Rule 62-210.900, F.A.C.]

5. Extension of Expiration Date: This air construction permit shall expire May 31, 2000. The permittee may, for good cause, request that this construction permit be extended. Such a request shall be submitted to the Department's Bureau of Air Regulation prior to 60 days before the expiration of the permit.
[Rules 62-210.300(1), 62-4.070(4) and 62-4.210, F.A.C]

6. Relocation Notification: At least 7 days prior to relocating the plant to an approved county where public notice was published within the last 5 years, the permittee shall notify the air program administrator for the Department's district office and/or, if applicable, appropriate local program. The notification shall be submitted using DEP Form 62-210.900(3), F.A.C., along with the appropriate processing fee. All potential operation sites shall be shown on a USGS topographic map. A county license, a discretionary public notice, or additional restrictions for the operation at a specific site may be imposed by the district office or local program. If the public notice for a proposed county is more than 5 years old, or if the proposed county was never covered by a public notice, this form shall be submitted at least 30 days in advance of the move and a public notice shall be published prior to operating in the proposed county. Each time that the permittee submits a Notice to Relocate, the operation permit shall be revised to reflect the new location.
[Rule 62-210.370(1), F.A.C.]

7. Operation Permit Required: This permit authorizes construction and/or installation of the permitted emissions unit and initial operation for testing purposes in order to determine compliance with the applicable rules and standards. An operation permit is required for continued commercial operation of the permitted emissions unit. The owner or operator shall apply for and receive an operation permit prior to expiration of this permit. To apply for an operation permit, the applicant shall submit the appropriate application fee and, in quadruplicate, the appropriate application form, a certification that construction was completed with a notation of any deviations from the conditions in the construction permit, compliance test results, and such additional information as the Department may by law require. A copy of the compliance test results must be submitted to The Department's Tallahassee office as well as the district office or local program which has compliance jurisdiction over the location where the test took place.
[F.A.C. Rules 62-4.030, 62-4.050, 62-4.220 and 62-210.300(2)]

8. Applicable Regulations: Unless otherwise indicated in this permit, the construction and operation of the subject emissions units shall be in accordance with the capacities and specifications stated in the application. The facility is subject to all applicable provisions of Chapter 403, F.S. and Florida Administrative Code Chapters 62-4, 62-110, 62-204, 62-296, 62-297 and the Code of Federal Regulations Title 40, Part 60, adopted by reference in the Florida Administrative Code (F.A.C.) regulations. Issuance of this permit does not relieve the facility owner or operator from compliance with any applicable federal, state, or local permitting or regulations.
[Rules 62-204.800 and 62-210.300, F.A.C.]

EMISSION LIMITING STANDARDS

9. General Visible Emissions Standard: Except for emissions units that are subject to a particulate matter or opacity limit set forth or established by rule and reflected by conditions elsewhere in this permit, no person shall cause, let, permit, suffer, or allow to be discharged into the atmosphere the emissions of air pollutants from any activity, the density of which is equal to or greater than that designated as Number 1 on the Ringelmann Chart (20% opacity). If a special compliance test is required (see specific condition 21), the test method for visible emissions shall be EPA Method 9, incorporated and adopted by reference in Chapter 62-297, F.A.C.
[Rule 62-296.320(4)(b)1, F.A.C.]

10. Unconfined Emissions of Particulate Matter:

    (a) No person shall cause, let, permit, suffer or allow the emissions of unconfined particulate matter from any activity, including vehicular movement; transportation of materials; construction, alteration, demolition or wrecking; or industrially related activities such as loading, unloading, storing or handling; without taking reasonable precautions to prevent such emissions.

    (b) Any permit issued to a facility with emissions of unconfined particulate matter shall specify the reasonable precautions to be taken by that facility to control the emissions of unconfined particulate matter.

    (c) Reasonable precautions committed to by the permittee:
    - Emissions that might be generated from various emission points throughout the crushing unit shall be controlled by a water suppression system with spray bars located at the various emissions points located throughout the plant.
    - All stockpiles and roadways where this crushing unit is located shall be watered on a regular basis by water trucks equipped with spray bars, to control any fugitive emissions that may be generated by vehicular traffic or prevailing winds.

(d) In determining what constitutes reasonable precautions for a particular source, the Department shall consider the cost of the control technique or work practice, the environmental impacts of the technique or practice, and the degree of reduction of emissions expected from a particular technique or practice.

[Rule 62-296.320(4)(c), F.A.C. and Permit Application received 11/2/98.]

11. General Pollutant Emission Limiting Standards:

(a) No person shall store, pump, handle, process, load, unload or use in any process or installation, volatile organic compounds or organic solvents without applying known and existing vapor emission control devices or systems deemed necessary and ordered by the Department.

(b) No person shall cause, suffer, allow or permit the discharge of air pollutants which cause or contribute to an objectionable odor.

[Note: An objectionable odor is defined in Rule 62-210.200(198), F.A.C., as any odor present in the outdoor atmosphere which by itself or in combination with other odors, is or may be harmful or injurious to human health or welfare, which unreasonably interferes with the comfortable use and enjoyment of life or property, or which creates a nuisance.]

[Rule 62-296.320(1)(a)&(2), F.A.C.]

OPERATIONAL REQUIREMENTS

12. Modifications: No emissions unit or facility subject to this rule shall be constructed or modified without obtaining an air construction permit from the Department. Such permit must be obtained prior to the beginning of construction or modification.
[Rules 62-210.300(1) and 62-212.300(1)(a), F.A.C.]

13. Plant Operation - Problems: If temporarily unable to comply with any of the conditions of the permit due to breakdown of equipment or destruction by hazard of fire, wind or by other cause, the permittee shall immediately notify the Department's district office and, if applicable, appropriate local program. The notification shall include pertinent information as to the cause of the problem, and what steps are being taken to correct the problem and to prevent its recurrence, and where applicable, the owner's intent toward reconstruction of destroyed facilities. Such notification does not release the permittee from any liability for failure to comply with Department rules.
[Rule 62-4.130, F.A.C.]

14. Circumvention: No person shall circumvent any air pollution control device or allow the emission of air pollutants without the applicable air pollution control device operating properly.
[Rule 62-210.650, F.A.C.]

The following specific conditions apply to the following emissions units after construction:

EMISSIONS UNIT NO.	EMISSIONS UNIT DESCRIPTION
001	This unit consists of a 200 ton per hour (TPH) Cedarapids, Inc. Model 3054 portable jaw crusher, Cedarapids, Inc. Model RC5411 cone crusher and associated equipment (feeder, screens, and conveyors)
002	This unit consists of a 910 KW Caterpillar Model 3512 generator, driven by a 325 hp Caterpillar diesel motor.

[NOTE: Emissions unit 001 is subject to 40 CFR 60, Subpart OOO, Standards of Performance for Nonmetallic Mineral Processing Plants (40 CFR 60.670 - 60.676) and 40 CFR 60 Subpart A, revised as of July 1, 1997.]

ESSENTIAL POTENTIAL TO EMIT (PTE) PARAMETERS

1. Hours of Operation: These emissions units are allowed to operate up to 3,120 hours during any calendar year.
   [Rule 62-210.200, F.A.C., Definitions-potential to emit (PTE); and, applicant request]

2. Permitted Capacity: The crusher may process up to 200 TPH and 624,000 TPY of material (total).
   [Rule 62-210.200, F.A.C., Definitions-potential to emit (PTE); and, applicant request]

EMISSION LIMITATIONS AND PERFORMANCE STANDARDS

3. Visible Emissions: The emission points described in unit 001 are subject to the visible emission limits of 40 CFR 60 Subpart OOO, as outlined below in Table 1.

   Table 1: Process Emission Source Visible Emission Limits

Emission Source	VE Limit (% Opacity)
Receiving Hopper/Grizzly Feeder	10
Crusher	15*
Portable Belt Conveyor(s)	10**
Screen(s)	15
Truck Loading/Unloading	<20

   * This limit applies since no capture system is used.
   ** This limit applies to transfer points onto conveyor belts only.

   [40 CFR 60.672]

4. No Visible Emissions - Saturated Materials: No owner or operator shall cause to be discharged into the atmosphere any visible emissions from:

   (a) Wet screening operations and subsequent screening operations, bucket elevators, and belt conveyors that process saturated material in the production line up to the next crusher, grinding mill or storage bin.

(b) Screening operations, bucket elevators, and belt conveyors in the production line downstream of wet mining operations, where such screening operations, bucket elevators, and belt conveyors process saturated materials up to the first crusher, grinding mill, or storage bin in the production line.

[40 CFR 60.672 (h)(1)&(2)]

5. Excess Emissions: The following excess emissions provisions can not be used to vary any NSPS requirements (from any subpart of 40 CFR 60).

(a) Excess emissions resulting from start-up, shutdown or malfunction of any emissions units shall be permitted providing (1) best operational practices to minimize emissions are adhered to and (2) the duration of excess emissions shall be minimized, but in no case exceed two hours in any 24 hour period unless specifically authorized by the Department for longer duration.

[Rule 62-210.700(1), F.A.C.]

(b) Excess emissions which are caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure which may reasonably be prevented during start-up, shutdown, or malfunction shall be prohibited.

[Rule 62-210.700(4), F.A.C.]

COMPLIANCE MONITORING AND TESTING REQUIREMENTS

6. Test Frequency:

(a) Prior to obtaining an operation permit for this facility, the owner or operator shall conduct a visible emissions compliance test to demonstrate compliance with the standards of this permit, in accordance with the conditions listed below.

[Rule 62-297.310(7)(a)1., F.A.C.]

(b) The owner or operator of the facility shall conduct visible emissions tests annually, in accordance with the conditions listed below.

[Rule 62-297.310(7)(a)4.a., F.A.C.]

7. Operating Rate During Testing: Unless otherwise stated in the applicable emission limiting standard rule, testing of emissions shall be conducted with the emissions unit operating at permitted capacity. Permitted capacity is defined as 90 to 100 percent of the maximum operation rate allowed by the permit. If it is impractical to test at permitted capacity, an emissions unit may be tested at less than the minimum permitted capacity (i.e., at less than 90 percent of the maximum operation rate allowed by the permit); in this case, subsequent emissions unit operation is limited to 110 percent of the test load until a new test is conducted provided however, operations do not exceed 100 percent of the maximum operation rate allowed by the permit. Once the unit is so limited, operation at higher capacities is allowed for no more than 15 consecutive days for the purpose of additional compliance testing to regain the authority to operate at the permitted capacity.

[Rule 62-297.310(2),F.A.C.]

8. Test Procedures shall meet all applicable requirements of Rule 62-297.310(4), F.A.C.

[Rule 62-297.310(4), F.A.C.]

9. Determination of Process Variables:

   (a) Required Equipment. The owner or operator of an emissions unit for which compliance tests are required shall install, operate, and maintain equipment or instruments necessary to determine process variables, such as process weight input or heat input, when such data are needed in conjunction with emissions data to determine the compliance of the emissions unit with applicable emission limiting standards.

   (b) Accuracy of Equipment. Equipment or instruments used to directly or indirectly determine process variables, including devices such as belt scales, weight hoppers, flow meters, and tank scales, shall be calibrated and adjusted to indicate the true value of the parameter being measured with sufficient accuracy to allow the applicable process variable to be determined within 10% of its true value.

   [Rule 62-297.310(5), F.A.C.]

10. Test Notification: The owner or operator shall notify the Department's district office and, if applicable, appropriate local program, at least 15 days prior to the date on which each formal compliance test is to begin. Notification shall include the date, time, and place of each such test, and the test contact person who will be responsible for coordinating and having such test conducted for the owner or operator.

    [Rule 62-297.310(7)(a)9., F.A.C., 40 CFR 60.8]

    [Note: The federal requirements of 40 CFR 60.8 require 30 days notice of the initial test and any tests required under section 114 of the Clean Air Act, but the Department rules require 15 days notice for the annual compliance tests. Unless otherwise advised by the Department, provide 15 days notice prior to conducting annual tests, except for the initial test when 30 days notice is required.]

11. Visible Emissions Test Method: In determining compliance with the standards in 40 CFR 60.672 (b) and (c) (see specific condition 3), the owner or operator shall use Method 9 and the procedures in 40 CFR 60.11, with the following additions:

    (a) The minimum distance between the observer and the emissions source shall be 4.57 meters (15 feet).

    (b) The observer shall, when possible, select a position that minimizes interference from other fugitive emissions units (e.g., road dust). The required observer position relative to the sun (Method 9, Section 2.1) must be followed.

    (c) For affected emissions units using wet dust suppression for particulate matter control, a visible mist is sometimes generated by the spray. The water mist must not be confused with particulate matter emissions and is not to be considered a visible emission. When a water mist of this nature is present, the observation of emissions is to be made at a point in the plume where the mist is no longer visible.

    [40 CFR 60.675(c)(1)(i), (ii) & (iii)]

12. Visible Emissions Test Duration - Initial
    (a) When determining compliance with the fugitive emissions standard for any affected facility described under 40 CFR 60.672(b) (see specific condition 3), the duration of the Method 9 observations may be reduced from 3 hours (thirty 6-minute averages) to 1 hour (ten 6-minute averages) only if the following conditions apply:

    (i) There are no individual readings greater than 10 percent opacity; and
    (ii) There are no more than 3 readings of 10 percent for the 1-hour period.
    [40 CFR 60.675(c)(3)(i) & (ii)]

    (b) When determining compliance with the fugitive emissions standard for any crusher at which a capture system is not used as described under 40 CFR 60.672(c), the duration of the Method 9 observations may be reduced from 3 hours (thirty 6-minute averages) to 1 hour (ten 6-minute averages) only if the following conditions apply:

    (i) There are no individual readings greater than 15 percent opacity; and
    (ii) There are no more than 3 readings of 15 percent for the 1-hour period.
    [40 CFR 60.675(c)(4)(i) & (ii)]

13. Visible Emissions Test Duration – Annual
    When either EPA Method 9 or DEP Method 9 is specified as the applicable opacity test method, the required minimum period of observation for a compliance test shall be sixty (60) minutes for emissions units which emit or have the potential to emit 100 tons per year or more of particulate matter, and thirty (30) minutes for emissions units which have potential emissions less than 100 tons per year of particulate matter and are not subject to a multiple-valued opacity standard. The opacity test observation period shall include the period during which the highest opacity emissions can reasonably be expected to occur.
    [Rule 62-297.310(4)(a)2]

14. Visible Emissions Test - Emissions Interference: For the method and procedure of 40 CFR 60.675(c) [specific condition 12 of Section III of this permit, above], if emissions from two or more emissions units continuously interfere so that the opacity of fugitive emissions from an individual affected emissions unit cannot be read, either of the following procedures may be used:

    (a) Use for the combined emission stream the highest fugitive opacity standard applicable to any of the individual affected emissions units contributing to the emissions stream
    (b) Separate the emissions so that the opacity of emissions from each affected emissions unit can be read.
    [40 CFR 60.675(e)(1)(i)&(ii)]

15. No Tests Required - Saturated Materials: Method 9 performance tests under 40 CFR 60.11 and 40 CFR 60.675 are not required for:

    (a) Wet screening operations and subsequent screening operations, bucket elevators, and belt conveyors that process saturated material in the production line up to, but not including the next crusher, grinding mill or storage bin.
    (b) Screening operations, bucket elevators, and belt conveyors in the production line downstream of wet mining operations, that process saturated materials up to the first crusher, grinding mill, or storage bin in the production line.
    [40 CFR 60.675(h)(1)&(2)]

16. Special Compliance Tests: When the Department, after investigation, has good reason (such as complaints, increased visible emissions or questionable maintenance of control equipment) to believe that any applicable emission standard contained in a Department rule or in a permit issued pursuant to those rules is being violated, it shall require the owner or operator of the facility to conduct compliance tests which identify the nature and quantity of pollutant emissions from the emissions units and to provide a report on the results of said tests to the Department.
[Rule 62-297.310(7)(b), F.A.C.]

REPORTING AND RECORD KEEPING REQUIREMENTS

17. Log: The permittee shall maintain a log showing the annual hours of operation per year and fuel consumption. Operators shall keep a log to include, at a minimum, the following information:

(a) The daily location and production rate.
(b) The daily hours of operation of the crusher system.
(c) Maintenance and repair logs for any work performed on the permitted emissions units.
(d) Daily logs regarding the use of wetting agents to control fugitive dust.

This data shall be made available to the Department or county upon request.
[Rule 62-4.070(3), F.A.C.]

18. Operation and Maintenance (O&M): The permittee shall keep an O&M plan for the air pollution control equipment with the facility. The O&M log shall include the list of the parameters being monitored, the frequency of the check/maintenance, observations, and comments.
[Rule 62-4.070(3), F.A.C.]

19. Test Reports: The owner or operator shall submit written reports of the results of all performance tests conducted to demonstrate compliance with the standards set forth in 40 CFR 60.672, including reports of opacity observations made using Method 9 to demonstrate compliance with 40 CFR 60.672(b) and 40 CFR 60.672(c).

(b) The required test report shall be filed with the Department as soon as practical but no later than 45 days after the last sampling run of each test is completed.
(c) The test report shall provide sufficient detail on the emissions unit tested and the test procedures used to allow the Department to determine if the test was properly conducted and the test results properly computed. As a minimum, the test report, other than for an EPA Method 9 test, shall provide the following information:
1. The type, location, and designation of the emissions unit tested.
2. The facility at which the emissions unit is located.
3. The owner or operator of the emissions unit.
4. The normal type and amount of fuels used and materials processed, and the types and amounts of fuels used and material processed during each test run.
5. The method, raw data and computations used to determine the amount of fuels used and materials processed, if necessary to determine compliance with an applicable emission limiting standard.
6. The type of air pollution control devices installed on the emissions unit, its general condition, their normal operating parameters (pressure drops, total operating current and GPM scrubber water), and their operating parameters during each test run.
[40 CFR 60.676(f), Rule 62-297.310(8)(b)&(c)1. - 6., F.A.C.]

20. Change From Saturated to Unsaturated Material: The owner or operator of any screening operation, bucket elevator, or belt conveyor that processes saturated material and is subject to 40 CFR 60.672(h) and subsequently processes unsaturated materials, shall submit a report of this change within 30 days following such change. This screening operation, bucket elevator, or belt conveyor is then subject to the 10 percent opacity limit in 40 CFR 60.672(b) and the emission test requirements of 40 CFR 60.11 and subpart OOO. Likewise a screening operation, bucket elevator, or belt conveyor that processes unsaturated material but subsequently processes saturated material shall submit a report of this change within 30 days following such change. This screening operation, bucket elevator, or belt conveyor is then subject to the no visible emission limit in 40 CFR 60.672(h). **[40 CFR 60.676(g)]**

21. Records Retention: This facility shall maintain a central file containing all measurements, records, and other data that are required to be collected pursuant to the various specific conditions of this permit.
[Rule 62-4.160(14)(a)&(b), F.A.C.]

22. Duration of Record Keeping: Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department. The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application for this permit. These records shall be retained at least three years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.
[Rule 62-4.160(14)(a)&(b), F.A.C.]

23. Excess Emissions Report: If excess emissions occur, the owner or operator shall notify the Department within one working day of: the nature, extent, and duration of the excess emissions; the cause of the excess emissions; and the actions taken to correct the problem. In addition, the Department may request a written summary report of the incident. Pursuant to the Standards of Performance for New Stationary Sources, excess emissions shall also be reported in accordance with 40 CFR 60.7, Subpart A. **[Rule 62-4.130, F.A.C.]**

24. Excess Emissions Report - Malfunctions: In case of excess emissions resulting from malfunctions, each owner or operator shall notify the Department or the appropriate local program in accordance with Rule 62-4.130, F.A.C. A full written report on the malfunctions shall be submitted in a quarterly report if requested by the Department.
[Rule 62-210.700(6), F.A.C.]

NSPS GENERAL PROVISIONS

[Note: The numbering of the original rules in the following conditions has been preserved for ease of reference. In cases where the state requirements are more restrictive than the NSPS general requirements, the state requirements shall prevail.]

25. Pursuant to 40 CFR 60.7 Notification And Record Keeping:

(a) Any owner or operator subject to the provisions of 40 CFR 60 shall furnish the Administrator written notification as follows:

(4) A notification of any physical or operational change to an existing facility which may increase the emission rate of any air pollutant to which a standard applies, unless that change is specifically exempted under an applicable subpart or in 40 CFR 60.14(e). This notice shall be postmarked 60 days or as soon as practicable before the change is commenced and shall include information describing the precise nature of the change, present and proposed emission control systems, productive capacity of the facility before and after the change, and the expected completion date of the change. The Administrator may request additional relevant information subsequent to this notice.

(b) The owner or operator subject to the provisions of 40 CFR 60 shall maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of an affected facility; any malfunction of the air pollution control equipment; or any periods during which a continuous monitoring system or monitoring device is inoperative.

(f) The owner or operator subject to the provisions of 40 CFR 60 shall maintain a file of all measurements, including continuous monitoring system, monitoring device, and performance testing measurements; all continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices; and all other information required by 40 CFR 60 recorded in a permanent form suitable for inspection. The file shall be retained for at least three years following the date of such measurements, maintenance, reports, and records.

[40 CFR 60.7]

26. Pursuant to 40 CFR 60.8 Performance Tests:

(a) Within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup of such facility and at such other times as may be required by the Administrator under section 114 of the Act, the owner or operator of such facility shall conduct performance test(s) and furnish the Administrator a written report of the results of such performance test(s).

(b) Performance tests shall be conducted and data reduced in accordance with the test methods and procedures contained in each applicable subpart unless the Administrator (1) specifies or approves, in specific cases, the use of a reference method with minor changes in methodology, (2) approves the use of an equivalent method, (3) approves the use of an alternative method the results of which he has determined to be adequate for indicating whether a specific source is in compliance, (4) waives the requirement for performance tests because the owner or operator of a source has demonstrated by other means to the Administrator's satisfaction that the affected facility is in compliance with the standard, or (5) approves shorter sampling times and smaller sample volumes when necessitated by process variables or other factors. Nothing in this paragraph shall be construed to abrogate the Administrator's authority to require testing under section 114 of the Act.

(c) Performance tests shall be conducted under such conditions as the Administrator shall specify to the plant operator based on representative performance of the affected facility. The owner or operator shall make available to the Administrator such records as may be necessary to determine the conditions of the performance tests. Operations during periods of startup, shutdown, and malfunction shall not constitute representative conditions for the purpose of a performance test nor shall emissions in excess of the level of the applicable emission limit during periods of startup, shutdown, and malfunction be considered a violation of the applicable emission limit unless otherwise specified in the applicable standard.

(d) The owner or operator of an affected facility shall provide the Administrator at least 30 days prior notice of any performance test, except as specified under other subparts, to afford the Administrator the opportunity to have an observer present.

[40 CFR 60.8]

27. Pursuant to 40 CFR 60.11 Compliance With Standards And Maintenance Requirements:

(a) Compliance with standards in 40 CFR 60, other than opacity standards, shall be determined only by performance tests established by 40 CFR 60.8, unless otherwise specified in the applicable standard.

(b) Compliance with opacity standards in 40 CFR 60.11 shall be determined by conducting observations in accordance with Reference Method 9 in appendix A of 40 CFR 60.11, any alternative method that is approved by the Administrator, or as provided in 40 CFR 60.11(e)(5). [Under certain conditions (40 CFR 60.675(c)(3)&(4)), Method 9 observation time may be reduced from 3 hours to 1 hour. Some affected facilities are exempted from Method 9 tests (40 CFR 60.675 (h)). See specific condition 12, Section III, above for test duration requirements.]

(c) The opacity standards set forth in 40 CFR 60.11 shall apply at all times except during periods of startup, shutdown, malfunction, and as otherwise provided in the applicable standard.

(d) At all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.

(g) For the purpose of submitting compliance certifications or establishing whether or not a person has violated or is in violation of any standard in this part, nothing in this part shall preclude the use, including the exclusive use, of any credible evidence or information, relevant to whether a source would have been in compliance with applicable requirements if the appropriate performance or compliance test or procedure had been performed.

[40 CFR 60.11]

28. Pursuant to 40 CFR 60.12 Circumvention:

No owner or operator subject to the provisions of 40 CFR 60.12 shall build, erect, install, or use any article, machine, equipment or process, the use of which conceals an emission which would otherwise constitute a violation of an applicable standard. Such concealment includes, but is not limited to, the use of gaseous diluents to achieve compliance with an opacity standard or with a standard which is based on the concentration of a pollutant in the gases discharged to the atmosphere.
[40 CFR 60.12]

29. Pursuant to 40 CFR 60.19 General notification and reporting requirements:

(a) For the purposes of this part, time periods specified in days shall be measured in calendar days, even if the word "calendar" is absent, unless otherwise specified in an applicable requirement.

(b) For the purposes of this part, if an explicit postmark deadline is not specified in an applicable requirement for the submittal of a notification, application, report, or other written communication to the Administrator, the owner or operator shall postmark the submittal on or before the number of days specified in the applicable requirement. For example, if a notification must be submitted 15 days before a particular event is scheduled to take place, the notification shall be postmarked on or before 15 days preceding the event; likewise, if a notification must be submitted 15 days after a particular event takes place, the notification shall be delivered or postmarked on or before 15 days following the end of the event. The use of reliable non-Government mail carriers that provide indications of verifiable delivery of information required to be submitted to the Administrator, similar to the postmark provided by the U.S. Postal Service, or alternative means of delivery agreed to by the permitting authority, is acceptable.

(c) Notwithstanding time periods or postmark deadlines specified in this part for the submittal of information to the Administrator by an owner or operator, or the review of such information by the Administrator, such time periods or deadlines may be changed by mutual agreement between the owner or operator and the Administrator. Procedures governing the implementation of this provision are specified in paragraph (f) of this section.

(d) If an owner or operator of an affected facility in a State with delegated authority is required to submit periodic reports under this part to the State, and if the State has an established timeline for the submission of periodic reports that is consistent with the reporting frequency(ies) specified for such facility under this part, the owner or operator may change the dates by which periodic reports under this part shall be submitted (without changing the frequency of reporting) to be consistent with the State's schedule by mutual agreement between the owner or operator and the State. The allowance in the previous sentence applies in each State beginning 1 year after the affected facility is required to be in compliance with the applicable subpart in this part. Procedures governing the implementation of this provision are specified in paragraph (f) of this section.

(f)(1)(i) Until an adjustment of a time period or postmark deadline has been approved by the Administrator under paragraphs (f)(2) and (f)(3) of this section, the owner or operator of an affected facility remains strictly subject to the requirements of this part.

(ii) An owner or operator shall request the adjustment provided for in paragraphs (f)(2) and (f)(3) of this section each time he or she wishes to change an applicable time period or postmark deadline specified in this part.

(2) Notwithstanding time periods or postmark deadlines specified in this part for the submittal of information to the Administrator by an owner or operator, or the review of such information by the Administrator, such time periods or deadlines may be changed by mutual agreement between the owner or operator and the Administrator. An owner or operator who wishes to request a change in a time period or postmark deadline for a particular requirement shall request the adjustment in writing as soon as practicable before the subject activity is required to take place. The owner or operator shall include in the request whatever information he or she considers useful to convince the Administrator that an adjustment is warranted.

(3) If, in the Administrator's judgment, an owner or operator's request for an adjustment to a particular time period or postmark deadline is warranted, the Administrator will approve the adjustment. The Administrator will notify the owner or operator in writing of approval or disapproval of the request for an adjustment within 15 calendar days of receiving sufficient information to evaluate the request.

(4) If the Administrator is unable to meet a specified deadline, he or she will notify the owner or operator of any significant delay and inform the owner or operator of the amended schedule.

[40 CFR 60.19]

Memorandum

Florida Department of
Environmental Protection

TO: Howard L. Rhodes

THRU: Clair Fancy
Jonathan Holtom

FROM: Ross Pollock RP

DATE: November 12, 1999

SUBJECT: Angelo's Recycled Materials, Inc., Plant No. 4
Construction Permit for a Relocatable Concrete and Asphalt Crusher
Final Permit No. 7775092-001-AC

Attached is the Final air construction permit for a portable concrete and asphalt material crusher with a diesel powered generator to be used at industrial and construction sites in Florida.

The application for this minor source is being processed by BAR because it is a relocatable unit that may operate in different Districts. The unit is subject to new source performance standards 40 CFR 60, Subpart OOO, Standards of Performance for Nonmetallic Mineral Processing Plants. The crusher will use water as needed to control fugitive emissions.

I recommend your approval and signature of the Final Permit.

Enclosures

/RJP

Central Florida Testing Laboratories, Inc.
Testing Development and Research
12625 - 40th Street North · Clearwater, Florida 33762
TAMPA BAY AREA (727) 572-9797 FLORIDA 1-800-248-CFTL FAX (727) 299-0023

November 4, 1999

Mr. Jonathan Holtom, P.E.
State of Florida
Department of Environmental Protection
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Subject: **Angelo's Recycled Materials, Inc.**
Plant No. 4 – Hillsborough County @ Bearss Ave.
FDEP File Number 7775092-001-AC
Notice of Intent

Dear Mr. Holtom:

Attached, please find the affidavits for the Public Notices published on October 26, 1999 in the St. Petersburg Times Tampa Edition for Angelo's Recycled Materials, Inc. – Crushing Plant No.4 now sitting idle at it's Bearss Avenue location in Hillsborough County.

Should you receive any public comment regarding the issuance of the construction permit for this operation, please inform us as to the nature of the comment(s) so we can resolve any problems that might arise.

Thank you for your cooperation in this matter. Should you have any questions or require any additional information to issue the permit for this facility, do not hesitate to contact our office.

Sincerely,
CENTRAL FLORIDA TESTING LABORATORIES, INC.

Bernard A. Ball, Jr.
Environmental Engineer
BaB/bAb

enclosure: Affidavit of Public Notice

copies to: **Mr. Dennis Price – Angelo's Recycled Materials, Inc.**
Mr. Richard Bazinet – Angelo's Recycled Materials, Inc.
Mr. Rick Kirby, P.E. - HCEPC

990409717

THE TIMES

an edition of the St. Petersburg Times
Published Daily
Tampa, Hillsborough, Florida

STATE OF FLORIDA
COUNTY OF HILLSBOROUGH } S.S.

Before the undersigned authority personally appeared C. Egan
who on oath says that he is Legal Clerk
of the The Times, an edition of the St. Petersburg Times
a daily newspaper published at Tampa, in Hillsborough County, Florida: that the attached copy of advertisement, being a Legal Notice
in the matter RE: DEP Notice of Intent to Issue Air Permit

in the Court,
was published in said newspaper in the issues of October 26, 1999

Affiant further says the said The Times, an edition of the St. Petersburg Times is a newspaper published at Tampa, in said Hillsborough County, Florida, and that the said newspaper has heretofore been continuously published in said Hillsborough County, Florida, each day and has been entered as second class mail matter at the post office in Tampa, in said Hillsborough County, Florida, for a period of one year next preceding the first publication of the attached copy of advertisement (the current second class permit has been issued to the St. Petersburg Times for all regional editions of Hillsborough, Pinellas, Pasco, Citrus and Hernando Counties), and affiant further says that he has neither paid nor promised any person, firm, or corporation any discount, rebate, commission or refund for the purpose of securing this advertisement for publication in the said newspaper.

C. Egan
Signature of Affiant

Sworn to and subscribed before
me this 28th day of
October A.D. 19 99
June E. Pfirrman
Notary Public

NOTARY PUBLIC STATE OF FLORIDA
OFFICIAL NOTARY SEAL
JUNE E PFIRRMAN
COMMISSION NUMBER
CC709627
MY COMMISSION EXPIRES
FEB. 14,2002
(SEAL)

Personally known ✓ or produced identification
Type of identification produced

C+S-403

PUBLIC NOTICE OF INTENT TO ISSUE AIR PERMIT
STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DRAFT Permit No.: 7775092-001-AC
Angelo's Recycled Materials, Inc.

The Department of Environmental Protection (Department) gives notice of its intent to issue an air construction permit to Angelo's Recycled Materials, Inc. for a diesel engine powered portable concrete and asphalt material crusher that will be operated at construction and industrial sites throughout Florida. The crusher is a minor source of air pollution and not subject to the Prevention of Significant Deterioration (PSD) regulations, Rule 62-212.400, F.A.C. A Best Available Control Technology determination was not required for this facility. The applicant's name and address are: Angelo's Recycled Materials, Inc., Post Office Box 1493, Largo, Florida 33779.

The facility has been reviewed for potential operation in all counties of Florida. The unit will emit fugitive particulate matter and the products of combustion from the diesel fuel. Control of fugitive particulate matter is accomplished by wetting as needed.

Total emissions of pollutants from this facility are estimated to be:

Pollutant	Hourly Emissions pounds per hour	Annual Emissions tons per year
Particulate Matter (PM/PM10)	7.5	11.7
Nitrogen Oxides (NOx)	15.2	23.7
Carbon Monoxide (CO)	3.3	5.1
Sulfur Dioxide (SO2)	1.0	1.6
Volatile Organic Compounds (VOC)	1.2	1.9

Because of the low emissions and limited time of operation at any one site, the crusher will not cause or contribute to any violation of an ambient air quality standard.

The Department will issue the FINAL Permit, in accordance with the conditions of the DRAFT Permit unless a response received in accordance with the following procedures results in a different decision or significant change of terms or conditions.

The Department will accept written comments concerning the proposed DRAFT Permit issuance action for a period of 14 (fourteen) days from the date of publication of this Notice. Written comments should be provided to the Department's Bureau of Air Regulation, 2600 Blair Stone Road, Mail Station #5505, Tallahassee, Florida 32399-2400. Any written comments filed shall be made available for public inspection. If written comments received result in a significant change in this DRAFT Permit, the Department shall issue a Revised DRAFT Permit and require, if applicable, another Public Notice.

The Department will issue the FINAL Permit with the conditions of the DRAFT Permit unless a timely petition for an administrative hearing is filed pursuant to Sections 120.569 and 120.57 F.S. Mediation is not available for this action. The procedures for petitioning for a hearing are set forth below.

A person whose substantial interests are affected by the Department's proposed permitting decision may petition for an administrative hearing in accordance with Sections 120.569 and 120.57 F.S. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department, 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida 32399-3000, telephone: 850/488-9370, fax: 850/487-4938. Petitions must be filed within fourteen days of publication of the public notice or within fourteen days of receipt of this notice of intent, whichever occurs first. A petitioner must mail a copy of the petition to the applicant at the address indicated above, at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under Section 120.569 and 120.57 F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention will be only at the approval of the presiding officer and participate as a party to it. Any subsequent intervention will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-5.207 of the Florida Administrative Code.

A petition must contain the following information: (a) The name, address, and telephone number of each petitioner, the applicant's name and address, the Permit File Numbers and the county in which the project is proposed; (b) A statement of how and when each petitioner received notice of the Department's action or proposed action; (c) A statement of how each petitioner's substantial interests are affected by the Department's action or proposed action; (d) a statement of the material facts disputed by petitioner, if any; (e) A statement of the facts that the petitioner contends warrant reversal or modification of the Department's action or proposed action; (f) A statement identifying the rules or statutes that the petitioner contends require reversal or modification of the Department's action or proposed action; and (g) A statement of the relief sought by the petitioner, stating precisely the action that the petitioner wants the Department to take with respect to the Department's action or proposed action addressed in this notice of intent.

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Department's final action may be different from the position taken by it in this notice of intent. Persons whose substantial interests will be affected by any such final decision of the Department on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

Copies of the proposed construction permit and the technical evaluation are available for public inspection during normal business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at:

Florida Dept. of Environmental Protection
Bureau of Air Regulation
111 S. Magnolia Drive, Suite 4
Tallahassee, Florida 32301
Telephone: 850/488-0114

Florida Dept. of Environmental Protection
Northwest District Office
160 Governmental Center
Pensacola, Florida 32501
Telephone: 850/595-8300

Florida Dept. of Environmental Protection
Southeast District Office
400 North Congress Avenue
West Palm Beach, Florida 33416
Telephone: 561/681-6755

Dade County Department of Environmental Resources Management
33 Southwest Second Avenue, Suite 900
Miami, Florida 33130
Telephone: 305/372-6925

Palm Beach County Health Department
901 Evernia Street
Post Office Box 29
West Palm Beach, Florida 33401
Telephone: 561/355-3070

Florida Dept. of Environmental Protection
Central District Office
3319 Maguire Boulevard, Suite 232
Orlando, Florida 32803
Telephone: 407/894-7555

Florida Dept. of Environmental Protection
Northeast District Office
7825 Baymeadows Way, Suite 200B
Jacksonville, Florida 32256
Telephone: 904/448-4300

Florida Dept. of Environmental Protection
South District Office
2295 Victoria Avenue, Suite 364
Fort Myers, Florida 33902
Telephone: 941/332-6975

Regulatory and Environmental Services Department
117 West Duval Street, Suite 225
Jacksonville, Florida 32202
Telephone: 904/630-3484

Pinellas County Department of Environmental Management
300 South Garden Avenue
Clearwater, Florida 33756
Telephone: 727/464-4422

Orange County Environmental Protection Department - Air Program Section
800 Mercy Drive
Orlando, Florida 32808
Telephone: 407/836-1400

Florida Dept. of Environmental Protection
Southwest District Office
3804 Coconut Palm Drive
Tampa, Florida 33619
Telephone: 813/744-6100

Broward County Department of Natural Resource Protection
218 Southwest First Avenue
Fort Lauderdale, Florida 33301
Telephone: 954/519-1202

Hillsborough County Environmental Protection Commission
1410 North 21 Street
Tampa, Florida 33605
Telephone: 813/272-5530

Sarasota County Natural Resources Department
1301 Cattleman Road, Building A
Sarasota, Florida 34232
Telephone: 941/378-6128

The complete project file, which includes the application, technical evaluation, proposed construction permit, and the information submitted by the responsible official, exclusive of confidential records under Section 403.111, F.S., is available in the office of the permitting authority in Tallahassee. Interested persons may contact either Jonathan Holton, P.E., or Ross Pollock, project engineer, at 111 South Magnolia Drive, Suite 4, Tallahassee, Florida 32301, or call 850/488-0114, for additional information.

(990409717) 10/26/99

52230m

Central Florida Testing Laboratories, Inc.
Testing Development and Research
12625 -40th Street North · Clearwater, Florida 33762
PINELLAS / HIILSBOROUGH (727) 572-9797 FLORIDA 1-800-248-CFTL FAX (727) 299-0023

October 20, 1999

VIA FAX ONLY

Ms. Carole Egan
Legal Advertising Desk
St. Petersburg Times
490 First Avenue North
St. Petersburg, Florida 33701

Subject: **Angelo's Recycled Materials, Inc. – Plant No.4**
FDEP Notice of Intent

Dear Ms. Egan:

Please have the attached legal notice published as soon as possible in the legal ad section which circulates in the area of 1201 East 148th Street in Tampa, Hillsborough County, Florida. The notice needs to appear for only one (1) day in the newspaper.

After the legal notice has appeared in the paper, please forward an affidavit for proof of publication for the notice to this office. Please send invoice for payment to the following address:

Mr. Dennis Price
Angelo's Recycled Materials, Inc.
Post Office Box 1493
Largo, Florida 33779
(904) 527-9671

Thank you for your prompt attention to this request. Please call me at 572-9797 to confirm your receipt of this request.

Sincerely,
CENTRAL FLORIDA TESTING LABORATORIES, INC.

Bernard A. Ball, Jr.
Environmental Engineer
BaB/bAb

enclosure: FDEP Public Notice of Intent

Copy to: **Mr. Dennis Price – Angelo's Recycled Materials, Inc.**
Mr. Jonathan Holtom, FDEP (AQS) - Tallahassee

PUBLIC NOTICE OF INTENT TO ISSUE AIR PERMIT

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

DRAFT Permit No.: 7775092-001-AC
Angelo's Recycled Materials, Inc.

The Department of Environmental Protection (Department) gives notice of its intent to issue an air construction permit to Angelo's Recycled Materials, Inc. for a diesel engine powered portable concrete and asphalt material crusher that will be operated at construction and industrial sites throughout Florida. The crusher is a minor source of air pollution and not subject to the Prevention of Significant Deterioration (PSD) regulations, Rule 62-212.400, F.A.C. A Best Available Control Technology determination was not required for this facility. The applicant's name and address are: Angelo's Recycled Materials, Inc., Post Office Box 1493, Largo, Florida 33779.

The facility has been reviewed for potential operation in all counties of Florida. The unit will emit fugitive particulate matter and the products of combustion from the diesel fuel. Control of fugitive particulate matter is accomplished by wetting as needed.

Total emissions of pollutants from this facility are estimated to be:

Pollutant	Hourly Emissions pounds per hour	Annual Emissions tons per year
Particulate Matter(PM/PM_{10})	7.5	11.7
Nitrogen Oxides (NOx)	15.2	23.7
Carbon Monoxide (CO)	3.3	5.1
Sulfur Dioxide (SO_2)	1.0	I.6
Volatile Organic Compounds (VOC)	1.2	1.9

Because of the low emissions and limited time of operation at any one site, the crusher will not cause or contribute to any violation of an ambient air quality standard.

The Department will issue the FINAL Permit, in accordance with the conditions of the DRAFT Permit unless a response received in accordance with the following procedures results in a different decision or significant change of terms or conditions.

The Department will accept written comments concerning the proposed DRAFT Permit issuance action for a period of 14 (fourteen) days from the date of publication of this Notice. Written comments should be provided to the Department's Bureau of Air Regulation, 2600 Blair Stone Road, Mail Station #5505, Tallahassee, Florida 32399-2400. Any written comments filed shall be made available for public inspection. If written comments received result in a significant change in this DRAFT Permit, the Department shall issue a Revised DRAFT Permit and require, if applicable, another Public Notice.

The Department will issue the FINAL Permit with the conditions of the DRAFT Permit unless a timely petition for an administrative hearing is filed pursuant to Sections 120.569 and 120.57 F.S. Mediation is not available for this action. The procedures for petitioning for a hearing are set forth below.

A person whose substantial interests are affected by the Department's proposed permitting decision may petition for an administrative hearing in accordance with Sections 120.569 and 120.57 F.S. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department, 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida 32399-3000, telephone: 850/488-9370, fax: 850/487-4938. Petitions must be filed within fourteen days of publication of the public notice or within fourteen days of receipt of this notice of intent, whichever occurs first. A petitioner must mail a copy of the petition to the applicant at the address indicated above, at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under Sections 120.569 and 120.57 F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-5.207 of the Florida Administrative Code.

A petition must contain the following information: (a) The name, address, and telephone number of each petitioner, the applicant's name and address, the Permit File Numbers and the county in which the project is proposed; (b) A statement of how and when each petitioner received notice of the Department's action or proposed action; (c) A statement of how each petitioner's substantial interests are affected by the Department's action or proposed action; (d) A statement of the material facts disputed by petitioner, if any; (e) A statement of the facts that the petitioner contends warrant reversal or modification of the Department's action or proposed action; (f) A statement identifying the rules or statutes that the petitioner contends require reversal or modification of the Department's action or proposed action; and (g) A statement of the relief sought by the petitioner, stating precisely the action that the petitioner wants the Department to take with respect to the Department's action or proposed action addressed in this notice of intent.

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Department's final action may be different from the position taken by it in this notice of intent. Persons whose substantial interests will be affected by any such final decision of the Department on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

Copies of the proposed construction permit and the technical evaluation are available for public inspection during normal business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at:

Florida Dept. of Environmental Protection
Bureau of Air Regulation
111 S. Magnolia Drive, Suite 4
Tallahassee, Florida 32301
Telephone: 850/488-0114

Florida Dept. of Environmental Protection
Central District Office
3319 Maguire Boulevard, Suite 232
Orlando, Florida 32803
Telephone: 407/894-7555

Orange County Environmental Protection
Department – Air Program Section
800 Mercy Drive
Orlando, Florida 32808
Telephone: 407/836-1400

Florida Dept. of Environmental Protection
Northwest District Office
160 Governmental Center
Pensacola, Florida 32501
Telephone: 850/595-8300

Florida Dept. of Environmental Protection
Northeast District Office
7825 Baymeadows Way, Suite 200B
Jacksonville, Florida 32256
Telephone: 904/448-4300

Florida Dept. of Environmental Protection
Southwest District Office
3804 Coconut Palm Drive
Tampa, Florida 33619
Telephone: 813/744-6100

Florida Dept. of Environmental Protection
Southeast District Office
400 North Congress Avenue
West Palm Beach, Florida 33416
Telephone: 561/681-6755

Florida Dept. of Environmental Protection
South District Office
2295 Victoria Avenue, Suite 364
Fort Myers, Florida 33902
Telephone: 941/332-6975

Broward County Department of Natural
Resource Protection
218 Southwest First Avenue
Fort Lauderdale, Florida 33301
Telephone: 954/519-1202

Dade County Department of Environmental
Resources Mangement
33 Southwest Second Avenue, Suite 900
Maimi, Florida 33130
Telephone: 305/372-6925

Regulatory and Environmental Services
Department
117 West Duval Street, Suite 225
Jacksonville, Florida 32202
Telephone: 904/630-3484

Hillsborough County Environmental
Protection Commission
1410 North 21 Street
Tampa, Florida 33605
Telephone: 813/272-5530

Palm Beach County Health Department
901 Evernia Street
Post Office Box 29
West Palm Beach, Florida 33401
Telephone: 561/355-3070

Pinellas County Department of
Environmental Management
300 South Garden Avenue
Clearwater, Florida 33756
Telephone: 727/464-4422

Sarasota County Natural Resources
Department,
1301 Cattleman Road, Building A
Sarasota, Florida 34232
Telephone: 941/378-6128

The complete project file, which includes the application, technical evaluation, proposed construction permit, and the information submitted by the responsible official, exclusive of confidential records under Section 403.111, F.S., is available in the office of the permitting authority in Tallahassee. Interested persons may contact either Jonathan Holtom, P.E., or Ross Pollock, project engineer, at 111 South Magnolia Drive, Suite 4, Tallahassee, Florida 32301, or call 850/488-0114, for additional information.

Department of Environmental Protection

Jeb Bush
Governor

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

David B. Struhs
Secretary

October 12, 1999

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Richard A. Bazinet, Director of Florida Operations
Angelo's Recycled Materials, Inc.
Post Office Box 1493
Largo, Florida 33779

Re: DRAFT Permit No. 7775092-001-AC
Concrete and Asphalt Crushing Plant No. 4

Dear Mr. Bazinet:

Enclosed is one copy of the Draft Air Construction Permit for a diesel engine powered portable concrete and asphalt material crusher which will initially be located at 1201 East 148th Avenue, Tampa, Hillsborough County. This facility will be allowed to operate at sites in all counties of the state provided that the proper public notice requirements are satisfied. The Technical Evaluation and Preliminary Determination, the Department's Intent to Issue Air Construction Permit and the "Public Notice of Intent to Issue Air Construction Permit" are also included.

The "Public Notice of Intent to Issue Air Construction Permit" must be published one time only, as soon as possible, in the legal advertisement section of a newspaper of general circulation in the area affected, pursuant to the requirements of Chapter 50, Florida Statutes. Proof of publication, i.e., newspaper affidavit, must be provided to the Department's Bureau of Air Regulation office within seven (7) days of publication. Failure to publish the notice and provide proof of publication may result in the denial of the permit.

Please submit any written comments you wish to have considered concerning the Department's proposed action to Jonathan Holtom, P.E., at the above letterhead address. If you have any other questions, please contact Ross Pollock or Mr. Holtom at 850/488-0114.

Sincerely,

C. H. Fancy, P.E., Chief,
Bureau of Air Regulation

CHF/rjp

Enclosures

In the Matter of an
Application for Permit by:

Angelo's Recycled Materials, Inc.
Post Office Box 1493
Largo, Florida 33779

DRAFT Permit No.: 7775092-001-AC
Concrete and Asphalt Crushing Plant No. 4
Statewide Operation

INTENT TO ISSUE AIR CONSTRUCTION PERMIT

The Department of Environmental Protection (Department) gives notice of its intent to issue an air construction permit (copy of DRAFT Permit attached) for the proposed project, detailed in the application specified above and the attached Technical Evaluation and Preliminary Determination, for the reasons stated below.

The applicant, Angelo's Recycled Materials, Inc., applied on September 2, 1999, to the Department for an air construction permit for statewide operation of its Concrete and Asphalt Crusher which will initially be located at 1201 East 148th Avenue, Tampa, Hillsborough County. The Department has permitting jurisdiction under the provisions of Chapter 403, Florida Statutes (F.S.), and Florida Administrative Code (F.A.C.) Chapters 62-4, 62-210, and 62-212. The above actions are not exempt from permitting procedures. The Department has determined that an air construction permit is required in order for the concrete and asphalt crusher plant to relocate to sites throughout the state.

The Department intends to issue this air construction permit based on the belief that reasonable assurances have been provided to indicate that operation of these emission units will not adversely impact air quality, and the emission units will comply with all appropriate provisions of Chapters 62-4, 62-204, 62-210, 62-212, 62-296, and 62-297, F.A.C.

Pursuant to Section 403.815, F.S., and Rule 62-110.106(7)(a)1., F.A.C., you (the applicant) are required to publish at your own expense the enclosed "Public Notice of Intent to Issue Air Construction Permit." The notice shall be published one time only in the legal advertisement section of a newspaper of general circulation in the area affected. Rule 62-110.106(7)(b), F.A.C., requires that the applicant cause the notice to be published as soon as possible after notification by the Department of its intended action. For the purpose of these rules, "publication in a newspaper of general circulation in the area affected" means publication in a newspaper meeting the requirements of Sections 50.011 and 50.031, F.S., in the county where the activity is to take place. If you are uncertain that a newspaper meets these requirements, please contact the Department at the address or telephone number listed below. The applicant shall provide proof of publication to the Department's Bureau of Air Regulation, at 2600 Blair Stone Road, Mail Station #5505, Tallahassee, Florida 32399-2400 (Telephone: 850/488-0114; Fax 850/ 922-6979). You must provide proof of publication within seven days of publication, pursuant to Rule 62-110.106(5), F.A.C. No permitting action for which published notice is required shall be granted until proof of publication of notice is made by furnishing a uniform affidavit in substantially the form prescribed in section 50.051, F.S. to the office of the Department issuing the permit. Failure to publish the notice and provide proof of publication may result in the denial of the permit pursuant to Rules 62-110.106(9) & (11), F.A.C.

The Department will issue the final permit with the attached conditions unless a response received in accordance with the following procedures results in a different decision or significant change of terms or conditions.

The Department will accept written comments concerning the proposed permit issuance action for a period of fourteen days from the date of publication of "Public Notice of Intent to Issue Air Permit." Written comments should be provided to the Department's Bureau of Air Regulation at 2600 Blair Stone Road, Mail Station #5505, Tallahassee, FL 32399-2400. Any written comments filed shall be made available for public inspection. If written comments received result in a significant change in the proposed agency action, the Department shall revise the proposed permit and require, if applicable, another Public Notice.

The Department will issue the permit with the attached conditions unless a timely petition for an administrative hearing is filed pursuant to sections 120.569 and 120.57 F.S., before the deadline for filing a petition. The procedures for petitioning for a hearing are set forth below.

A person whose substantial interests are affected by the proposed permitting decision may petition for an administrative proceeding (hearing) under sections 120.569 and 120.57 of the Florida Statutes. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida, 32399-3000. Petitions filed by the permit applicant or any of the parties listed below must be filed within fourteen days of receipt of this notice of intent. Petitions filed by any persons other than those entitled to written notice under section 120.60(3) of the Florida Statutes must be filed within fourteen days of publication of the public notice or within fourteen days of receipt of this notice of intent, whichever occurs first. Under section 120.60(3), however, any person who asked the Department for notice of agency action may file a petition within fourteen days of receipt of that notice, regardless of the date of publication. A petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under sections 120.569 and 120.57 F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205 of the Florida Administrative Code.

A petition that disputes the material facts on which the Department's action is based must contain the following information: (a) The name and address of each agency affected and each agency's file or identification number, if known; (b) The name, address, and telephone number of the petitioner, the name, address, and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests will be affected by the agency determination; (c) A statement of how and when petitioner received notice of the agency action or proposed action; (d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate; (e) A concise statement of the ultimate facts alleged, as well as the rules and statutes which entitle the petitioner to relief; and (f) A demand for relief.

A petition that does not dispute the material facts upon which the Department's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as required by Rule 28-106.301.

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Department's final action may be different from the position taken by it in this notice. Persons whose substantial interests will be affected by any such final decision of the Department on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

Mediation is not available in this proceeding.

In addition to the above, a person subject to regulation has a right to apply for a variance from or waiver of the requirements of particular rules, on certain conditions, under Section 120.542 F.S. The relief provided by this state statute applies only to state rules, not statutes, and not to any federal regulatory requirements. Applying for a variance or waiver does not substitute or extend the time for filing a petition for an administrative hearing or exercising any other right that a person may have in relation to the action proposed in this notice of intent.

The application for a variance or waiver is made by filing a petition with the Office of General Counsel of the Department, 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida 32399-3000. The petition must specify the following information: (a) The name, address, and telephone number of the petitioner; (b) The name, address, and telephone number of the attorney or qualified representative of the petitioner, if any; (c) Each rule or portion of a rule from which a variance or waiver is requested; (d) The citation to the statute underlying (implemented by) the rule identified in (c) above; (e) The type of action requested; (f) The specific facts that would justify a variance or waiver for the petitioner; (g) The reason why the variance or waiver would serve the purposes of the underlying statute (implemented by the rule); and (h) A statement whether the variance or waiver is permanent or temporary and, if temporary, a statement of the dates showing the duration of the variance or waiver requested.

The Department will grant a variance or waiver when the petition demonstrates both that the application of the rule would create a substantial hardship or violate principles of fairness, as each of those terms is defined in Section

120.542(2) F.S., and that the purpose of the underlying statute will be or has been achieved by other means by the petitioner.

Persons subject to regulation pursuant to any federally delegated or approved air program should be aware that Florida is specifically not authorized to issue variances or waivers from any requirements of any such federally delegated or approved program. The requirements of the program remain fully enforceable by the Administrator of the EPA and by any person under the Clean Air Act unless and until the Administrator separately approves any variance or waiver in accordance with the procedures of the federal program.

Executed in Tallahassee, Florida.

C. H. Fancy, P.E., Chief
Bureau of Air Regulation

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this INTENT TO ISSUE AIR CONSTRUCTION PERMIT (including the PUBLIC NOTICE, Technical Evaluation and Preliminary Determination, and the DRAFT permit) was sent by certified mail (*) and copies were mailed by U.S. Mail, or electronic mail (as noted) before the close of business on 10/18/99 to the person(s) listed:

Mr. Richard A. Bazinet, Director of Florida Operations, Angelo's Recycled Materials, Inc.*
Mr. Bernard A. Ball, Central Florida Testing Laboratories, Inc.
Len Kozlov, DEP, Central District
Chris Kirts, DEP, Northeast District
Ed Middleswart, DEP, Northwest District
Bill Thomas, DEP, Southwest District
Phil Barbaccia, DEP, South District
Isidore Goldman, DEP, Southeast District
Daniela Banu, Broward County Department of Natural Resource Protection
H. Patrick Wong, Dade County Department of Environmental Resources Management
Richard Robinson, Regulatory and Environmental Services Department
Jerry Campbell, Hillsborough County Environmental Protection Commission
James E. Stormer, Palm Beach County Health Department
Peter Hessling, Pinellas County Department of Environmental Management
Kent Kimes, Sarasota County Natural Resources Department
Marie Driscoll, Orange County Environmental Protection Department

10/18/99 cc: Reading File

Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED, on this date, pursuant to §120.52, Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

Barbara J. Boutwell 10/18/99
(Clerk) (Date)

PUBLIC NOTICE OF INTENT TO ISSUE AIR PERMIT

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

DRAFT Permit No.: 7775092-001-AC
Angelo's Recycled Materials, Inc.

The Department of Environmental Protection (Department) gives notice of its intent to issue an air construction permit to Angelo's Recycled Materials, Inc. for a diesel engine powered portable concrete and asphalt material crusher that will be operated at construction and industrial sites throughout Florida. The crusher is a minor source of air pollution and not subject to the Prevention of Significant Deterioration (PSD) regulations, Rule 62-212.400, F.A.C. A Best Available Control Technology determination was not required for this facility. The applicant's name and address are: Angelo's Recycled Materials, Inc., Post Office Box 1493, Largo, Florida 33779.

The facility has been reviewed for potential operation in all counties of Florida. The unit will emit fugitive particulate matter and the products of combustion from the diesel fuel. Control of fugitive particulate matter is accomplished by wetting as needed.

Total emissions of pollutants from this facility are estimated to be:

Pollutant	Hourly Emissions pounds per hour	Annual Emissions tons per year
Particulate Matter(PM/PM_{10})	7.5	11.7
Nitrogen Oxides (NOx)	15.2	23.7
Carbon Monoxide (CO)	3.3	5.1
Sulfur Dioxide (SO_2)	1.0	1.6
Volatile Organic Compounds (VOC)	1.2	1.9

Because of the low emissions and limited time of operation at any one site, the crusher will not cause or contribute to any violation of an ambient air quality standard.

The Department will issue the FINAL Permit, in accordance with the conditions of the DRAFT Permit unless a response received in accordance with the following procedures results in a different decision or significant change of terms or conditions.

The Department will accept written comments concerning the proposed DRAFT Permit issuance action for a period of 14 (fourteen) days from the date of publication of this Notice. Written comments should be provided to the Department's Bureau of Air Regulation, 2600 Blair Stone Road, Mail Station #5505, Tallahassee, Florida 32399-2400. Any written comments filed shall be made available for public inspection. If written comments received result in a significant change in this DRAFT Permit, the Department shall issue a Revised DRAFT Permit and require, if applicable, another Public Notice.

The Department will issue the FINAL Permit with the conditions of the DRAFT Permit unless a timely petition for an administrative hearing is filed pursuant to Sections 120.569 and 120.57 F.S. Mediation is not available for this action. The procedures for petitioning for a hearing are set forth below.

A person whose substantial interests are affected by the Department's proposed permitting decision may petition for an administrative hearing in accordance with Sections 120.569 and 120.57 F.S. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department, 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida 32399-3000, telephone: 850/488-9370, fax: 850/487-4938. Petitions must be filed within fourteen days of publication of the public notice or within fourteen days of receipt of this notice of intent, whichever occurs first. A petitioner must mail a copy of the petition to the applicant at the address indicated above, at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under Sections 120.569 and 120.57 F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-5.207 of the Florida Administrative Code.

A petition must contain the following information: (a) The name, address, and telephone number of each petitioner, the applicant's name and address, the Permit File Numbers and the county in which the project is proposed; (b) A statement of how and when each petitioner received notice of the Department's action or proposed action; (c) A statement of how each petitioner's substantial interests are affected by the Department's action or proposed action; (d) A statement of the material facts disputed by petitioner, if any; (e) A statement of the facts that the petitioner contends warrant reversal or modification of the Department's action or proposed action; (f) A statement identifying the rules or statutes that the petitioner contends require reversal or modification of the Department's action or proposed action; and (g) A statement of the relief sought by the petitioner, stating precisely the action that the petitioner wants the Department to take with respect to the Department's action or proposed action addressed in this notice of intent.

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Department's final action may be different from the position taken by it in this notice of intent. Persons whose substantial interests will be affected by any such final decision of the Department on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

Copies of the proposed construction permit and the technical evaluation are available for public inspection during normal business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at:

Florida Dept. of Environmental Protection
Bureau of Air Regulation
111 S. Magnolia Drive, Suite 4
Tallahassee, Florida 32301
Telephone: 850/488-0114

Florida Dept. of Environmental Protection
Central District Office
3319 Maguire Boulevard, Suite 232
Orlando, Florida 32803
Telephone: 407/894-7555

Orange County Environmental Protection
Department – Air Program Section
800 Mercy Drive
Orlando, Florida 32808
Telephone: 407/836-1400

Florida Dept. of Environmental Protection
Northwest District Office
160 Governmental Center
Pensacola, Florida 32501
Telephone: 850/595-8300

Florida Dept. of Environmental Protection
Northeast District Office
7825 Baymeadows Way, Suite 200B
Jacksonville, Florida 32256
Telephone: 904/448-4300

Florida Dept. of Environmental Protection
Southwest District Office
3804 Coconut Palm Drive
Tampa, Florida 33619
Telephone: 813/744-6100

Florida Dept. of Environmental Protection
Southeast District Office
400 North Congress Avenue
West Palm Beach, Florida 33416
Telephone: 561/681-6755

Florida Dept. of Environmental Protection
South District Office
2295 Victoria Avenue, Suite 364
Fort Myers, Florida 33902
Telephone: 941/332-6975

Broward County Department of Natural
Resource Protection
218 Southwest First Avenue
Fort Lauderdale, Florida 33301
Telephone: 954/519-1202

Dade County Department of Environmental
Resources Mangement
33 Southwest Second Avenue, Suite 900
Maimi, Florida 33130
Telephone: 305/372-6925

Regulatory and Environmental Services
Department
117 West Duval Street, Suite 225
Jacksonville, Florida 32202
Telephone: 904/630-3484

Hillsborough County Environmental
Protection Commission
1410 North 21 Street
Tampa, Florida 33605
Telephone: 813/272-5530

Palm Beach County Health Department
901 Evernia Street
Post Office Box 29
West Palm Beach, Florida 33401
Telephone: 561/355-3070

Pinellas County Department of
Environmental Management
300 South Garden Avenue
Clearwater, Florida 33756
Telephone: 727/464-4422

Sarasota County Natural Resources
Department
1301 Cattleman Road, Building A
Sarasota, Florida 34232
Telephone: 941/378-6128

The complete project file, which includes the application, technical evaluation, proposed construction permit, and the information submitted by the responsible official, exclusive of confidential records under Section 403.111, F.S., is available in the office of the permitting authority in Tallahassee. Interested persons may contact either Jonathan Holtom, P.E., or Ross Pollock, project engineer, at 111 South Magnolia Drive, Suite 4, Tallahassee, Florida 32301, or call 850/488-0114, for additional information.

TECHNICAL EVALUATION

AND

PRELIMINARY DETERMINATION

Angelo's Recycled Materials, Inc.

Relocatable Concrete and Asphalt Crushing Plant No. 4
State Wide Operation

Air Construction Permit No.: 7775092-001-AC

Facility ID No.: 7775092
Unit No. 01 (Crusher, Conveyors, Materials handling)
Unit No. 02 (Diesel Engine Powered Generator)

Relocatable Unit

Department of Environmental Protection
Division of Air Resources Management
Bureau of Air Regulation

October 1, 1999

1. APPLICATION INFORMATION

1.1 *Applicant's Name and Address*

Mr. Richard A. Bazinet, Director of Florida Operations
Angelo's Recycled Materials, Inc.
Post Office Box 1493
Largo, Florida 33779

1.2 Reviewing and Processing Schedule

September 2, 1999 Date of Receipt of Complete Application

2. FACILITY INFORMATION

2.1 Relocatable concrete and asphalt crushing unit operating throughout Florida.

Angelo's Recycled Materials, Inc. plans to operate a 200 TPH mobile crushing unit at sites in Florida. There are two crushers included in the facility. These are a Cedarapids, Inc. Model 3054 jaw crusher and a Cedarapids cone crusher, Model RC 5411. Other components of the crushing unit are a feeder, conveyors, and a 910 KW Caterpillar generator driven by a 325 hp Caterpillar diesel motor. Water will be added as needed to control fugitive dust emissions.

2.2 Standard Industrial Classification Code (SIC)

Major Group No.	17	Construction – Special Trade Contractors
Group No.	1795	Wrecking and Demolition Work

2.3 Facility Category

The portable crusher emits particulate matter from the handling and crushing of the concrete and asphalt material and the normal products of combustion from the diesel fuel burned in the diesel engine used to drive the generator which provides power to the crushing units.

The portable crusher operated by the applicant is classified as a minor air pollutant emitting facility. Air pollutant emissions are less than 100 TPY of any single criteria air pollutant.

This facility is not on the list of the 28 Major Facility Categories, Table 62-212.400-1. This facility is also classified as a natural non-Title V facility.

Based on the specific conditions in the draft permit and the physical restrictions of the equipment, this facility is classified as a *minor source* of air pollution.

3. PROJECT DESCRIPTION

3.1 This permit addresses the following emissions units:

EMISSION UNIT NO.	SYSTEM	EMISSION UNIT DESCRIPTION
001	Size Reduction	200 TPH Cedarapids, Inc. Model 3054 jaw crusher, Cedarapids, Inc. Model RC5411 cone crusher.
002	Diesel Powered Generator Set	910 KW Caterpillar generator Model 3512, 325 hp Caterpillar diesel motor

4. PROCESS DESCRIPTION

4.1 General Information

Concrete or asphalt material is fed to the crusher and reduced in size. The crushed material is screened and stored in an open area. It is loaded and unloaded from trucks. Dust from the crushing of the rocks will be controlled by using water sprays when necessary. Power for the unit comes from a diesel engine, which burns a maximum of 25 gallons per hour of No. 2 virgin diesel fuel containing up to 0.5 percent sulfur, that is used to drive a 910 KW generator.

5. RULE APPLICABILITY

The proposed project is subject to preconstruction review requirements under the provisions of Chapter 403, Florida Statutes, and Chapters 62-4, 62-204, 62-210, and 62-212, of the Florida Administrative Code (F.A.C.).

The proposed project is not subject to review under Rule 62-212.400, F.A.C., Prevention of Significant Deterioration (PSD), because it is a minor unit and the potential emission increases for all criteria pollutants do not exceed the significant emission rates given in Chapter 62-212, Table 62-212.400-2, F.A.C. Therefore, this facility may operate in any county in Florida without concern of ambient air quality violations.

A determination of Best Available Control Technology (BACT) is not required for this minor facility. No analysis of the air quality impact of the proposed project's impacts on soils, vegetation and visibility; along with air quality impacts resulting from associated commercial, residential and industrial growth is required for a minor facility.

The crusher and associated equipment are subject to 40 CFR 60, Subpart OOO, Standards of Performance for Nonmetallic Mineral Processing Plants. The diesel engine is subject to Rule 62-210.300, Permits Required, however there are no unit specific regulatory requirements that apply. Its potential emissions are sufficiently limited by its physical capacity to merit classification as a minor source. Its potential emissions are further limited by a requested restriction on the allowable hours of operation. No regular testing of the diesel engine is

required, however if the Department has reason to believe that a violation of the facility wide visible emissions limit has occurred, a special compliance test can be ordered.

The emission units affected by this permit shall comply with all applicable provisions of the Florida Administrative Code and, specifically, the following Chapters and Rules:

Chapter 62-4	Permits.
Rule 62-210.300	Permits Required
Rule 62-210.350	Public Notice and Comments
Rule 62-210.370	Reports
Rule 62-210.650	Circumvention
Rule 62-210.700	Excess Emissions
Rule 62-210.900	Forms and Instructions
Rule 62-212.300	General Preconstruction Review Requirements
Rule 62-296.320	General Pollutant Emission Limiting Standards
Rule 62-297.310	General Test Requirements
Rule 62-297.400	EPA Methods Adopted by Reference
Rule 62-297.401	EPA Test Procedures

6. SOURCE IMPACT ANALYSIS

6.1 Emission Limitations

The proposed portable crusher will emit the following PSD pollutants (Table 212.400-2): particulate matter, sulfur dioxide, nitrogen oxides, volatile organic compounds, and carbon monoxide. The estimated emissions for these emission units are summarized in the following table.

6.2 Emission Summary

The unit is a minor source for all criteria air pollutants. Following are the estimated emissions which are based on 3,120 hours per year of operation and appropriate AP-42 emission factors.

Pollutants	Estimated Hourly Emissions lb/hr	Estimated Annual Emissions TPY
PM/PM_{10}	7.5	11.7
NO_X	15.2	23.7
SO_2	1.0	1.6
CO	3.3	5.1
VOC	1.2	1.9

6.3 Control Technology Review

The crusher unit and associated conveyors are potential sources of fugitive particulate matter emissions. Emissions shall be controlled by wetting the material being processed, as well as the storage piles and yard/roads, when needed.

The diesel engine powering the crusher will emit products of combustion. However, there are no unit specific regulatory requirements which apply to the diesel engine. Because of the small size of this diesel engine, even continuous operation would not cause this facility to be subject to the Title V regulations. Therefore, no operational restrictions for "reasonable assurance" are required.

In addition to the physical design constraints, at the permittee's request, emissions from these units are further limited by production and by hours per year operation limits.

6.4 Air Quality Analysis

An air quality analysis was not conduced for this project. The Department does not expect the low emissions from this operation to have a significant impact on the ambient air quality.

7. CONCLUSION

Based on the foregoing technical evaluation of the application, the Department has made a preliminary determination that the proposed project will comply with all applicable state and federal air pollution regulations provided the Department's restrictions described in the Specific Conditions of the proposed permit are met. The General and Specific Conditions are listed in the attached permit.

Permit Engineer: Ross Pollock
Reviewed and Approved by: Jonathan Holtom, P.E.

TECHNICAL EVALUATION

AND

PRELIMINARY DETERMINATION

Angelo's Recycled Materials, Inc.

Relocatable Concrete and Asphalt Crushing Plant No. 4
State Wide Operation

Air Construction Permit No.: 7775092-001-AC

Facility ID No.: 7775092
Unit No. 01 (Crusher, Conveyors, Materials handling)
Unit No. 02 (Diesel Engine Powered Generator)

Relocatable Unit

Department of Environmental Protection
Division of Air Resources Management
Bureau of Air Regulation

October 1, 1999

1. APPLICATION INFORMATION

1.1 *Applicant's Name and Address*

Mr. Richard A. Bazinet, Director of Florida Operations
Angelo's Recycled Materials, Inc.
Post Office Box 1493
Largo, Florida 33779

1.2 Reviewing and Processing Schedule

September 2, 1999 Date of Receipt of Complete Application

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2.1 Relocatable concrete and asphalt crushing unit operating throughout Florida.

Angelo's Recycled Materials, Inc. plans to operate a 200 TPH mobile crushing unit at sites in Florida. There are two crushers included in the facility. These are a Cedarapids, Inc. Model 3054 jaw crusher and a Cedarapids cone crusher, Model RC 5411. Other components of the crushing unit are a feeder, conveyors, and a 910 KW Caterpillar generator driven by a 325 hp Caterpillar diesel motor. Water will be added as needed to control fugitive dust emissions.

2.2 Standard Industrial Classification Code (SIC)

Major Group No.	17	Construction – Special Trade Contractors
Group No.	1795	Wrecking and Demolition Work

2.3 Facility Category

The portable crusher emits particulate matter from the handling and crushing of the concrete and asphalt material and the normal products of combustion from the diesel fuel burned in the diesel engine used to drive the generator which provides power to the crushing units.

The portable crusher operated by the applicant is classified as a minor air pollutant emitting facility. Air pollutant emissions are less than 100 TPY of any single criteria air pollutant.

This facility is not on the list of the 28 Major Facility Categories, Table 62-212.400-1. This facility is also classified as a natural non-Title V facility.

Based on the specific conditions in the draft permit and the physical restrictions of the equipment, this facility is classified as a *minor source* of air pollution.

3. PROJECT DESCRIPTION

3.1 This permit addresses the following emissions units:

EMISSION UNIT NO.	SYSTEM	EMISSION UNIT DESCRIPTION
001	Size Reduction	200 TPH Cedarapids, Inc. Model 3054 jaw crusher, Cedarapids, Inc. Model RC5411 cone crusher.
002	Diesel Powered Generator Set	910 KW Caterpillar generator Model 3512, 325 hp Caterpillar diesel motor

4. PROCESS DESCRIPTION

4.1 General Information

Concrete or asphalt material is fed to the crusher and reduced in size. The crushed material is screened and stored in an open area. It is loaded and unloaded from trucks. Dust from the crushing of the rocks will be controlled by using water sprays when necessary. Power for the unit comes from a diesel engine, which burns a maximum of 25 gallons per hour of No. 2 virgin diesel fuel containing up to 0.5 percent sulfur, that is used to drive a 910 KW generator.

5. RULE APPLICABILITY

The proposed project is subject to preconstruction review requirements under the provisions of Chapter 403, Florida Statutes, and Chapters 62-4, 62-204, 62-210, and 62-212, of the Florida Administrative Code (F.A.C.).

The proposed project is not subject to review under Rule 62-212.400, F.A.C., Prevention of Significant Deterioration (PSD), because it is a minor unit and the potential emission increases for all criteria pollutants do not exceed the significant emission rates given in Chapter 62-212, Table 62-212.400-2, F.A.C. Therefore, this facility may operate in any county in Florida without concern of ambient air quality violations.

A determination of Best Available Control Technology (BACT) is not required for this minor facility. No analysis of the air quality impact of the proposed project's impacts on soils, vegetation and visibility; along with air quality impacts resulting from associated commercial, residential and industrial growth is required for a minor facility.

The crusher and associated equipment are subject to 40 CFR 60, Subpart OOO, Standards of Performance for Nonmetallic Mineral Processing Plants. The diesel engine is subject to Rule 62-210.300, Permits Required, however there are no unit specific regulatory requirements that apply. Its potential emissions are sufficiently limited by its physical capacity to merit classification as a minor source. Its potential emissions are further limited by a requested restriction on the allowable hours of operation. No regular testing of the diesel engine is

required, however if the Department has reason to believe that a violation of the facility wide visible emissions limit has occurred, a special compliance test can be ordered.

The emission units affected by this permit shall comply with all applicable provisions of the Florida Administrative Code and, specifically, the following Chapters and Rules:

Chapter 62-4	Permits.
Rule 62-210.300	Permits Required
Rule 62-210.350	Public Notice and Comments
Rule 62-210.370	Reports
Rule 62-210.650	Circumvention
Rule 62-210.700	Excess Emissions
Rule 62-210.900	Forms and Instructions
Rule 62-212.300	General Preconstruction Review Requirements
Rule 62-296.320	General Pollutant Emission Limiting Standards
Rule 62-297.310	General Test Requirements
Rule 62-297.400	EPA Methods Adopted by Reference
Rule 62-297.401	EPA Test Procedures

6. SOURCE IMPACT ANALYSIS

6.1 Emission Limitations

The proposed portable crusher will emit the following PSD pollutants (Table 212.400-2): particulate matter, sulfur dioxide, nitrogen oxides, volatile organic compounds, and carbon monoxide. The estimated emissions for these emission units are summarized in the following table.

6.2 Emission Summary

The unit is a minor source for all criteria air pollutants. Following are the estimated emissions which are based on 3,120 hours per year of operation and appropriate AP-42 emission factors.

Pollutants	Estimated Hourly Emissions lb/hr	Estimated Annual Emissions TPY
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CO	3.3	5.1
VOC	1.2	1.9

6.3 Control Technology Review

The crusher unit and associated conveyors are potential sources of fugitive particulate matter emissions. Emissions shall be controlled by wetting the material being processed, as well as the storage piles and yard/roads, when needed.

The diesel engine powering the crusher will emit products of combustion. However, there are no unit specific regulatory requirements which apply to the diesel engine. Because of the small size of this diesel engine, even continuous operation would not cause this facility to be subject to the Title V regulations. Therefore, no operational restrictions for "reasonable assurance" are required.

In addition to the physical design constraints, at the permittee's request, emissions from these units are further limited by production and by hours per year operation limits.

6.4 Air Quality Analysis

An air quality analysis was not conduced for this project. The Department does not expect the low emissions from this operation to have a significant impact on the ambient air quality.

7. CONCLUSION

Based on the foregoing technical evaluation of the application, the Department has made a preliminary determination that the proposed project will comply with all applicable state and federal air pollution regulations provided the Department's restrictions described in the Specific Conditions of the proposed permit are met. The General and Specific Conditions are listed in the attached permit.

Permit Engineer: Ross Pollock
Reviewed and Approved by: Jonathan Holtom, P.E.

Department of Environmental Protection

Jeb Bush
Governor

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

David B. Struhs
Secretary

P.E. Certification Statement

Angelo's Recycled Materials, Inc.
Initial Project Site:
1201 East 148th Avenue
Tampa, Hillsborough County

DEP File No.: 7775092-001-AC
Facility ID No.: 7775092-001

Project: Relocatable Source Air Construction Permit for Plant No. 4

I HEREBY CERTIFY that the engineering features described in the above referenced application and related additional information submittals, if any, and subject to the proposed permit conditions, provide reasonable assurance of compliance with applicable provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Chapters 62-4 and 62-204 through 62-297. However, I have not evaluated and I do not certify aspects of the proposal outside of my area of expertise (including but not limited to the electrical, mechanical, structural, hydrological, and geological features).

This review was conducted by Ross Pollock under my responsible supervision.

JONATHAN K. HOLTOM * CERTIFICATE NO. 52664 * STATE OF FLORIDA * PROFESSIONAL ENGINEER

Jonathan K. Holtom, P.E.
Registration Number: 0052664

10/11/99
Date

Permitting Authority:
Florida Department of Environmental Protection
Division of Air Resources Management, Bureau of Air Regulation
2600 Blair Stone Road, Mail Station #5505
Tallahassee, Florida 32399-2400

Telephone: 850/488-0114
Fax: 850/922-6979

Department of Environmental Protection

Jeb Bush
Governor

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

David B. Struhs
Secretary

PERMITTEE

Angelo's Recycled Materials, Inc.
Post Office Box 1493
Largo, Florida 33779

FID No.: 7775092
Permit No.: 7775092-001-AC
SIC No.: 1795
Expires: *6 months from date of issuance*

AUTHORIZED REPRESENTATIVE

Mr. Richard Bazinet, Director of Florida Operations

PROJECT

This permit allows the applicant to construct a diesel engine powered portable concrete and asphalt material crushing plant, which will be designated as Crushing Plant No. 4.

STATEMENT OF BASIS

This construction permit is issued under the provisions of Chapter 403 of the Florida Statutes (F.S.), and the Florida Administrative Code (F.A.C.) Chapters 62-4, 62-204, 62-210, 62-212, 62-296, and 62-297. The above named permittee is authorized to construct the facility in accordance with the conditions of this permit and as described in the application, approved drawings, plans, and other documents on file with the Department of Environmental Protection (Department).

APPENDICES

The attached appendices are a part of this permit:

Appendix GC – General Permit Conditions
Appendix PC – Permitted Counties

Howard L. Rhodes, Director
Division of Air Resources
Management

SECTION II. FACILITY-WIDE SPECIFIC CONDITIONS

FACILITY DESCRIPTION

This facility consists of a 200 ton per hour (TPH) Cedarapids, Inc. Model 3054 portable jaw crusher, a Cedarapids, Inc. Model RC5411 cone crusher. The facility also includes equipment associated with the crushers (feeders, screens, and conveyors) and a 910 KW Caterpillar Model 3512 generator driven by a 325 hp Caterpillar diesel motor. Fugitive particulate matter emissions throughout the crushing unit are controlled by a water suppression system.

REGULATORY CLASSIFICATION

The crusher portion of this facility is subject to regulation under 40 CFR 60, Subpart OOO, Standards of Performance for Nonmetallic Mineral Processing Plants. The generator portion of the facility is regulated under Rule 62-210.300, F.A.C., Permits Required, however there are no unit specific regulatory requirements that apply.

RELEVANT DOCUMENTS

The documents listed below are the basis of the permit. They are specifically related to this permitting action. These documents are on file with the Department.

- Application received (Bureau of Air Regulation) September 2, 1999

PERMITTED COUNTIES

(Please see Appendix PC – Permitted Counties for a list of counties in which the facility is currently permitted to operate)

OPERATING LOCATION

The facility will begin initial operation at 1201 East 148th Avenue, Tampa, Hillsborough County. The UTM coordinates of this location are Zone 17; 357.8 km E; 3107.2 km N.

SECTION II. FACILITY-WIDE SPECIFIC CONDITIONS

The following specific conditions apply to all emissions units at this facility.

ADMINISTRATIVE

1. Regulating Agencies: All documents relating to the initial application for a permit to operate and all initial compliance tests shall be submitted to the Department's Bureau of Air Regulation in Tallahassee. Subsequent applications for permit renewals, reports, tests, minor modifications, and notifications shall be submitted to the district office or local program that has permitting/compliance jurisdiction over the current or proposed operating location.

2. General Conditions: In addition to the specific conditions of this permit, the owner and operator are subject to and shall operate under the General Permit Conditions G.1 through G.15, contained in the attached Appendix GC – General Permit Conditions of this permit. General Permit Conditions are binding and enforceable pursuant to Chapter 403 of the Florida Statutes.
[Rule 62-4.160, F.A.C.]

3. Terminology: The terms used in this permit have specific meanings as defined in the corresponding chapters of the Florida Administrative Code.

4. Forms and Application Procedures: The permittee shall use the applicable forms listed in Rule 62-210.900, F.A.C., and follow the application procedures in Chapter 62-4, F.A.C.
[Rule 62-210.900, F.A.C.]

5. Extension of Expiration Date: This air construction permit shall expire on *(six months from date of issuance)*. The permittee may, for good cause, request that this construction permit be extended. Such a request shall be submitted to the Department's Bureau of Air Regulation prior to 60 days before the expiration of the permit.
[Rules 62-210.300(1), 62-4.070(4) and 62-4.210, F.A.C.]

6. Relocation Notification: At least 7 days prior to relocating the plant to an approved county where public notice was published within the last 5 years, the permittee shall notify the air program administrator for the Department's district office and/or, if applicable, appropriate local program. The notification shall be submitted using DEP Form 62-210.900(3), F.A.C., along with the appropriate processing fee. All potential operation sites shall be shown on a USGS topographic map. A county license, a discretionary public notice, or additional restrictions for the operation at a specific site may be imposed by the district office or local program. If the public notice for a proposed county is more than 5 years old, or if the proposed county was never covered by a public notice, this form shall be submitted at least 30 days in advance of the move and a public notice shall be published prior to operating in the proposed county. Each time that the permittee submits a Notice to Relocate, the operation permit shall be revised to reflect the new location.
[Rule 62-210.370(1), F.A.C.]

7. Operation Permit Required: This permit authorizes construction and/or installation of the permitted emissions unit and initial operation for testing purposes in order to determine compliance with the applicable rules and standards. An operation permit is required for continued commercial operation of the permitted emissions unit. The owner or operator shall apply for and receive an operation permit prior to expiration of this permit. To apply for an operation permit, the applicant shall submit the appropriate application fee and, in quadruplicate, the appropriate application form, a certification that construction was completed with a notation of any deviations from the conditions in the construction permit, compliance test results, and such additional information as the Department may by law require. A copy of the compliance test results must be submitted to The Department's Tallahassee office as well as the district office or local program which has compliance jurisdiction over the location where the test took place.
[F.A.C. Rules 62-4.030, 62-4.050, 62-4.220 and 62-210.300(2)]

8. Applicable Regulations: Unless otherwise indicated in this permit, the construction and operation of the subject emissions units shall be in accordance with the capacities and specifications stated in the application. The facility is subject to all applicable provisions of Chapter 403, F.S. and Florida Administrative Code Chapters 62-4, 62-110, 62-204, 62-296, 62-297 and the Code of Federal Regulations Title 40, Part 60, adopted by reference in the Florida Administrative Code (F.A.C.) regulations. Issuance of this permit does not relieve the facility owner or operator from compliance with any applicable federal, state, or local permitting or regulations.
[Rules 62-204.800 and 62-210.300, F.A.C.]

EMISSION LIMITING STANDARDS

9. General Visible Emissions Standard: Except for emissions units that are subject to a particulate matter or opacity limit set forth or established by rule and reflected by conditions elsewhere in this permit, no person shall cause, let, permit, suffer, or allow to be discharged into the atmosphere the emissions of air pollutants from any activity, the density of which is equal to or greater than that designated as Number 1 on the Ringelmann Chart (20% opacity). If a special compliance test is required (see specific condition 21), the test method for visible emissions shall be EPA Method 9, incorporated and adopted by reference in Chapter 62-297, F.A.C.
[Rule 62-296.320(4)(b)1, F.A.C.]

10. Unconfined Emissions of Particulate Matter:

    (a) No person shall cause, let, permit, suffer or allow the emissions of unconfined particulate matter from any activity, including vehicular movement; transportation of materials; construction, alteration, demolition or wrecking; or industrially related activities such as loading, unloading, storing or handling; without taking reasonable precautions to prevent such emissions.

    (b) Any permit issued to a facility with emissions of unconfined particulate matter shall specify the reasonable precautions to be taken by that facility to control the emissions of unconfined particulate matter.

    (c) Reasonable precautions committed to by the permittee:
    - Emissions that might be generated from various emission points throughout the crushing unit shall be controlled by a water suppression system with spray bars located at the various emissions points located throughout the plant.
    - All stockpiles and roadways where this crushing unit is located shall be watered on a regular basis by water trucks equipped with spray bars, to control any fugitive emissions that may be generated by vehicular traffic or prevailing winds.

(d) In determining what constitutes reasonable precautions for a particular source, the Department shall consider the cost of the control technique or work practice, the environmental impacts of the technique or practice, and the degree of reduction of emissions expected from a particular technique or practice.

[Rule 62-296.320(4)(c), F.A.C. and Permit Application received 11/2/98.]

11. General Pollutant Emission Limiting Standards:

(a) No person shall store, pump, handle, process, load, unload or use in any process or installation, volatile organic compounds or organic solvents without applying known and existing vapor emission control devices or systems deemed necessary and ordered by the Department.

(b) No person shall cause, suffer, allow or permit the discharge of air pollutants which cause or contribute to an objectionable odor.

[Note: An objectionable odor is defined in Rule 62-210.200(198), F.A.C., as any odor present in the outdoor atmosphere which by itself or in combination with other odors, is or may be harmful or injurious to human health or welfare, which unreasonably interferes with the comfortable use and enjoyment of life or property, or which creates a nuisance.]

[Rule 62-296.320(1)(a)&(2), F.A.C.]

OPERATIONAL REQUIREMENTS

12. Modifications: No emissions unit or facility subject to this rule shall be constructed or modified without obtaining an air construction permit from the Department. Such permit must be obtained prior to the beginning of construction or modification.
[Rules 62-210.300(1) and 62-212.300(1)(a), F.A.C.]

13. Plant Operation - Problems: If temporarily unable to comply with any of the conditions of the permit due to breakdown of equipment or destruction by hazard of fire, wind or by other cause, the permittee shall immediately notify the Department's district office and, if applicable, appropriate local program. The notification shall include pertinent information as to the cause of the problem, and what steps are being taken to correct the problem and to prevent its recurrence, and where applicable, the owner's intent toward reconstruction of destroyed facilities. Such notification does not release the permittee from any liability for failure to comply with Department rules.
[Rule 62-4.130, F.A.C.]

14. Circumvention: No person shall circumvent any air pollution control device or allow the emission of air pollutants without the applicable air pollution control device operating properly.
[Rule 62-210.650, F.A.C.]

The following specific conditions apply to the following emissions units after construction:

EMISSIONS UNIT NO.	EMISSIONS UNIT DESCRIPTION
001	This unit consists of a 200 ton per hour (TPH) Cedarapids, Inc. Model 3054 portable jaw crusher, Cedarapids, Inc. Model RC5411 cone crusher and associated equipment (feeder, screens, and conveyors)
002	This unit consists of a 910 KW Caterpillar Model 3512 generator, driven by a 325 hp Caterpillar diesel motor.

[NOTE: Emissions units 001 is subject to 40 CFR 60, Subpart OOO, Standards of Performance for Nonmetallic Mineral Processing Plants (40 CFR 60.670 - 60.676) and 40 CFR 60 Subpart A, revised as of July 1, 1997.]

ESSENTIAL POTENTIAL TO EMIT (PTE) PARAMETERS

1. Hours of Operation: These emissions units are allowed to operate up to 3,120 hours during any calendar year.
   [Rule 62-210.200, F.A.C., Definitions-potential to emit (PTE); and, applicant request]
2. Permitted Capacity: The crusher may process up to 200 TPH and 624,000 TPY of material (total).
   [Rule 62-210.200, F.A.C., Definitions-potential to emit (PTE); and, applicant request]

EMISSION LIMITATIONS AND PERFORMANCE STANDARDS

3. Visible Emissions: The emission points described in unit 001 are subject to the visible emission limits of 40 CFR 60 Subpart OOO, as outlined below in Table 1.

Table 1: Process Emission Source Visible Emission Limits

Emission Source	VE Limit (% Opacity)
Receiving Hopper/Grizzly Feeder	10
Crusher	15*
Portable Belt Conveyor(s)	10**
Screen(s)	15
Truck Loading/Unloading	<20

* This limit applies since no capture system is used.
** This limit applies to transfer points onto conveyor belts only.

[40 CFR 60.672]

4. No Visible Emissions - Saturated Materials: No owner or operator shall cause to be discharged into the atmosphere any visible emissions from:
   (a) Wet screening operations and subsequent screening operations, bucket elevators, and belt conveyors that process saturated material in the production line up to the next crusher, grinding mill or storage bin.

(b) Screening operations, bucket elevators, and belt conveyors in the production line downstream of wet mining operations, where such screening operations, bucket elevators, and belt conveyors process saturated materials up to the first crusher, grinding mill, or storage bin in the production line.

[40 CFR 60.672 (h)(1)&(2)]

5. Excess Emissions: The following excess emissions provisions can not be used to vary any NSPS requirements (from any subpart of 40 CFR 60).

(a) Excess emissions resulting from start-up, shutdown or malfunction of any emissions units shall be permitted providing (1) best operational practices to minimize emissions are adhered to and (2) the duration of excess emissions shall be minimized, but in no case exceed two hours in any 24 hour period unless specifically authorized by the Department for longer duration.

[Rule 62-210.700(1), F.A.C.]

(b) Excess emissions which are caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure which may reasonably be prevented during start-up, shutdown, or malfunction shall be prohibited.

[Rule 62-210.700(4), F.A.C.]

COMPLIANCE MONITORING AND TESTING REQUIREMENTS

6. Test Frequency:

(a) Prior to obtaining an operation permit for this facility, the owner or operator shall conduct a visible emissions compliance test to demonstrate compliance with the standards of this permit, in accordance with the conditions listed below.

[Rule 62-297.30(7)(a)1., F.A.C.]

(b) The owner or operator of the facility shall conduct visible emissions tests annually, in accordance with the conditions listed below.

[Rule 62-297.310(7)(a)4.a., F.A.C.]

7. Operating Rate During Testing: Unless otherwise stated in the applicable emission limiting standard rule, testing of emissions shall be conducted with the emissions unit operating at permitted capacity. Permitted capacity is defined as 90 to 100 percent of the maximum operation rate allowed by the permit. If it is impractical to test at permitted capacity, an emissions unit may be tested at less than the minimum permitted capacity (i.e., at less than 90 percent of the maximum operation rate allowed by the permit); in this case, subsequent emissions unit operation is limited to 110 percent of the test load until a new test is conducted provided however, operations do not exceed 100 percent of the maximum operation rate allowed by the permit. Once the unit is so limited, operation at higher capacities is allowed for no more than 15 consecutive days for the purpose of additional compliance testing to regain the authority to operate at the permitted capacity.

[Rule 62-297.310(2),F.A.C.]

8. Test Procedures shall meet all applicable requirements of Rule 62-297.310(4), F.A.C.

[Rule 62-297.310(4), F.A.C.]

9. Determination of Process Variables:

   (a) Required Equipment. The owner or operator of an emissions unit for which compliance tests are required shall install, operate, and maintain equipment or instruments necessary to determine process variables, such as process weight input or heat input, when such data are needed in conjunction with emissions data to determine the compliance of the emissions unit with applicable emission limiting standards.

   (b) Accuracy of Equipment. Equipment or instruments used to directly or indirectly determine process variables, including devices such as belt scales, weight hoppers, flow meters, and tank scales, shall be calibrated and adjusted to indicate the true value of the parameter being measured with sufficient accuracy to allow the applicable process variable to be determined within 10% of its true value.

   [Rule 62-297.310(5), F.A.C.]

10. Test Notification: The owner or operator shall notify the Department's district office and, if applicable, appropriate local program, at least 15 days prior to the date on which each formal compliance test is to begin. Notification shall include the date, time, and place of each such test, and the test contact person who will be responsible for coordinating and having such test conducted for the owner or operator.

    [Rule 62-297.310(7)(a)9., F.A.C., 40 CFR 60.8]

    [Note: The federal requirements of 40 CFR 60.8 require 30 days notice of the initial test and any tests required under section 114 of the Clean Air Act, but the Department rules require 15 days notice for the annual compliance tests. Unless otherwise advised by the Department, provide 15 days notice prior to conducting annual tests, except for the initial test when 30 days notice is required.]

11. Visible Emissions Test Method: In determining compliance with the standards in 40 CFR 60.672 (b) and (c) (see specific condition 3), the owner or operator shall use Method 9 and the procedures in 40 CFR 60.11, with the following additions:

    (a) The minimum distance between the observer and the emissions source shall be 4.57 meters (15 feet).

    (b) The observer shall, when possible, select a position that minimizes interference from other fugitive emissions units (e.g., road dust). The required observer position relative to the sun (Method 9, Section 2.1) must be followed.

    (c) For affected emissions units using wet dust suppression for particulate matter control, a visible mist is sometimes generated by the spray. The water mist must not be confused with particulate matter emissions and is not to be considered a visible emission. When a water mist of this nature is present, the observation of emissions is to be made at a point in the plume where the mist is no longer visible.

    [40 CFR 60.675(c)(1)(i), (ii) & (iii)]

12. When determining compliance with the fugitive emissions standard for any affected facility described under 40 CFR 60.672(b) (see specific condition 3), the duration of the Method 9 observations may be reduced from 3 hours (thirty 6-minute averages) to 1 hour (ten 6-minute averages) only if the following conditions apply:

    (a) There are no individual readings greater than 10 percent opacity; and
    (b) There are no more than 3 readings of 10 percent for the 1-hour period.
    [40 CFR 60.675(c)(3)(i) & (ii)]

13. When determining compliance with the fugitive emissions standard for any crusher at which a capture system is not used as described under 40 CFR 60.672(c), the duration of the Method 9 observations may be reduced from 3 hours (thirty 6-minute averages) to 1 hour (ten 6-minute averages) only if the following conditions apply:

    (a) There are no individual readings greater than 15 percent opacity; and
    (b) There are no more than 3 readings of 15 percent for the 1-hour period.
    [40 CFR 60.675(c)(4)(i) & (ii)]

14. Visible Emissions Test - Emissions Interference: For the method and procedure of 40 CFR 60.675(c) [specific condition 12 of Section III of this permit, above], if emissions from two or more emissions units continuously interfere so that the opacity of fugitive emissions from an individual affected emissions unit cannot be read, either of the following procedures may be used:

    (a) Use for the combined emission stream the highest fugitive opacity standard applicable to any of the individual affected emissions units contributing to the emissions stream
    (b) Separate the emissions so that the opacity of emissions from each affected emissions unit can be read.
    [40 CFR 60.675(e)(1)(i)&(ii)]

15. No Tests Required - Saturated Materials: Method 9 performance tests under 40 CFR 60.11 and 40 CFR 60.675 are not required for:

    (a) Wet screening operations and subsequent screening operations, bucket elevators, and belt conveyors that process saturated material in the production line up to, but not including the next crusher, grinding mill or storage bin.
    (b) Screening operations, bucket elevators, and belt conveyors in the production line downstream of wet mining operations, that process saturated materials up to the first crusher, grinding mill, or storage bin in the production line.
    [40 CFR 60.675(h)(1)&(2)]

16. Special Compliance Tests: When the Department, after investigation, has good reason (such as complaints, increased visible emissions or questionable maintenance of control equipment) to believe that any applicable emission standard contained in a Department rule or in a permit issued pursuant to those rules is being violated, it shall require the owner or operator of the facility to conduct compliance tests which identify the nature and quantity of pollutant emissions from the emissions units and to provide a report on the results of said tests to the Department.
    [Rule 62-297.310(7)(b), F.A.C.]

REPORTING AND RECORD KEEPING REQUIREMENTS

17. Log: The permittee shall maintain a log showing the annual hours of operation per year and fuel consumption. Operators shall keep a log to include, at a minimum, the following information:

    (a) The daily location and production rate.
    (b) The daily hours of operation of the crusher system.
    (c) Maintenance and repair logs for any work performed on the permitted emissions units.
    (d) Daily logs regarding the use of wetting agents to control fugitive dust.

    This data shall be made available to the Department or county upon request.
    [Rule 62-4.070(3), F.A.C.]

18. Operation and Maintenance (O&M): The permittee shall keep an O&M plan for the air pollution control equipment with the facility. The O&M log shall include the list of the parameters being monitored, the frequency of the check/maintenance, observations, and comments.
    [Rule 62-4.070(3), F.A.C.]

19. Test Reports: The owner or operator shall submit written reports of the results of all performance tests conducted to demonstrate compliance with the standards set forth in 40 CFR 60.672, including reports of opacity observations made using Method 9 to demonstrate compliance with 40 CFR 60.672(b) and 40 CFR 60.672(c).

    (b) The required test report shall be filed with the Department as soon as practical but no later than 45 days after the last sampling run of each test is completed.
    (c) The test report shall provide sufficient detail on the emissions unit tested and the test procedures used to allow the Department to determine if the test was properly conducted and the test results properly computed. As a minimum, the test report, other than for an EPA Method 9 test, shall provide the following information:
        1. The type, location, and designation of the emissions unit tested.
        2. The facility at which the emissions unit is located.
        3. The owner or operator of the emissions unit.
        4. The normal type and amount of fuels used and materials processed, and the types and amounts of fuels used and material processed during each test run.
        5. The method, raw data and computations used to determine the amount of fuels used and materials processed, if necessary to determine compliance with an applicable emission limiting standard.
        6. The type of air pollution control devices installed on the emissions unit, its general condition, their normal operating parameters (pressure drops, total operating current and GPM scrubber water), and their operating parameters during each test run.

    [40 CFR 60.676(f), Rule 62-297.310(8)(b)&(c)1. - 6., F.A.C.]

20. Change From Saturated to Unsaturated Material: The owner or operator of any screening operation, bucket elevator, or belt conveyor that processes saturated material and is subject to 40 CFR 60.672(h) and subsequently processes unsaturated materials, shall submit a report of this change within 30 days following such change. This screening operation, bucket elevator, or belt conveyor is then subject to the 10 percent opacity limit in 40 CFR 60.672(b) and the emission test requirements of 40 CFR 60.11 and subpart OOO. Likewise a screening operation, bucket elevator, or belt conveyor that processes unsaturated material but subsequently processes saturated material shall submit a report of this change within 30 days following such change. This screening operation, bucket elevator, or belt conveyor is then subject to the no visible emission limit in 40 CFR 60.672(h). **[40 CFR 60.676(g)]**

21. Records Retention: This facility shall maintain a central file containing all measurements, records, and other data that are required to be collected pursuant to the various specific conditions of this permit.
[Rule 62-4.160(14)(a)&(b), F.A.C.]

22. Duration of Record Keeping: Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department. The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application for this permit. These records shall be retained at least three years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.
[Rule 62-4.160(14)(a)&(b), F.A.C.]

23. Excess Emissions Report: If excess emissions occur, the owner or operator shall notify the Department within one working day of: the nature, extent, and duration of the excess emissions; the cause of the excess emissions; and the actions taken to correct the problem. In addition, the Department may request a written summary report of the incident. Pursuant to the Standards of Performance for New Stationary Sources, excess emissions shall also be reported in accordance with 40 CFR 60.7, Subpart A.
[Rule 62-4.130, F.A.C.]

24. Excess Emissions Report - Malfunctions: In case of excess emissions resulting from malfunctions, each owner or operator shall notify the Department or the appropriate local program in accordance with Rule 62-4.130, F.A.C. A full written report on the malfunctions shall be submitted in a quarterly report if requested by the Department.
[Rule 62-210.700(6), F.A.C.]

NSPS GENERAL PROVISIONS

[Note: The numbering of the original rules in the following conditions has been preserved for ease of reference. In cases where the state requirements are more restrictive than the NSPS general requirements, the state requirements shall prevail.]

25. Pursuant to 40 CFR 60.7 Notification And Record Keeping:

(a) Any owner or operator subject to the provisions of 40 CFR 60 shall furnish the Administrator written notification as follows:

(4) A notification of any physical or operational change to an existing facility which may increase the emission rate of any air pollutant to which a standard applies, unless that change is specifically exempted under an applicable subpart or in 40 CFR 60.14(e). This notice shall be postmarked 60 days or as soon as practicable before the change is commenced and shall include information describing the precise nature of the change, present and proposed emission control systems, productive capacity of the facility before and after the change, and the expected completion date of the change. The Administrator may request additional relevant information subsequent to this notice.

(b) The owner or operator subject to the provisions of 40 CFR 60 shall maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of an affected facility; any malfunction of the air pollution control equipment; or any periods during which a continuous monitoring system or monitoring device is inoperative.

(f) The owner or operator subject to the provisions of 40 CFR 60 shall maintain a file of all measurements, including continuous monitoring system, monitoring device, and performance testing measurements; all continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices; and all other information required by 40 CFR 60 recorded in a permanent form suitable for inspection. The file shall be retained for at least three years following the date of such measurements, maintenance, reports, and records.

[40 CFR 60.7]

26. Pursuant to 40 CFR 60.8 Performance Tests:

(a) Within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup of such facility and at such other times as may be required by the Administrator under section 114 of the Act, the owner or operator of such facility shall conduct performance test(s) and furnish the Administrator a written report of the results of such performance test(s).

(b) Performance tests shall be conducted and data reduced in accordance with the test methods and procedures contained in each applicable subpart unless the Administrator (1) specifies or approves, in specific cases, the use of a reference method with minor changes in methodology, (2) approves the use of an equivalent method, (3) approves the use of an alternative method the results of which he has determined to be adequate for indicating whether a specific source is in compliance, (4) waives the requirement for performance tests because the owner or operator of a source has demonstrated by other means to the Administrator's satisfaction that the affected facility is in compliance with the standard, or (5) approves shorter sampling times and smaller sample volumes when necessitated by process variables or other factors. Nothing in this paragraph shall be construed to abrogate the Administrator's authority to require testing under section 114 of the Act.

(c) Performance tests shall be conducted under such conditions as the Administrator shall specify to the plant operator based on representative performance of the affected facility. The owner or operator shall make available to the Administrator such records as may be necessary to determine the conditions of the performance tests. Operations during periods of startup, shutdown, and malfunction shall not constitute representative conditions for the purpose of a performance test nor shall emissions in excess of the level of the applicable emission limit during periods of startup, shutdown, and malfunction be considered a violation of the applicable emission limit unless otherwise specified in the applicable standard.

(d) The owner or operator of an affected facility shall provide the Administrator at least 30 days prior notice of any performance test, except as specified under other subparts, to afford the Administrator the opportunity to have an observer present.

[40 CFR 60.8]

27. Pursuant to 40 CFR 60.11 Compliance With Standards And Maintenance Requirements:

(a) Compliance with standards in 40 CFR 60, other than opacity standards, shall be determined only by performance tests established by 40 CFR 60.8, unless otherwise specified in the applicable standard.

(b) Compliance with opacity standards in 40 CFR 60.11 shall be determined by conducting observations in accordance with Reference Method 9 in appendix A of 40 CFR 60.11, any alternative method that is approved by the Administrator, or as provided in 40 CFR 60.11(e)(5). [Under certain conditions (40 CFR 60.675(c)(3)&(4)), Method 9 observation time may be reduced from 3 hours to 1 hour. Some affected facilities are exempted from Method 9 tests (40 CFR 60.675 (h)). See specific conditions 12 and 13, Section III, above for test duration requirements.]

(c) The opacity standards set forth in 40 CFR 60.11 shall apply at all times except during periods of startup, shutdown, malfunction, and as otherwise provided in the applicable standard.

(d) At all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.

(g) For the purpose of submitting compliance certifications or establishing whether or not a person has violated or is in violation of any standard in this part, nothing in this part shall preclude the use, including the exclusive use, of any credible evidence or information, relevant to whether a source would have been in compliance with applicable requirements if the appropriate performance or compliance test or procedure had been performed.

[40 CFR 60.11]

28. Pursuant to 40 CFR 60.12 Circumvention:

No owner or operator subject to the provisions of 40 CFR 60.12 shall build, erect, install, or use any article, machine, equipment or process, the use of which conceals an emission which would otherwise constitute a violation of an applicable standard. Such concealment includes, but is not limited to, the use of gaseous diluents to achieve compliance with an opacity standard or with a standard which is based on the concentration of a pollutant in the gases discharged to the atmosphere.
[40 CFR 60.12]

29. Pursuant to 40 CFR 60.19 General notification and reporting requirements:

(a) For the purposes of this part, time periods specified in days shall be measured in calendar days, even if the word "calendar" is absent, unless otherwise specified in an applicable requirement.
(b) For the purposes of this part, if an explicit postmark deadline is not specified in an applicable requirement for the submittal of a notification, application, report, or other written communication to the Administrator, the owner or operator shall postmark the submittal on or before the number of days specified in the applicable requirement. For example, if a notification must be submitted 15 days before a particular event is scheduled to take place, the notification shall be postmarked on or before 15 days preceding the event; likewise, if a notification must be submitted 15 days after a particular event takes place, the notification shall be delivered or postmarked on or before 15 days following the end of the event. The use of reliable non-Government mail carriers that provide indications of verifiable delivery of information required to be submitted to the Administrator, similar to the postmark provided by the U.S. Postal Service, or alternative means of delivery agreed to by the permitting authority, is acceptable.
(c) Notwithstanding time periods or postmark deadlines specified in this part for the submittal of information to the Administrator by an owner or operator, or the review of such information by the Administrator, such time periods or deadlines may be changed by mutual agreement between the owner or operator and the Administrator. Procedures governing the implementation of this provision are specified in paragraph (f) of this section.
(d) If an owner or operator of an affected facility in a State with delegated authority is required to submit periodic reports under this part to the State, and if the State has an established timeline for the submission of periodic reports that is consistent with the reporting frequency(ies) specified for such facility under this part, the owner or operator may change the dates by which periodic reports under this part shall be submitted (without changing the frequency of reporting) to be consistent with the State's schedule by mutual agreement between the owner or operator and the State. The allowance in the previous sentence applies in each State beginning 1 year after the affected facility is required to be in compliance with the applicable subpart in this part. Procedures governing the implementation of this provision are specified in paragraph (f) of this section.
(f)(1)(i) Until an adjustment of a time period or postmark deadline has been approved by the Administrator under paragraphs (f)(2) and (f)(3) of this section, the owner or operator of an affected facility remains strictly subject to the requirements of this part.
(ii) An owner or operator shall request the adjustment provided for in paragraphs (f)(2) and (f)(3) of this section each time he or she wishes to change an applicable time period or postmark deadline specified in this part.

(2) Notwithstanding time periods or postmark deadlines specified in this part for the submittal of information to the Administrator by an owner or operator, or the review of such information by the Administrator, such time periods or deadlines may be changed by mutual agreement between the owner or operator and the Administrator. An owner or operator who wishes to request a change in a time period or postmark deadline for a particular requirement shall request the adjustment in writing as soon as practicable before the subject activity is required to take place. The owner or operator shall include in the request whatever information he or she considers useful to convince the Administrator that an adjustment is warranted.

(3) If, in the Administrator's judgment, an owner or operator's request for an adjustment to a particular time period or postmark deadline is warranted, the Administrator will approve the adjustment. The Administrator will notify the owner or operator in writing of approval or disapproval of the request for an adjustment within 15 calendar days of receiving sufficient information to evaluate the request.

(4) If the Administrator is unable to meet a specified deadline, he or she will notify the owner or operator of any significant delay and inform the owner or operator of the amended schedule.

[40 CFR 60.19]

APPENDIX GC – GENERAL PERMIT CONDITIONS

[F.A.C. 62-4.160]

G.1 The terms, conditions, requirements, limitations, and restrictions set forth in this permit are "Permit Conditions" and are binding and enforceable pursuant to Sections 403.161, 403.727, or 403.859 through 403.861, Florida Statutes. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.

G.2 This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings or exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.

G.3 As provided in Subsections 403.087(6) and 403.722(5), Florida Statutes, the issuance of this permit does not convey any vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. This permit is not a waiver or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in the permit.

G.4 This permit conveys no title to land or water, does not constitute State recognition or acknowledgment of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title.

G.5 This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department.

G.6 The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.

G.7 The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law and at a reasonable time, access to the premises, where the permitted activity is located or conducted to:

(a) Have access to and copy and records that must be kept under the conditions of the permit;
(b) Inspect the facility, equipment, practices, or operations regulated or required under this permit, and,
(c) Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.

Reasonable time may depend on the nature of the concern being investigated.

G.8 If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately provide the Department with the following information:

(a) A description of and cause of non-compliance; and

(b) The period of noncompliance, including dates and times; or, if not corrected, the anticipated time the non-compliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the non-compliance.

The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the Department for penalties or for revocation of this permit.

G.9 In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except where such use is prescribed by Sections 403.73 and 403.111, Florida Statutes. Such evidence shall only be used to the extend it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.

G.10 The permittee agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance, provided, however, the permittee does not waive any other rights granted by Florida Statutes or Department rules.

G.11 This permit is transferable only upon Department approval in accordance with Florida Administrative Code Rules 62-4.120 and 62-730.300, F.A.C., as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.

G.12 This permit or a copy thereof shall be kept at the work site of the permitted activity.

G.13 This permit also constitutes:

(a) Determination of Best Available Control Technology *( )*
(b) Determination of Prevention of Significant Deterioration *( )*; and
(c) Compliance with New Source Performance Standards *(X)*.

G.14 The permittee shall comply with the following:

(a) Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.

(b) The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application or this permit. These materials shall be retained at least three years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.

(c) Records of monitoring information shall include:

1. The date, exact place, and time of sampling or measurements;
2. The person responsible for performing the sampling or measurements;
3. The dates analyses were performed;
4. The person responsible for performing the analyses;
5. The analytical techniques or methods used; and
6. The results of such analyses.

G.15 When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware that relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.

The applicant has published the proper public notices and is authorized to operate in the following counties:

Permitted Counties:	Public Notice Valid Until:	Permitted Counties:	Public Notice Valid Until:	Permitted Counties:	Public Notice Valid Until:
Alachua		Hamilton		Okeechobee	
Baker		Hardee		Orange	
Bay		Hendry		Osceola	
Bradford		Hernando		Palm Beach	
Brevard		Highlands		Pasco	
Broward		Hillsborough		Pinellas	
Calhoun		Holmes		Polk	
Charlotte		Indian River		Putnam	
Citrus		Jackson		St. Johns	
Clay		Jefferson		St. Lucie	
Collier		Lafayette		Santa Rosa	
Columbia		Lake		Sarasota	
Dade		Lee		Seminole	
DeSoto		Leon		Sumter	
Dixie		Levy		Suwannee	
Duval		Libery		Taylor	
Escambia		Madison		Union	
Flagler		Manatee		Volusia	
Franklin		Marion		Wakulla	
Gasden		Martin		Walton	
Gilchrist		Monroe		Washington	
Glades		Nassau			
Gulf		Okaloosa			

Memorandum

Florida Department of
Environmental Protection

TO: Clair Fancy

THRU: Jonathan Holtom

FROM: Ross Pollock

DATE: October 8, 1999

SUBJECT: Intent Package for Draft Permit No.: 7775092-001-AC
Angelo's Recycled Materials, Inc.
Relocatable Concrete and Asphalt Crushing Plant No. 4

Day 90: December 1, 1999

This permit is for the construction of a diesel engine powered portable concrete and asphalt material crushing plant. The permit will allow the plant to operate statewide after the proper proof of publication has been received.

The application for this construction permit was received on September 2, 1999 and was complete the same day. The portable concrete and asphalt crusher is a minor facility. Fugitive emissions will be controlled by a water suppression system.

I recommend that this Intent to Issue be sent out as attached.

CHF/rjp

Is your RETURN ADDRESS completed on the reverse side?

SENDER:
- Complete items 1 and/or 2 for additional services.
- Complete items 3, 4a, and 4b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "*Return Receipt Requested*" on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):
1. ☐ Addressee's Address
2. ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:
Mr. Richard A. Bazinet, Director of Field Operations
Angelo's Recycled Materials, Inc.
Post Office Box 1493
Largo, Florida 33779

4a. Article Number
P 263 585 264

4b. Service Type
☐ Registered ☐ Certified
☐ Express Mail ☐ Insured
☐ Return Receipt for Merchandise ☐ COD

7. Date of Delivery

5. Received By: *(Print Name)*

8. Addressee's Address *(Only if requested and fee is paid)*

6. Signature: *(Addressee or Agent)*
X

PS Form **3811**, December 1994 102595-97-B-0179 Domestic Return Receipt

Thank you for using Return Receipt.

P 263 585 264

US Postal Service
Receipt for Certified Mail
No Insurance Coverage Provided.
Do not use for International Mail *(See reverse)*

Sent to Mr. Richard A. Bazinet, Director	
Street & Number Post Office Box 1493	
Post Office, State, & ZIP Code Largo, Florida 33779	
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, & Addressee's Address	
TOTAL Postage & Fees	$
Postmark or Date 10/18/99	

DRAFT Permit No. 7775092-001-AC
Concrete and Asphalt Crushing Plant No. 4

PS Form **3800**, April 1995

Central Florida Testing Laboratories, Inc.
Testing Development and Research
12625 -40th Street North · Clearwater, Florida 33762
TAMPA BAY AREA (727) 572-9797 FLORIDA 1-800-248-CFTL FAX (727) 299-0023

August 31, 1999

Mr. Richard Bazinet
Angelo's Recycled Materials, Inc.
0ost Office Box 1493
Largo, Florida 33779

Subject: FDEP Statewide Construction Permit Application
Cedarapids Crushing and Aggregate Processing Unit No.4

Dear Mr. Bazinet:

Enclosed, please find three (3) copies of the completed Florida Department of Environmental Protection (FDEP) - *Long Form Construction Permit Application,* for the Cedarapids Aggregate Crushing and Processing Unit No.4 now located at the Bearss Avenue Site in Tampa.

Please review the completed permit application with Mr. Denis Price. Should you find it acceptable, please sign and date page three of each copy of the application. **Retain one (1) copy for your files and forward the remaining two (2) copies with a process fee check payable to the Florida Department of Environmental Protection for two thousand dollars ($2000.00), to the FDEP's District Office in Tallahassee at the following address:**

State of Florida
Department of Environmental Protection
Bureau of Air Regulation
2600 Blair Stone Road
Tallahassee, Florida 32399-2400
attn: Mr. Jonathan Holtom, P.E.

Thank you once again for this opportunity to be of service. Should you have any questions or if we can be of any further assistance, do not hesitate to contact our office.

Respectfully,
CENTRAL FLORIDA TESTING LABORATORIES, INC.

Bernard A. Ball, Jr.
Environmental Engineer
BaB/bAb

enclosures: **(3) Copies of Construction Permit Application**

ANGELO'S RECYCLED MATERIALS, INC.

Aggregate Crushing Plant No.4

FDEP "after-the-fact" Construction Permit Application

AUGUST - 1999

Department of Environmental Protection

Division of Air Resources Management

APPLICATION FOR AIR PERMIT - NON-TITLE V SOURCE

See Instructions for Form No. 62-210.900(3)

I. APPLICATION INFORMATION

Identification of Facility

1. Facility Owner/Company Name: **ANGELO'S RECYCLED MATERIALS, INC.**	
2. Site Name: **ANGELO'S RECYCLED MATERIALS, INC. - RECLAIMED CRUSHING UNIT NO. 4**	
3. Facility Identification Number: [ ] Unknown	
4. Facility Location: Street Address or Other Locator: **1201 E. –148th Avenue (3/4 mile south of Bearss Avenue)** City: **Tampa** County: **Hillsborough** Zip Code: **33613**	
5. Relocatable Facility? [X] Yes [ ] No	6. Existing Permitted Facility? [ ] Yes [X] No

Application Contact

1. Name and Title of Application Contact: **Mr. Bernard A. Ball, Jr., Environmental Engineer**	
2. Application Contact Mailing Address: Organization/Firm: **Central Florida Testing Laboratories, Inc.** Street Address: **12625 – 40th Street North** City: **Clearwater** State: **Florida** Zip Code: **33762**	
3. Application Contact Telephone Numbers: Telephone: **(727) 572-9797** Fax: **(727) 299-0023**	

Application Processing Information (DEP Use)

1. Date of Receipt of Application:	9-2-99
2. Permit Number:	7775692 - 001 - AC

Purpose of Application

Air Operation Permit Application

This Application for Air Permit is submitted to obtain: (Check one)

[ ] Initial non-Title V air operation permit for one or more existing, but previously unpermitted, emissions units.

[ ] Initial non-Title V air operation permit for one or more newly constructed or modified emissions units.

Current construction permit number:_____

[ ] Non-Title V air operation permit revision to address one or more newly constructed or modified emissions units.

Current construction permit number:_____

Operation permit number to be revised:_____

[ ] Initial non-Title V air operation permit under Rule 62-210.300(2)(b), F.A.C., for an existing facility seeking classification as a synthetic non-Title V source.

Current operation/construction permit number(s):

_____

[ ] Non-Title V air operation permit revision for a synthetic non-Title V source. Give reason for revision; e.g., to address one or more newly constructed or modified emissions units.

Operation permit number to be revised:_____

Reason for revision:_____

Air Construction Permit Application

This Application for Air Permit is submitted to obtain: (Check one)

[ ] Air construction permit to construct or modify one or more emissions units.

[ ] Air construction permit to make federally enforceable an assumed restriction on the potential emissions of one or more existing, permitted emissions units.

[X] Air construction permit for one or more existing, but unpermitted, emissions units.

Owner/Authorized Representative

1. Name and Title of Owner/Authorized Representative:
   Mr. Richard A. Bazinet, Director of Florida Operations
2. Owner/Authorized Representative Mailing Address:
   Organization/Firm: **Angelo's Recycled Materials, Inc.**
   Street Address: **Post Office Box 1493**
   City: **Largo** State: **Florida** Zip Code: **33779**
3. Owner/Authorized Representative Telephone Numbers:
   Telephone: **(727) 581-1544** Fax: **(727) 586-5676**
4. Owner/Authorized Representative Statement:

   I, the undersigned, am the owner or authorized representative of the facility addressed in this application. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made in this application are true, accurate and complete and that, to the best of my knowledge, any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. The air pollutant emissions units and air pollution control equipment described in this application will be operated and maintained so as to comply with all applicable standards for control of air pollutant emissions found in the statutes of the State of Florida and rules of the Department of Environmental Protection and revisions thereof. I understand that a permit, if granted by the Department, cannot be transferred without authorization from the Department, and I will promptly notify the Department upon sale or legal transfer of any permitted emissions unit.*

   Director 8-9-1-99

   Signature Date

* Attach letter of authorization if not currently on file.

Professional Engineer Certification

1. Professional Engineer Name: **Mr. George C. Sinn, Jr., P.E.**
   Registration Number: **16911**
2. Professional Engineer Mailing Address:
   Organization/Firm: **Central Florida Testing Laboratories, Inc.**
   Street Address: **12625 – 40th Street North**
   City: **Clearwater** State: **Florida** Zip Code: **33762**
3. Professional Engineer Telephone Numbers:
   Telephone: **(727) 572-9797** Fax: **(727) 299-0023**

4. Professional Engineer Statement:

I, the undersigned, hereby certify, except as particularly noted herein, that:*

(1) To the best of my knowledge, there is reasonable assurance that the air pollutant emissions unit(s) and the air pollution control equipment described in this Application for Air Permit, when properly operated and maintained, will comply with all applicable standards for control of air pollutant emissions found in the Florida Statutes and rules of the Department of Environmental Protection; and

(2) To the best of my knowledge, any emission estimates reported or relied on in this application are true, accurate, and complete and are either based upon reasonable techniques available for calculating emissions or, for emission estimates of hazardous air pollutants not regulated for an emissions unit addressed in this application, based solely upon the materials, information and calculations submitted with this application.

If the purpose of this application is to obtain an air construction permit for one or more proposed new or modified emissions units (check here [X], if so), I further certify that the engineering features of each such emissions unit described in this application have been designed or examined by me or individuals under my direct supervision and found to be in conformity with sound engineering principles applicable to the control of emissions of the air pollutants characterized in this application.

If the purpose of this application is to obtain an initial air operation permit or operation permit revision for one or more newly constructed or modified emissions units (check here [ ], if so), I further certify that, with the exception of any changes detailed as part of this application, each such emissions unit has been constructed or modified in substantial accordance with the information given in the corresponding application for air construction permit and with all provisions contained in such permit.

Signature

8/31/99
Date

(seal)

Attach any exception to certification statement.

With the exception of manufacturers efficiency and production guarantees.

Scope of Application

Emissions Unit ID	Description of Emissions Unit	Permit Type	Processing Fee
001	Cedarapids Inc. – Raw Material Receiving Hopper / Vibrating Grizzly Feeder System – used to feed uncrushed material to crusher.	AC1E	$1000.00
002	Cedarapids, Inc. Model #3054 Jaw Crusher and Discharge Pan – where crushed material exits crushing unit and falls onto conveyor belt	AC1E	
003	Cedarapids Cone Crusher Model RC5411 – used to crush oversize material which does not pass through vibrating screener.	AC1E	
004	Cedarapids Vibrating Screening Deck – used to separate crushed material into a desired size.	AC1E	
005	Magnet Transfer Drop Point – used to separate metal material from recrushed oversize material (drop point ~ 2 feet)	AC1E	
006	Radial Stacker Belt – drop point were material falls from belt to crushed material stockpile	AC1E	
007	Emissions from 325 H.P. Caterpillar, Model # 3512 (910kW) Diesel Generator – fired on No.2 virgin diesel fuel – used to power all equipment employed by this crushing - aggregate processing unit.	AC1E	$1000.00
008	Fugitive emissions from paved and unpaved roads.		
009	Fugitives from on site storage piles		

Application Processing Fee

Check one: [**X**] Attached - Amount: $**2000.00** [ ] Not Applicable

Construction/Modification Information

1. Description of Proposed Project or Alterations:

This project consists of an "after-the-fact" State Wide Construction Permit application for a portable Cedarapids, Inc. Aggregate Crushing & Processing Plant owned and operated by Angelo's Recycled Materials, Inc. This crushing will serve the sole purpose of crushing and processing and reclaimed asphalt concrete that is recycled from the road, buildings, etc. and will be reused in the building or construction industry. This crushing unit has the capability of being portable and will travel from site to site "statewide". The Crushing Unit is referred to as "Reclaimed Crushing Unit No.4" is now located and sitting stationary, south of Bearss Avenue at the intersection of 148th Avenue and 12th Street in Tampa, Hillsborough County, Florida. This unit is powered by a 325 H.P. Caterpillar Diesel Generator fired on Virgin No.2 fuel oil with a maximum sulfur limit of 0.5% by weight.

Stockpiles and Roadways at this facility are watered on a regular basis by a sprlinker system and a 5 mph speed limit is enforced as to control any fugitive emissions that may be generated by vehicular traffic or prevailing winds.

This facility is a natural non-Title V facility and will comply with all FDEP Rules and Regulations.

2. Projected or Actual Date of Commencement of Construction: **NA (existing source)**

3. Projected Date of Completion of Construction: **NA (already constructed)**

Application Comment

This project consists of an "after-the-fact" State Wide Construction Permit application for a portable Cedarapids, Inc. Aggregate Crushing & Processing Plant owned and operated by Angelo's Recycled Materials, Inc. This crushing will serve the sole purpose of crushing and processing and reclaimed asphalt concrete that is recycled from the road, buildings, etc. and will be reused in the building or construction industry. This crushing unit has the capability of being portable and will travel from site to site "statewide". The Crushing Unit is referred to as "Reclaimed Crushing Unit No.4" is now located and sitting stationary, south of Bearss Avenue at the intersection of 148th Avenue and 12th Street in Tampa, Hillsborough County, Florida. This unit is powered by a 325 H.P. Caterpillar Diesel Generator fired on Virgin No.2 fuel oil with a maximum sulfur limit of 0.5% by weight.

Stockpiles and Roadways at this facility are watered on a regular basis by a sprlinker system and a 5 mph speed limit is enforced as to control any fugitive emissions that may be generated by vehicular traffic or prevailing winds.

This facility is a natural non-Title V facility and will comply with all FDEP Rules and Regulations.

II. FACILITY INFORMATION

A. GENERAL FACILITY INFORMATION

Facility Location and Type

1. Facility UTM Coordinates: **(Portable Unit – Location at present time)** Zone: **17** East (km): **357.8** North (km): **3107.2**			
2. Facility Latitude/Longitude: Latitude (DD/MM/SS): **28°05'40" N** Longitude (DD/MM/SS): **82°26'50" W**			
3. Governmental Facility Code: **O**	4. Facility Status Code: **ACTIVE**	5. Facility Major Group SIC Code: **14**	6. Facility SIC(s): **1422** 1795
7. Facility Comment (limit to 500 characters): **This project consists of an "after-the-fact" State Wide Construction Permit application for a portable Cedarapids, Inc. Aggregate Crushing & Processing Plant owned and operated by Angelo's Recycled Materials, Inc. This crushing will serve the sole purpose of crushing and processing and reclaimed asphalt concrete that is recycled from the road, buildings, etc. and will be reused in the building or construction industry. This crushing unit has the capability of being portable and will travel from site to site "statewide". The Crushing Unit is referred to as "Reclaimed Crushing Unit No.4" is now located and sitting stationary, south of Bearss Avenue at the intersection of 148th Avenue and 12th Street in Tampa, Hillsborough County, Florida. This unit is powered by a 325 H.P. Caterpillar Diesel Generator fired on Virgin No.2 fuel oil with a maximum sulfur limit of 0.5% by weight.** **Stockpiles and Roadways at this facility are watered on a regular basis by a sprlinker system and a 5 mph speed limit is enforced as to control any fugitive emissions that may be generated by vehicular traffic or prevailing winds.** **This facility is a natural non-Title V facility and will comply with all FDEP Rules and Regulations.**			

Facility Contact

1. Name and Title of Facility Contact: **Mr. Dennis Price, Environmental Manager**
2. Facility Contact Mailing Address: Organization/Firm: **Angelo's Recycled Products, Inc.** Street Address: **Post Office Box 1493** City: **Largo** State: **Florida** Zip Code: **33779**
3. Facility Contact Telephone Numbers: Telephone: **(904) 527-9671** Fax: **(727) 586-5676**

Facility Regulatory Classifications

Check all that apply:

1. [ ] Small Business Stationary Source?	[X] Unknown
2. [X] Synthetic Non-Title V Source?	
3. [X] Synthetic Minor Source of Pollutants Other than HAPs?	
4. [X] Synthetic Minor Source of HAPs?	
5. [X] One or More Emissions Units Subject to NSPS?	
6. [ ] One or More Emission Units Subject to NESHAP Recordkeeping or Reporting?	
7. Facility Regulatory Classifications Comment (limit to 200 characters): **Natural Non-Title V Source**	

Rule Applicability Analysis

This facility is subject to the rules and provisions of 40 CFR 60, subpart 000.

B. FACILITY POLLUTANTS

List of Pollutants Emitted

1. Pollutant Emitted	2. Pollutant Classif.	3. Requested Emissions Cap lb/hour	tons/year	4. Basis for Emissions Cap	5. Pollutant Comment
PM10	**SM**	**NA**	**NA**	**RULE**	**<10% opacity from drop points, storage**
PM	**SM**	**NA**	**NA**	**RULE**	**Piles, <15% from crusher**
SO2	**SM**	**NA**	**NA**	**RULE**	**Emissions from diesel generator**
NOx	**SM**	**NA**	**NA**	**RULE**	**Subject to opacity limitations only**
CO	**SM**	**NA**	**NA**	**RULE**	**FAC 62-296.310**
TOC	**SM**	**NA**	**NA**	**RULE**	"

C. FACILITY SUPPLEMENTAL INFORMATION

Supplemental Requirements

1. Area Map Showing Facility Location: [**X**] Attached, Document ID:__**I**____ [ ] Not Applicable [ ] Waiver Requested
2. Facility Plot Plan: [**X**] Attached, Document ID:__**II**____[ ] Not Applicable [ ] Waiver Requested
3. Process Flow Diagram(s): [**X**] Attached, Document ID:__**III**____[ ] Not Applicable [ ] Waiver Requested
4. Precautions to Prevent Emissions of Unconfined Particulate Matter: [**X**] Attached, Document ID:__**IV**____[ ] Not Applicable [ ] Waiver Requested
5. Supplemental Information for Construction Permit Application: [**X**] Attached, Document ID:__**VII**___ [ ] Not Applicable
6. Supplemental Requirements Comment:

EMISSIONS ID. NO. 001

200 TPH Cedarapids – Grizzly Feeder

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through G as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

A. GENERAL EMISSIONS UNIT INFORMATION

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in This Section: (Check one)

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

[X] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Description of Emissions Unit Addressed in This Section (limit to 60 characters):
Cedarapids Inc. – Raw Material Recieving Hopper / Vibrating Grizzly Feeder System – used to feed uncrushed material to crusher.

3. Emissions Unit Identification Number:
ID: **001**
[ ] No ID
[ ] ID Unknown

3. Emissions Unit Status Code:	4. Initial Startup Date:	5. Emissions Unit Major Group SIC Code:
ACTIVE	**UNKNOWN**	**14**

6. Emissions Unit Comment: (Limit to 500 Characters):

THIS AGGREGATE PROCESSING UNIT WILL CRUSH AND SCREEN ASPHALT ONLY, THEREFORE EMISSIONS WILL BE NIL TO NONE FROM THIS EMISSIONS UNIT. SHOULD ANY OCCUR THE MATERIAL WILL BE SPRAYED AS TO CONTROL ANY EMISSIONS GENERATED.

Emissions Unit Information Section __1___ of __9___
Receiving Hopper – Vibrating Grizzly Feeder
Emissions Unit Control Equipment

1. Control Equipment/Method Description (limit to 200 characters per device or method):

ANY EMISSIONS THAT MAY BE GENERATED BY DUMPING OF UNCRUSHED MATERIAL INTO RECEIVING HOPPER AND VIBRATION OF MATERIAL BY GRIZZLY FEEDER INTO CRUSHER ARE CONTROLLED AT THIS FACILITY BY DAMPENING MATERIAL AS NEEDED AS TO CONTROL GENERATION OF FUGITIVES

2. Control Device or Method Code(s): **061,099**

Emissions Unit Details

1. Package Unit: **RAW MATERIAL RECEIVING HOPPER / VIBRATING GRIZZLY FEEDER SYSTEM**
   Manufacturer: **CEDARAPIDS** Model Number: **NA**
2. Generator Nameplate Rating: MW
3. Incinerator Information:
   Dwell Temperature: °F
   Dwell Time: seconds
   Incinerator Afterburner Temperature: °F

Emissions Unit Operating Capacity and Schedule

1. Maximum Heat Input Rate: mmBtu/hr
2. Maximum Incineration Rate: lb/hr tons/day
3. Maximum Process or Throughput Rate: **200 TPH AS RAW (UNCRUSHED) RECLAIMED ASPHALT OR CONCRETE**
4. Maximum Production Rate: **200 TPH AS RECLAIMED CRUSHED AND SCREENED ASPHALT (RAP) OR CONCRETE**
5. Requested Maximum Operating Schedule:
   10 hours/day **6** days/week
   52 weeks/year **3120** hours/year
7. Operating Capacity/Schedule Comment (limit to 200 characters):

Dampened, uncrushed reclaimed asphalt material is fed into the material receiving hopper and grizzly feeder of the plant where any fugitive emissions generated are controlled by water spray heads mounted in the receiving hopper which sprays the material before it enters the grizzly feeder and crusher.

B. EMISSION POINT (STACK/VENT) INFORMATION

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram? **001 (Grizzly Feeder)**	2. Emission Point Type Code: **4**

3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point): **NONE**

3. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: **NONE**

4. Discharge Type Code: **F**	6. Stack Height: feet	7. Exit Diameter: feet
8. Exit Temperature: °F	9. Actual Volumetric Flow Rate: acfm	10. Water Vapor: %

11. Maximum Dry Standard Flow Rate: dscfm	12. Nonstack Emission Point Height: **~15** FEET

13. Emission Point UTM Coordinates: **(Relocatable source figures below are location now)**

Zone: **17** East (km): **357.8** North (km): **3107.2**

14. Emission Point Comment (limit to 200 characters):

EMISSIONS POINT WILL BE FUGITIVE IF ANY EMISSIONS GENERATED AT ALL

C. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment _____ of _____

1. Segment Description (Process/Fuel Type) (limit to 500 characters):		
Cedarapids Inc. – Raw Material Recieving Hopper / Vibrating Grizzly Feeder System – used to feed uncrushed material to crusher.		
2. Source Classification Code (SCC): **30502511**	3. SCC Units: **TONS OF PRODUCT PROCESSED**	
4. Maximum Hourly Rate: **200 tph**	5. Maximum Annual Rate: **624,000 ton**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: **NA**	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment (limit to 200 characters):		

Segment Description and Rate: Segment _____ of _____

1. Segment Description (Process/Fuel Type) (limit to 500 characters):		
2. Source Classification Code (SCC):	3. SCC Units:	
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment (limit to 200 characters):		

D. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION

Potential Emissions

1. Pollutant Emitted: **PM, PM10**		2. Pollutant Regulatory Code: **WP**
3. Primary Control Device Code: **061**	4. Secondary Control Device Code: **099**	5. Total Percent Efficiency of Control: **80%**
6. Potential Emissions: **PM10 = 0.42 lb/hr & 0.65 ton/hr** **PM = 0.88 lb/hr & 1.36 ton/hr**		7. Synthetically Limited? [**X**]
8. Emission Factor: **0.0021 lb/ton** Reference: **AP-42**		8. Emissions Method Code: **3**

10. Calculation of Emissions (limit to 600 characters):

PM10 = (200 lb/ton)(0.0021 lb/ton) = 0.42 lb/hr
$PM10_{yearly}$ [(200 lb/hr)(3120 hr/yr)(0.0021 lb/ton)] / 2000 lb/ton = 0.65 ton/yr

PM = [(200 lb/ton)(0.0021 lb/ton)] (2.1) = 0.88 lb/hr

$PM10_{yearly}$ [(200 lb/hr)(3120 hr/yr)(0.0021 lb/ton)] / 2000 lb/ton (2.1) = 1.36 ton/yr

11. Pollutant Potential Emissions Comment (limit to 200 characters):
Raw Material Receiving Hopper / Grizzly Feeder – subject to 40 CFR 60, subpart 000 rules and regulations.

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code: **40 CFR 60, subpart 000**	2. Future Effective Date of Allowable Emissions: **Initial Compliance Test**
3. Requested Allowable Emissions and Units: **< 10 % Opacity**	4. Equivalent Allowable Emissions: lb/hour tons/year

5. Method of Compliance (limit to 60 characters):
Initial and Annual EPA Method 9 Compliance Testing

6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):

E. VISIBLE EMISSIONS INFORMATION
(Only Emissions Units Subject to a VE Limitation)

Visible Emissions Limitation: Visible Emissions Limitation _____ of _____

1. Visible Emissions Subtype: **VE**	2. Basis for Allowable Opacity: [X] Rule [ ] Other
3. Requested Allowable Opacity: Normal Conditions: **<10%** Exceptional Conditions: **<10%** Maximum Period of Excess Opacity Allowed: **0** min/hour	
4. Method of Compliance: **Initial and Annual Visible Emissions Compliance Testing.**	
5. Visible Emissions Comment (limit to 200 characters):	

F. CONTINUOUS MONITOR INFORMATION
(Only Emissions Units Subject to Continuous Monitoring)

Continuous Monitoring System: Continuous Monitor _____ of _____

1. Parameter Code: **NONE**	2. Pollutant(s):
3. CMS Requirement:	[ ] Rule [ ] Other
4. Monitor Information: Manufacturer: Model Number: Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment (limit to 200 characters):	

G. EMISSIONS UNIT SUPPLEMENTAL INFORMATION

Supplemental Requirements

1. Process Flow Diagram [X] Attached, Document ID:__III____[ ] Not Applicable [ ] Waiver Requested
2. Fuel Analysis or Specification [ ] Attached, Document ID:_____ [X] Not Applicable [ ] Waiver Requested
3. Detailed Description of Control Equipment [X] Attached, Document ID:__V_____[ ] Not Applicable [ ] Waiver Requested
4. Description of Stack Sampling Facilities [ ] Attached, Document ID:_____ [X] Not Applicable [ ] Waiver Requested
5. Compliance Test Report [ ] Attached, Document ID:_____ [ ] Previously submitted, Date:_____ [X] Not Applicable
6. Procedures for Startup and Shutdown [ ] Attached, Document ID:_____ [X] Not Applicable [ ] Waiver Requested
7. Operation and Maintenance Plan [X] Attached, Document ID:__VI____ [ ] Not Applicable [ ] Waiver Requested
8. Supplemental Information for Construction Permit Application [X] Attached, Document ID:__VII__ [ ] Not Applicable
9. Other Information Required by Rule or Statute [ ] Attached, Document ID:_____ [X] Not Applicable
10. Supplemental Requirements Comment:

EMISSIONS ID. NO. 002

Cedarapids Model 3054 Jaw Crusher

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through G as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

A. GENERAL EMISSIONS UNIT INFORMATION

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in This Section: (Check one)

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

[X] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

9. Description of Emissions Unit Addressed in This Section (limit to 60 characters):
Cedarapids, Inc. Model #3054 Jaw Crusher and Discharge Pan – where crushed material exits crushing unit and falls onto conveyor belt.

3. Emissions Unit Identification Number:
ID: **002**
[ ] No ID
[ ] ID Unknown

10. Emissions Unit Status Code:	11. Initial Startup Date:	12. Emissions Unit Major Group SIC Code:
ACTIVE	**UNKNOWN**	**14**

13. Emissions Unit Comment: (Limit to 500 Characters):

THIS AGGREGATE PROCESSING UNIT WILL CRUSH AND CONVEY RECLAIMED ASPHALT ONLY, THEREFORE EMISSIONS WILL BE NIL TO NONE FROM THIS EMISSIONS UNIT. SHOULD ANY OCCUR THE MATERIAL WILL BE SPRAYED AS TO CONTROL ANY EMISSIONS GENERATED.

Emissions Unit Information Section __2___ of __9___
Cedarapids Model 3054 Jaw Crusher
Emissions Unit Control Equipment

6. Control Equipment/Method Description (limit to 200 characters per device or method): **ANY EMISSIONS THAT MAY BE GENERATED BY CRUSHING AND DISCHARGING OF UNCRUSHED MATERIAL ONTO DISCHARGE PAN AND CONVEYOR BELT INTO CRUSHER ARE CONTROLLED AT THIS FACILITY BY DAMPENING MATERIAL AS NEEDED AS TO CONTROL GENERATION OF FUGITIVES**
2. Control Device or Method Code(s): **061,099**

Emissions Unit Details

1. Package Unit: **CRUSHER / DISCHARGE PAN** Manufacturer: **CEDARAPIDS**	Model Number: **3054**	
2. Generator Nameplate Rating:	MW	
3. Incinerator Information: Dwell Temperature: Dwell Time: Incinerator Afterburner Temperature:		°F seconds °F

Emissions Unit Operating Capacity and Schedule

1. Maximum Heat Input Rate:		mmBtu/hr
2. Maximum Incineration Rate:	lb/hr	tons/day
3. Maximum Process or Throughput Rate: **200 TPH AS RAW (UNCRUSHED) RECLAIMED ASPHALT OR CONCRETE**		
4. Maximum Production Rate: **200 TPH AS RECLAIMED CRUSHED AND SCREENED ASPHALT (RAP) OR CONCRETE**		
5. Requested Maximum Operating Schedule:		
10 hours/day		**6** days/week
52 weeks/year		**3120** hours/year

14. Operating Capacity/Schedule Comment (limit to 200 characters):

Dampened, uncrushed reclaimed asphalt material is fed into the crusher from the receiving hopper and grizzly feeder of the plant where it is crushed and discharged to the discharge pan where it fall onto a conveyor belt. Any fugitive emissions generated are controlled by dampening of the material before it enters the grizzly feeder and crusher as needed.

Emissions Unit Information Section __2___ of __9___
Cedarapids Model 3054 Jaw Crusher

B. EMISSION POINT (STACK/VENT) INFORMATION

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram? **002 (Cone Crusher)**	7. Emission Point Type Code: **4**

3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point):
NONE

8. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:
NONE

9. Discharge Type Code: **F**	6. Stack Height: feet	7. Exit Diameter: feet
8. Exit Temperature: °F	9. Actual Volumetric Flow Rate: acfm	10. Water Vapor: %

11. Maximum Dry Standard Flow Rate: dscfm	12. Nonstack Emission Point Height: ~7 FEET

13. Emission Point UTM Coordinates: **(Relocatable unit figures below are location now)**
Zone: **17** East (km): **357.8** North (km): **3107.2**

14. Emission Point Comment (limit to 200 characters):
EMISSIONS POINT WILL BE FUGITIVE IF ANY EMISSIONS GENERATED AT ALL

C. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment _____ of _____

1. Segment Description (Process/Fuel Type) (limit to 500 characters): **Cedarapids, Inc. – Portable Impact Crushing Unit Model 3054 – Crusher Discharge Pan/Belt. (Material Handling - Emissions related to dropping material out of crusher onto belt.)**		
3. Source Classification Code (SCC): **30502511**	3. SCC Units: **TONS OF PRODUCT PROCESSED**	
4. Maximum Hourly Rate: **200 tph**	10. Maximum Annual Rate: **624,000 ton**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: **NA**	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment (limit to 200 characters):		

Segment Description and Rate: Segment _____ of _____

1. Segment Description (Process/Fuel Type) (limit to 500 characters):		
2. Source Classification Code (SCC):	3. SCC Units:	
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment (limit to 200 characters):		

D. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION

Potential Emissions

1. Pollutant Emitted: **PM, PM10**	2. Pollutant Regulatory Code: **WP**	
3. Primary Control Device Code: **061**	4. Secondary Control Device Code: **099**	5. Total Percent Efficiency of Control: **80%**
6. Potential Emissions: **PM10 = 0.42 lb/hr & 0.66 ton/hr** **PM = 0.88 lb/hr & 1.39 ton/hr**		7. Synthetically Limited? [X]
8. Emission Factor: **0.0021 lb/ton** Reference: **AP-42 (Table 11.19.2-2 controlled) and footnote © for PM Emissions**		15. Emissions Method Code: **3**
10. Calculation of Emissions (limit to 600 characters): **PM10 = (200 lb/ton)(0.0021 lb/ton) = 0.42 lb/hr** **$PM10_{yearly}$ [(200 lb/hr)(3120 hr/yr)(0.0021 lb/ton)] / 2000 lb/ton = 0.66 ton/yr** **PM = [(200 lb/ton)(0.0021 lb/ton)] (2.1) = 0.88 lb/hr** **$PM10_{yearly}$ [(200 lb/hr)(3120 hr/yr)(0.0021 lb/ton)] / 2000 lb/ton (2.1) = 1.39 ton/yr**		
11. Pollutant Potential Emissions Comment (limit to 200 characters): **Crusher and Discharge Pan – subject to 40 CFR 60, subpart 000 rules and regulations.**		

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code: **40 CFR 60, subpart 000**	2. Future Effective Date of Allowable Emissions: **Initial Compliance Test**
3. Requested Allowable Emissions and Units: **< 15 % Opacity**	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance (limit to 60 characters): **Initial and Annual EPA Method 9 Compliance Testing**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):	

E. VISIBLE EMISSIONS INFORMATION
(Only Emissions Units Subject to a VE Limitation)

Visible Emissions Limitation: Visible Emissions Limitation _____ of _____

1. Visible Emissions Subtype: **VE**	2. Basis for Allowable Opacity: **[X]** Rule [ ] Other
3. Requested Allowable Opacity: Normal Conditions: **<15%** Exceptional Conditions: **<15%** Maximum Period of Excess Opacity Allowed: **0** min/hour	
4. Method of Compliance: **Initial and Annual Visible Emissions Compliance Testing.**	
5. Visible Emissions Comment (limit to 200 characters):	

F. CONTINUOUS MONITOR INFORMATION
(Only Emissions Units Subject to Continuous Monitoring)

Continuous Monitoring System: Continuous Monitor _____ of _____

1. Parameter Code: **NONE**	2. Pollutant(s):
3. CMS Requirement:	[ ] Rule [ ] Other
4. Monitor Information: Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment (limit to 200 characters):	

G. EMISSIONS UNIT SUPPLEMENTAL INFORMATION

Supplemental Requirements

1. Process Flow Diagram [X] Attached, Document ID:__III____[ ] Not Applicable [ ] Waiver Requested
2. Fuel Analysis or Specification [ ] Attached, Document ID:_____ [X] Not Applicable [ ] Waiver Requested
3. Detailed Description of Control Equipment [X] Attached, Document ID:__V_____[ ] Not Applicable [ ] Waiver Requested
4. Description of Stack Sampling Facilities [ ] Attached, Document ID:_____ [X] Not Applicable [ ] Waiver Requested
5. Compliance Test Report [ ] Attached, Document ID:_____ [ ] Previously submitted, Date:_____ [X] Not Applicable
6. Procedures for Startup and Shutdown [ ] Attached, Document ID:_____ [X] Not Applicable [ ] Waiver Requested
7. Operation and Maintenance Plan [X] Attached, Document ID:__VI____[ ] Not Applicable [ ] Waiver Requested
8. Supplemental Information for Construction Permit Application [X] Attached, Document ID:__VII __ [ ] Not Applicable
9. Other Information Required by Rule or Statute [ ] Attached, Document ID:_____ [X] Not Applicable
10. Supplemental Requirements Comment:

EMISSIONS ID. NO. 003

Cedarapids Cone Crusher Model RC5411

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through G as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

A. GENERAL EMISSIONS UNIT INFORMATION

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in This Section: (Check one)

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

[X] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

16. Description of Emissions Unit Addressed in This Section (limit to 60 characters):
Cedarapids, Inc. Model #RC5411 Cone Crusher and Discharge Pan – where oversize material is crushed and crushed material exits crushing unit and falls onto conveyor belt.

3. Emissions Unit Identification Number:
ID: **003**
[ ] No ID
[ ] ID Unknown

17. Emissions Unit Status Code:	18. Initial Startup Date:	19. Emissions Unit Major Group SIC Code:
ACTIVE	**UNKNOWN**	**14**

20. Emissions Unit Comment: (Limit to 500 Characters):

THIS AGGREGATE PROCESSING UNIT WILL CRUSH AND CONVEY RECLAIMED ASPHALT ONLY, THEREFORE EMISSIONS WILL BE NIL TO NONE FROM THIS EMISSIONS UNIT. SHOULD ANY OCCUR THE MATERIAL WILL BE SPRAYED AS TO CONTROL ANY EMISSIONS GENERATED.

Emissions Unit Information Section 3 of 9
Cedarapids Model RC5411 Cone Crusher

Emissions Unit Control Equipment

11. Control Equipment/Method Description (limit to 200 characters per device or method):

ANY EMISSIONS THAT MAY BE GENERATED BY CRUSHING AND DISCHARGING OF UNCRUSHED MATERIAL ONTO DISCHARGE PAN OF CONE CRUSHING SYSTEM AND CONVEYOR BELT INTO CRUSHER ARE CONTROLLED AT THIS FACILITY BY DAMPENING MATERIAL AS NEEDED AS TO CONTROL GENERATION OF FUGITIVES

2. Control Device or Method Code(s): **061,099**

Emissions Unit Details

1. Package Unit: **CONE CRUSHER / DISCHARGE PAN**
   Manufacturer: **CEDARAPIDS** Model Number: **RC5411**
2. Generator Nameplate Rating: MW
3. Incinerator Information:
   Dwell Temperature: °F
   Dwell Time: seconds
   Incinerator Afterburner Temperature: °F

Emissions Unit Operating Capacity and Schedule

1. Maximum Heat Input Rate: mmBtu/hr
2. Maximum Incineration Rate: lb/hr tons/day
3. Maximum Process or Throughput Rate: **200 TPH AS RAW (UNCRUSHED) RECLAIMED ASPHALT OR CONCRETE**
4. Maximum Production Rate: **200 TPH AS RECLAIMED CRUSHED AND SCREENED ASPHALT (RAP) OR CONCRETE**
5. Requested Maximum Operating Schedule:
   10 hours/day **6** days/week
   52 weeks/year **3120** hours/year

21. Operating Capacity/Schedule Comment (limit to 200 characters):

Dampened oversized material that bypasses the vibrating screener is fed into the cone crusher from the vibrating screener of the plant where it is crushed and discharged to the discharge pan where it fall onto a conveyor belt. Any fugitive emissions generated are controlled by dampening of the material before it enters the grizzly feeder and crusher as needed.

Emissions Unit Information Section __3___ of __9___
Cedarapids Model RC5411 Cone Crusher

B. EMISSION POINT (STACK/VENT) INFORMATION

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram? **003 (cone crusher)**	12. Emission Point Type Code: **4**
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point): **NONE**	
13. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: **NONE**	

14. Discharge Type Code: **F**	6. Stack Height: feet	7. Exit Diameter: feet
8. Exit Temperature: °F	9. Actual Volumetric Flow Rate: acfm	10. Water Vapor: %

11. Maximum Dry Standard Flow Rate: dscfm	12. Nonstack Emission Point Height: ~7 FEET

13. Emission Point UTM Coordinates: **(Relocatable unit figures below are location now)**

Zone: **17** East (km): **357.8** North (km): **3107.2**

14. Emission Point Comment (limit to 200 characters):

EMISSIONS POINT WILL BE FUGITIVE IF ANY EMISSIONS GENERATED AT ALL

Emissions Unit Information Section __3___ of __9___
Cedarapids Model RC5411 Cone Crusher

C. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment _____ of _____

1. Segment Description (Process/Fuel Type) (limit to 500 characters):		
Cedarapids, Inc. – Portable Cone Crushing Unit Model RC5411 – Crusher Discharge Pan/Belt. (Material Handling – Emissions related to dropping material out of crusher onto belt.)		
4. Source Classification Code (SCC): **30502511**	3. SCC Units: **TONS OF PRODUCT PROCESSED**	
4. Maximum Hourly Rate: **200 tph**	15. Maximum Annual Rate: **624,000 ton**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: **NA**	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment (limit to 200 characters):		

Segment Description and Rate: Segment _____ of _____

1. Segment Description (Process/Fuel Type) (limit to 500 characters):		
2. Source Classification Code (SCC):	3. SCC Units:	
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment (limit to 200 characters):		

D. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION

Potential Emissions

1. Pollutant Emitted: **PM, PM10**	2. Pollutant Regulatory Code: **WP**	
3. Primary Control Device Code: **061**	4. Secondary Control Device Code: **099**	5. Total Percent Efficiency of Control: **80%**
6. Potential Emissions: **PM10 = 0.42 lb/hr & 0.66 ton/hr** **PM = 0.88 lb/hr & 1.39 ton/hr**		7. Synthetically Limited? [X]
8. Emission Factor: **0.0021 lb/ton** Reference: **AP-42 (Table 11.19.2-2 controlled) and footnote © for PM Emissions**		22. Emissions Method Code: **3**

10. Calculation of Emissions (limit to 600 characters):

PM10 = (200 lb/hr)(0.0021 lb/ton) = 0.42 lb/hr
$PM10_{yearly}$ [(200 lb/hr)(3120 hr/yr)(0.0021 lb/ton)] / 2000 lb/ton = 0.66 ton/yr

PM = [(200 lb/ton)(0.0021 lb/ton)] (2.1) = 0.88 lb/hr

$PM10_{yearly}$ [(200 lb/hr)(3120 hr/yr)(0.0021 lb/ton)] / 2000 lb/ton (2.1) = 1.39 ton/yr

11. Pollutant Potential Emissions Comment (limit to 200 characters):
Cone Crusher and Discharge Pan – subject to 40 CFR 60, subpart 000 rules and regulations.

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code: **40 CFR 60, subpart 000**	2. Future Effective Date of Allowable Emissions: **Initial Compliance Test**
3. Requested Allowable Emissions and Units: **< 15 % Opacity**	4. Equivalent Allowable Emissions: lb/hour tons/year

5. Method of Compliance (limit to 60 characters):
Initial and Annual EPA Method 9 Compliance Testing

6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):

E. VISIBLE EMISSIONS INFORMATION
(Only Emissions Units Subject to a VE Limitation)

Visible Emissions Limitation: Visible Emissions Limitation _____ of _____

1. Visible Emissions Subtype: **VE**	2. Basis for Allowable Opacity: [X] Rule [ ] Other
3. Requested Allowable Opacity: Normal Conditions: **<15%** Exceptional Conditions: **<15%** Maximum Period of Excess Opacity Allowed: **0** min/hour	
4. Method of Compliance: **Initial and Annual Visible Emissions Compliance Testing.**	
5. Visible Emissions Comment (limit to 200 characters):	

F. CONTINUOUS MONITOR INFORMATION
(Only Emissions Units Subject to Continuous Monitoring)

Continuous Monitoring System: Continuous Monitor _____ of _____

1. Parameter Code: **NONE**	2. Pollutant(s):
3. CMS Requirement:	[ ] Rule [ ] Other
4. Monitor Information: Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment (limit to 200 characters):	

G. EMISSIONS UNIT SUPPLEMENTAL INFORMATION

Supplemental Requirements

1. Process Flow Diagram [**X**] Attached, Document ID:__**III**____ [ ] Not Applicable [ ] Waiver Requested
2. Fuel Analysis or Specification [ ] Attached, Document ID:_____ [**X**] Not Applicable [ ] Waiver Requested
3. Detailed Description of Control Equipment [**X**] Attached, Document ID:__**V**_____[ ] Not Applicable [ ] Waiver Requested
4. Description of Stack Sampling Facilities [ ] Attached, Document ID:_____ [**X**] Not Applicable [ ] Waiver Requested
5. Compliance Test Report [ ] Attached, Document ID:_____ [ ] Previously submitted, Date:_____ [**X**] Not Applicable
6. Procedures for Startup and Shutdown [ ] Attached, Document ID:_____ [**X**] Not Applicable [ ] Waiver Requested
7. Operation and Maintenance Plan [**X**] Attached, Document ID:__**VI**____ [ ] Not Applicable [ ] Waiver Requested
8. Supplemental Information for Construction Permit Application [**X**] Attached, Document ID:__**VII**__ [ ] Not Applicable
9. Other Information Required by Rule or Statute [ ] Attached, Document ID:_____ [**X**] Not Applicable
10. Supplemental Requirements Comment:

EMISSIONS ID. NO. 004

Cedarapids Vibrating Screener

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through G as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

A. GENERAL EMISSIONS UNIT INFORMATION

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in This Section: (Check one)

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

[X] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

23. Description of Emissions Unit Addressed in This Section (limit to 60 characters):
Cedarapids, Inc. Vibrating Screener – Vibrating Screener to Screener Discharge Conveying System (drop point from Vibrating Screener to Screener Discharge Conveying System)

3. Emissions Unit Identification Number:
ID: **004**
[ ] No ID
] ID Unknown

24. Emissions Unit Status Code:	25. Initial Startup Date:	26. Emissions Unit Major Group SIC Code:
ACTIVE	**UNKNOWN**	**14**

27. Emissions Unit Comment: (Limit to 500 Characters):

The fugitive emissions generated from this drop point where crushed material leaves the vibrating screener and is dropped onto the screened material discharge belt are controlled by the water spray bar system on a as needed basis, mounted in the area of the discharge pan / conveying system. This material is still moist enough as to cause little to no fugitive emissions at this drop point. This material is still moist from previous spray systems and is also dampened before it leaves the belt and drops to it's stockpile.

Emissions Unit Information Section __4__ of __9__
Cedarapids Vibrating Screener

Emissions Unit Control Equipment

1. Control Equipment/Method Description (limit to 200 characters per device or method): **The fugitive emissions generated from this drop point where crushed material leaves the vibrating screener and is dropped onto the screened material discharge belt are controlled by the water spray bar system on a as needed basis, mounted in the area of the discharge pan / conveying system. This material is still moist enough as to cause little to no fugitive emissions at this drop point. This material is still moist from previous spray systems and is also dampened before it leaves the belt and drops to it's stockpile.**
2. Control Device or Method Code(s): **061,099**

Emissions Unit Details

1. Package Unit: **VIBRATING SCREENER** Manufacturer: **CEDARAPIDS**	Model Number: **RC5411**	
2. Generator Nameplate Rating:	MW	
3. Incinerator Information: Dwell Temperature: Dwell Time: Incinerator Afterburner Temperature:		°F seconds °F

Emissions Unit Operating Capacity and Schedule

1. Maximum Heat Input Rate:		mmBtu/hr
2. Maximum Incineration Rate:	lb/hr	tons/day
3. Maximum Process or Throughput Rate: **200 TPH AS RAW (UNCRUSHED) RECLAIMED ASPHALT OR CONCRETE**		
4. Maximum Production Rate: **200 TPH AS RECLAIMED CRUSHED AND SCREENED ASPHALT (RAP) OR CONCRETE**		
5. Requested Maximum Operating Schedule:		
10 hours/day		**6** days/week
52 weeks/year		**3120** hours/year

28. Operating Capacity/Schedule Comment (limit to 200 characters):

The fugitive emissions generated from this drop point where crushed material leaves the vibrating screener and is dropped onto the screened material discharge belt are controlled by the water spray bar system on a as needed basis, mounted in the area of the discharge pan / conveying system. This material is still moist enough as to cause little to no fugitive emissions at this drop point. This material is still moist from previous spray systems and is also dampened before it leaves the belt and drops to it's stockpile.

Emissions Unit Information Section __4___ of __9___
Cedarapids Vibrating Screener

B. EMISSION POINT (STACK/VENT) INFORMATION

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram? **004 (Vibrating Screener)**	16. Emission Point Type Code: **4**
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point): **NONE**	
17. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: **NONE**	

18. Discharge Type Code: **F**	6. Stack Height: feet	7. Exit Diameter: feet
8. Exit Temperature: °F	9. Actual Volumetric Flow Rate: acfm	10. Water Vapor: %

11. Maximum Dry Standard Flow Rate: dscfm	12. Nonstack Emission Point Height: **~10** FEET

13. Emission Point UTM Coordinates: **(Relocatable unit figures below are location now)**

Zone: **17** East (km): **357.8** North (km): **3107.2**

14. Emission Point Comment (limit to 200 characters):

EMISSIONS POINT WILL BE FUGITIVE IF ANY EMISSIONS GENERATED AT ALL

C. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment _____ of _____

1. Segment Description (Process/Fuel Type) (limit to 500 characters):		
Cedarapids, Inc. – Portable Crushing Unit – Vibrating Screener to Screened Material Discharge Belt. (Material Handling - Emissions related to conveying of reclaimed crushed material).Portable Cone (Material Handling - Emissions related to dropping material out of screener onto belt.)		
5. Source Classification Code (SCC): **30502503**	3. SCC Units: **TONS OF PRODUCT PROCESSED**	
4. Maximum Hourly Rate: **200 tph**	19. Maximum Annual Rate: **624,000 ton**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: **NA**	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment (limit to 200 characters):		

Segment Description and Rate: Segment _____ of _____

1. Segment Description (Process/Fuel Type) (limit to 500 characters):		
2. Source Classification Code (SCC):	3. SCC Units:	
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment (limit to 200 characters):		

D. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION

Potential Emissions

1. Pollutant Emitted: **PM, PM10**	2. Pollutant Regulatory Code: **WP**	
3. Primary Control Device Code: **061**	4. Secondary Control Device Code: **099**	5. Total Percent Efficiency of Control: **80%**
6. Potential Emissions: **PM10 = 0.96 lb/hr, 1.50 ton/yr** **PM = 2.02 lb/hr, 3.14 ton/yr**		7. Synthetically Limited? [X]
8. Emission Factor: **0.0048 lb/ton** Reference: **AP-42 (Table 11.19.2-2 controlled) and footnote © for PM Emissions**		29. Emissions Method Code: **3**

10. Calculation of Emissions (limit to 600 characters):

$PM10_{yearly}$ = [(200 ton/hr)(3120 hr/yr)(0.0048 lb/ton)] / (2000 lb/ton) = 1.50 ton/yr
$PM10_{hour}$ = [(200 ton/hr)(0.0048 lb/ton)] = 0.96 lb/hr

TSP_{yearly} = [(200 ton/hr)(3120 hr/yr)(0.0048 lb/ton)] (2.1) / (2000 lb/ton) = 3.14 ton/yr
TSP_{hour} = [(200 ton/hr)(0.0048 lb/ton)] (2.1) = 2.02 lb/hr

11. Pollutant Potential Emissions Comment (limit to 200 characters):
Vibrating Screener – subject to 40 CFR 60, subpart 000 rules and regulations.

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code: **40 CFR 60, subpart 000**	2. Future Effective Date of Allowable Emissions: **Initial Compliance Test**
3. Requested Allowable Emissions and Units: **< 10 % Opacity**	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance (limit to 60 characters): **Initial and Annual EPA Method 9 Compliance Testing**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):	

E. VISIBLE EMISSIONS INFORMATION
(Only Emissions Units Subject to a VE Limitation)

Visible Emissions Limitation: Visible Emissions Limitation _____ of _____

1. Visible Emissions Subtype: **VE**	2. Basis for Allowable Opacity: [X] Rule [ ] Other
3. Requested Allowable Opacity: Normal Conditions: **<10%** Exceptional Conditions: **<10%** Maximum Period of Excess Opacity Allowed: **0** min/hour	
4. Method of Compliance: **Initial and Annual Visible Emissions Compliance Testing.**	
5. Visible Emissions Comment (limit to 200 characters):	

F. CONTINUOUS MONITOR INFORMATION
(Only Emissions Units Subject to Continuous Monitoring)

Continuous Monitoring System: Continuous Monitor _____ of _____

1. Parameter Code: **NONE**	2. Pollutant(s):
3. CMS Requirement:	[ ] Rule [ ] Other
4. Monitor Information: Manufacturer: Model Number: Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment (limit to 200 characters):	

G. EMISSIONS UNIT SUPPLEMENTAL INFORMATION

Supplemental Requirements

1. Process Flow Diagram [**X**] Attached, Document ID:__**III**____[ ] Not Applicable [ ] Waiver Requested
2. Fuel Analysis or Specification [ ] Attached, Document ID:_____ [**X**] Not Applicable [ ] Waiver Requested
3. Detailed Description of Control Equipment [**X**] Attached, Document ID:__**V**_____[ ] Not Applicable [ ] Waiver Requested
4. Description of Stack Sampling Facilities [ ] Attached, Document ID:_____ [**X**] Not Applicable [ ] Waiver Requested
5. Compliance Test Report [ ] Attached, Document ID:_____ [ ] Previously submitted, Date:_____ [**X**] Not Applicable
6. Procedures for Startup and Shutdown [ ] Attached, Document ID:_____ [**X**] Not Applicable [ ] Waiver Requested
7. Operation and Maintenance Plan [**X**] Attached, Document ID:__**VI** ____[ ] Not Applicable [ ] Waiver Requested
8. Supplemental Information for Construction Permit Application [**X**] Attached, Document ID:__**VII**__ [ ] Not Applicable
9. Other Information Required by Rule or Statute [ ] Attached, Document ID:_____ [**X**] Not Applicable
10. Supplemental Requirements Comment:

EMISSIONS ID. NO. 005

Emissions From Magnet Transfer Drop

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through G as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

A. GENERAL EMISSIONS UNIT INFORMATION

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in This Section: (Check one)

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

[X] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

30. Description of Emissions Unit Addressed in This Section (limit to 60 characters):
Cedarapids, Inc. Magnet Transfer Point – Transfer Point where metal is extracted from oversized crushed material drops to a transfer belt to be run back through screener (drop point from magnet belt to transfer belt)

3. Emissions Unit Identification Number:
ID: **005**
[ ] No ID
] ID Unknown

31. Emissions Unit Status Code:	32. Initial Startup Date:	33. Emissions Unit Major Group SIC Code:
ACTIVE	**UNKNOWN**	**14**

34. Emissions Unit Comment: (Limit to 500 Characters):

The fugitive emissions generated from this drop point where crushed material leaves the magnet belt and is dropped onto a transfer belt to be rescreened. This material will be controlled by the water spray bar system on a as needed basis, mounted in the area of the discharge pan / conveying system. This material is still moist enough as to cause little to no fugitive emissions at this drop point. This material is still moist from previous spray systems and is also dampened before it leaves the belt and drops to it's stockpile.

Emissions Unit Information Section __5__ of __9__
Cedarapids Magnet Transfer Point
Emissions Unit Control Equipment

1. Control Equipment/Method Description (limit to 200 characters per device or method): **The fugitive emissions generated from this drop point where crushed material leaves the magnet belt and is dropped onto the transfer belt is controlled by the water spray bar system on a as needed basis, mounted in the area of the discharge pan / conveying system. This material is still moist enough as to cause little to no fugitive emissions at this drop point. This material is still moist from previous spray systems and is also dampened before it leaves the belt and drops to it's stockpile.**
2. Control Device or Method Code(s): **061,099**

Emissions Unit Details

1. Package Unit: **Magnet Transfer Point** Manufacturer: **CEDARAPIDS**	Model Number: **RC5411**	
2. Generator Nameplate Rating:	MW	
3. Incinerator Information: Dwell Temperature: Dwell Time: Incinerator Afterburner Temperature:		°F seconds °F

Emissions Unit Operating Capacity and Schedule

1. Maximum Heat Input Rate:		mmBtu/hr
2. Maximum Incineration Rate:	lb/hr	tons/day
3. Maximum Process or Throughput Rate: **200 TPH AS RAW (UNCRUSHED) RECLAIMED ASPHALT OR CONCRETE**		
4. Maximum Production Rate: **200 TPH AS RECLAIMED CRUSHED AND SCREENED ASPHALT (RAP) OR CONCRETE**		
5. Requested Maximum Operating Schedule:		
	10 hours/day	**6** days/week
	52 weeks/year	**3120** hours/year
35. Operating Capacity/Schedule Comment (limit to 200 characters): **The fugitive emissions generated from this drop point where crushed material leaves the magnet belt is dropped onto the transfer material discharge belt are controlled by the water spray bar system on a as needed basis, mounted in the area of the discharge pan / conveying system. This material is still moist enough as to cause little to no fugitive emissions at this drop point. This material is still moist from previous spray systems and is also dampened before it leaves the belt and drops to it's stockpile.**		

B. EMISSION POINT (STACK/VENT) INFORMATION

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram? **005 (Magnet Trans. Pt.)**	20. Emission Point Type Code: **4**
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point): **NONE**	
21. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: **NONE**	

22. Discharge Type Code: **F**	6. Stack Height: feet	7. Exit Diameter: feet
8. Exit Temperature: °F	9. Actual Volumetric Flow Rate: acfm	10. Water Vapor: %

11. Maximum Dry Standard Flow Rate: dscfm	12. Nonstack Emission Point Height: **~4** FEET

13. Emission Point UTM Coordinates: **(Relocatable unit figures below are location now)**

Zone: **17** East (km): **357.8** North (km): **3107.2**

14. Emission Point Comment (limit to 200 characters):

EMISSIONS POINT WILL BE FUGITIVE IF ANY EMISSIONS GENERATED AT ALL

Emissions Unit Information Section __5___ of __9___
Cedarapids Magnet Transfer Point

C. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment _____ of _____

1. Segment Description (Process/Fuel Type) (limit to 500 characters): **Cedarapids, Inc. – Portable Crushing Unit – Magnet Transfer Point. (Material Handling - Emissions related to conveying of reclaimed crushed material from one belt to another)**		
6. Source Classification Code (SCC): **30502505**	3. SCC Units: **TONS OF PRODUCT PROCESSED**	
4. Maximum Hourly Rate: **200 tph**	23. Maximum Annual Rate: **624,000 ton**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: **NA**	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment (limit to 200 characters):		

Segment Description and Rate: Segment _____ of _____

1. Segment Description (Process/Fuel Type) (limit to 500 characters):		
2. Source Classification Code (SCC):	3. SCC Units:	
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment (limit to 200 characters):		

D. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION

Potential Emissions

1. Pollutant Emitted: **PM, PM10**	2. Pollutant Regulatory Code: **WP**	
3. Primary Control Device Code: **061**	4. Secondary Control Device Code: **099**	5. Total Percent Efficiency of Control: **80%**
6. Potential Emissions: **PM10 = 0.96 lb/hr, 1.50 ton/yr** **PM = 2.02 lb/hr, 3.14 ton/yr**		7. Synthetically Limited? [**X**]
8. Emission Factor: **0.0021 lb/ton** Reference: **AP-42 (Table 11.19.2-2 controlled) and footnote © for PM Emissions**		36. Emissions Method Code: **3**

10. Calculation of Emissions (limit to 600 characters):

$PM10_{yearly}$ = [(200 ton/hr)(3120 hr/yr)(0.0048 lb/ton)] / (2000 lb/ton) = 1.50 ton/yr
$PM10_{hour}$ = [(200 ton/hr)(0.0048 lb/ton)] = 0.96 lb/hr

TSP_{yearly} = [(200 ton/hr)(3120 hr/yr)(0.0048 lb/ton)] (2.1) / (2000 lb/ton) = 3.14 ton/yr
TSP_{hour} = [(200 ton/hr)(0.0048 lb/ton)] (2.1) = 2.02 lb/hr

11. Pollutant Potential Emissions Comment (limit to 200 characters):
Magnet Transfer Point – subject to 40 CFR 60, subpart 000 rules and regulations.

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code: **40 CFR 60, subpart 000**	2. Future Effective Date of Allowable Emissions: **Initial Compliance Test**
3. Requested Allowable Emissions and Units: **< 10 % Opacity**	4. Equivalent Allowable Emissions: lb/hour tons/year

5. Method of Compliance (limit to 60 characters):
Initial and Annual EPA Method 9 Compliance Testing

6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):

E. VISIBLE EMISSIONS INFORMATION
(Only Emissions Units Subject to a VE Limitation)

Visible Emissions Limitation: Visible Emissions Limitation _____ of _____

1. Visible Emissions Subtype: **VE**	2. Basis for Allowable Opacity: **[X]** Rule [ ] Other
3. Requested Allowable Opacity: Normal Conditions: **<10%** Exceptional Conditions: **<10%** Maximum Period of Excess Opacity Allowed: **0** min/hour	
4. Method of Compliance: **Initial and Annual Visible Emissions Compliance Testing.**	
5. Visible Emissions Comment (limit to 200 characters):	

F. CONTINUOUS MONITOR INFORMATION
(Only Emissions Units Subject to Continuous Monitoring)

Continuous Monitoring System: Continuous Monitor _____ of _____

1. Parameter Code: **NONE**	2. Pollutant(s):
3. CMS Requirement:	[ ] Rule [ ] Other
4. Monitor Information: Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment (limit to 200 characters):	

G. EMISSIONS UNIT SUPPLEMENTAL INFORMATION

Supplemental Requirements

1. Process Flow Diagram [**X**] Attached, Document ID:__**III**____[ ] Not Applicable [ ] Waiver Requested
2. Fuel Analysis or Specification [ ] Attached, Document ID:_____ [**X**] Not Applicable [ ] Waiver Requested
3. Detailed Description of Control Equipment [**X**] Attached, Document ID:__**V**_____[ ] Not Applicable [ ] Waiver Requested
4. Description of Stack Sampling Facilities [ ] Attached, Document ID:_____ [**X**] Not Applicable [ ] Waiver Requested
5. Compliance Test Report [ ] Attached, Document ID:_____ [ ] Previously submitted, Date:_____ [**X**] Not Applicable
6. Procedures for Startup and Shutdown [ ] Attached, Document ID:_____ [**X**] Not Applicable [ ] Waiver Requested
7. Operation and Maintenance Plan [**X**] Attached, Document ID:__**VI**____[ ] Not Applicable [ ] Waiver Requested
8. Supplemental Information for Construction Permit Application [**X**] Attached, Document ID:__**VII**__ [ ] Not Applicable
9. Other Information Required by Rule or Statute [ ] Attached, Document ID:_____ [**X**] Not Applicable
10. Supplemental Requirements Comment:

EMISSIONS ID. NO. 006

Emissions From Radial Stacker Belt

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through G as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

A. GENERAL EMISSIONS UNIT INFORMATION

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in This Section: (Check one)

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

[X] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Description of Emissions Unit Addressed in This Section (limit to 60 characters):

Drop Point from Radial Stacker No.1 to Stockpile – where crushed material leaves radial stacker belt to stockpile

3. Emissions Unit Identification Number: [ ] No ID
ID: **006**

37. Emissions Unit Status Code:	38. Initial Startup Date:	39. Emissions Unit Major Group SIC Code:
ACTIVE	**UNKNOWN**	**14**

40. Emissions Unit Comment: (Limit to 500 Characters):

CRUSHED RECLAIMED ASPHALT & CONCRETE WILL TRAVEL ALONG THE RADIAL STACKER BELT TO BE STOCKPILED FOR FUTURE USE AT CONSTRUCTION SITES. THE ENTIRE AGGREGATE PROCESSING UNIT WILL CRUSH AND AND CONVEY RECLAIMED ASPHALT & CONCRETE, THEREFORE EMISSIONS WILL BE NIL TO NONE FROM THIS EMISSIONS UNIT. SHOULD ANY OCCUR THE MATERIAL WILL BE SPRAYED AS TO CONTROL ANY EMISSIONS GENERATED.

Emissions Unit Control Equipment

24. Control Equipment/Method Description (limit to 200 characters per device or method): **ANY EMISSIONS THAT MAY BE GENERATED UNIT ARE CONTROLLED AT THIS FACILITY BY DAMPENING MATERIAL BEFORE IT ENTERS THE RECEIVING HOPPER AS NEEDED TO CONTROL GENERATION OF FUGITIVES**
2. Control Device or Method Code(s): **061,099**

Emissions Unit Details

1. Package Unit: **RADIAL STACKER BELT** Manufacturer: **SELF FABRICATED**	Model Number: **NA**	
2. Generator Nameplate Rating:	MW	
3. Incinerator Information:		
Dwell Temperature:		°F
Dwell Time:		seconds
Incinerator Afterburner Temperature:		°F

Emissions Unit Operating Capacity and Schedule

1. Maximum Heat Input Rate:		mmBtu/hr
2. Maximum Incineration Rate:	lb/hr	tons/day
3. Maximum Process or Throughput Rate: **200 TPH AS RAW (UNCRUSHED) RECLAIMED ASPHALT OR CONCRETE**		
4. Maximum Production Rate: **200 TPH AS RECLAIMED CRUSHED AND SCREENED ASPHALT (RAP) OR CONCRETE**		
5. Requested Maximum Operating Schedule:		
10 hours/day		**6** days/week
52 weeks/year		**3120** hours/year

41. Operating Capacity/Schedule Comment (limit to 200 characters):

Dampened, uncrushed reclaimed asphalt material is fed into the crusher from the receiving hopper and grizzly feeder of the plant where it is crushed and discharged to the discharge pan where it fall onto a conveyor belt from there it is conveyed to a stockpile for future use at one of the asphalt plants. Any fugitive emissions generated are controlled by dampening of the material before it enters the grizzly feeder and crusher as needed.

B. EMISSION POINT (STACK/VENT) INFORMATION

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram? **006 (Radial Stacker)**	25. Emission Point Type Code: **4**

3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point):
NONE

26. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:
NONE

27. Discharge Type Code: **F**	6. Stack Height: feet	7. Exit Diameter: feet
8. Exit Temperature: °F	9. Actual Volumetric Flow Rate: acfm	10. Water Vapor: %
11. Maximum Dry Standard Flow Rate: dscfm	12. Nonstack Emission Point Height: **~2-15** FEET	

13. Emission Point UTM Coordinates: **(portable facility – figure below at location now)**
Zone: **17** East (km): **357.8** North (km): **3107.2**

14. Emission Point Comment (limit to 200 characters):
EMISSIONS POINT WILL BE FUGITIVE IF ANY EMISSIONS GENERATED AT ALL

C. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment _____ of _____

1. Segment Description (Process/Fuel Type) (limit to 500 characters): **Cedarapids – Radial Stacker Belt to Stockpile (Material Handling – Emissions related to conveying and dropping of material.)**		
7. Source Classification Code (SCC): **30502511**	3. SCC Units: **TONS OF PRODUCT PROCESSED**	
4. Maximum Hourly Rate: **200 tph**	28. Maximum Annual Rate: **624,000 ton**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: **NA**	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment (limit to 200 characters):		

Segment Description and Rate: Segment _____ of _____

1. Segment Description (Process/Fuel Type) (limit to 500 characters):		
2. Source Classification Code (SCC):	3. SCC Units:	
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment (limit to 200 characters):		

EMISSIONS UNIT NO. 6 of 9
RADIAL STACKER BELT

D. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION

Potential Emissions

1. Pollutant Emitted: **PM, PM10**	2. Pollutant Regulatory Code: **WP**	
3. Primary Control Device Code: **061**	4. Secondary Control Device Code: **099**	5. Total Percent Efficiency of Control: **80%**
6. Potential Emissions: **PM10 = 0.96 lb/hr & 1.50 ton/hr** **PM = 2.02 lb/hr & 3.14 ton/hr**		7. Synthetically Limited? [X]
8. Emission Factor: **0.0048 lb/ton** Reference: **AP-42 (Table 11.19.2-2 controlled) and footnote © for PM Emissions**		42. Emissions Method Code: **3**

10. Calculation of Emissions (limit to 600 characters):

PM10 = (200 lb/ton)(0.0048 lb/ton) = 0.96 lb/hr
$PM10_{yearly}$ [(200 lb/hr)(3120 hr/yr)(0.0048 lb/ton)] / 2000 lb/ton = 1.50 ton/yr

PM = [(200 lb/ton)(0.0048 lb/ton)] (2.1) = 2.02 lb/hr

$PM10_{yearly}$ [(200 lb/hr)(3120 hr/yr)(0.0048 lb/ton)] / 2000 lb/ton (2.1) = 3.14 ton/yr

11. Pollutant Potential Emissions Comment (limit to 200 characters):
Radial Stacker Belt – subject to 40 CFR 60, subpart 000 rules and regulations.

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code: **40 CFR 60, subpart 000**	2. Future Effective Date of Allowable Emissions: **Initial Compliance Test**
3. Requested Allowable Emissions and Units: **< 10 % Opacity**	4. Equivalent Allowable Emissions: lb/hour tons/year

5. Method of Compliance (limit to 60 characters):
Initial and Annual EPA Method 9 Compliance Testing

6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):

EMISSIONS UNIT NO. 6 of 9
RADIAL STACKER BELT

E. VISIBLE EMISSIONS INFORMATION
(Only Emissions Units Subject to a VE Limitation)

Visible Emissions Limitation: Visible Emissions Limitation _____ of _____

1. Visible Emissions Subtype: **VE**	2. Basis for Allowable Opacity: [X] Rule [ ] Other
3. Requested Allowable Opacity: Normal Conditions: **<10%** Exceptional Conditions: **<10%** Maximum Period of Excess Opacity Allowed: **0** min/hour	
4. Method of Compliance: **Initial and Annual Visible Emissions Compliance Testing.**	
5. Visible Emissions Comment (limit to 200 characters):	

F. CONTINUOUS MONITOR INFORMATION
(Only Emissions Units Subject to Continuous Monitoring)

Continuous Monitoring System: Continuous Monitor _____ of _____

1. Parameter Code: **NONE**	2. Pollutant(s):
3. CMS Requirement:	[ ] Rule [ ] Other
4. Monitor Information: Manufacturer: Model Number: Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment (limit to 200 characters):	

EMISSIONS UNIT NO. 6 of 9
RADIAL STACKER BELT

G. EMISSIONS UNIT SUPPLEMENTAL INFORMATION

Supplemental Requirements

1. Process Flow Diagram [X] Attached, Document ID: **III** [ ] Not Applicable [ ] Waiver Requested
2. Fuel Analysis or Specification [ ] Attached, Document ID:_____ [X] Not Applicable [ ] Waiver Requested
3. Detailed Description of Control Equipment [X] Attached, Document ID: **V** [ ] Not Applicable [ ] Waiver Requested
4. Description of Stack Sampling Facilities [ ] Attached, Document ID:_____ [X] Not Applicable [ ] Waiver Requested
5. Compliance Test Report [ ] Attached, Document ID:_____ [ ] Previously submitted, Date:_____ [X] Not Applicable
6. Procedures for Startup and Shutdown [ ] Attached, Document ID:_____ [X] Not Applicable [ ] Waiver Requested
7. Operation and Maintenance Plan [X] Attached, Document ID: **VI** [ ] Not Applicable [ ] Waiver Requested
8. Supplemental Information for Construction Permit Application [X] Attached, Document ID: **VII** [ ] Not Applicable
9. Other Information Required by Rule or Statute [ ] Attached, Document ID:_____ [X] Not Applicable
10. Supplemental Requirements Comment:

EMISSIONS ID. NO. 007

Emissions From Caterpillar Generator Set

EMISSIONS UNIT NO. 7 of 9
DIESEL GENERATOR SET

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through G as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

A. GENERAL EMISSIONS UNIT INFORMATION

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in This Section: (Check one)

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

[X] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Description of Emissions Unit Addressed in This Section (limit to 60 characters):
Caterpillar Diesel fired Generator Set used to supply electrical power to the crushing / aggregate processing plant. Generator fired on No.2 virgin diesel fuel oil with a maximum sulfur content of 0.5% by weight, ~138,000 Btu/gal and a maximum fuel consumption of 25 gal/hr.

3. Emissions Unit Identification Number:
ID: **007**
[ ] No ID
[ ] ID Unknown

43. Emissions Unit Status Code:	44. Initial Startup Date:	45. Emissions Unit Major Group SIC Code:
ACTIVE	**UNKNOWN**	**14**

46. Emissions Unit Comment: (Limit to 500 Characters):
325 H.P. Caterpillar Diesel Generator – fired on No.2 virgin diesel fuel with a maximum sulfur limit of 0.5% by weight – used to power all equipment employed by this crushing/aggregate processing unit.

EMISSIONS UNIT NO. 7 of 9
DIESEL GENERATOR SET

Emissions Unit Control Equipment

29. Control Equipment/Method Description (limit to 200 characters per device or method): **NONE**
2. Control Device or Method Code(s): **NA**

Emissions Unit Details

1. Package Unit: **Generator Set** Manufacturer: **Caterpillar Diesel**	Model Number: **325**	
2. Generator Nameplate Rating:	MW	
3. Incinerator Information: Dwell Temperature: Dwell Time: Incinerator Afterburner Temperature:		°F seconds °F

Emissions Unit Operating Capacity and Schedule

1. Maximum Heat Input Rate: **6.21** mmBtu/hr		
2. Maximum Incineration Rate:	lb/hr	tons/day
3. Maximum Process or Throughput Rate: **Consumes No.2 fuel oil at a maximum rate of 25 gal/hr**		
4. Maximum Production Rate: **25 gal/hr**		
5. Requested Maximum Operating Schedule:		
	10 hours/day	**6** days/week
	52 weeks/year	**3120** hours/year

47. Operating Capacity/Schedule Comment (limit to 200 characters):

325 H.P. Caterpillar Diesel Generator – fired on No.2 virgin diesel fuel with a maximum sulfur limit of 0.5% by weight – used to power all equipment employed by this crushing/aggregate processing unit.

EMISSIONS UNIT NO. 7 of 9
DIESEL GENERATOR SET

B. EMISSION POINT (STACK/VENT) INFORMATION

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram? **007 (Generator)**	30. Emission Point Type Code: **4**
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point): **NONE**	
31. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: **NONE**	

32. Discharge Type Code: **F**	6. Stack Height: feet	7. Exit Diameter: feet
8. Exit Temperature: °F	9. Actual Volumetric Flow Rate: acfm	10. Water Vapor: %

11. Maximum Dry Standard Flow Rate: dscfm	12. Nonstack Emission Point Height: **~12** FEET
13. Emission Point UTM Coordinates: **(portable unit at this location only)** Zone: **17** East (km): **357.8** North (km): **3107.2**	
14. Emission Point Comment (limit to 200 characters):	

EMISSIONS UNIT NO. 7 of 9
DIESEL GENERATOR SET

C. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment _____ of _____

1. Segment Description (Process/Fuel Type) (limit to 500 characters): **Caterpillar Diesel Generator Set – Emissions from Detroit Diesel Generator fired on No.2 virgin diesel fuel with a maximum sulfur limit of 0.5% by weight.**		
8. Source Classification Code (SCC): **20222200401**	3. SCC Units: **1000 gallons burned**	
4. Maximum Hourly Rate: **25 ga/hr @ worst case**	33. Maximum Annual Rate: **78,000 gal/yr @ max.**	6. Estimated Annual Activity Factor: **0.50 tpy @ worst**
7. Maximum % Sulfur: **0.5%**	8. Maximum % Ash: **≤ 0.01 % by weight**	9. Million Btu per SCC Unit: **138,000**
10. Segment Comment (limit to 200 characters):		

Segment Description and Rate: Segment _____ of _____

1. Segment Description (Process/Fuel Type) (limit to 500 characters):		
2. Source Classification Code (SCC):	3. SCC Units:	
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment (limit to 200 characters):		

D. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION

Potential Emissions **Pollutant 1 of 5**

1. Pollutant Emitted: **PM10**		2. Pollutant Regulatory Code: **WP**
3. Primary Control Device Code:	4. Secondary Control Device Code: **NONE**	5. Total Percent Efficiency of Control: **0%**
6. Potential Emissions: : **PM10 = 1.07 lb/hr or 1.67 ton/yr**		7. Synthetically Limited? [**X**]
8. Emission Factor: **0.31 lb/MMBTU** Reference: **AP-42**		48. Emissions Method Code: **3**

10. Calculation of Emissions (limit to 600 characters):

PM10 = (25 gal/hr fuel useage)(138,000 BTU/gal) = 3.45 MMBTU/hr
(3.45 MMBTU/hr)(0.31 lb/MMBTU) = 1.07 lb/hr
(1.07 lb/hr)(3120 hrs/yr) / 2000 lb/ton = 1.67 ton/hr

11. Pollutant Potential Emissions Comment (limit to 200 characters):
Emissions from Diesel Generator Subject to 62-296.320 FAC

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code: **40 CFR 60, subpart 000**	2. Future Effective Date of Allowable Emissions: **Initial Compliance Test**
3. Requested Allowable Emissions and Units: **< 10 % Opacity**	4. Equivalent Allowable Emissions: lb/hour tons/year

5. Method of Compliance (limit to 60 characters):
Initial and Annual EPA Method 9 Compliance Testing

6. Allowable Emissions Comment (Desc. Of Operating Method) (limit to 200 characters):

EMISSIONS UNIT NO. 7 of 9
DIESEL GENERATOR SET

D. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION

Potential Emissions **Pollutant 2 of 5**

1. Pollutant Emitted: **NOx**	2. Pollutant Regulatory Code: **WP**	
3. Primary Control Device Code:	4. Secondary Control Device Code: **NONE**	5. Total Percent Efficiency of Control: **0%**
6. Potential Emissions: : **NOx = 15.21 lb/hr or 23.73 ton/yr**		7. Synthetically Limited? [**X**]
8. Emission Factor: **4.41 lb/MMBTU** Reference: **AP-42**		49. Emissions Method Code: **3**

10. Calculation of Emissions (limit to 600 characters):

NOx = (25 gal/hr fuel useage)(138,000 BTU/gal) = 3.45 MMBTU/hr
(3.45 MMBTU/hr)(4.41 lb/MMBTU) = 15.21 lb/hr
(15.21 lb/hr)(3120 hrs/yr) / 2000 lb/ton = 23.73 ton/yr

11. Pollutant Potential Emissions Comment (limit to 200 characters):
Emissions from Diesel Generator Subject to 62-296.320 FAC

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code: **62-296.320 of FAC**	2. Future Effective Date of Allowable Emissions: **Initial Compliance Test**
3. Requested Allowable Emissions and Units: **< 10 % Opacity**	4. Equivalent Allowable Emissions: lb/hour tons/year

5. Method of Compliance (limit to 60 characters):
Initial and Annual EPA Method 9 Compliance Testing

6. Allowable Emissions Comment (Desc. Of Operating Method) (limit to 200 characters):

EMISSIONS UNIT NO. 7 of 9
DIESEL GENERATOR SET

D. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION

Potential Emissions **Pollutant 3 of 5**

1. Pollutant Emitted: **CO**		2. Pollutant Regulatory Code: **WP**
3. Primary Control Device Code:	4. Secondary Control Device Code: **NONE**	5. Total Percent Efficiency of Control: **0%**
6. Potential Emissions: : **CO = 3.28 lb/hr or 5.12 ton/yr**		7. Synthetically Limited? [X]
8. Emission Factor: **0.95 lb/MMBTU** Reference: **AP-42**		50. Emissions Method Code: **3**

10. Calculation of Emissions (limit to 600 characters):

CO = (25 gal/hr fuel useage)(138,000 BTU/gal) = 3.45 MMBTU/hr
(3.45 MMBTU/hr)(0.95 lb/MMBTU) = 3.28 lb/hr
(3.28 lb/hr)(3120 hrs/yr) / 2000 lb/ton = 5.12 ton/hr

11. Pollutant Potential Emissions Comment (limit to 200 characters):
Emissions from Diesel Generator Subject to 62-296.320 FAC

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code: **62-296.320 FAC**	2. Future Effective Date of Allowable Emissions: **Initial Compliance Test**
3. Requested Allowable Emissions and Units: **< 20% Opacity**	4. Equivalent Allowable Emissions: lb/hour tons/year

5. Method of Compliance (limit to 60 characters):
Initial and Annual EPA Method 9 Compliance Testing

6. Allowable Emissions Comment (Desc. Of Operating Method) (limit to 200 characters):

EMISSIONS UNIT NO. 7 of 9
DIESEL GENERATOR SET

D. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION

Potential Emissions **Pollutant 4 of 5**

1. Pollutant Emitted: **SOx**		2. Pollutant Regulatory Code: **WP**
3. Primary Control Device Code:	4. Secondary Control Device Code: **NONE**	5. Total Percent Efficiency of Control: **0%**
6. Potential Emissions: : **SOx = 1.00 lb/hr or 1.56 ton/yr**		7. Synthetically Limited? [**X**]
8. Emission Factor: **0.29 lb/MMBTU** Reference: **AP-42**		51. Emissions Method Code: **3**

10. Calculation of Emissions (limit to 600 characters):

SOx = (25 gal/hr fuel useage)(138,000 BTU/gal) = 3.45 MMBTU/hr
(3.45 MMBTU/hr)(0.29 lb/MMBTU) = 1.00 lb/hr
(1.00 lb/hr)(3120 hrs/yr) / 2000 lb/ton = 1.56 ton/hr

11. Pollutant Potential Emissions Comment (limit to 200 characters):
Emissions from Diesel Generator Subject to 62-296.320 FAC

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code: **62-296.320 FAC**	2. Future Effective Date of Allowable Emissions: **Initial Compliance Test**
3. Requested Allowable Emissions and Units: **< 20% Opacity**	4. Equivalent Allowable Emissions: lb/hour tons/year

5. Method of Compliance (limit to 60 characters):
Initial and Annual EPA Method 9 Compliance Testing

6. Allowable Emissions Comment (Desc. Of Operating Method) (limit to 200 characters):

D. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION

Potential Emissions **Pollutant 5 of 5**

1. Pollutant Emitted: **TOC**		2. Pollutant Regulatory Code: **WP**
3. Primary Control Device Code:	4. Secondary Control Device Code: **NONE**	5. Total Percent Efficiency of Control: **0%**
6. Potential Emissions: : **TOC = 1.24 lb/hr or 1.93 ton/yr**		7. Synthetically Limited? [**X**]
8. Emission Factor: **0.36 lb/MMBTU** Reference: **AP-42**		52. Emissions Method Code: **3**

10. Calculation of Emissions (limit to 600 characters):

TOC = (25 gal/hr fuel useage)(138,000 BTU/gal) = 3.45 MMBTU/hr
(3.45 MMBTU/hr)(0.36 lb/MMBTU) = 1.24 lb/hr
(1.24 lb/hr)(3120 hrs/yr) / 2000 lb/ton = 1.93 ton/~~hr~~ yr

11. Pollutant Potential Emissions Comment (limit to 200 characters):
Emissions from Diesel Generator Subject to 62-296.320 FAC

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code: **62-296.320 FAC**	2. Future Effective Date of Allowable Emissions: **Initial Compliance Test**
3. Requested Allowable Emissions and Units: **< 20% Opacity**	4. Equivalent Allowable Emissions: lb/hour tons/year

5. Method of Compliance (limit to 60 characters):
Initial and Annual EPA Method 9 Compliance Testing

6. Allowable Emissions Comment (Desc. Of Operating Method) (limit to 200 characters):

E. VISIBLE EMISSIONS INFORMATION
(Only Emissions Units Subject to a VE Limitation)

Visible Emissions Limitation: Visible Emissions Limitation _____ of _____

1. Visible Emissions Subtype: **VE**	2. Basis for Allowable Opacity: [X] Rule [ ] Other
3. Requested Allowable Opacity: Normal Conditions: **<20%** Exceptional Conditions: **<10%** Maximum Period of Excess Opacity Allowed: **0** min/hour	
4. Method of Compliance: **Initial and Annual Visible Emissions Compliance Testing.**	
5. Visible Emissions Comment (limit to 200 characters): **Visible Emissions from Diesel Generator are subject to 62-296.320 FAC**	

F. CONTINUOUS MONITOR INFORMATION
(Only Emissions Units Subject to Continuous Monitoring)

Continuous Monitoring System: Continuous Monitor _____ of _____

1. Parameter Code: **NONE**	2. Pollutant(s):
3. CMS Requirement:	[ ] Rule [ ] Other
4. Monitor Information: Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment (limit to 200 characters):	

EMISSIONS UNIT NO. 7 of 9
DIESEL GENERATOR SET

G. EMISSIONS UNIT SUPPLEMENTAL INFORMATION

Supplemental Requirements

1. Process Flow Diagram [X] Attached, Document ID: **III** [ ] Not Applicable [ ] Waiver Requested
2. Fuel Analysis or Specification [X] Attached, Document ID: **VII** [ ] Not Applicable [ ] Waiver Requested **can be found in supplemental secttion of application**
3. Detailed Description of Control Equipment [X] Attached, Document ID: **V** [ ] Not Applicable [ ] Waiver Requested
4. Description of Stack Sampling Facilities [ ] Attached, Document ID:_____ [X] Not Applicable [ ] Waiver Requested
5. Compliance Test Report [ ] Attached, Document ID:_____ [ ] Previously submitted, Date:_____ [X] Not Applicable
6. Procedures for Startup and Shutdown [ ] Attached, Document ID:_____ [X] Not Applicable [ ] Waiver Requested
7. Operation and Maintenance Plan [X] Attached, Document ID: **VI** [ ] Not Applicable [ ] Waiver Requested
8. Supplemental Information for Construction Permit Application [X] Attached, Document ID: **VII** [ ] Not Applicable
9. Other Information Required by Rule or Statute [ ] Attached, Document ID:_____ [X] Not Applicable
10. Supplemental Requirements Comment:

EMISSIONS ID. NO. 008

Emissions From Paved / Unpaved Roads

III. EMISSIONS UNIT INFORMATION

FUGITIVE EMISSIONS FROM PAVED & UNPAVED AREAS

A separate Emissions Unit Information Section (including subsections A through G as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

A. GENERAL EMISSIONS UNIT INFORMATION

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in This Section: (Check one)

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

[X] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Description of Emissions Unit Addressed in This Section (limit to 60 characters):

Fugitive emissions from paved and unpaved areas – worst case scenario. All paved and unpaved areas and aggregate piles at this facility as well as other locations will be kept damp on a as needed basis.

3. Emissions Unit Identification Number:
ID: **004**
[ ] No ID
[ ] ID Unknown

1. Emissions Unit Status Code:	2. Initial Startup Date:	3. Emissions Unit Major Group SIC Code:
NA	**ASAP**	**2951**

4. Emissions Unit Comment: (Limit to 500 Characters):
Fugitive emissions from paved and unpaved areas – worst case scenario. All paved and unpaved areas and aggregate piles at this facility and other locations will be kept damp on a as needed basis.

Emissions Unit Control Equipment

1. Control Equipment/Method Description (limit to 200 characters per device or method):

   All unpaved roadways at this facility and other locations are and will be kept damp by water truck and sprlinker system on a as needed basis. Vehicular traffic speed will be posted and enforced at a maximum of 5 m.p.h. at all locations.

2. Control Device or Method Code(s): **099**

Emissions Unit Details

1. Package Unit: **NA**
   Manufacturer: Model Number:
2. Generator Nameplate Rating: MW
3. Incinerator Information:
   Dwell Temperature: °F
   Dwell Time: seconds
   Incinerator Afterburner Temperature: °F

Emissions Unit Operating Capacity and Schedule

1. Maximum Heat Input Rate:
2. Maximum Incineration Rate: lb/hr tons/day
3. Maximum Process or Throughput Rate:
4. Maximum Production Rate:
5. Requested Maximum Operating Schedule:

   24 hours/day **7 days/week**

   52 weeks/year ***not to exceeed: 4000*** **hrs/year**

6. Operating Capacity/Schedule Comment (limit to 200 characters):
   Vehicular traffic at this facility will not be continuous 24 hrs/day

B. EMISSION POINT (STACK/VENT) INFORMATION

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram? **004 – Unpaved/Paved Areas**	2. Emission Point Type Code: **4**	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point): **NA – Fugitive Emission Point**		
3. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: **NOT APPLICABLE**		
4. Discharge Type Code: **F**	6. Stack Height: **~ 0.0** feet	7. Exit Diameter: **Not Determinable** feet
8. Exit Temperature: **~Ambient** °F	9. Actual Volumetric Flow Rate: **Unknown**	10. Water Vapor: **~5 %**
11. Maximum Dry Standard Flow Rate: dscfm	12. Nonstack Emission Point Height: feet	
13. Emission Point UTM Coordinates: (@ **present location, other locations UTM not determined as of yet.)** Zone: **17** East (km): **357.8 E** North (km): **3107.2 N**		
14. Emission Point Comment (limit to 200 characters): **This emission point subject to 62-296.310 FAC Rules and Regulations.**		

C. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment __1__ of __2__

1. Segment Description (Process/Fuel Type) (limit to 500 characters): **Fugitive emissions from paved, unpaved roads and stockpiles (Material Handling) emissions related to silt content on roadways and vehicular traffic in facility. Worst case scenario.**		
2. Source Classification Code (SCC): **3050204**	3. SCC Units: **Vehicle Miles Traveled**	
4. Maximum Hourly Rate: **NA**	5. Maximum Annual Rate: **NA**	6. Estimated Annual Activity Factor: **NA**
6. Maximum % Sulfur: **NA**	7. Maximum % Ash: **NA**	8. Million Btu per SCC Unit: **NA**
10. Segment Comment (limit to 200 characters): **FUGITIVE EMISSIONS CALCULATED AT WORST CASE SCENARIO**		

Segment Description and Rate: Segment _____ of _____

1. Segment Description (Process/Fuel Type) (limit to 500 characters):		
2. Source Classification Code (SCC):	3. SCC Units:	
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment (limit to 200 characters):		

D. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION

Potential Emissions

1. Pollutant Emitted: **PM10, TSP**	2. Pollutant Regulatory Code: **EL**	
3. Primary Control Device Code: **099**	4. Secondary Control Device Code:	5. Total Percent Efficiency of Control: **90.0%**
6. Potential Emissions: PM10 : **1.0 lb/hr, 1.67 ton/yr** TSP: **2.1** lb/hour **3.28** tons/year		7. Synthetically Limited? [**X**] **YES**
8. Emission Factor: **0.24 lb/VMT** Reference: **AP-42 (Section 13.2.1.1) unpaved roads**		9. Emissions Method Code: **3**

10. Calculation of Emissions (limit to 600 characters):

$E = k(5.9)[s/12][S/30][W/3]^{0.7}[w/4]^{0.5}[365-P/365]$

$E = 0.36(5.9)[8.9/12][5/30][31.3/3]^{0.7}[10/4]^{0.5}[365-120/365] = 2.0$ lb/VMT

$E = 2.0$ lb/VMT (1-0.90 control efficiency fron water truck) $= 0.2$ lb/VMT

$E_{daily} = (0.2$ lb/VMT$)(50$ VMT/day$) = 10.0$ lb/day

$E_{year} = [(10.0$ lb/day$) / (\sim 12$ hr/day$) (4000$ hr/yr$) / 2000$ lb/ton $= 1.67$ ton/yr

11. Pollutant Potential Emissions Comment (limit to 200 characters):

Allowable Emissions Allowable Emissions ___1___ of __7____

3. Basis for Allowable Emissions Code: **RULE**	2. Future Effective Date of Allowable Emissions: **NA**
4. Requested Allowable Emissions and Units: **<10% Opacity**	5. Equivalent Allowable Emissions: PM10 = **1.0 lb/hr, 1.67 ton/hr** TSP = **2.10** lb/hour, **3.28** tons/year

5. Method of Compliance (limit to 60 characters): **Compliance will be achieved through initial and annual emissions compliance testing. Watering of roadways and stockpiles will be performed as to control fugitive emissions at all locations.**

6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):

E. VISIBLE EMISSIONS INFORMATION
(Only Emissions Units Subject to a VE Limitation)

Visible Emissions Limitation: Visible Emissions Limitation ___1___ of ___1___

1. Visible Emissions Subtype: **VE10**	2. Basis for Allowable Opacity: [X] Rule [ ] Other
3. Requested Allowable Opacity: Normal Conditions: **10 %** Exceptional Conditions: **10 %** Maximum Period of Excess Opacity Allowed: **NONE** min/hour	
4. Method of Compliance: **EPA METHOD 9**	
5. Visible Emissions Comment (limit to 200 characters): **Regulated under 62-296.320**	

F. CONTINUOUS MONITOR INFORMATION
(Only Emissions Units Subject to Continuous Monitoring)

Continuous Monitoring System: Continuous Monitor _____ of _____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	[ ] Rule [ ] Other
4. Monitor Information: Manufacturer: Model Number: Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment (limit to 200 characters): **NOT APPLICABLE**	

G. EMISSIONS UNIT SUPPLEMENTAL INFORMATION

Supplemental Requirements

1. Process Flow Diagram [X] Attached, Document ID: I [ ] Not Applicable [ ] Waiver Requested
2. Fuel Analysis or Specification [X] Attached, Document ID: V [ ] Not Applicable [ ] Waiver Requested **Can be found in supplemental information section of application**
3. Detailed Description of Control Equipment [X] Attached, Document ID: VI [ ] Not Applicable [ ] Waiver Requested
4. Description of Stack Sampling Facilities [ ] Attached, Document ID: _____ [ ] Not Applicable [ ] Waiver Requested
5. Compliance Test Report [ ] Attached, Document ID: _____ [ ] Previously submitted, Date: _____ [X] Not Applicable
6. Procedures for Startup and Shutdown [ ] Attached, Document ID: _____ [ ] Not Applicable [ ] Waiver Requested
7. Operation and Maintenance Plan [ ] Attached, Document ID: _____ [X] Not Applicable [ ] Waiver Requested
8. Supplemental Information for Construction Permit Application [X] Attached, Document ID: V [ ] Not Applicable
9. Other Information Required by Rule or Statute [ ] Attached, Document ID: _____ [ ] Not Applicable
10. Supplemental Requirements Comment:

EMISSIONS ID. NO. 009

Emissions From Stock and Storage Piles

III. EMISSIONS UNIT INFORMATION

FUGITIVE EMISSIONS FROM AGGREGATE STORAGE PILES

A separate Emissions Unit Information Section (including subsections A through G as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

A. GENERAL EMISSIONS UNIT INFORMATION

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in This Section: (Check one)

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

[X] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

6. Description of Emissions Unit Addressed in This Section (limit to 60 characters):

Fugitive emissions from paved and unpaved areas – worst case scenario. All paved and unpaved areas and aggregate piles at this facility and other locations will be kept damp on a as needed basis.

3. Emissions Unit Identification Number:
ID: **005**

[ ] No ID
[ ] ID Unknown

5. Emissions Unit Status Code:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code:
NA	**ASAP**	**2951**

8. Emissions Unit Comment: (Limit to 500 Characters):
Fugitive emissions from Aggregate Handling – worst case scenario. All aggregate piles at this facility and other locations will be kept damp on a as needed basis.

Emissions Unit Control Equipment

5. Control Equipment/Method Description (limit to 200 characters per device or method):

All aggregate stockpiles at this facility and other locations will be kept damp by water truck and sprlinker system on a as needed basis.

2. Control Device or Method Code(s): **099**

Emissions Unit Details

1. Package Unit: **NA**
   Manufacturer: Model Number:
2. Generator Nameplate Rating: MW
3. Incinerator Information:
   Dwell Temperature: °F
   Dwell Time: seconds
   Incinerator Afterburner Temperature: °F

Emissions Unit Operating Capacity and Schedule

1. Maximum Heat Input Rate:
2. Maximum Incineration Rate: lb/hr tons/day
3. Maximum Process or Throughput Rate:
4. Maximum Production Rate:
7. Requested Maximum Operating Schedule:

24 hours/day **7 days/week**

52 weeks/year ***not to exceeed: 4000*** **hrs/year**

8. Operating Capacity/Schedule Comment (limit to 200 characters):
Aggregate Handling at this facility will not be continuous 24 hrs/day

B. EMISSION POINT (STACK/VENT) INFORMATION

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram? **005 – Conveyor Drops, Loader Operations**		6. Emission Point Type Code: **4**
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point): **NA – Fugitive Emission Point**		
7. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: **NOT APPLICABLE**		
8. Discharge Type Code: **F**	6. Stack Height: **~ 0.0** feet	7. Exit Diameter: **Not Determinable** feet
8. Exit Temperature: **~Ambient** °F	9. Actual Volumetric Flow Rate: **Unknown**	10. Water Vapor: **~5 %**
11. Maximum Dry Standard Flow Rate: dscfm		12. Nonstack Emission Point Height: feet
13. Emission Point UTM Coordinates: **(@ present location. UTM's for other locations have not been determined as of yet)** Zone: **17** East (km): **362.2 E** North (km): **3004.0 N**		
14. Emission Point Comment (limit to 200 characters): **This emission point subject to 62-296.310 FAC Rules and Regulations.**		

C. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment ___1__ of __2___

1. Segment Description (Process/Fuel Type) (limit to 500 characters):		
Fugitive emissions from aggregate stockpiles and conveyor belts (Material Handling) emissions related to fugitives from conveyor belt drops and from aggregate storage piles from prevailing winds.		
12. Source Classification Code (SCC): **3050207, 3050205**	13. SCC Units: **Area of stockpiles / tons of products**	
14. Maximum Hourly Rate: **NA**	15. Maximum Annual Rate: **NA**	6. Estimated Annual Activity Factor: **NA**
16. Maximum % Sulfur: **NA**	17. Maximum % Ash: **NA**	18. Million Btu per SCC Unit: **NA**
10. Segment Comment (limit to 200 characters): **FUGITIVE EMISSIONS CALCULATED AT WORST CASE SCENARIO**		

Segment Description and Rate: Segment _____ of _____

1. Segment Description (Process/Fuel Type) (limit to 500 characters):		
2. Source Classification Code (SCC):	3. SCC Units:	
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment (limit to 200 characters):		

D. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION

Potential Emissions

1. Pollutant Emitted: **PM10, TSP**	2. Pollutant Regulatory Code: **EL**	
3. Primary Control Device Code: **099**	4. Secondary Control Device Code:	5. Total Percent Efficiency of Control: **90.0%**
6. Potential Emissions: PM10 : **0.20 lb/hr, 0.41 ton/yr** TSP = **0.42 lb/hr, 0.86 ton/yr**		7. Synthetically Limited? [**X**] **YES**
6. Emission Factor: Reference: **AP-42 (Section 13.2.4.2)**		9.Emissions Method Code: **3**

7. Calculation of Emissions (limit to 600 characters):

$E = k(0.0032)[u/5]^{1.3}[M/2]^{1.4}$

E = 0.35(0.0032)[7/5]$^{1.3}$ / [0.7/2]$^{1.4}$ = 0.0081 lb/ton

E = 250 ton/hr (0.0081 lb/ton) = 2.03 lb/hr

E = (2.03 lb/hr)(1-0.90 collector efficiency) (~24 hr/day) = 4.87 lb/day

E = [(4.87 lb/day) / (~24 hr/day) (4000 hr/yr) / 2000 lb/ton = 0.41 ton/yr

8. Pollutant Potential Emissions Comment (limit to 200 characters):

Aggregate Storage Piles & Conveyor Drops – Fugitive Emissions (controlled) are subject to 62-296.700 (2)(e)(f)

Allowable Emissions Allowable Emissions ___1___ of __7____

7. Basis for Allowable Emissions Code: **RULE**	2. Future Effective Date of Allowable Emissions: **NA**
8. Requested Allowable Emissions and Units: **<10% Opacity**	9. Equivalent Allowable Emissions: PM10: **0.20 lb/hr, 0.41 ton/hr** TSP = **0.42 lb/hr, 0.86 ton/yr**

5. Method of Compliance (limit to 60 characters): **Compliance will be achieved through initial and annual emissions compliance testing. Watering of stockpiles will be performed as to control fugitive emissions at all sites.**

6. Allowable Emissions Comment (Desc. Of Operating Method) (limit to 200 characters):

E. VISIBLE EMISSIONS INFORMATION
(Only Emissions Units Subject to a VE Limitation)

Visible Emissions Limitation: Visible Emissions Limitation ___1___ of ___1___

1. Visible Emissions Subtype: **VE10**	2. Basis for Allowable Opacity: [X] Rule [ ] Other
3. Requested Allowable Opacity: Normal Conditions: **10 %** Exceptional Conditions: **10 %** Maximum Period of Excess Opacity Allowed: **NONE** min/hour	
4. Method of Compliance: **EPA METHOD 9**	
5. Visible Emissions Comment (limit to 200 characters): **Regulated under 62-296.320**	

F. CONTINUOUS MONITOR INFORMATION
(Only Emissions Units Subject to Continuous Monitoring)

Continuous Monitoring System: Continuous Monitor _____ of _____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	[ ] Rule [ ] Other
4. Monitor Information: Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment (limit to 200 characters): **NOT APPLICABLE**	

G. EMISSIONS UNIT SUPPLEMENTAL INFORMATION

Supplemental Requirements

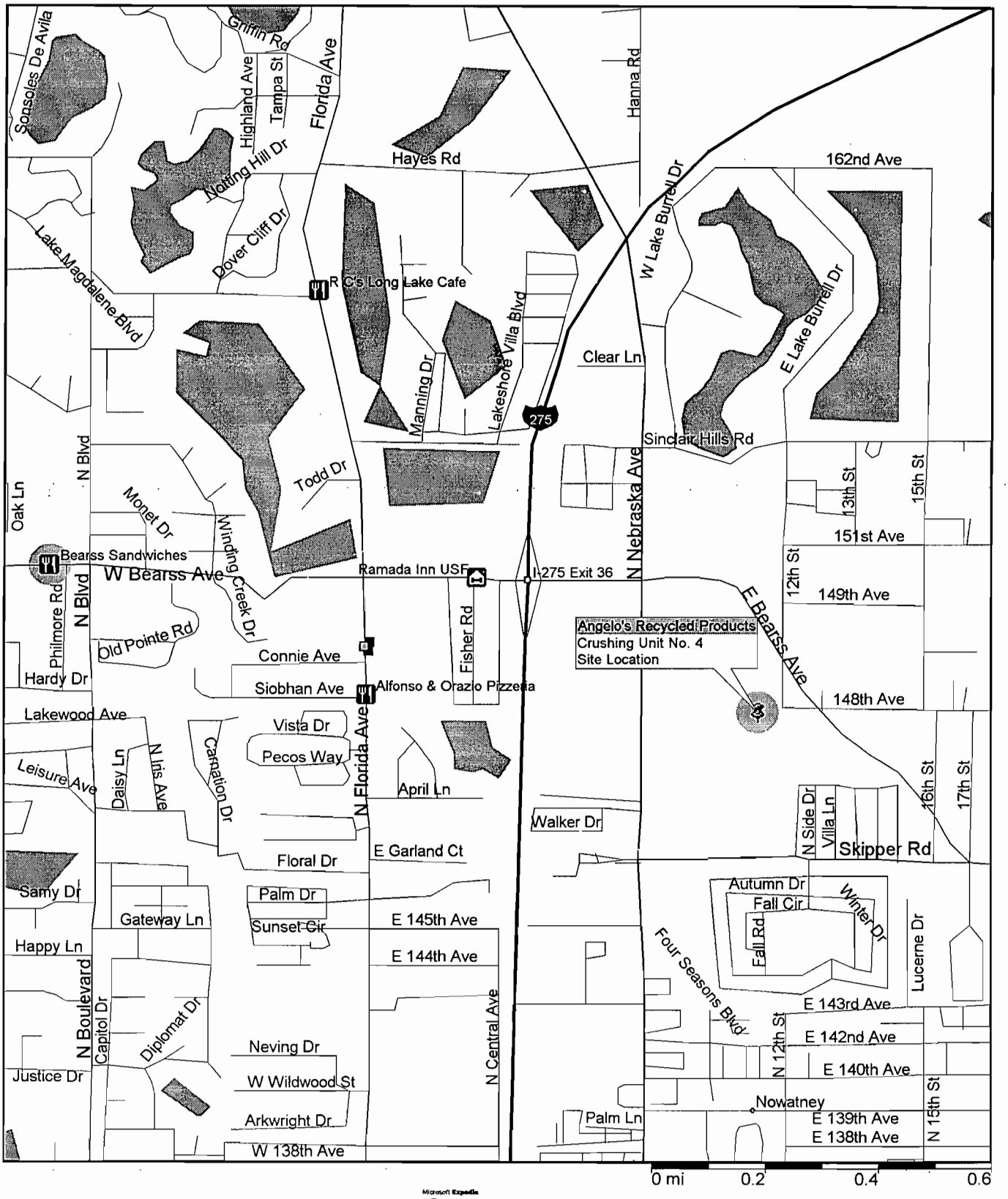
1. Process Flow Diagram [X] Attached, Document ID: **III** [ ] Not Applicable [ ] Waiver Requested
2. Fuel Analysis or Specification [X] Attached, Document ID: **VII** [ ] Not Applicable [ ] Waiver Requested **Can be found in supplemental information section of application**
3. Detailed Description of Control Equipment [X] Attached, Document ID: **V** [ ] Not Applicable [ ] Waiver Requested
4. Description of Stack Sampling Facilities [ ] Attached, Document ID:_____ [ ] Not Applicable [ ] Waiver Requested
5. Compliance Test Report [ ] Attached, Document ID:_____ [ ] Previously submitted, Date:_____ [X] Not Applicable
6. Procedures for Startup and Shutdown [ ] Attached, Document ID:_____ [ ] Not Applicable [ ] Waiver Requested
7. Operation and Maintenance Plan [ ] Attached, Document ID:_____ [X] Not Applicable [ ] Waiver Requested
8. Supplemental Information for Construction Permit Application [X] Attached, Document ID: **VI** [ ] Not Applicable
9. Other Information Required by Rule or Statute [ ] Attached, Document ID:_____ [ ] Not Applicable
10. Supplemental Requirements Comment:

TABLE OF CONTENTS

I. FACILITY LOCATION

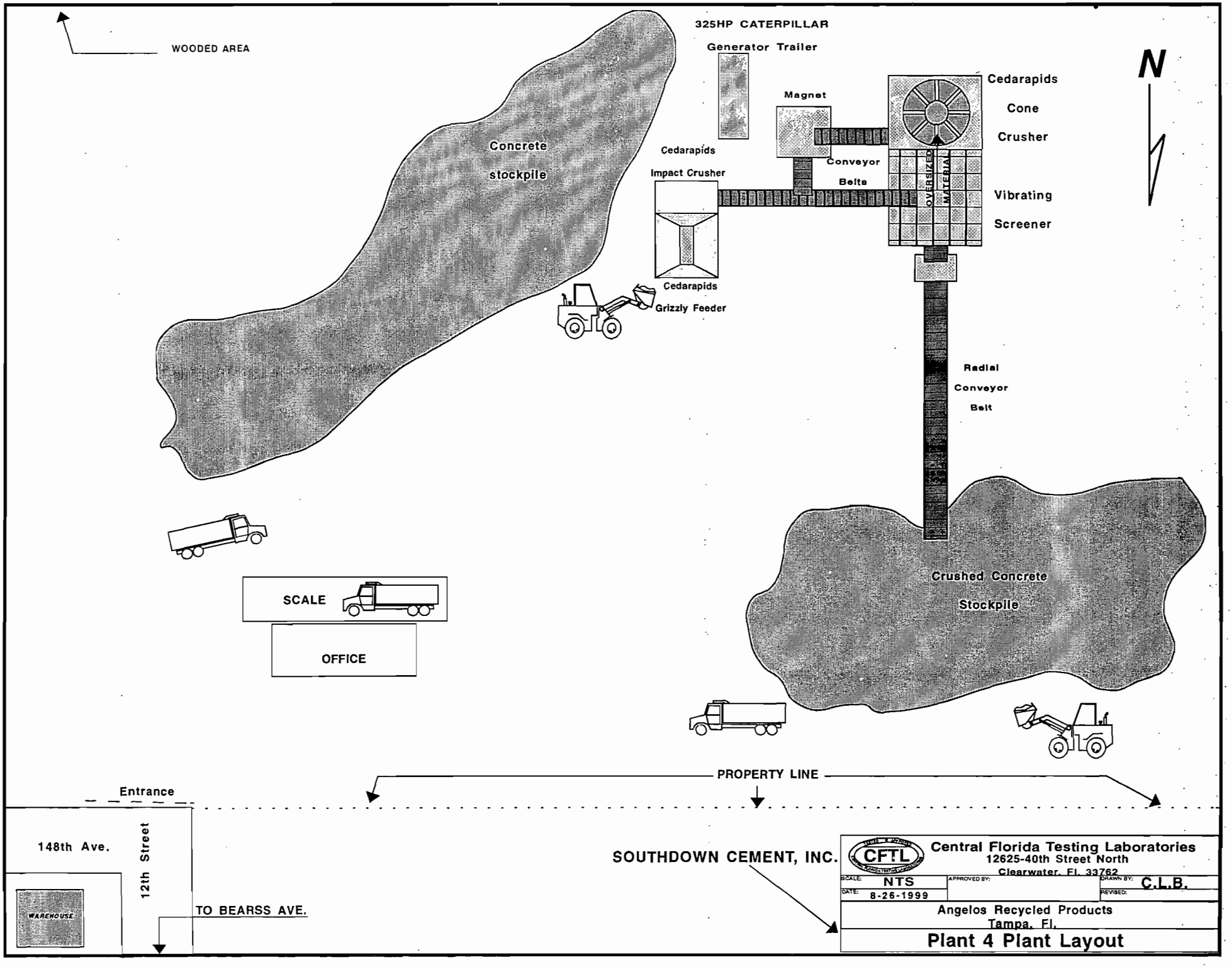
ANGELO'S RECYCLED MATERIALS

PORTABLE RECLAIMED CRUSHING PLANT NO.4



Microsoft Expedia Streets98

II. SITE PLAN



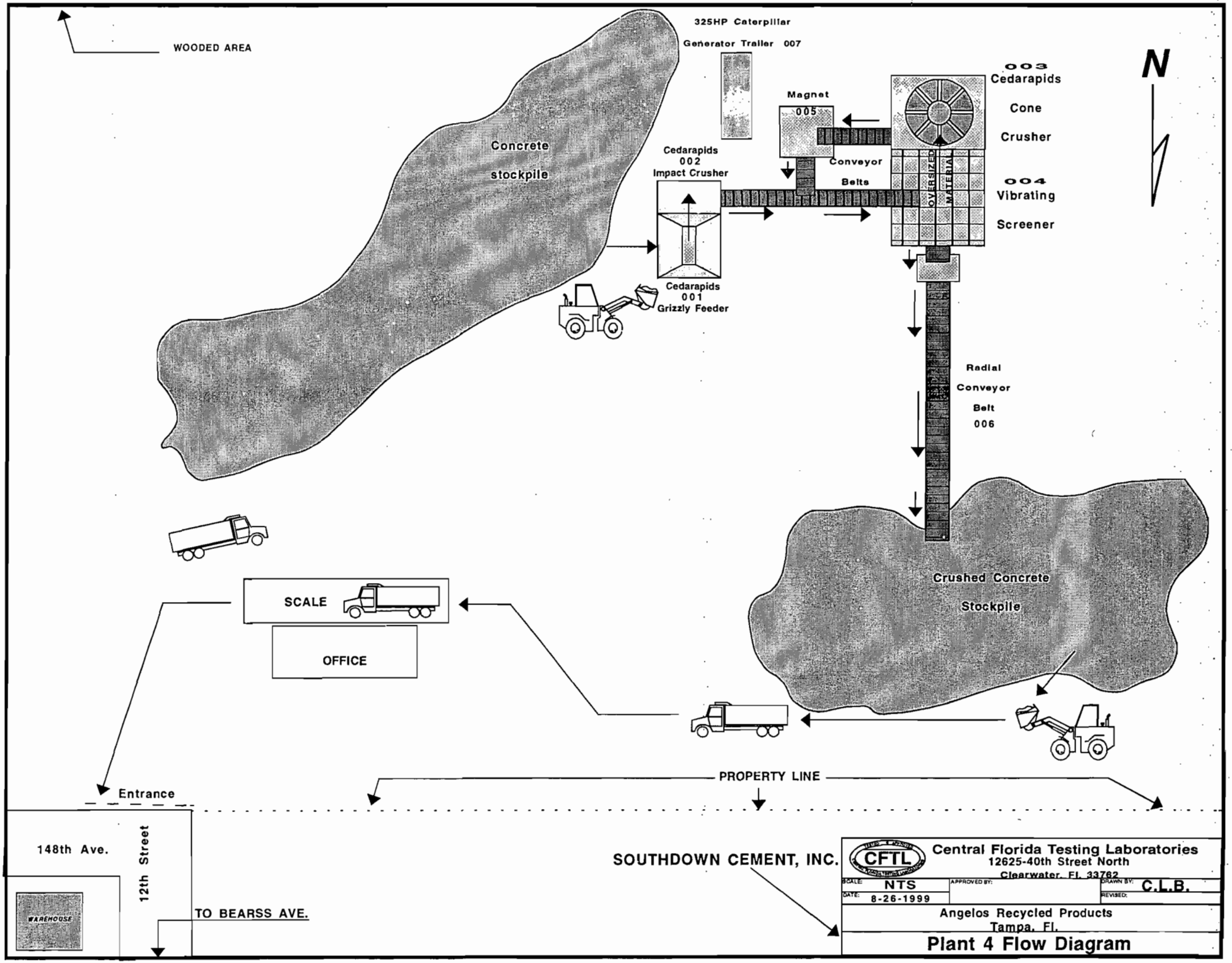
Central Florida Testing Laboratories
12625-40th Street North
Clearwater, Fl. 33762

SCALE:	APPROVED BY:	DRAWN BY:
NTS		C.L.B.
DATE: 8-26-1999		REVISED:

Angelos Recycled Products
Tampa, Fl.

Plant 4 Plant Layout

III. FLOW DIAGRAM


WOODED AREA
325HP Caterpillar
Generator Trailer 007
Concrete
stockpile
Magnet
005
003
Cedarapids
Cone
Crusher
Cedarapids
002
Impact Crusher
Conveyor
Belts
OVERSIZED
MATERIAL
004
Vibrating
Screener
N
Cedarapids
001
Grizzly Feeder
Radial
Conveyor
Belt
006
SCALE
OFFICE
Crushed Concrete
Stockpile
PROPERTY LINE
Entrance
148th Ave.
12th Street
WAREHOUSE
TO BEARSS AVE.
SOUTHDOWN CEMENT, INC.
CFTL
Central Florida Testing Laboratories
12625-40th Street North
Clearwater, Fl. 33762
SCALE: NTS
APPROVED BY:
DRAWN BY: C.L.B.
DATE: 8-26-1999
REVISED:
Angelos Recycled Products
Tampa, Fl.
Plant 4 Flow Diagram

IV. UNCONFINED EMISSIONS

FUGITIVE EMISSION CONTROL

Precautions to control and prevent fugitive emissions are accomplished at this site occurs in several manners. Any stockpiles at this location or any other location will be kept dampened by sprlinker systems or by water truck to control airborne emissions by prevailing winds. All traffic areas will have an enforced and instructed 5 mph speed limit as well as kept damp by water truck or sprlinker system on an as needed basis to control fugitive emissions.

V. CONTROL EQUIPMENT

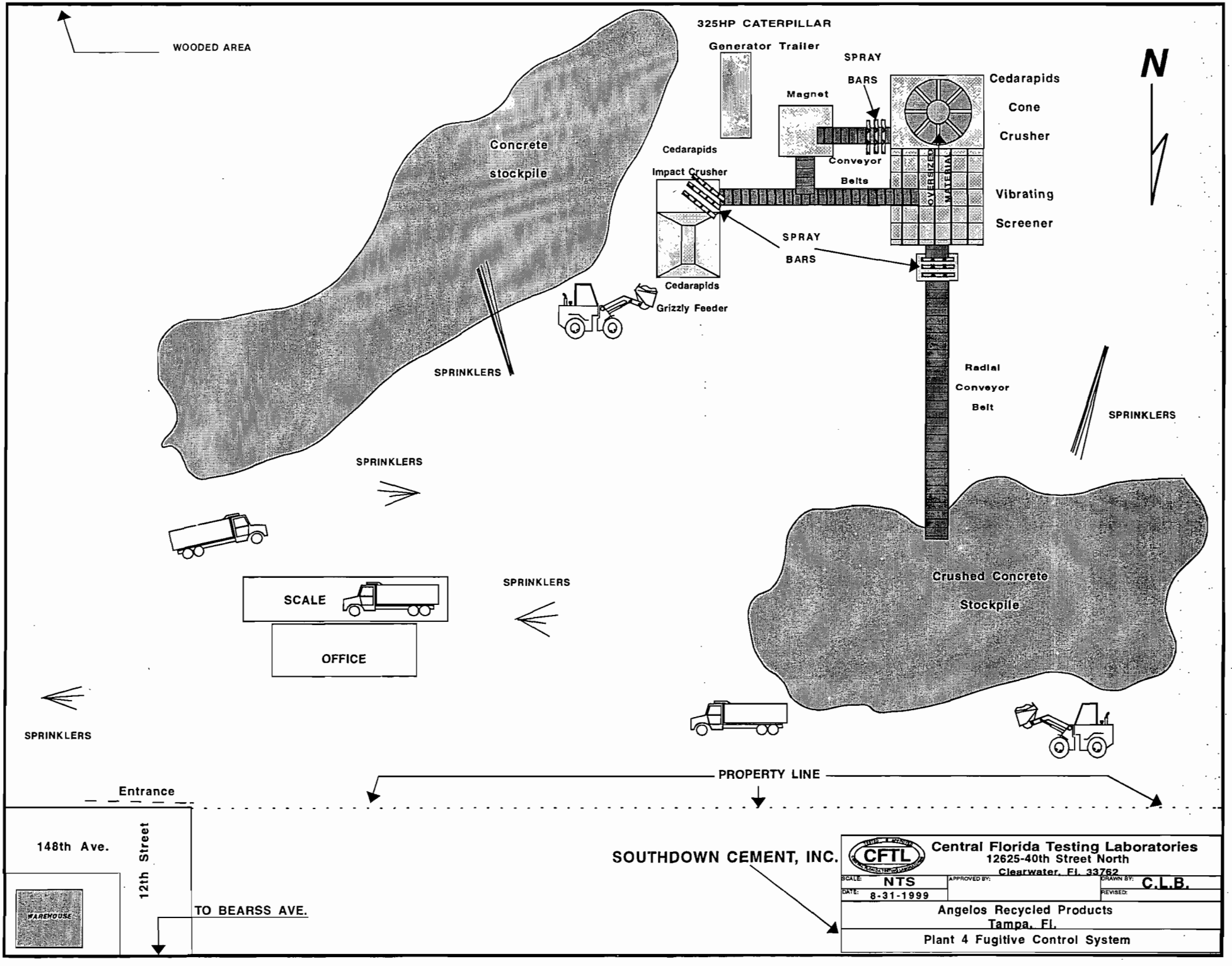
CONTROL EQUIPMENT

All of the equipment used to control fugitive dust emissions from this crushing unit was generated by crushing and maintenance personnel on as needed basis as this crushing unit did not come equipped with any dust suppression equipment when purchased.

The water spray bar and spray head system used on this equipment were manufactured and installed on all areas where possible fugitive dust emissions would occur during the crushing, screening and conveying operations. These areas include the grizzly feeder, the crusher, the conveyor belt drop points, screens and discharge pan.

The control process starts with an on site well that is equipped with two (2) electric pumps (only one used at a time as one is a spare) that is used to feed water through 1 1/2 inch PVC pipe to a hose bib rack. From the hose bib rack water is fed through either 1/2 PVC piping or 1/2 inch hose to spray heads and bars mounted at the various fugitive emission points mentioned above at 25-40 psi, depending what is needed to control the emissions. When at other sites the crusher is equipped with its own pump to supply water to the dust supression spray bar system. Water is usually obtained from various sources such as on site water supplies, fire hydrant, lakes, ponds or water truck.

In addition, plant personnel stand on top of the feeder hopper, where the material is dumped in by front loader, dampening the material that is in the loader and the material that is being dumped into this hopper with a high pressure water hose, to control any fugitive emissions generated.



CFTL

Central Florida Testing Laboratories
12625-40th Street North
Clearwater, Fl. 33762

SCALE: NTS	APPROVED BY:	DRAWN BY: C.L.B.
DATE: 8-31-1999		REVISED:

Angelos Recycled Products
Tampa, Fl.

Plant 4 Fugitive Control System

VI. O & M PLAN

General Maintenance Intervals

The crushing unit and the general area are checked visually, daily for visible emissions. The entire compound inclusive of storage piles are continiously kept damp by a water truck. If any fugitive emissions are seen escaping the crushing plant the source is identified immediately and the problem area is corrected. Fugitive emissions at drop points are controlled by increasing and decreasing the water pressure from 25-40 psi, at the spray bars/heads.

Inspections of various parts of the Self-Made Water Spray Bar / Spray Head Dust Suppression System are done on a daily basis before startup, during operation and after shut down, as well as complete inspection on a weekly basis. If anything is found broken, not functioning or out of the ordinary it is fixed immediately by trained plant personnel. In addition, this dust supression system is equipped with a spare pump in case of breakdown the spare pump can be used until the other pump can be fixed.

OPERATING PARAMETERS
for
SELF-MADE WATER SPRAY BAR / SPRAY HEAD
DUST SUPRESSION SYSTEM

Water Pressure to Spray Bars & Spray Heads *20-45 psi @ each head*

Operation Mode *Continuous w/ product*

Maintenance Log

Description of Maintenance Performed:	Date	Initials

Maintenance Log

Description of Maintenance Performed:	Date	Initials

Maintenance Log

Description of Maintenance Performed:	Date	Initials

VII. SUPPLEMENTAL INFORMATION

ANGELO'S RECYCLED MATERIALS - PLANT NO. 4

Total Emissions Produced by Facility

Point	Emission Point Name	PM10 lb/hr	PM10 ton/yr	SOx lb/hr	SOx ton/yr	CO lb/hr	CO ton/yr	NOx lb/hr	NOx ton/yr	TOC lb/hr	TOC ton/yr
001	Receiving Hopper / Grizzly Feeder	0.42	0.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
002	Cedarapids 3054 Jaw Crusher	0.42	0.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
003	Cedarapids RC5411 Cone Crusher	0.42	0.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
004	Vibrating Screening Deck	0.96	1.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
005	Magnet Transfer Point	0.96	1.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
006	Radial Stacker Belt	0.96	1.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
007	Generator Set	1.07	1.67	1.00	1.56	3.28	5.12	15.12	23.73	1.24	1.93
008	Paved/Unpaved Roads	1.00	1.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
009	Fugitives from Stockpiles	~~2.03~~ 0.20	0.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	TOTALS: Crusher/Generator	~~7.17~~/1.07	~~8.56~~/1.67	0/1.00	0/1.56	0/3.28	0/5.12	0/15.12	0/23.73	0/1.24	0/1.93

6.41/1.07 10.23/1.67 15.21

central company, inc.

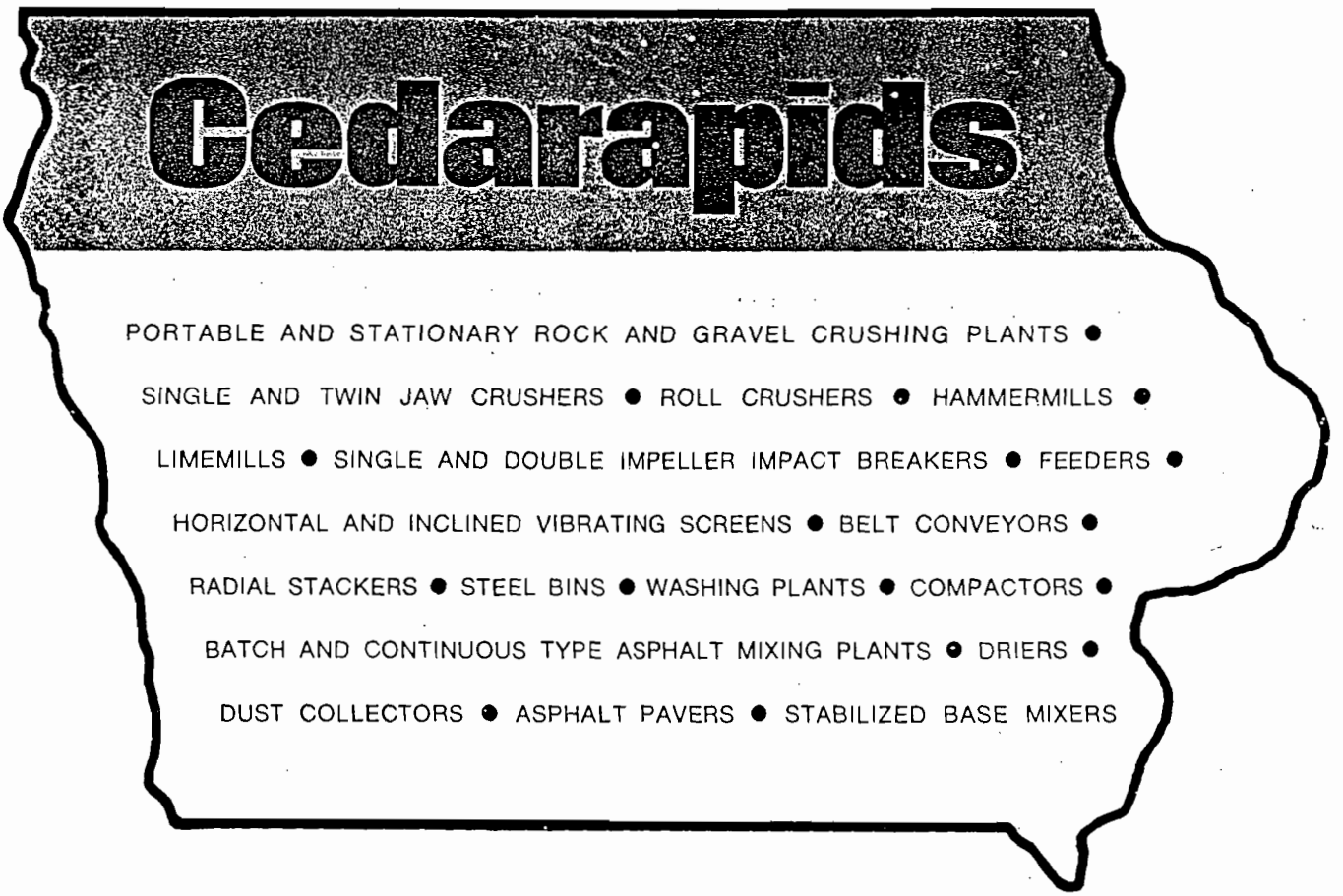
PETROLEUM PRODUCTS

CENTRAL OIL COMPANY, INC.

FUEL OIL #2 (DISTILLATE) SPECIFICATIONS

CHARACTERISTICS	MIN	MAX
GRAVITY, API AT 60°F	32.3	
SULPHUR, % WT.		0.21
POUR POINT, F		15.
BS & W. %		0.2
VISCOSITY, SSU/100F SECS	33	40.
VISCOSITY,KINEMATIC CST/40C	2.0	4.
FLASH POINT, PM CC, F	150.	
ASH, % WT.		0.01
CETANE NUMBER	40.	
CARBON RESIDUE,RAMSBOTTOM (10%)		25.
CLOUD POINT, F		0.01
SEDIMENT BY EXTRACTION, % WT.	C&B	
APPEARANCE		1.5
COLOR, ASTM		1-A
CORROSION, COPPER STRIP 3 HRS.122°F		"REPORT"
BTU PER U.S. GALLON	138,500	

P. O. Box 1034 • Tampa, Florida 33601 • Phone 813-248-2105 • Telex 52-2508

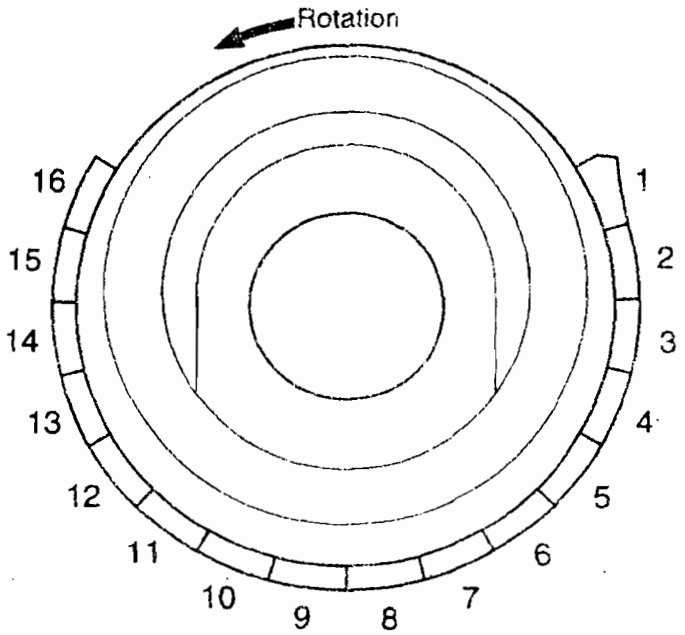

Cedarapids
PORTABLE AND STATIONARY ROCK AND GRAVEL CRUSHING PLANTS ●
SINGLE AND TWIN JAW CRUSHERS ● ROLL CRUSHERS ● HAMMERMILLS ●
LIMEMILLS ● SINGLE AND DOUBLE IMPELLER IMPACT BREAKERS ● FEEDERS ●
HORIZONTAL AND INCLINED VIBRATING SCREENS ● BELT CONVEYORS ●
RADIAL STACKERS ● STEEL BINS ● WASHING PLANTS ● COMPACTORS ●
BATCH AND CONTINUOUS TYPE ASPHALT MIXING PLANTS ● DRIERS ●
DUST COLLECTORS ● ASPHALT PAVERS ● STABILIZED BASE MIXERS

Cedarapids
A Raytheon Company

Counterweight Configuration

1. 02-540-289-0140 Wear Plate
2. Use Key 1
3. 02-540-290-0020
4. 02-540-291-0019
   02-540-289-0040 Shim Qty 2
5. 02-540-291-0019
   02-540-289-0040 Shim Qty 2
6. 02-540-291-0019
   02-540-289-0040 Shim Qty 1
7. 02-540-291-0019
   02-540-289-0040 Shim Qty 1
8. 02-540-291-0000
9. 02-540-291-0000
10. 02-540-291-0019
    02-540-289-0040 Shim Qty 1
11. 02-540-291-0019
    02-540-289-0040 Shim Qty 1
12. 02-540-291-0019
    02-540-289-0040 Shim Qty 2
13. 02-540-291-0019
    02-540-289-0040 Shim Qty 2
14. 02-540-291-0019
    02-540-289-0020 Shim Qty 3
15. 02-540-289-0140 Wear Plate
16. Use Key 15

ANGELOS RECYCLED M
(813) 903-0588
— JONATHAN CASTRO —
TAMPA - FLORIDA



Section 3
Rollercone Description

How It Works

he Rollercone II crushes rock in a continuous action. See Figure 3-1, a descriptive cutaway of a typical Rollercone II.

Rock to be crushed by the Rollercone II is fed through the hopper and into the crushing chamber, an area lined with cast manganese alloy. The upper crushing surface is the bowl liner; the lower is the mantle.

The mantle rests on the cone, which in turn mounts on the wedge plate. The rotating wedge plate moves under the cone like a cam with an upward thrust to make the oscillating movement of the cone and mantle. As a point on the mantle comes nearer and nearer to the bowl liner, the force that can be generated grows rapidly.

The gear-driven wedge plate rotates on large, low-friction roller bearings. Proper lubrication of thrust and radial bearings is very important in the Rollercone II. A pump, gear-driven directly off the pinion shaft, forces oil through the lubrication system when the pinion shaft is rotating in the proper direction. An electric pre-lube pump, mounted externally, pumps oil to the bearings at switchable intervals. During normal operation a flow-sensing device meters and monitors oil flow.

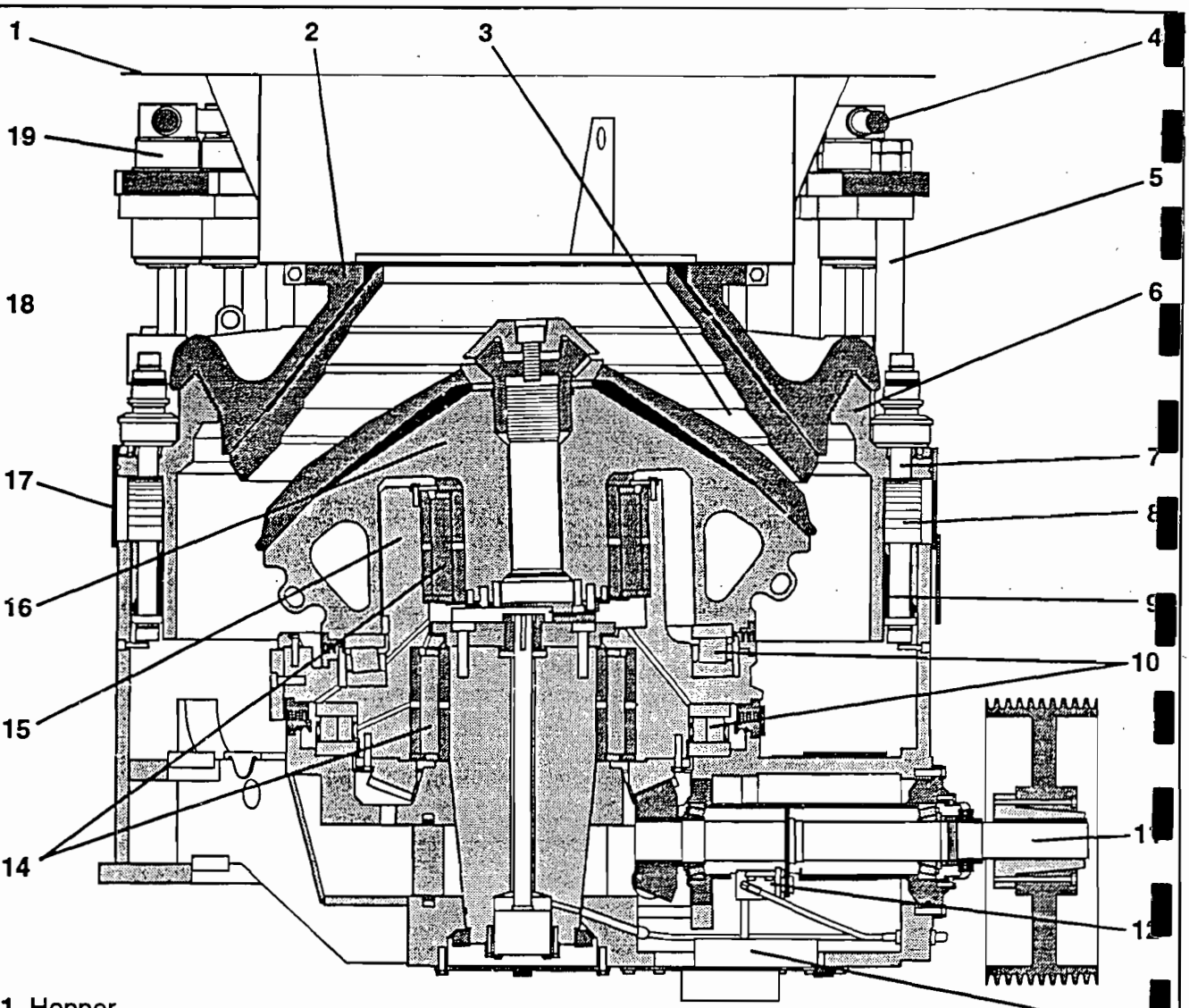
The movement between the mantle and the stationary bowl liner can be thought of as opening and closing the crushing surfaces, but it takes place in a circular area around a conical shape. The "closed side setting" (CSS) is the nearest the two crushing surfaces come to each other.

180° across the cone from the closed side, the oscillating movement makes an "open side" where the rock falls lower in the crushing chamber until it is discharged in a steady flow at the lower edge of the mantle. Under normal "choke feed" conditions, the rock will be caught three to eight times in the crushing action.

A combined force of pressurized hydraulic fluid and compressed gas pushes steadily downward during normal crushing to keep the bonnet in place. The bowl liner mounts to the bonnet. The bonnet rests on the bonnet support.

The upper portion of the crusher contains the tramp iron relief system. This system is highly pressurized but designed to yield if uncrushable material, like tramp iron, finds its way into the feed. Without any damage to the crusher the upper assembly quickly lifts to pass the tramp iron through the crushing chamber, then returns to the original position, to go on crushing as before.

After passing through the crushing chamber the rock falls out through the base to be removed at a rate at least equal to the feed rate.



1. Hopper
2. Bonnet and bowl liner
3. "Crushing chamber"
4. Relief system manifold tubes
5. Hold down bolt
6. Bonnet support
7. Adjusting bolt assembly
8. Shim stack
9. Clamp ring
10. Upper and lower thrust bearings
11. Pinion shaft
12. Internal oil pump
13. Oil heater
14. Upper and lower radial bearings
15. Wedge plate
16. Cone with mantle
17. Shim guard
18. Accumulators (not shown)
19. Relief cylinder

Figure 3-1
General Description Cutaway

Cedarapids
A Raytheon Company

Section 3
Rollercone Description

Tramp Iron Relief System

The Cedarapids/ElJay Rollercone II uses a hydro-pneumatic tramp iron relief system that provides more protection to a crusher than any other known system in use today.

If properly maintained, the relief system holds the bonnet down with great force. It also allows a great deal of bonnet travel for passing tramp iron without crusher damage or stoppage.

The system includes hydraulic cylinders mounted in individual support beams. The beams mount over bonnet support with hold-down bolts to form a pressure ring. Push rods extend from sockets in each piston to sockets in bonnet. The hydraulic cylinders vent or relieve high pressure fluid to accumulators if uncrushable items enter the crushing chamber.

Notice: If you allow pressure to bleed off from the tramp iron relief system, bowl float will occur. Bowl float voids your warranty. Bowl float is defined as the periodic separation of the bonnet from the bonnet support (see Section 13- Glossary and Section 12- Troubleshooting).

The accumulator bladders are filled with nitrogen gas at 13 450 ± 345 kiloPascals (kPa) at ambient temperature. English equivalents: 1950 ± 50 pounds per square inch (psi). Hydraulic fluid is then pumped into the system to compress the nitrogen bladders to 15 900 kPa (2300 psi). This provides reserve energy in the accumulators to keep the manifold and cylinder under continuous pressure.

The accumulator has enough capacity (19 liters or 5 gallons) to hold this reserve fluid **plus** the fluid that must be displaced through the manifold from the cylinders when tramp iron passes through the crusher.

Notice: This system does not tolerate hydraulic or nitrogen gas leaks. Any leaks will soon empty the available energy reserve in the accumulator.

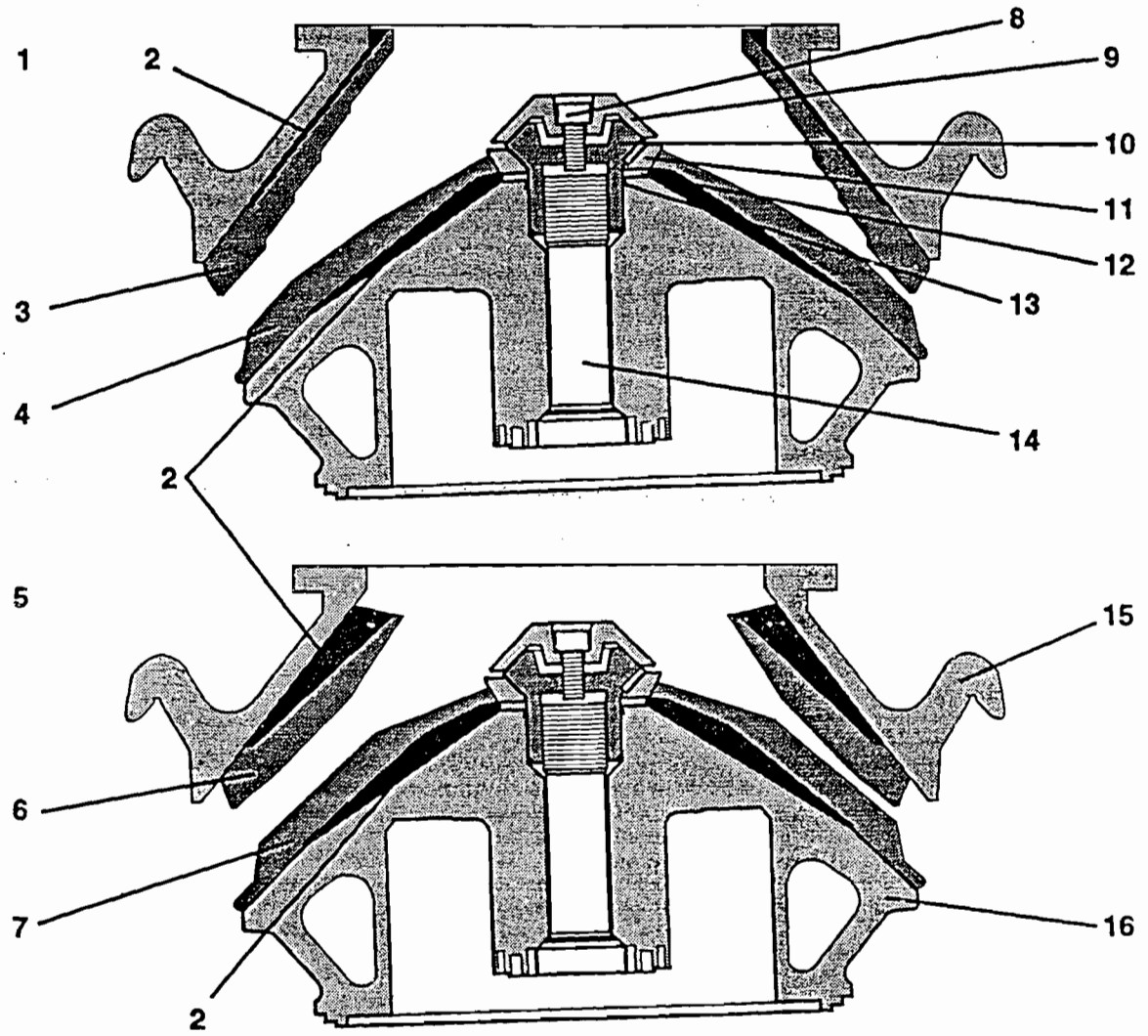
Improvements in the Rollercone II

The Rollercone II ushers in a new generation of equipment that brings crusher technology into the 21st century. The improved Rollercone II increases your production, cuts maintenance costs, and enhances safety and durability.

Here are some of the improvements you will find in your Rollercone II:

- **An advanced crushing chamber design** with a large, unobstructed feed opening allows more rock to enter the crushing chamber, producing a more cubical product with a higher percentage passing the closed side setting. This feature can increase production up to 35%.
- **New spiral bevel gears** are sized for increased production and more efficient operation.
- **A newly redesigned bonnet** is thicker in cross section, with bolt-on rotation stops.
- **Patented replaceable vee seat inserts** help prevent metal erosion and transfer occurring during occasional bowl float and reduce the cost of vee seat repair.
- **The new tough fabricated base frame** is field-proven for durability. **Replaceable wear-resistant strut guards** protect against strut wear.
- **New split couplers** on adjusting bolts make changing manganese liners easier than ever.
- **Interchangeability between coarse and fine chambers** allows you to switch from coarse to fine crushing on the same machine. Simply change the manganese liners to have the right crushing chamber for every job. (Figure 3-2)

These new features combine to make the Cedarapids/ ElJay Rollercone II the most versatile and durable on the market.



1. Coarse chamber
2. Plastic backing
3. Coarse liner
4. Coarse manganese mantle

5. Fine chamber
6. Fine liner
7. Fine manganese mantle
8. Mantle nut cap bolt
9. Mantle nut cap
10. Mantle hold down nut
11. Mantle hold down washer
12. Sponge rubber
13. O-ring
14. Mantle hold down bolt
15. Bonnet
16. Cone

Figure 3-2
Differences Between Fine and Coarse Chambers

Anti-Spin Brake

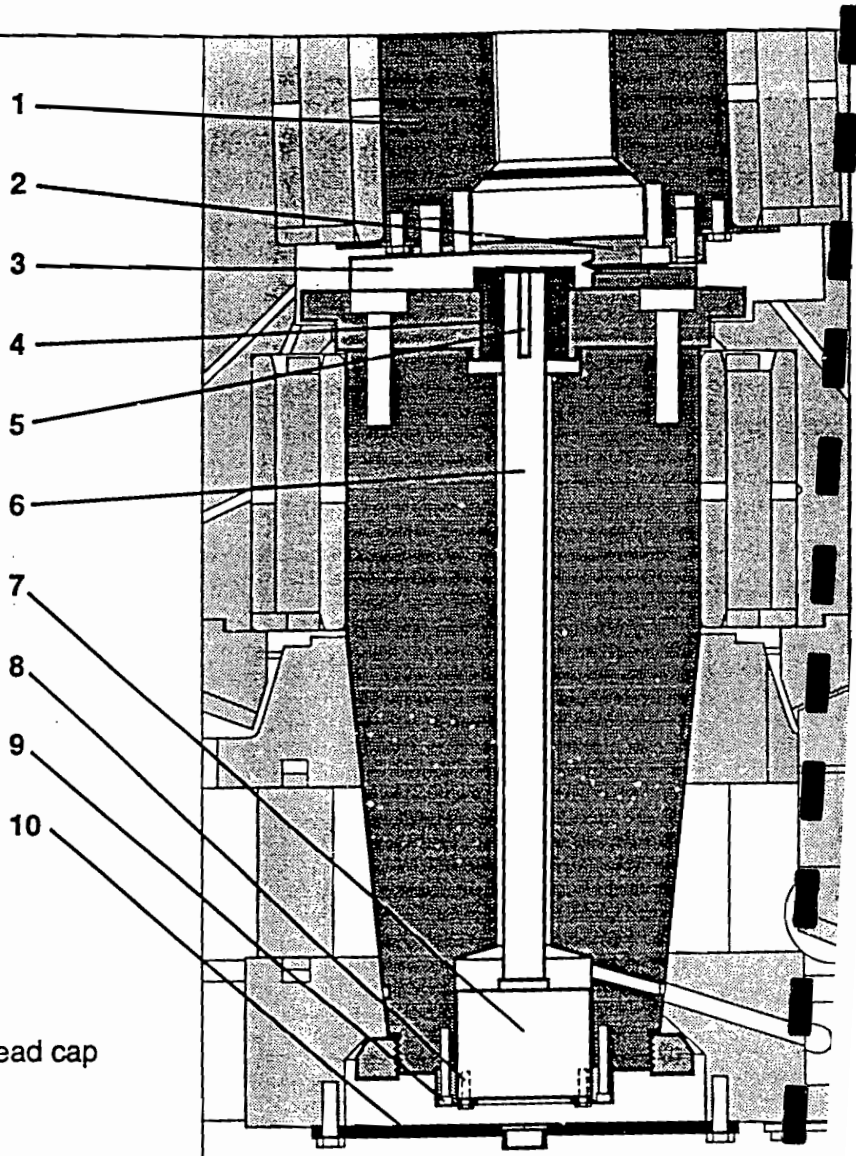
The anti-spin brake, shown in Figure 3-3, prevents the cone head from spinning when the crusher runs empty. During crushing, the brake allows the cone head to rotate slowly to the right (clockwise), but not to the left (counterclockwise). It provides smoother operation, and eliminates unnecessary manganese wear.

A torque bar is bolted and dowelled to the underside of the cone head. The torque bar slips inside the floating plate. A cone brake shaft engages the underside slot in the floating plate and is keyed to the brake shaft. The brake shaft projects down through the base frame spindle into an overrunning clutch, which is attached to a guide ring with bolts. The bolts are intended to shear off before any damage occurs to the shaft or clutch.

Notice: Do not replace the shearable bolts with hardened ones. This can cause damage to the clutch and/or shaft. Do not use bolts which are longer than ¾".

Do not run the Rollercone II empty for long periods of time. If sump oil is warm enough to flow freely, no further warm-up is necessary. As soon as the drive sheave is up to speed, crushing can begin.

If the cone head turns left (counterclockwise) at start-up, consult a Rollercone Service Manual or Cedarapids Service Representative for repair procedures.



1. Cone stem
2. Floating plate
3. Torque bar
4. Brake bar
5. Upper key
6. Brake shaft
7. Overrunning clutch
8. Grade five shear bolts 5/16 x 3/4"
9. Clutch guide ring with 5/16" allen-head cap screws
10. Brake cover plate

Figure 3-3
RC54II Anti-Spin Brake

Section 4
Rollercone II Capabilities

Characteristics of Rock

In any rock crushing operation, the physical characteristics of the raw material affect the output product you can achieve. The characteristics of rock of most interest in the rock processing industry are abrasion, compressive strength, toughness, and specific gravity. Cedarapids Inc uses several material tests to quantify or compare rocks on the basis of these characteristics. These tests follow American Standards Testing Methods (ASTM) standard procedures.

Rock Abrasion

Tests for chemicals with known abrasive compounds can determine the abrasion characteristics of specific rocks. Silica dioxide (SiO_2), iron oxide (FeO) and aluminum oxide (Al_2O_3) are commonly found abrasive compounds in rock. Magnesium carbonate ($MgCO_3$) and calcium carbonate ($CaCO_2$) are also associated with abrasive effects. Abrasive test data are needed more for considering impact or grinder crushing, but abrasion is a factor in the wear life of Rollercone II manganese. A high abrasive content causes more liner wear. Rock samples can be sent for chemical analysis to Cedarapids Inc through your Cedarapids Distributor. Such samples should weigh only ½ to 1 kilogram (one to two pounds) and must be representative of the quarry to provide reliable information. Check with your distributor to get details of the sampling process.

Rock Compressive Strength

Generally rock with compressive strength up to 345,000 kPa (50,000 psi) with acceptable hardness and toughness value is considered suitable for reduction in Rollercones. Before attempting to crush rock with greater than 345,000 kPa (50,000 psi) compressive strength, consult the factory. A scale roughly corresponding to that given in more detail in ASTM C170 is shown next for your convenience:

34000 to 69000 kPa
(5,000 to 10,000 psi) ..... Soft

69000 to 138000 kPa
(10,000 to 20,000 psi) ..... Medium

138000 to 207000 kPa
(20,000 to 30,000 psi) ..... Hard

207000 to 310000 kPa
(30,000 to 45,000 psi) ..... Very Hard

over 310000 kPa
(over 45,000 psi) ..... Extremely Hard

Some practical testing of hardness you can do in the field is based on the Mohs Scale of Hardness. Talc has a Mohs hardness value of one and diamond the value ten.

Talc = 1	Orthoclase = 6
Gypsum = 2	Quartz = 7
Calcite = 3	Topaz = 8
Fluorite = 4	Corundum = 9
Apatite = 5	Diamond = 10

With this scale a rock that can be scratched with:

- Your fingernail = about 2
- Copper coin = about 3
- Pocket knife = over 5
- Window glass = 5-½
- Steel file = 6-½

For more extensive information about types and characteristics of rock, consult your Cedarapids Distributor and the Cedarapids Pocket Reference Guide.

Section 4
Rollercone II Capabilities

Controlling Wear

The manganese wear parts in a Rollercone II crusher are designed to wear well in the hammering, compressive action created by the oscillation of the mantle against the bowl liner. Manganese wears faster in highly abrasive conditions.

The strategy for controlling wear is to reduce chances for abrasive action and increase chances for compressive action wherever possible.

Here are five tips to help maximize wear life:

- Make sure the crushing chamber is choke fed as often and as much as possible.
- Provide efficient screening prior to crushing to prevent as much abrasive sand and fines as possible from entering the crushing chamber.
- Eliminate as much water as possible from entering the crushing chamber. Water mixed with the infeed increases the abrasive characteristics of the rock.
- Crush across as much surface area of the mantle as possible. Try to make the mantle surface work (and wear) fully from top to bottom, not just at the parallel zone.
- Use the appropriate manganese configuration for the type of rock and the desired size reduction. A coarse bowl liner is less appropriate for rock crushed to finer grades.

Getting Better Production

At any equivalent crusher setting and screen opening, Cedarapids/ElJay cones yield a higher percentage of product than competitive cone crushers. For you this means greater net capacity.

To get most production, it is best to set Rollercone II no tighter than minimum necessary to get product size you want. The unique low angle of fall in crushing chamber and virtual zero clearance at bearings allow settings that are very close to finished product size. Make sure feed has only a minimum of rock already to size.

Minimum closed side setting is closest settin possible that does not induce bowl float. Actua minimum closed side setting at a given crushin site can vary widely, depending on the nature an condition of the material being crushed, as well a common variations in crusher operating styles.

Example: if a Rollercone II is in a closed circui making 16 mm minus (⅝" minus), screen shoul have enough capacity so that very few 16 mm (⅝" or smaller rocks return to crusher. Too much roc that is near size can cause bowl float, an unacceptab condition that can damage your crusher. In an ope circuit many operators find that a setting about 3 m (⅛") tighter than desired product size yields a produ with a higher percentage passing sizing screen.

Under some conditions, when the setting is t close, "pancakes" form and the bowl will float. I this condition exists, increase the setting until bo float stops. See Section 12- Troubleshooting.

To get the most production it is also very importan to choke feed your crusher. Uniform choke feedi not only increases volume going through your crushe but makes a better quality product. Product is mor uniformly broken to grade specifications and is more cubical in shape when the crusher is choke fed.

Cubical fractures (broken edges with nearly 9 angles; see Section 13- Glossary) are best for mos crushed rock applications because the right angles compact more efficiently and with more stabil y. Choke feeding helps reduce occurrences of elongated rock particles. Rock pieces that are long and nar w can pass through the crusher without being fur er reduced in size. This type of rock does not compac as well as cubical rock pieces.

Although it is best to choke feed the Rollercone II sometimes providing a high enough feed rate t choke feed it is difficult. In these conditions, bu d surge pile or surge bin and run the crusher only whe enough material is on hand to choke feed it. An the possible action, when the crusher can't be choke fed is to slow the incoming feed speed with a batt

board or other means (see Section 7- Installation). If the incoming rock has too much velocity, it could pass so quickly through the crushing chamber that it would not be crushed properly.

When the Rollercone II is used as a secondary crusher, some operators run the primary crusher for an extra shift to make a surge pile, so a continuous supply of rock is available to choke feed the Rollercone II.

Capacity and gradation charts are included in Section 9- Changing Closed Side Settings. These charts show typical capacities of Rollercone IIs crushing igneous rocks (granite, trap, basalt, etc). Gradation charts show the average product grades of widely separated tests in open circuit when choke fed. The gradation and capacity charts are offered to show what is possible with the Rollercone II.

Your product grades and capacities may differ because different rock content results in different crushing performance. Also, how you operate your crusher will determine its performance.

Please carefully study the capacity and gradation charts to make best use of your Rollercone II. Your Cedarapids Distributor will be glad to discuss gradations and capacities appropriate to your crushing needs. The feed openings in the charts are based on new manganese and ideal screening conditions.

Cedarapids cone mantles and bowl liners are wear parts. Their design gives the best wear-to-production ratio. As each rock is crushed, it gets more cutting edges as it passes through the crushing chamber. The cutting and scraping of the rock wear away the manganese surfaces, causing the closed side setting to gradually increase. The rate of wear depends on the amounts of rock being crushed, the hardness of the rock, the condition and cross-sectional shape of the manganese, moisture content, and other factors.

The "parallel zone" wears down fastest. Adjust the closed side setting as needed to compensate for manganese wear.

Section 4
Rollercone II Capabilities

Preventing Bowl Float

Bowl float is the periodic separation of the bonnet from the bonnet support (see Section 13- Glossary).

Notice: Bowl float causes excessive wear and premature failure of some components. Allowing bowl float voids the warranty.

Check the crusher for bowl float after making any change in setting, feed material, or feed rate. **The minimum closed side setting is the closest setting possible that does not induce bowl float.** Bowl float causes damage to vee seat wear strips. If it goes on too long it will cause the relief cylinder seals to leak and can lead to bonnet cracks. The end result will be costly repairs and downtime.

Bowl float may not be visible without careful observation. You can detect it by looking for movement between the bonnet and bonnet support or between the rotation stop blocks. Even a small but continual movement can develop serious problems.

A number of factors can contribute, separately or in combination, to bowl float. See Section 12- Troubleshooting, for a discussion of how to prevent bowl float.

What You Should Know about the Rollercone II Bearings

The roller bearings in the Rollercone II need a constant, clean oil flow. The smooth running, low-vibration Rollercone II is sensitive to weight imbalances. Listening to and watching carefully for unusual vibrations can give you an early indication of the need for maintenance. See Section 6- Transport and Travel, for important notes about blocking the cone head to protect the roller bearings.

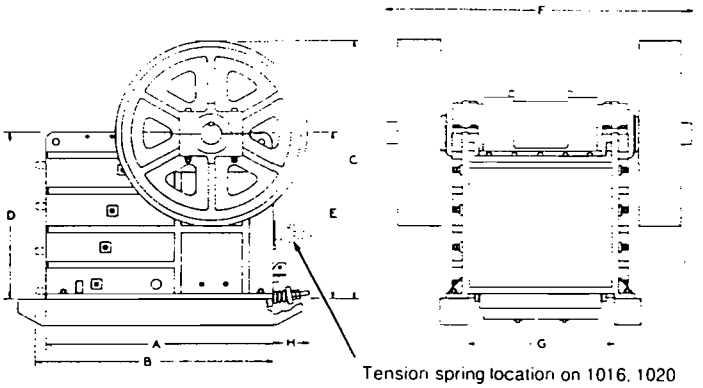
One source of imbalance is wear to the counterweights, especially the leading counterweight. Dirt or mud build-up in the crusher or motor sheaves can also cause unbalanced running. Normally, with plenty of clean oil and smooth, low-vibration running, the roller bearings will last a long time and help you produce profitable margins.

Other factors can reduce the Rollercone II's performance. If you are getting lower product rates than expected, Section 12- Troubleshooting, may help.

Why Does the Rollercone II Use Roller-type Bearings?

The roller bearing design of the Rollercone II allows no significant variation in the length of the oscillating stroke of the Rollercone II cone head, whether running empty or loaded. This virtual zero clearan makes the Rollercone II able, under norm conditions, to work at very close settings and a effective ratios of reduction. This means balanc vibration-free running and better sizing.

The only things that affect a Rollercone II's set are wear of manganese and bowl float, or bo float. Manganese wear can be controlled an monitored. Bowl float should never be allowed. Fo more information, see Section 12- Troubleshootin



Tension spring location on 1016, 1020

Recommended Openings at Closed Stroke - inches & (mm)

Size	Min.	Max.	Size	Min.	Max.
1016	¾ (19)	3½ (89)	2248	2½ (64)	6 (152)
1020	¾ (19)	3½ (89)	2436	2½ (64)	6 (152)
1024	¾ (19)	3½ (89)	2438	4½ (114)	8 (203)
1036	1½ (38)	3½ (89)	2542	3½ (89)	10 (254)
1236	1½ (38)	5 (127)	2742	3½ (89)	10 (254)
1242	1½ (38)	5 (127)	3042	4 (102)	13 (330)
1248	1½ (38)	5 (127)	3054	3½ (89)	13 (330)
1524	1½ (38)	5 (127)	3242	4 (102)	13 (330)
1636	1½ (38)	5 (127)	3648	4 (102)	13 (330)
1642	1½ (38)	5 (127)	3660	4 (102)	13 (330)
1648	1½ (38)	5 (127)	4242	14 (356)	23 (584)
1824	1½ (38)	5 (127)	4248	4 (102)	13 (330)
1836	1½ (38)	5 (127)	5460	6 (152)	20 (508)
2236	2½ (64)	6 (152)	5748	19 (483)	28 (711)

Dimension to the nearest inch & 5mm

Model	1016	1020	1024	1036	1236	1242	1248	1524	1636	1642	1648	1824	1836	2236
A	40 1015	48 1220	45 1145	48 1220	48 1220	56 1420	59 1500	55 1395	61 1550	71 1800	66 1675	56 1420	64 1625	65 1650
B	– –	– –	– –	– –	– –	– –	– –	– –	– –	73 1855	– –	– –	– –	– –
C	41 1040	46 1170	46 1170	46 1170	51 1295	55 1395	56 1420	57 1445	63 1600	76 1930	70 1780	57 1445	63 1600	77 1955
D	24 610	28 710	28 710	28 710	32 810	33 840	35 890	36 915	41 1040	46 1170	41 1040	36 915	41 1040	48 1220
E	26 660	28 710	28 710	28 710	33 840	34 865	35 890	39 990	42 1065	48 1220	42 1065	39 990	42 1065	49 1245
F	58 1470	72 1830	72 1830	81 2055	81 2055	98 2490	104 2640	67 1700	92 2335	99 2515	94 2385	77 1955	92 2335	92 2335
G	22 560	26 660	27 685	41 1040	41 1040	47 1195	53 1345	27 685	41 1040	47 1195	53 1345	27 685	41 1040	43 1090
H	14 355	14 355	21 535	18 455	19 480	20 510	19 480	18 455	16 405	20 510	16 405	19 480	16 405	17 430

Model	2248	2436	2438	2542	2742	3042	3054	3242	3648	3660	4242	4248	5748	5460
A	79 2005	88 2235	67 1700	82 2080	88 2235	88 2235	88 2235	93 2360	107 2715	118 2995	103 2615	123 3125	138 3505	149 3785
B	81 2055	91 2310	– –	85 2160	88 2235	91 2311	91 2311	99 2515	113 2870	– –	109 2770	126 3200	141 3580	152 3860
C	83 2110	89 2260	77 1955	93 2360	92 2337	92 2337	92 2337	105 2665	120 3050	125 3175	105 2665	137 3480	137 3480	172 4370
D	52 1320	61 1550	50 1270	63 1600	62 1575	62 1575	63 1600	75 1905	82 2080	86 2185	75 1905	96 2440	96 2440	127 3225
E	54 1370	61 1550	49 1245	65 1650	64 1626	64 1626	64 1626	77 1955	84 2135	88 2235	77 1955	101 2565	101 2565	130 3300
F	99 2515	94 2385	92 2335	95 2415	99 2515	99 2515	110 2795	99 2515	101 2565	119 3025	99 2515	120 3050	120 3050	140 3555
G	53 1345	43 1090	43 1090	45 1145	47 1195	47 1195	69 1755	47 1195	52 1320	78 1980	47 1195	55 1395	55 1395	67 1700
H	16 405	17 430	18 455	19 480	17 430	17 430	20 510	22 560	20 510	28 711	22 560	20 510	20 510	18 455

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Jaw Crusher

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Standard Features

Fabricated, stress-relieved welded steel base
Rib-reinforced side plates
Close-tolerance machining of jaw plate backs and seating surfaces
Reversible key plates through model 2438
Drop-forged, heat-treated, chrome-nickel-steel overhead eccentric shaft
Spherical self-aligning roller bearings
Hydraulic bearing removal for 3648 side bearing, models 4248 & 5460 side and pitman bearings
Cast steel pitman
Hydraulic/shim toggle seat adjustment (discharge opening) except wedge adjustment on 1016 and 1020
One smooth and one grooved flywheel
Split-hub flywheels
Standard left-hand drive (face tension spring)

Options

V-belt drives
Grooving second flywheel
Circulating oil lubrication system with reservoir and low-oil alarm for 1836 and above
Steel skid for crusher and motor for 2236 and above
Motor platform for 2236 and above
Operator's platform, ladder and crusher hopper for 2236 and above
Stationary grizzly with bypass chute for 2236 and above
Undercrusher discharge chute to belt conveyor, end or side discharge, for 2236 and above

Dimensions to nearest inch & mm - weights (kg)

Model	1016	1020	1024	1036	1236	1242	1248	1524	1636	1642	1648	1824	1836	2236
Weights	5306 2406	7000 3175	8255 3744	12,551 5693	13,978 6340	19,936 9042	24,300 11022	12,305 5581	21,003 9527	33,998 15421	28,406 12885	12,426 5636	21,280 9653	24,903 11296
HP	20-30	25-40	40-50	55-70	60-75	70-100	80-120	40-60	60-90	100-130	100-150	40-60	60-90	90-125
RPM	300	250-300	250-300	250-300	250-300	250-300	250-300	250-300	250-300	250-300	250-300	250-300	250-300	250-300
Jaw Opening	10x16 255x405	10x20 255x510	10x24 255x610	10x36 255x915	12x36 305x915	12x42 305x1065	12x48 305x1220	15x24 380x610	16x36 405x915	16x42 405x1065	16x48 405x1220	18x24 455x610	18x36 455x915	22x36 560x915
Shaft Dia. Side Bearing	3.937 85	4.4375 113	4.4375 113	5.4375 138	5.9375 151	6.4375 164	6.4375 164	4.921 125	6.4375 164	8.6603 220	7.091 180	4.921 125	6.4375 164	6.4375 164
Shaft Dia. Pitman Bearing	5.120 130	5.907 150	5.907 150	7.4821 190	7.8764 200	7.875 200	7.875 200	6.694 170	7.875 200	10.2383 260	8.664 220	6.694 170	7.875 200	7.875 200
Std. Grooved Flywheel Dia.	30 760	36 915	36 915	36 915	36 915	42 1065	42 1065	36 915	42 1065	55 1395	42 1065	36 915	42 1065	55 1395
Face Std. Flywheel	7 175	11 280	11 280	11 280	11 280	12 305	12 305	11 280	12 305	13 330	12 305	11 280	12 305	13 330
Stationary Jaw Length	20 510	22 560	21 535	24 610	28 710	29 735	29 735	34 865	34 865	38 965	34 865	33 840	34 865	43 1090
Movable Jaw Length	26 660	27 685	27 685	27 685	31 785	33 840	34 865	40 1015	41 1040	45 1145	41 1040	40 1015	41 1040	50 1270

Model	2248	2436	2438	2542	2742	3042	3054	3242	3648	3660	4242	4248	5748	5460
Weights	43,094 19547	46,737 21200	26,017 11801	42,095 19366	48,520 22008	48,520 22008	52,740 28269	57,137 25917	79,653 36131	107,664 48836	58,838 26689	104,567 47431	117,000 53071	196,258 89023
HP	127-175	125-150	90-125	125-175	125-175	125-175	125-175	150-200	200-250	250-300	150-200	250-300	250-300	350-450
RPM	225-275	225-275	250-300	225-275	225-275	225-275	225-275	225-275	200-250	210-235	225-275	200-225	200-225	200
Jaw Opening	22x48 560x1220	24x36 610x915	24x38 610x965	25x42 625x1065	27x42 685x1065	30x42 760x1065	30x54 760x1372	32x42 810x1065	36x48 915x1220	36x60 915x1524	42x42 1065x1065	42x48 1065x1220	57x48 1445x1220	54x60 1372x1524
Shaft Dia. Side Bearing	836603 220	8.6603 220	6.4375 164	7.091 180	8.6603 220	8.6603 220	8.6603 220	8.6603 220	10.375 264	14.000 356	8.6603 220	14.000 356	14.000 356	18.000 457
Shaft Dia. Pitman Bearing	10.2383 260	10.2383 260	7.875 200	8.6645 220	10.2383 260	10.2383 260	10.2383 260	10.2383 260	11.815 300	15.570 400	10.2383 260	15.750 400	15.750 400	19.687 500
Std. Grooved Flywheel Dia.	57 1445	57 1445	55 1395	57 1445	57 1445	57 1445	57 1445	57 1445	72 1830	72 1830	57 1445	72 1830	72 1830	84 2134
Face Std. Flywheel	18 455	15 380	13 330	15 380	15 380	18 455	18 455	18 455	13 330	13 330	18 455	13 330	13 330	20 510
Stationary Jaw Length	45 1145	53 1345	43 1090	57 1445	57 1445	57 1445	57 1445	68 1725	77 1956	77 1956	68 1725	90 2285	90 2285	113 2870
Movable Jaw Length	56 1420	65 1650	50 1270	63 1600	65 1650	65 1650	65 1650	75 1905	85 2160	85 2160	75 1905	98 2490	98 2490	129 3277

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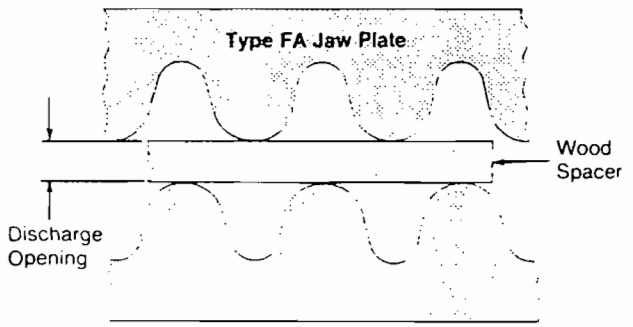
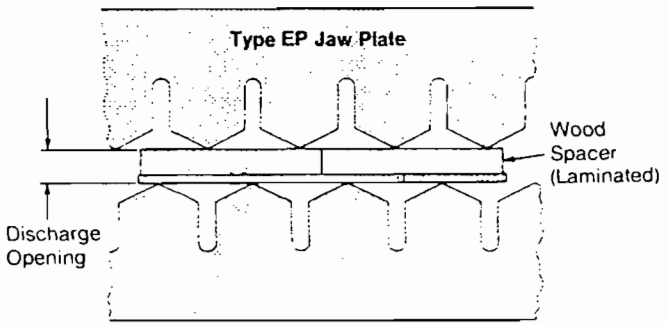
Jaw Crusher Capacity in tons and (metric tons)

Jaw Size in. & (cm.) Size Opening Closed Stroke	10 x 16 (25 x 41)	10 x 20 (25 x 50)	10 x 24 (25 x 61)	15 x 24 (38 x 61) 18 x 24 (46 x 61)	10 x 36 (25 x 91) 12 x 36 (30 x 91) 16 x 36 (41 x 91) 18 x 36 (46 x 91)	22 x 36 (56 x 91) 24 x 36 (61 x 91)	24 x 38 (61 x 97)	12 x 42 (30 x 107)	(12 x 48) (30 x 122) 16 x 48 (41 x 122) 22 x 48 (59 x 122)	25 x 42 (61 x 107) 64 x 42 (69 x 107)	30 x 42 (76 x 107) 32 x 42 (81 x 107)	42 x 48 (107 x 122) 57 x 48 (148 x 122) 36 x 48 (91 x 122)	30 x 54 (76 x 137)	36 x 60 (91 x 152) 54 x 60 (137 x 152)
¾"	10-20	10-25	15-25											
19mm	(9-18)	(9-23)	(14-23)											
1"	15-25	20-30	25-35											
25.4mm	(14-23)	(18-27)	(23-32)											
1½"	25-35	25-45	35-50	35-50	55-75			60-90	70-100					
38.1mm	(23-32)	(23-41)	(32-45)	(32-45)	(36-68)			(54-81)	(63-90)					
2"	30-45	40-55	50-70	50-70	70-100			85-115	115-130					
50.8mm	(27-41)	(36-50)	(45-63)	(45-63)	(63-90)			(77-100)	(104-117)					
2½"	40-55	50-70	60-85	60-85	95-125	95-125		105-145	125-165					
63.5mm	(36-50)	(45-63)	(54-77)	(54-77)	(86-113)	(86-113)		(95-131)	(113-149)					
3"	50-70	60-85	70-100	70-100	110-150	110-150		125-175	150-200					
76.2mm	(45-63)	(54-77)	(63-90)	(63-90)	(99-135)	(99-135)		(113-158)	(135-180)					
3½"	60-80	70-100	85-115	85-115	125-175	125-175		155-205	180-230	155-205				
88.9mm	(54-72)	(63-90)	(77-104)	(77-104)	(113-158)	(113-158)		(140-185)	(162-207)	(140-185)				
4"				100-130	150-200	150-200		175-225	210-260	175-225	175-225	210-260	235-285	265-315
101.6mm				(90-117)	(135-180)	(135-180)		(158-203)	(189-234)	(158-203)	(158-203)	(189-234)	(212-257)	(239-284)
4½"				110-150	170-220	170-220	180-230	200-260	230-290	200-260	200-260	230-290	260-320	295-355
114.3mm				(99-135)	(153-198)	(153-198)	(162-207)	(180-234)	(207-261)	(180-234)	(180-234)	(207-261)	(234-288)	(266-320)
5"				120-170	190-250	190-250	200-260	225-285	260-320	225-285	225-285	260-320	295-355	335-395
127.0mm				(108-153)	(171-225)	(171-225)	(180-234)	(203-257)	(234-288)	(203-257)	(203-257)	(234-288)	(266-320)	(302-356)
6"						230-300	240-320		310-390	260-340	260-340	310-390	355-435	400-480
152.4mm						(207-270)	(216-288)		(279-351)	(234-306)	(234-306)	(279-351)	(320-392)	(360-432)
7"							285-365			320-400	320-400	370-450	420-500	470-550
177.8mm							(257-329)			(288-360)	(288-360)	(333-405)	(378-450)	(423-495)
8"							320-420			350-450	350-450	415-515	475-575	530-630
203.2mm							(288-378)			(315-405)	(315-405)	(374-464)	(428-518)	(477-567)
10"										460-560	460-560	530-630	605-705	680-780
254mm										(414-504)	(414-504)	(477-567)	(545-635)	(612-702)
12"											560-660	650-750	740-840	830-930
304.8mm											(504-594)	(585-675)	(666-756)	(747-837)

All capacities are based on 100 lbs. per cu. ft. (1602 kg/m³) weight of rock. Tonnage may vary depending on particle size of feed, rate of feed, proper operating conditions, breaking characteristics and compressing strength of rock. Type of jaw faces and horsepower used can also affect capacity.





To set FA, EP, or E style jaws, use a piece of wood cut to correct size and set between jaws as shown.

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Jaw Crusher

Features

- Submerged arc welded all-steel base (thermally stress relieved in oven at 1400°F).
- Side bearings directly over side plates.
- Independent side bearing housings.
- Minimum bearing center distance to eliminate flexing.
- Spherical, self-aligning roller bearings to handle side thrush.
- Positive, maintenance-free labyrinth seals to keep out dust.
- Oil/grease lubrication - large sizes for more positive lubrication.
- Drop forged, heat treated 4340 chrome-nickel-steel alloy shafts.
- Massive, large diameter split hub flywheels (most sizes) to maintain inertia and remove easily.
- Cast steel pitman with machined surfaces for highest strength.
- Several Manganese jaw plate choices.
- Steep toggle plate for aggressive crushing action.
- Hydraulic-shim adjustment.
- Two convertible rip-rap crushers (4242-3242 & 5748-4248).
- Widest range of crusher sizes (26 total).
- Optional hydraulic toggle for quick adjustment and high pressure relief.

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Jaw Crusher Calculated Weights

Model	Complete Total	Complete Pitman Assembly	Flywheel Only (Each)
1016	5,306	2,844	690
1024	8,255	4,817	1,275
1036	12,551	7,449	1,223
1236	13,978	8,007	1,250
1242	19,521	12,120	2,098
1248	24,300	14,374	2,175
1524	12,305	6,771	1,215
1636	21,003	11,895	2,075
1642	33,998	19,642	2,741
1648	32,406	16,988	2,684
1824	12,426	6,771	1,215
1836	21,280	12,105	2,126
2236	24,903	14,266	2,785
2248	43,094	25,746	3,700
2436	46,737	22,861	3,462
2438	42,695	21,832	3,509
2540	45,000	18,950	4,200
2542	42,095	21,832	3,584
2742	45,992	24,416	3,675
3042	48,520	25,842	4,194
3054	52,740	27,525	4,194
3242	57,137	28,755	4,028
3648	79,653	39,524	5,560
3660	107,664	58,478	5,595
4242	58,838	28,755	4,028
4248	104,567	52,827	5,595
5460	196,258	102,715	10,570
5748	117,000	52,827	5,595

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Service Technical Information

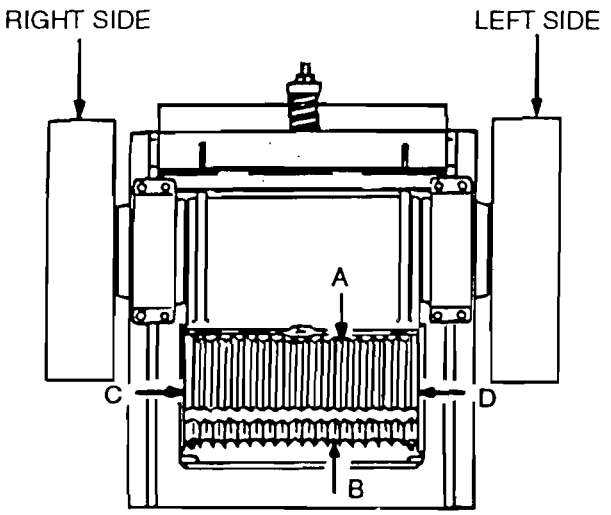

Figure 1
Jaw Crusher Opening

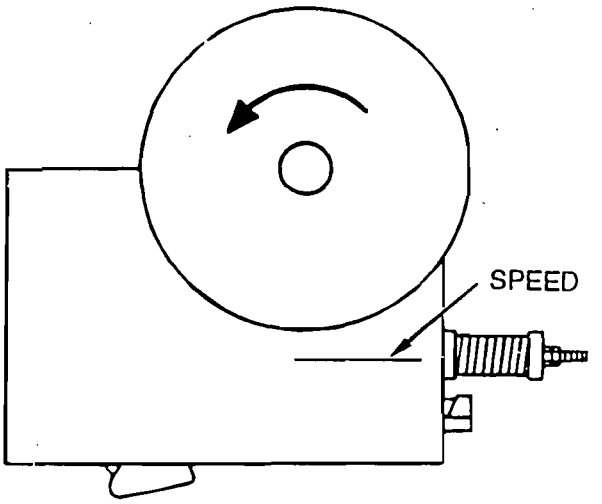

Figure 2
Direction of Rotation

Right & Left Side

Right and left side of crusher are determined when standing facing the tension springs. (Figure 1)

Table 1
Recommended Openings at Closed Stroke (Inches & mm)

Size	Minimum		Maximum		RPM Range
	Inches	mm	Inches	mm	
1016	3/4	19	3-1/2	89	250-300
1020	3/4	19	3-1/2	89	250-300
1024	3/4	19	3-1/2	89	250-300
1036	1-1/2	38	3-1/2	89	250-300
1236	1-1/2	38	5	127	250-300
1242	1-1/2	38	5	127	250-300
1248	1-1/2	38	5	127	250-300
1524	1-1/2	38	5	127	250-300
1636	1-1/2	38	5	127	250-300
1648	1-1/2	38	5	127	250-300
1824	1-1/2	38	5	127	250-300
1836	1-1/2	38	5	127	250-300
2236	2-1/2	64	6	152	250-300
2248	2-1/2	64	6	152	225-275
2436	2-1/2	64	6	152	225-275
2438	4-1/2	114	8	203	250-300
2442	3-1/2	89	10	254	225-275
2742	3-1/2	89	10	254	225-275
3042	4	102	13	330	225-275
3054	4	102	13	330	225-275
3242	4	102	13	330	225-275
3648	4	102	13	330	200-250
4242	14	355	23	584	225-275
4248	4	102	13	330	200-225
5460	6	152	20	508	200
5748	19	483	28	711	200-225

Table 2
"All Grease" Lubrication Capacities (Lbs. Required)

Crusher Size	Each Side Bearing	Pitman Bearings
1016	2	4
1020	2	5
1024	2	8
1036	2	14
1236	2	18
1524, 1824	3	8
1536, 1636, 1836	6	25
2236	4	23
1242	4	27
1248	4	32
2540, 2442	7	33
2436	12	29
1648	9	38
2640, 3040, 1642	10	48
3042, 3242 4242, 3054	10	48
2248	8	55
2742	10	47
3648	12	64
4248, 5748	9	51
5460	31	153

Pitman Assembly Procedure

All pitman and side bearing end cap bolts are to be of the self-locking type and **Loctite #271 is also to be applied.** Then tighten bolts to correct torque.

All seals with grooved lands should be packed with proper grease when assembling. After assembly, purge seal on grease lubricated unit. Remove grease fitting for seals and install plugs.

Removing Clearance from Straight Bore Pitman Bearings:

Be sure no more than 50% of the unmounted clearance is removed after the bearings have cooled and shrunk in place on the shaft.

Removing Clearance from Tapered Side Bearings:

Remove between 40% and 50% of the unmounted clearance, no more.

Example: Unmounted (bench) clearance = .010. 40% = .010 x (.4) = .004; 50% = .010 x (.5) = .005. .010 minus .004 = .007; .010 minus .005 = .005

Record all unmounted and mounted clearances for future reference.

Jaw Crusher Lubrication

Proper lubrication for jaw crusher should follow guidelines established in our current Cedarapids 010 Operation Manual until notified differently by Engineering.

Be sure to add 20% grease just like new unit is an overhaul.

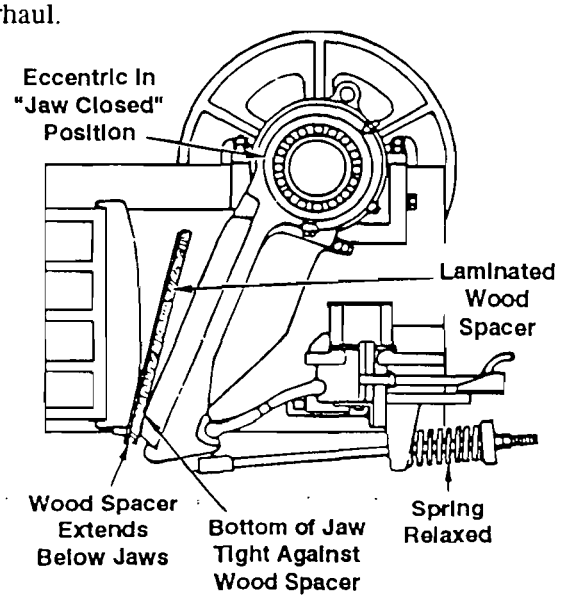

Figure 3
Jaw Cross-section Cut-away View

Setting Discharge Opening

To set the discharge opening between jaws to obtain the desired product size range:

1) When the crushing chamber is completely empty, stop the crusher drive and lock out the power source so no unexpected movement of the flywheel can occur.
2) Loosen nuts that hold base toggle seat.
3) Loosen tension spring nuts so shim pack can be adjusted.
4) Make a wooden spacer similar to Figure 7, to the exact thickness of the correct discharge opening. When lumber of proper width or thickness is not available, make up a lamination, including plywood, hard fibre board, or metal to obtain the correct thickness. Spacer must be wide enough to bridge between several jaw plate tips shown in Figures 5 & 6. **This is especially important when setting the specified minimum discharge opening!**
5) Turn the flywheel so that eccentric shaft closes the jaws as much as possible.
6) Hold the wooden spacer so that it is centered in the crushing chamber and extends below jaws. (Figures 3 & 4)
7) Force the bottom of the movable jaw tight against the wood spacer. Adjust shim packs uniformly to fix toggle seat in that position. (On some models this is done with a mechanical linkage)
8) Tighten nuts with hold base toggle seat.
9) Tighten tension spring nuts to restore holding force on toggle plate.

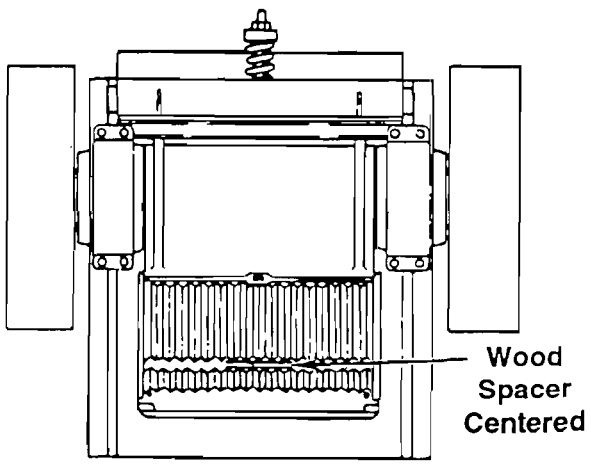

Figure 4
Jaw Top View

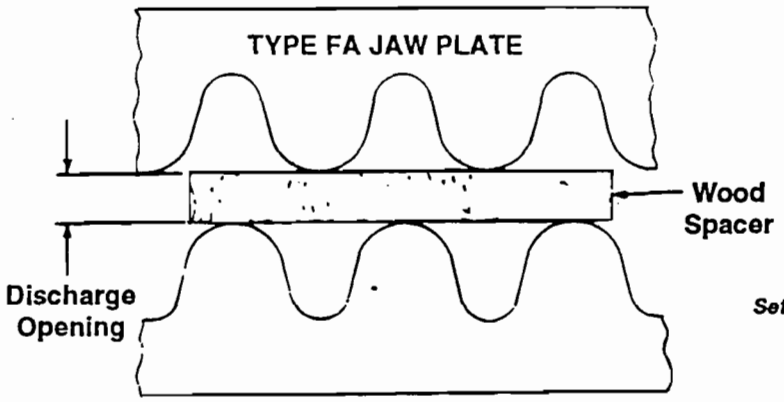

Figure 5
Setting Type FA Jaw Opening

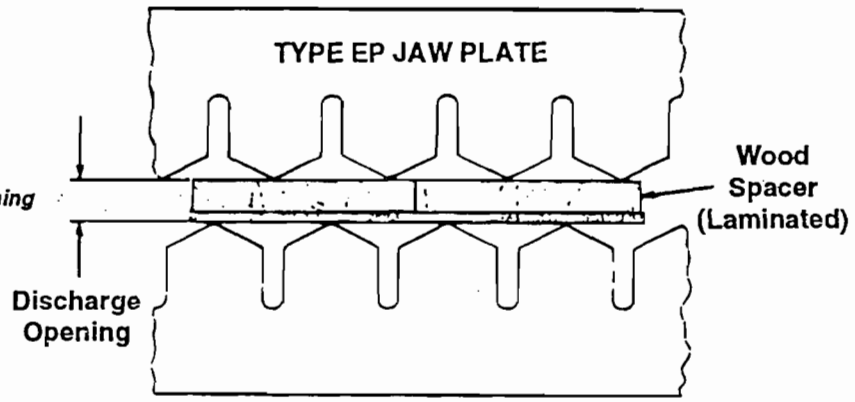

Figure 6
Setting Type EP Jaw Opening

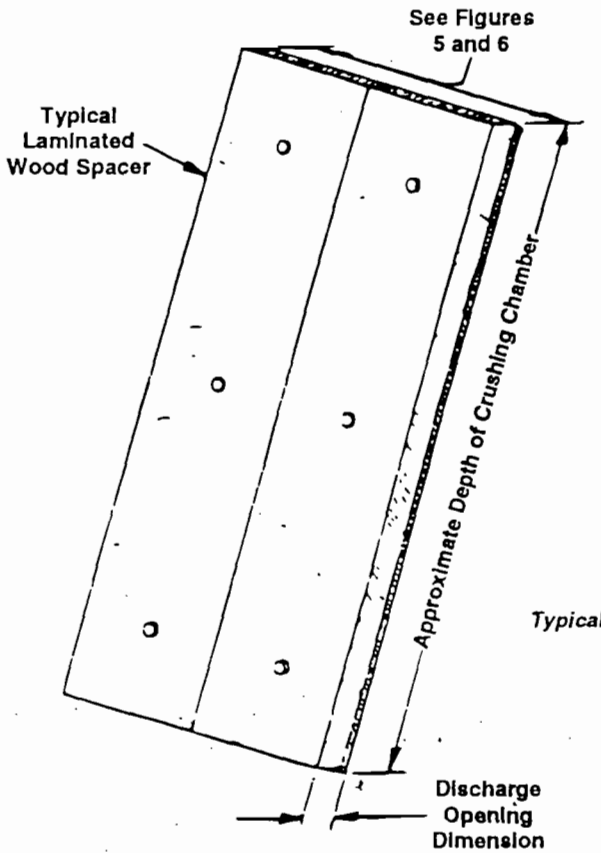

Figure 7
Typical Laminated Spacer

Jaw Crusher Adjustment Procedure

Caution! Never adjust crusher when it is being operated.

1) Loosen tension rods and spring assembly.
2) Loosen adjustable toggle plate seat wedges.
3) Install hydraulic ram(s) and pump.
4) Using a piece of wood the thickness of the desired opening hanging down to the bottom of the crushing chamber.
5) Pump the hydraulic rams to move the pitman toward the stationary jaw till block of wood is tight against both jaw plates.
6) Remove or install as required the necessary shims behind the adjustable toggle plate seals.

NOTE: Be sure shims are equal on both sides.

7) Release the hydraulic pressure - this will allow the pitman to retract forcing the shims tight against the base.
8) Retension the tension springs equally to insure the pitman, toggle plate and adjustable seat are all tight, one against the other.
9) Retension the adjustable toggle plate seat wedges.

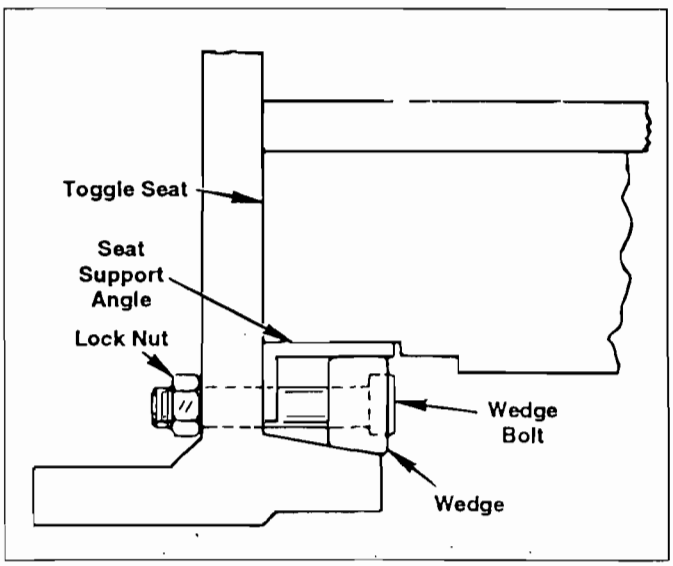

Figure 8
End View of Toggle Seat Wedge Assembly

Jaw Plates Installation

Base Stationary Jaw Plates & Key Plates

1) Stationary jaw machined surface must be checked for flatness both crosswise and top to bottom. In general, it should be within 1/16", however, it will vary with each size crusher. Key plates should be checked in the same manner.
2) Stationary jaw must be centered in base and must be held tight against the bottom end of the base while in this position.
3) Lower key plates are installed and then a 3/4" or 1" spacer bar is set on top of the lower key plate and the upper key plate is installed.
4) Using a minimum of 16 lb. sledge hammer, you drive on the upper key plate forcing the lower key plate down tight in place.
5) A properly fitting key plate will have a minimum of 70% contact between the base guide and the ear of the jaw plate. The bolts which hold the key plates in the base should be halfway between the upper 3/4 of the slotted hole in the base. **At no time** should the bolts contact either end of the base hole.
6) After the lower key plates are in position, remove the spacer and drive the upper key plates into position following the guidelines for contact and bolt locations in Step 5. All bolts should be torqued for proper tension. Refer to standard bolt torque chart and follow (lube) recommendation.

NOTE: It may require grinding of key plates to properly fit as described above.

7) With steps five and six completed, install the required shims under the upper lip of the jaw plate and base and weld the shim to the base. Refer to Print No. 3645-049-01.
8) After operating crusher for eight hours, recheck bolt tension. Retension bolts as required until they remain tight.

Pitman Plate & Jaw Wedge

1) Movable jaw machined surface must be checked for flatness crosswise and top to bottom in general. It must be with 1/16", however, it will vary with each size crusher.
2) The pitman lip must be smooth for the jaw plate to fit evenly and tight against the lip.

3) The movable jaw plate must be centered on the pitman.

NOTE: This may require trimming pitman sides or ears.

4) Install the pitman jaw wedge. Be sure it does not extend beyond the end of the pitman, restricting the pitman side float.

5) Install the keeper bolts to hold the wedge in place and their lock nuts and washer.

6) Using a minimum 16 lb. sledge hammer, you must drive on the face of the wedge starting in the center and working toward both ends to seat the wedge. While driving on wedge, a person is to be tightening the bolts and nuts in the same area.

NOTE: Do not drive on the heads of the bolts!

All bolts should be torqued for proper tension. Refer to standard bolt torque chart and follow (lube) recommendation.

7) After operating crusher for eight hours, recheck bolt tension. Retension both as required until they remain tight.

NOTE: The wedge should never bottom out against the pitman nor should the top of the wedge be in further than the pitman barrel. In either case, add a shim to top of wedge same width and length as wedge to correct.

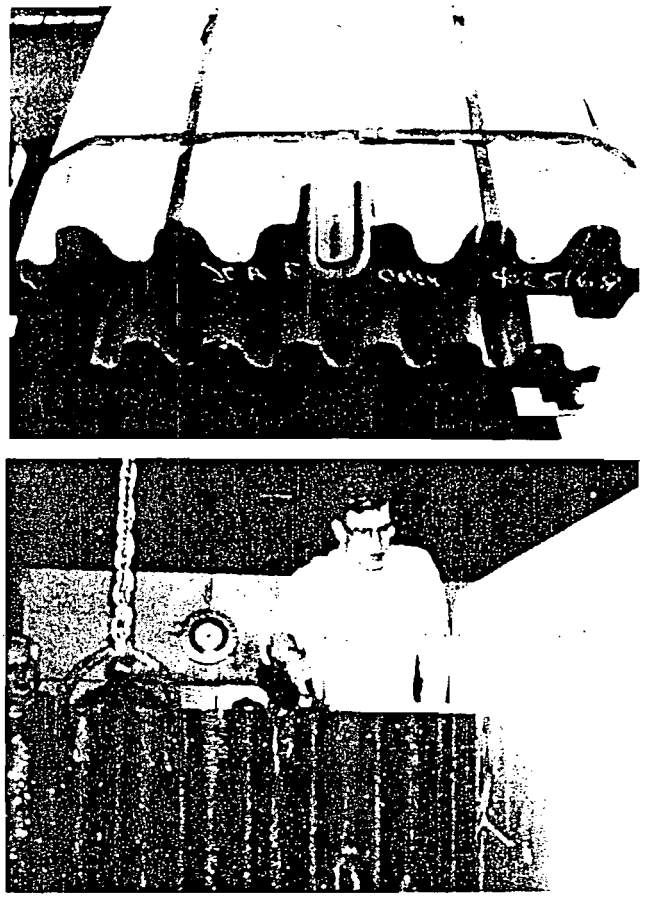

Figure 9
Proper Use of Lifting Loop on Jaw Plate

Caution! When welding mild steel lifting loops to Manganese jaw plates or key plates, American Welding Society standards are to be followed as summarized:

- Stainless 310 rod 5/32 diameter. A number of passes should be used rather than one large pass.
- No preheating or after welding heating to be done.
- Follow all safety precautions whenever lifting items.

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Shim Locations

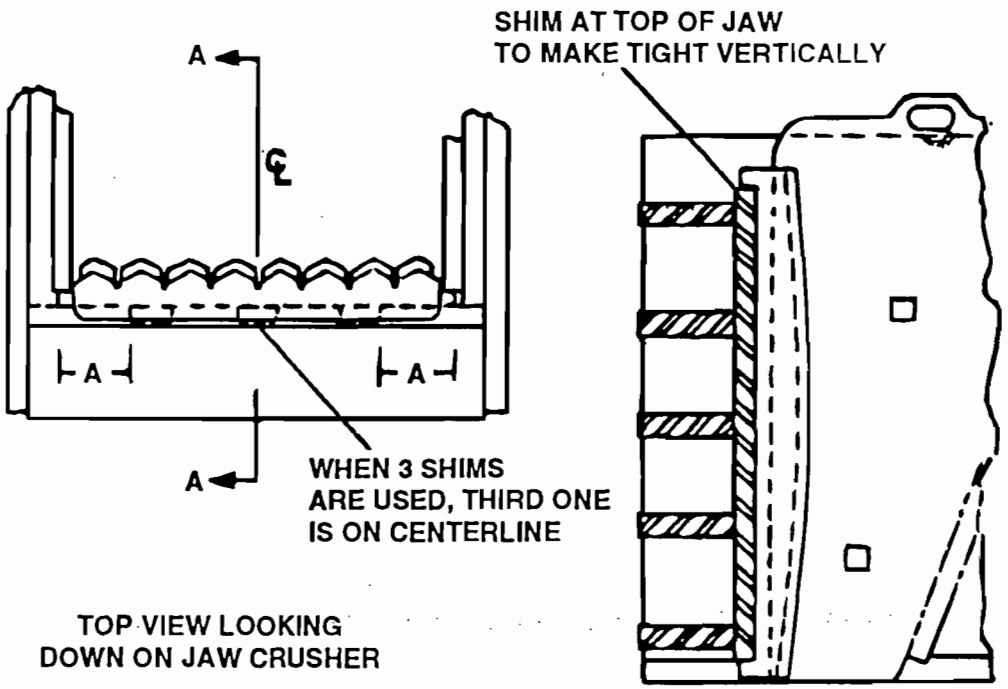

Figure 10
Top View of Jaw Crusher for Shim Location

Size	A	Shim Places	Shim Group
1016	3"	2	I
1020	3"	2	I
1024	5"	2	I
1524	5"	2	I
1824	5"	2	I
1036	5"	3	I
1236	5"	3	I
1536	5"	3	I
1636	5"	3	I
1836	5"	3	I
2236	5"	3	II
2436	5"	3	II
2442	5"	3	II
2742	5"	3	II
3046	5"	3	II
1242	5"	3	I
3042	5"	3	II
3242	9"	2	III
4242	9"	2	III
3645	5"	3	III
1648	7"	3	I
2248	7"	3	II
4248	5"	3	III
1248	7"	3	I
2438	5"	3	II
1642	5"	3	II
5460	7"	3	IV
3054	6"	3	IV
3660	7"	3	IV

Part #	Description
Shim Group I	
41306-001	1/4" FL x 2-1/2" x 1" LG
41314-001	5/16" FL x 2-1/2" x 1" LG
41321-001	3/8" FL x 2-1/2" x 1" LG
41335-001	1/2" FL x 2-1/2" x 1" LG
Shim Group II	
41306-002	1/4" FL x 2-1/2" x 2" LG
41314-002	5/16" FL x 2-1/2" x 2" LG
41321-002	3/8" FL x 2-1/2" x 2" LG
41335-002	1/2" FL x 2-1/2" x 2" LG
Shim Group III	
41307-004	1/4" FL x 3" x 4" LG
41315-004	5/16" FL x 3" x 4" LG
41322-004	3/8" FL x 3" x 4" LG
41336-004	1/2" FL x 3" x 4" LG
Shim Group IV	
41307-006	1/4" FL x 3" x 6" LG
41315-006	5/16" FL x 3" x 6" LG
41322-006	3/8" FL x 3" x 6" LG
41336-006	1/2" FL x 3" x 6" LG

Changing Toggle Plate

Jaw Crusher Toggle Plate Changing Procedure

Caution! Never adjust toggle plate setting when crusher is being operated.

1) Install chain through the center hold of the toggle plate and feed it up between the pitman and the base.
2) Connect chain to come-along and snug up chain just so it doesn't fall back down.
3) Loosen the tension rod and spring assembly.
4) Loosen adjustable toggle plate seat wedges.
5) Install hydraulic rams and pump assembly.
6) Pump rams to push seat forward far enough to remove shims.
7) Release hydraulic pressure - this will allow the pitman to push the seat back.
8) Remove hydraulic ram(s) and relocate upper position in order to push the pitman end toward the stationary jaw.
9) Pump ram(s) far enough so the toggle plate drops free of the pitman.
10) For safety, put hard block of wood between pitman and base.
11) Lower the toggle plate down to the tension rods.
12) Lower tension rods down on to the conveyor and remove springs.
13) Let the toggle plate all the way down on to tension rods.
14) Pull plate out from under the crusher. To install new toggle plate, slight the new plate under the crusher on the tension rod.
15) Feed the chain backup between pitman and base and hood chain on to the come-along.
16) Raise the toggle plate up into the adjustable seat.
17) Remove the wooden block between pitman and base.
18) Slowly release hydraulic pressure to let pitman come back and adjust come-along as required to line toggle plate up with pitman seat.
19) Remove ram(s) from upper position and reinstall in position to adjust crusher setting.
20) Raise the tension rods up in to position and install the springs and snug up assembly.
21) Use block of wood for desired setting of crusher and hang it down to bottom of crushing chamber.
22) Adjust crusher until the block of wood is tight between the pitman jaw and stationary jaw.
23) Install required equal amount of shims on both sides.
24) Release hydraulic pressure on rams. This will allow the pitman to retract forcing the shims tight against the base.
25) Retension the tension springs equally to insure the pitman, toggle plate and adjustable seat are all tight one against the other.
26) Retension the adjustable toggle plate seat wedges.

Caution! Never operate the crusher with the hydraulic cylinders under pressure.

NOTE: If you hear or see the toggle plate slapping in its seats, the tension rod and spring assemblies must be retensioned more.

Installation of Jaw Pitman Assembly into Base

1) Install the toggle plate inside the base. Use a chain through the center hole to suspend the toggle plate in the base. Make sure the chain can be dropped out through the hole after the pitman is installed.
2) Hook a crane to the pitman at the top and the bottom so that when the pitman is hoisted, it will be held at an angle of around 15 to 20 degrees from end to end and level horizontally from side to side. Crane(s) must be adequate for the weight of the pitman.
3) Lower the pitman into the base. Be careful not to bang the side of the bearing housing into the base seats.
4) When the bearing is 1 or 2 inches from being seated, install the bearing bolts on the bottom and top.
5) Start the back bearing bolts. Disconnect the chain on the top of the pitman.
6) Before unhooking the lower chain from the pitman, lift the pitman and raise the toggle plate into position. Then remove the chain.
7) Tighten the bearing housing to the base. Tighten the back bolts first (the tension spring end). This draws the side bearing housing to the rear. Tighten the bottom bolts second. This ensures the assembly is down tight. Tighten the top bolts last in a corner-to-corner or criss-cross pattern.
8) Torque all housing bolts to the recommended value.
9) Check and record the clearance between the outside rotating seal and the side bearing end cap for future reference. This clearance should be very close to equal all the way around.
10) Install the tension rods and spring assemblies. Compress both springs evenly until there is no looseness between the pitman seat, the toggle plate, and the adjustable seat.
11) Install the flywheels onto the shaft.

Note: Be sure the counterweights on the flywheels are in line from side to side and ahead of the leading spoke as it rotates down into the closed stroke.

12) Tighten the shaft's end cap bolts first to push the flywheels onto the shaft.
13) Tighten the flywheel hub bolts last.

Note: Number 12 and number 13 bolts should be torqued to the recommended value of the torque chart, using the "LUBE" column of the chart.

Size	Old Part #	Description	New Part #	Description	Qty.
2236	7146-196	1-1/4" N.C. x 15"	7383-324	1-1/4" N.C. x 16"	8
2542	7146-196	1-1/4" N.C. x 15"	7383-324	1-1/4" N.C. x 16"	8
2742	7146-196	1-1/4" N.C. x 15"	7383-324	1-1/4" N.C. x 16"	8
3042	7146-196	1-1/4" N.C. x 15"	7383-324	1-1/4" N.C. x 16"	8
3054	7146-196	1-1/4" N.C. x 15"	7383-324	1-1/4" N.C. x 16"	8
3242	7146-196	1-1/4" N.C. x 15"	7383-324	1-1/4" N.C. x 16"	8
4242	7146-196	1-1/4" N.C. x 15"	7383-324	1-1/4" N.C. x 16"	8
3648	3645-049-02	1-1/2" N.C. x 19" (Stud)	7383-325	1-1/2" N.C. x 18-1/2"	8
3660	3645-049-02	1-1/2" N.C. x 19" (Stud)	7383-325	1-1/2" N.C. x 18-1/2"	8
4248	3645-049-02	1-1/2" N.C. x 19" (Stud)	7383-325	1-1/2" N.C. x 18-1/2"	8
5460	4248C04	1-1/2" N.C. x 21-1/2" (Stud)	7383-326	1-1/2" N.C. x 20"	8

Torque bolts per Standard Torque Chart. Use Lubricated column figure.

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Pitman Information

Jaw Crusher Shielding & Lubricating Pitman Toggle Plate & Seat to Reduce Wear

During jaw crusher operation, fine dust generated by the process accumulates on top of the toggle plate and works its way in between toggle plate and seat. The addition of lubricant to that area produces a combination of oil and dust which acts like a grinding compound to speed up the wearing of toggle plate and seat.

We recommend a burlap shield and oil wick that will trap the dust and bleed clean oil into the contact area so that wear is minimized.

1) Cut burlap strips, wide enough to nest in area above toggle seat, on low point of toggle plate as shown. Strips should be as long as the crushing chamber is wide.
2) Cut at least ten strips, laying them one on top of each other to form a laminated shield. Saturate the strips with old engine oil.
3) Install shield on top of pitman toggle seat and toggle plate contact area as shown.

Maintenance:

1) Check shield periodically.
2) When top strip is saturated with dust, carefully peel it off.
3) Add old motor oil to shield after each top strip is removed.
4) Remove entire shield before the last two strips are removed.

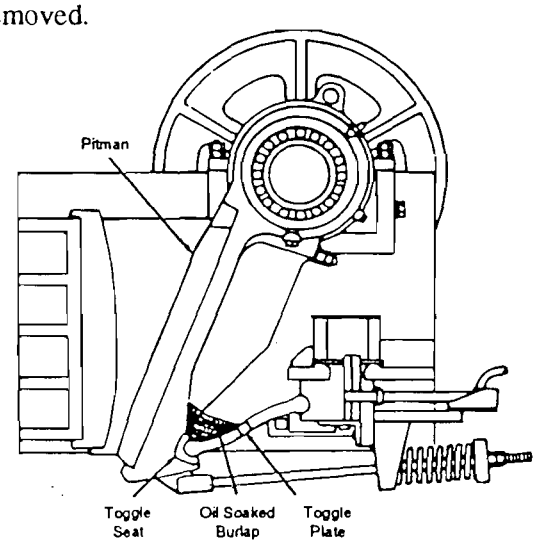

Figure 11
Cut-away Side View of Typical Jaw Crusher with Burlap Dust Shield

Pitman Assembly Procedure

1) All pitman and side bearing end cap bolts are to be of the self locking type and **Loctite #271 is also to be applied.** Then tighten bolts to correct torque.
2) All seals with grooved lands should be packed with proper grease when assembling. After assembly, purge seal on grease lubricated unit, then remove grease fitting for seals and install plugs.
3) In removing clearance from bearings follow these guidelines:

   Straight Bore Pitman Bearings: Be sure no more than 50% of the unmounted clearance is removed after the bearings have cooled and shrunk in place on the shaft.

   Tapered Side Bearings: Remove between 40 and 50% of the unmounted clearance, no more.

   Example: Unmounted bench clearance = .010; 40% = .010 x 0.4 = .004; 50% = .010 x 0.5 = .005; Then .010 - .004 = .006; .010 - .005 = .005. Record all unmounted and mounted clearances for future reference.
4) Proper lubrication for jaw crusher should follow guidelines established in IMCO 010 Operation & Maintenance Manual until notified differently by factory.

Be sure to add 20% grease just like new unit in an overhaul.

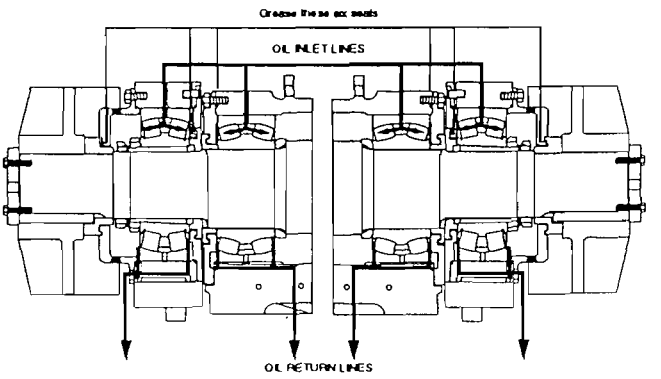

Figure 12
Pitman Oil Lubricating System

Lubrication

Pitman and Side Bearings: Fill supply tank with recommended lubricants. See Operation Manual for the oil capacity. **Lubricant:** Extreme pressure type oil. Typical brand names are, Amoco Amogear EP (220) [150], Mobil Mobilgear (630) [629], Exxon Spartan EP

Pitman Information

(220) [150], Shell Omala (220) [150], Gulf EP Lube HD (220) [150], Texaco Meropa (220) [150]

Ambient Oil Temperature Guide: (Above 32°F) [Below 32° F]

Use ISO Viscosity Grade 68 of primary lubricant for flushing.

Every 1000 hours, drain the supply tank and fill with flushing oil. Proceed with flushing operation. See specific instruction in the Operation Manual.

Grease Fittings: Dust & Moisture seals. Grease must extrude from seals at all times to produce an effective dust and moisture seal. Greasing intervals must be established to maintain this visible grease slick. **Lubricant:** Lithium base, grade 2 grease.

Contaminants in Lubricants

The following is a guide to levels of contaminants in lubrication. This is the concerned range measured in parts per million (ppm).

Iron: 125-150, Chrome: 25-30, Aluminum: 45-50, Copper: 100-125, Silicon: 25-30, Water: 0.

Oil is to be changed every 1000 hours. (Shorter intervals if at elevated temperature or continuous operation)

Refer to Cedarapids Operation & Maintenance Manual for bearing grease capacities and other detailed lubrication instructions.

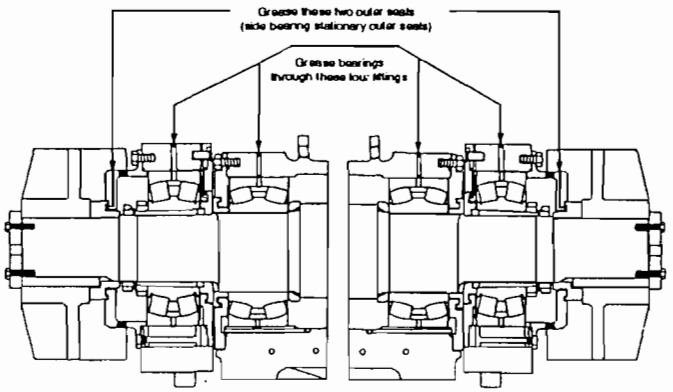

Figure 13
Grease Fittings on Pitman

Pitman Grease Fittings

Pitman and Side Bearings: Grease must extrude from seals at all times to produce an effective dust and moisture seal. Greasing intervals must be established to maintain this visible grease slick. Typical brand names are Amoco Amolith EP1, Gulf Gulfcrown EP1, Shell Alvania EP1, Exxon Lidok EP1, Mobil Mobilux EP1, Texaco Multifak EP1.

Refer to Cedarapids Operation & Maintenance Manual for bearing grease capacities and other detailed lubrication instructions.

Setting Oil Lubricating Flow Switches

1) Run the oil lubrication system without the crusher running.
2) Open flow switches all the way open.
3) Allow enough time for oil to warm up.
4) Adjust the three highest switches back down to the lowest switch setting.

Notes:

- As the higher ones are backed down the low ones will raise some.
- The flow switch brass indicator settings will vary with each size of crusher due to pump output.
- If indicator(s) begin to lower their preset position, it could indicate oil line problems or a bearing beginning to fail.
- If excessive oil leaks out of the seals, possible causes are: lack of grease in seals, return line blockage, return line has low area trapping oil fluid restricting flow to reserve or oil flow rate is too high and the flow rate indicator needs to be lowered.
- Oil is to be drained and flushed every 1000 hours of operation or seasonally, whichever occurs first.

Caution! Never operate oil lubricated crusher without the alarm system in operation.

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Lubrication Instructions

Oil Lubrication for Combination Grease or Oil Lubricated Crusher

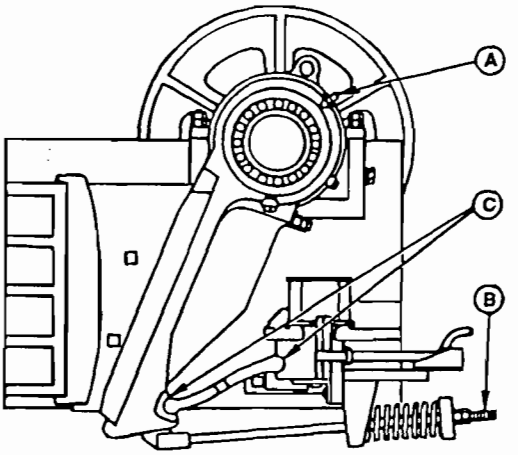

Figure 14
Side View – Location of Dust Barrier Grease Fittings & Oil Hoses

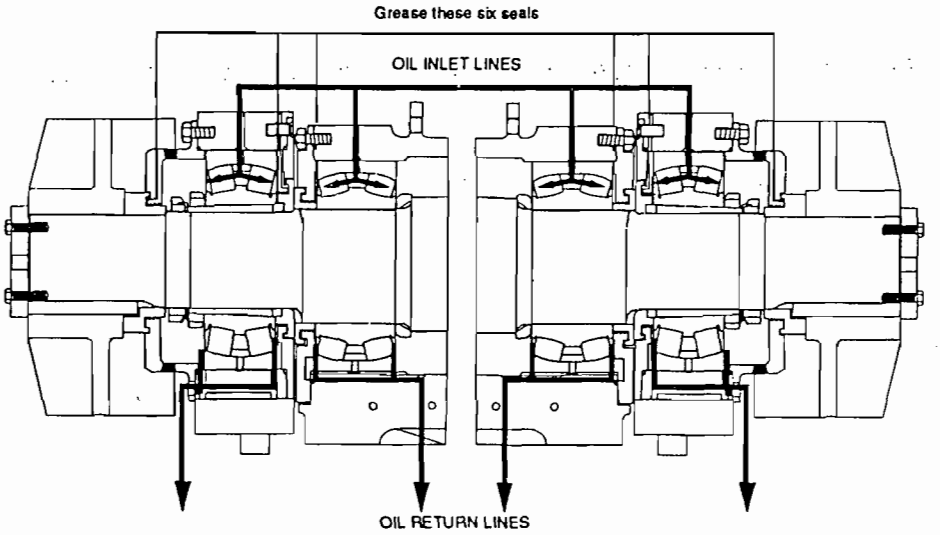

Figure 15
Cut-away Front View – Location of Dust Barrier Grease Fittings & Oil Hoses

SYMBOL	PART	INSTRUCTIONS	LUBRICANT RECOMMENDED
A	Side Bearing Seals, Pitman Seals (Dirt Barriers)	Check daily. Grease must extrude from the seals at all times to produce an effective dust and moisture seal. Greasing intervals must be established to maintain this visible grease slick.	Lithium base, Grade 2 grease
B	Tension Rod Threads	Lubrication with oil as needed.	SAE 30 motor oil
C	Toggle Plate	Lubricate at reassembly.	Lithium base, Grade 2 grease
D	Oil Circulation System	Every 1000 hours or seasonally, whichever occurs first. Drain when hot. Flush with at least 10 gallons flushing oil, run empty, drain and refill.	Amoco Amogear EP 220 or 150* Exxon Spartan EP 220 or 150* Gulf EP Lube HD 220 or 150* Mobil Mobilgear 630 or 629* Shell Omala 220 or 150* Texaco Meropa 220 or 150* *Use lower number for temperatures below freezing.

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Circulating Oil System
Electric Oil Pump Drive

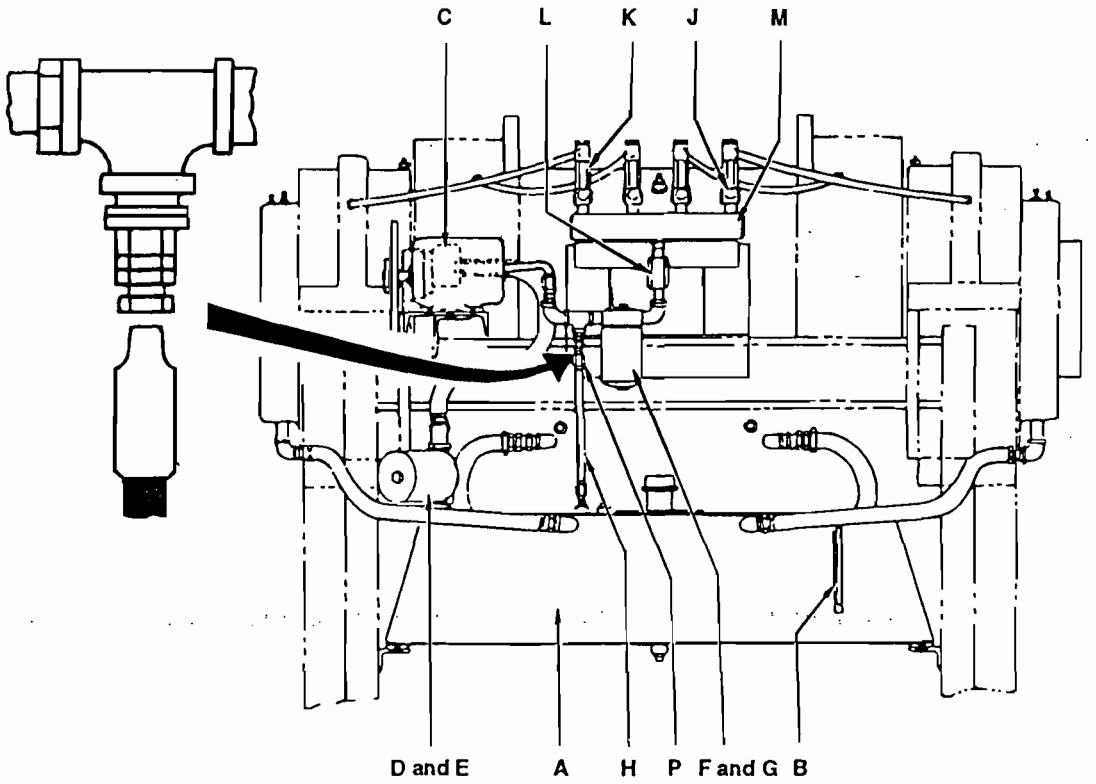

Figure 16
Circulating Oil System Components – Rear End View of Crusher with Electric Oil Pump Drive

Item Descriptions

A Oil reservoir
B Level gauge
C Oil pump
D & E Suction filter with gauge
F & G Discharge filter with gauge
H Relief line
J Pressure oiler
K Flow indicator tube
L Check valve
M Oil manifold
P Relief valve

Supply Tank & Level Gauge

A large supply tank (A) for the oiling system is mounted on the crusher frame. It is set lower than the pitman shaft bearings so that oil draining from each bearing will return by gravity flow to the tank for re-circulation.

Caution! It is vital that all four drain hoses be without a low point where oil could collect and congeal during cold weather so that drainage back to the supply tank would be slowed or blocked.

A sight gauge (B) on the side of the tank shows the level of oil. The tank size is dependent upon the crusher size as follows: 3648, 4248, 3660 & 5460 crushers have a 25 gallon tank while 3242 and smaller crushers have a 20 gallon capacity.

Use an **extreme pressure** type oil with the proper viscosity grade. Typical brand names are: Amoco Amogear EP, Exxon Spartan EP, Gulf EP Lube HD, Mobil Mobilgear, Shell Omala, Texaco Meropa. Viscosity should be 220 with ambient temperatures above 32°F and 150 with temperatures below 32°F. (Mobil 630 and 629)

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Circulating Oil System
Flywheel Pump Drive

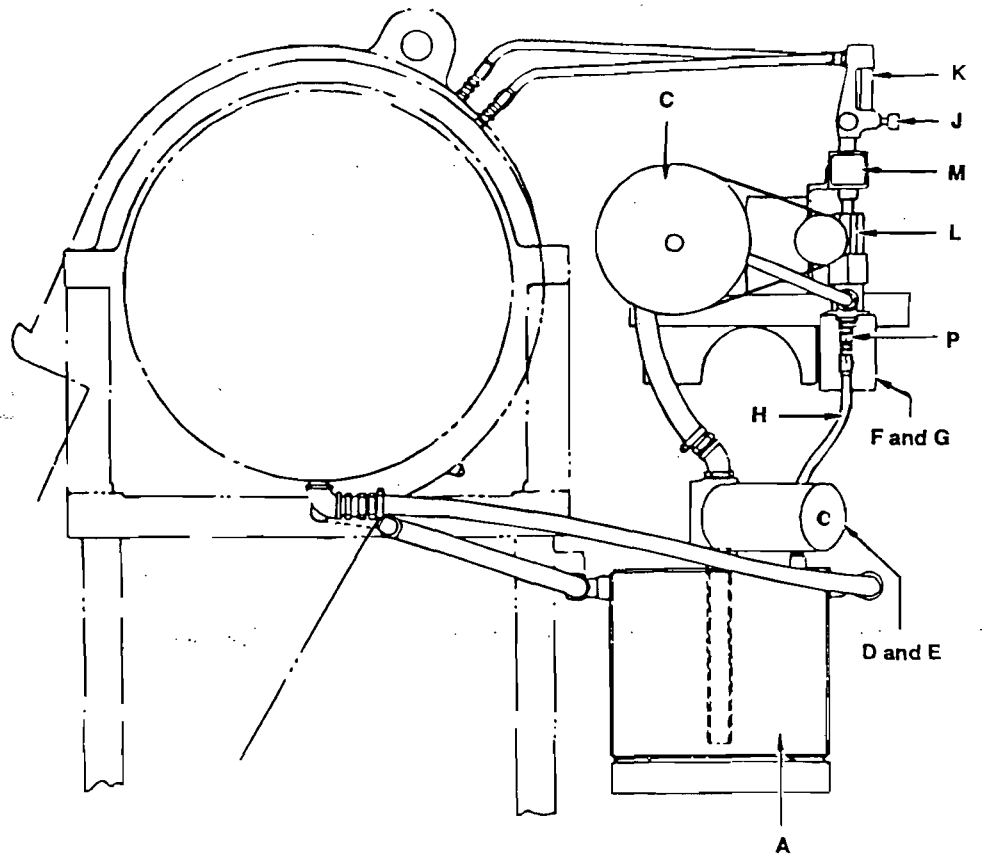

Figure 17
Circulating Oil System Components – Left Side View of Crusher with Flywheel-to-Pump Drive

Item Descriptions

A Oil reservoir
C Oil pump
D & E Suction filter with gauge
F & G Discharge filter with gauge
H Relief line
J Pressure oiler
K Flow indicator tube
L Check valve
M Oil manifold
P Relief valve

Oil Pump

The oil pump (C) picks up oil from the tank and forces it through the distribution system to the top of each of the four main roller bearings. When the oil reaches the bottom of each bearing it flows by gravity back to the supply tank. Oil which reaches the central gravity of the pitman, after having passed through the pitman bearings, also flows back to the supply tank. In this way a continuous circulation of oil over all bearing rollers takes place whenever the crusher drive is operating.

System Filters

Two filters are used in the lubrication system, a suction-line filter (D) above the reservoir (A) and a discharge-line filter (F) below the oil manifold, (M).

The suction filter has a reusable 100-mesh wire cloth element to prevent particles from reaching the pump. The discharge filter has a 25-micron disposable element which prevents even the smallest particles from being carried to the bearings. Each filter has an internal bypass which assures oil flow even if the element is plugged.

A 75 psi external relief valve is included in the inlet to the discharge filter to prevent damage if oilers become plugged or are shut off.

If there is a drop in volume at pressure oilers, (J) this may be an indication filters are clogged.

The reusable filter should be cleaned seasonally and the disposable filter changed when oil is changed. Under excessive dust conditions, filters should be checked periodically.

Check Valve

A check valve (L) in the oil feed line to the flow indicators prevents any reverse flow of oil in the feed line. This assures instant discharge of fresh oil into each bearing as soon as crusher operation begins again.

Flow Adjustment

The control knobs (J) regulate the oil flow to the bearings. To adjust them, allow the crusher to run until the oil is warmed up. Fully open all knobs. The brass indicators will be at their highest points in the tubes (K). Then close the valves until all the indicators are at the same level.

Periodically check the level. If the level falls evenly or in one or two of the tubes, it could be a sign of bearing problems or clogged filters.

During normal operation the relief line (I) returns excess oil to the reservoir.

Filters and Pressure Gauges

The discharge filter gauge (G) shows the pressure in the feed line to the filter (F) and flow control unit (J). The gauge will indicate a pressure but the readings will vary with ambient temperature, type of lubricant, operating temperature, etc.

Suction gauge (E) will normally show little or no reading.

Dust Barrier Grease Requirement

Circumferential grease passages around the outer side of each bearing cap and retaining ring serve as dust barriers and oil retainers when they are kept full of grease. Regular injection of grease at the six fittings (A) Figure 16 will force trapped dirt and dust particles outward and keep the lubricating oil from leaking to the outside. Any grease which is forced inward and manages to reach the oil cavity on the inner side of the assembly merely displaces some oil and eventually adds to the overall lubrication of the bearings.

Grease these fittings as often as necessary to keep a slick of grease extruding from each barrier so that all dust and dirt are kept out and oil leakage is minimized. Use a lithium base, grade 2 grease.

Heating Oil Prior to Start-up

During periods of cold weather the system should be observed closely for pump V-belt slippage or pump cavitation (failure to pump oil even though pump is being driven). If no oil flow is visible through flow indicators (K) when the crusher flywheels are turning, there will eventually be a lack of the required lubrication at each

Circulating Oil System Flywheel Pump Drive

bearing. A pre-heating of the oil in the supply tank will help to minimize the problem.

Caution! Do not heat oil be applying a torch flame directly to the sides an bottom of the supply tank. Extreme heating will carbonize the oil and create serious operating problems.

Draining and Flushing System

Each 1000 hours of crusher operation or seasonally, whichever occurs first, drain the supply tank. Remove the screen from suction filter (D) and clean it. Reinstall the filter screen. Add at least 10 gallons of flushing oil to the supply tank. Run the crusher empty for at least 10 minutes, then stop the drive and drain the flushing oil. If it appears extremely dirty, repeat the flushing with fresh oil to remove more of the contaminants.

When the flushing has been completed, install a new element in the pump discharge line filter (F). Remove and clean the filter screen in suction filter (D). Reinstall the screen. Refill the supply tank to normal operating level with the lubricant recommended.

Oil Pump Drive (Flywheel Drive)

Some early lubrication system pumps were driven by belt from the flywheel. These hand a link-type belt which could be replaced without removing the flywheel. A turnbuckle maintains belt tension by pivoting the pump bracket.

The belt should be kept only tight enough to drive the pump without slippage when the oil is cold at start-up. Over-tightening can cause rapid belt wear.

Oil Pump Drive Belt (Electric Motor Drive)

Maintain normal V-belt tightness by adjusting motor position. V-belt should be kept only tight enough to drive the pump without slippage when oil is cold at crusher start-up. Over-tightening will cause rapid V-belt wear.

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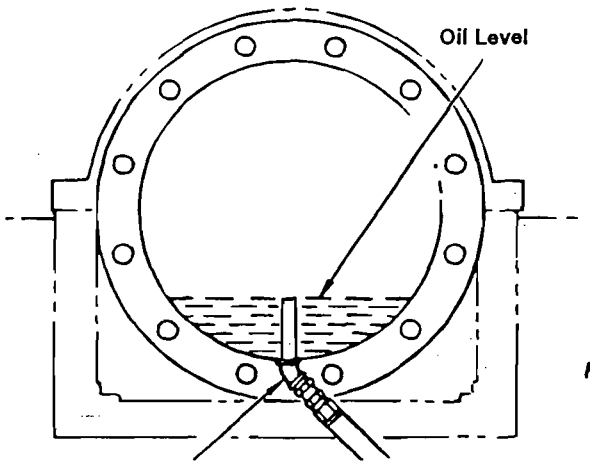
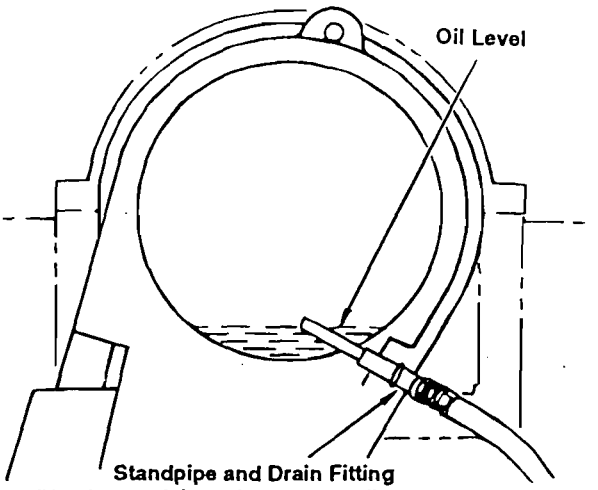
Circulating Oil System
Standpipe & Oil Level (Early Models Only)



Standpipe and Drain Fitting
(Used on serial numbers preceeding 38760)

End View of Side Bearing Showing Standpipe & Oil Level

Figure 18



Standpipe and Drain Fitting
(Used on serial numbers preceeding 38760)

End View of Pitman Showing Standpipe & Oil Level

Caution! Pitman Shaft Removal: The oil standpipes in the pitman must be unscrewed and removed before the shaft assembly with bearings can be withdrawn from the pitman. If this is not done, the standpipes will be severely damaged as shaft and bearings are withdrawn.

Oil Level Standpipes

All crushers (except model 5460) that precede serial number 38760 have two oil level standpipes in the pitman. (Figure 18) Model 3648 and smaller crusher also have an oil level standpipe in each of the side bearing end caps. These standpipes keep a small amount of oil covering the bottom of each bearing at all times. The maintenance of this oil supply assures the proper lubrication of each bearing at the moment of start-up. Also, if the oil pump fails the bearings will still be adequately lubricated for a reasonable length of time.

Caution! Routinely check the pressure system during each day's operation so that any interruption in the oil flow can be spotted quickly and restored. Shut down the crusher immediately if the oil flow is interrupted. The residual oil supply is not sufficient to last for long periods.

Pitman Shaft Removal - The oil standpipes in the pitman must be unscrewed and removed before the shaft assembly with bearings can be withdrawn from the pitman.

Lubricating Stored Equipment

Idle equipment whether new or used, must be turned over at least every 30 days either by power or hand to redistribute the lubricant. Revolving the bearing assemblies periodically insures lubricant on all surfaces of the bearing.

Failure to rotate bearings when crusher is idle will permit lubricant to drain to the bottom of the bearing assembly and by the collection of moisture through condensation will set up a chemical reaction in the bearing assemblies know as corrosive staining. These stained areas are a positive point for premature bearing failures, as flaking will start at these points when the equipment is put back into operation.

Circulating Oil System Low Oil Flow Alarm System

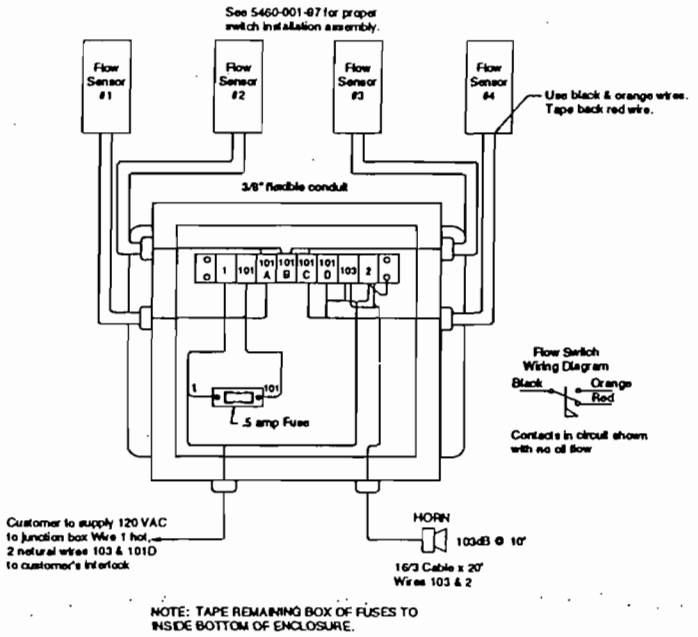


Figure 19
Wiring Diagram for Optional Low Flow Alarm System

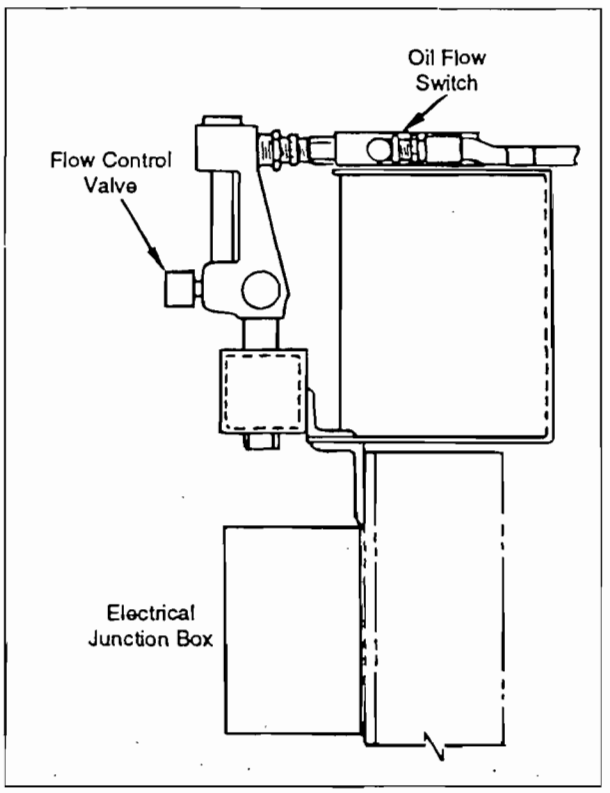
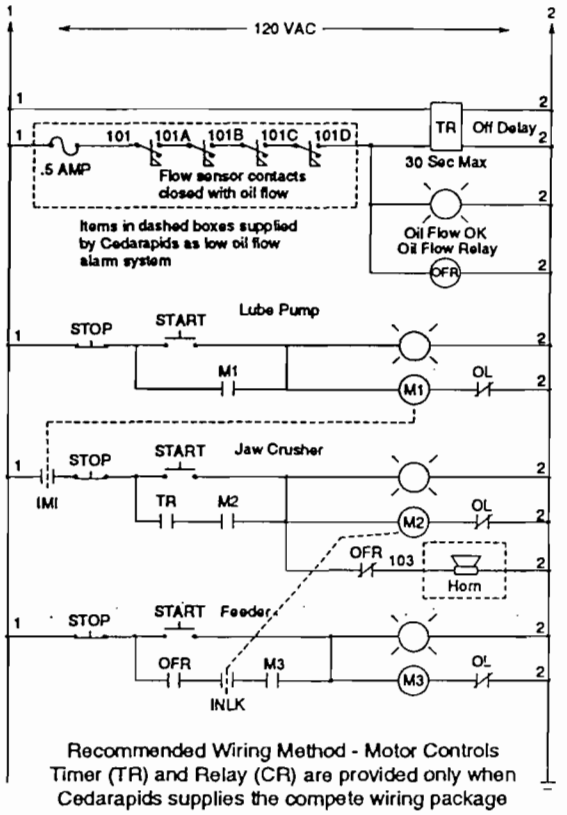


Figure 21
Location of Oil Flow Detection Switch



Recommended Wiring Method - Motor Controls
Timer (TR) and Relay (CR) are provided only when Cedarapids supplies the compete wiring package

Figure 20
Schematic for Optional Low Flow Alarm System

Note: Flow sensors have normally closed contacts that open up as flow is sensed. The alarm will sound when there is a loss of oil flow.

Optional Low Oil Flow Alarm (Figures 19-21)

All jaw crushers equipped with circulating oil lubrication systems can be equipped with an electric alarm to warn of inadequate oil flow to one or more bearings. A flow sensor is installed between each flowmeter and the crusher bearing it serves. A set of electrical contacts is closed by oil flowing through the device.

When oil is flowing to all four crusher bearings, the "Oil Flow OK" light will be on, the OFR relay will be energized, allowing the feeder to run and the TR timer will close, allowing the crusher to run (Figure 20).

If any switch opens due to a no-flow condition, the oil flow relay will drop out, the feeder will stop, the horn will sound, and the "Oil Flow OK" light will go out, warning the operator of an oil flow problem. This condition will remain until the oil flow is reestablished.

If the alarm sounds for the time set on the timer, the crusher will stop.

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Jaw Crusher Tool Listing

Model	Sleeve Type	Removal Nut	Tightening Nut	Wrench
1016	Push	369	7031 021	45500 752 03
1020X	Push	569	569B	45500 752 09
1020W	Pull	569A	569C	45500 752 09
1024	Push	569	569B	45500 752 09
1024W	Pull	569A	569C	45500 752 09
1036B	Push	697	697B	45500 752 09
1036D	Pull	697A	896	45500 752 09
1036	Pull	697A	896	45500 752 09
1236	Pull	697A	896	45500 752 09
1236	Pull	4418 238	4418 237	45500 752 09
1242	Pull	896	897	45500 752 09
1248	Pull	896	897	45500 752 09
1424	Pull	995	896	45500 752 09
1524	Pull	697BA	697 01	45500 752 09
1524	Push	697	697B	45500 752 09
1536	Push	895	896	45500 751 09
1624	Pull	569D	569E	45500 751 09
1636	Pull	896	897	45500 751 09
1642	Pull	946	4418 115	45500 751 10
1648	Pull	947	946	45500 751 10
1824	Push	697	697B	45500 751 09
1830	Push	895	896	45500 752 09
1836	Push	895	896	45500 752 09
2025	Pull	896	897	45500 752 09
2036	Pull	896	897	45500 752 09
2225	Pull	896	897	45500 752 09
2236	Pull	896	897	45500 752 09
2248	Pull	946	4418 115	45500 751 10
2436	Pull	946	4418 115	45500 751 10
2540	Pull	946	947	45500 751 10
2540	Push	947	946	45500 751 10
2542	Pull	947	946	45500 751 10
2640	Pull	946	4418 115	45500 751 10
2742	Pull	946	4418 115	45500 751 10
3040	Push	946A	946	45500 751 10
3040	Pull	946	4418 115	45500 751 10
3042	Push	946A	946	45500 751 10
3042	Pull	946	4418 115	45500 751 10
3054	Pull	946	4418 115	45500 751 10
3240	Pull	946A	946	45500 751 10
3242	Pull	946	4418 115	45500 751 10
3648	Pull	4418 172	4418 170	45500 751 16
3660	Push	4418 190	4418 189	45500-751-20
4242	Pull	946	4418 115	45500 752 10
4248	Push	4418 189	4418 189	45500-751-20
5460	Pull	5460 002 34 5460 002 35	5460 002 34 5460 002 35	01376AXA
Twin Jaw Crushers				
1216	Pull	370	569B	45500 751 09
1236	Pull	397A	896	45500 751 09
1624	Pull	569D	569E	45500 751 09
1836	Pull	896	897	45500 751 09
Dual Jaw Crushers				
1840/640	Pull	896	897A	45500 751 09
Gyra Jaw Crushers				
1072	Pull	947	946N	45500 751 10

Crusher Operation Problems

Feed too large

Pounding or crushing on pitman barrel and pitman bearing housings can cause short bearing life.

Feed too small

Excessive wear on bottom end of jaw plates. No wear in center area of jaw plates. Good manganese wasted.

Feeding material in excess of 35,000 - 40,000 PSI

Rock too hard can cause shaft breakage, bearing failure, base breakage and bolt fractures.

Setting crusher below minimum setting

Excessive wear on top of pitman, excessive wear on bottom of jaw plates. Overstressing shaft and bearing assemblies causing either or both shaft and bearing failure.

Choke feeding crusher

Excessive load on shaft and bearings. Excessive wear on pitman barrel. Excessive wear on feed hopper. Normal feed rate is to maintain 80% of jaw chamber.

Operating crusher too slowly

Make crusher too aggressive and end up overloading shaft, bearing and base, causing early failure.

Operating crusher too fast

No allowing enough time for jaw plates to grip the rock to break it. Excessive scrubbing wear action on jaw plates, shortening their life.

Operating at minimum setting short toggle plate & worn jaw plate

Excessively overloading stressing shaft.

Not centering movable jaw plate on pitman & in between key plate

Restricts the lateral movement of pitman. Stress loading bearings assembly causing excessive heat and early bearing failure. Possible shaft failure.

Operating with movable jaw plate rubbing on key plat due to movable jaw plate growth

Restricts lateral movement of pitman. Stress loading bearing assembly, causing excessive heat and early bearing failure. Possible shaft failure.

Operating with worn jaw plates

Pounding of jaw plates into base and pitman causing excessive wear on base and pitman. Depending on amount of wear, could over-stress shaft and bearings, causing either or both shaft and bearing failure.

Operating with two flat face jaw plates - no configuration

Excessive stress on shaft in hard rock application. For use in soft rock only.

Operating with two straight face jaw plates with configuration

Rapid wear on lower end of jaw plates.

Operating with unequal amount of shims behind the adjustable toggle seat

Over-stress of the toggle plate causes early failure of seat. Over-stress of one side of pitman and tension rod causing failure of tension rod and/or tension springs. Also causes uneven wear in toggle seats plus the toggle plate.

Toggle seat wedges loose

Will cause excessive wear on wedges, seat and base. Could cause toggle plate failure.

Operating with worn toggle seats

Will cause toggle plate to have uneven wear and early failure as well as toggle seat and crusher base damage.

Over-tensioning one rod and spring assembly

Will carry majority of load and fail prematurely.

Flywheel loose on shaft

Damage keyways and shaft. Most important, loose lateral tightness for rotating seal which could cause contaminants to enter the bearing.

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Jaw Crusher
Jaw Plate Assembly Procedure

Base Stationary Jaw & Key Plates

(1) Stationary jaw machined surface must be check for flatness both crosswise and top to bottom. It must be within 1/16".

(2) Stationary jaw must be centered in base and must be held tight upwards against the bottom end of the base and while in this position.

(3) Lower key plates are installed and then a 3/4" or 1" spacer bar is set on top of the lower key plate and the upper key plate is installed.

(4) Using a minimum of a 16 lb sledge hammer, you drive on the upper key plate forcing the lower key plate down tight in place.

(5) A properly fitting key plate will have a minimum of 70% contact between the base guide and the ear of the jaw plate. At the same time, the bolts that hold the key plates in the base should be between 1/2 way and the upper 3/4 of the slotted hole in the base. At no time should the bolts contact either end of the base hole.

(6) After the lower key plates are in position, remove the spacer and drive the upper key plates into position following guidelines for contact and bolt locations as in step (5).

NOTE

It may require grinding of key plates to properly fit as described above.

(7) With steps (5) & (6) completed, install the required shims under the upper lip of the jaw plate and base and weld the shims to the base. Refer to print #3645-049-01.

Pitman Jaw Plate & Key Wedge

(1) Movable jaw machined surface must be checked for flatness both crosswise and top to bottom. It must be within 1/16".

(2) The pitman lip must be smooth for the jaw plate to fit evenly and tight against the lip.

(3) The movable jaw plate must be centered on the pitman.

(4) The jaw wedge must be installed and be sure it does not extend beyond the end of the pitman, restricting the pitman slide float.

(5) Install the keeper bolts, locknuts and washer to hold the wedge in place.

(6) Using a minimum of a 16 lb sledge hammer, drive on the face of the wedge, starting in the center and working towards both ends to seat the wedge. While driving on wedge, a person is to be tightening the bolts and nuts in the same area.

(7) At no time should the jaw wedge be driven in deeper than the pitman barrel surface. If it goes in too deep, remove it and add a shim on top of the wedge the same width and length of wedge and then reset it.

NOTE

The wedge should never bottom out so there is no room left to draw it tighter.

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Jaw Crusher
Standard Jaw Configuration

STANDARD JAW CRUSHER CONFIGURATION							
Model	Stationary Jaw Style	Movable Jaw Style	Tooth Type	Model	Stationary Jaw Style	Movable Jaw Style	Tooth Type
1016	Straight	Regular Curve	E	2248	Regular Curve	Bellied	FA
1020	Bellied	Regular Curve	E	2436*	Regular Curve	Bellied	EP
1024	Bellied	Regular Curve	E	2438†	Regular Curve	Bellied	FA
1036	Bellied	Regular Curve	FA	2542	Regular Curve	Bellied	FA
1236	Bellied	Regular Curve	FA	2742	Regular Curve	Bellied	FA
1242	Bellied	Regular Curve	FA	3042	Regular Curve	Bellied	FA
1248	Bellied	Regular Curve	FA	3054**	Bellied	Bellied	FA
1524	Straight	Regular Curve	F	3242	Bellied	Regular Curve	FA
1636	Bellied	Regular Curve	FA	3648	Bellied	Regular Curve	FA
1642*	Bellied	Regular Curve	FA	3660**	Bellied	Bellied	FA
1648	Bellied	Regular Curve	FA	4242‡	Bellied	Regular Curve	FA
1824	Straight	Regular Curve	F	4248	Bellied	Regular Curve	FA
1836	Regular Curve	Bellied	FA	5460	Straight	Straight	FA
2236	Regular Curve	Bellied	FA	5748‡	Bellied	Regular Curve	FA

*Hard Rock **Recycle †Limestone ‡Rip-Rap

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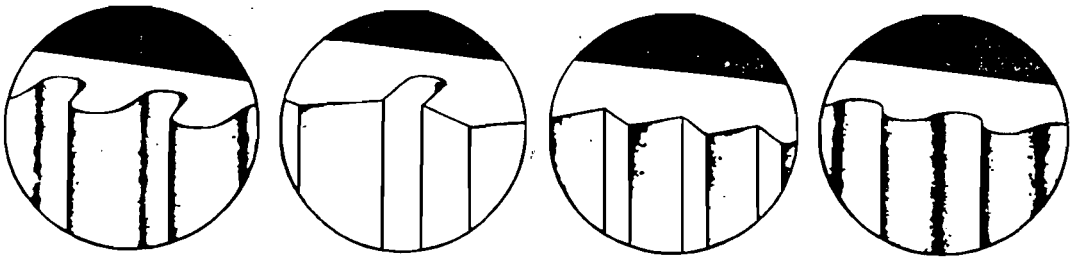
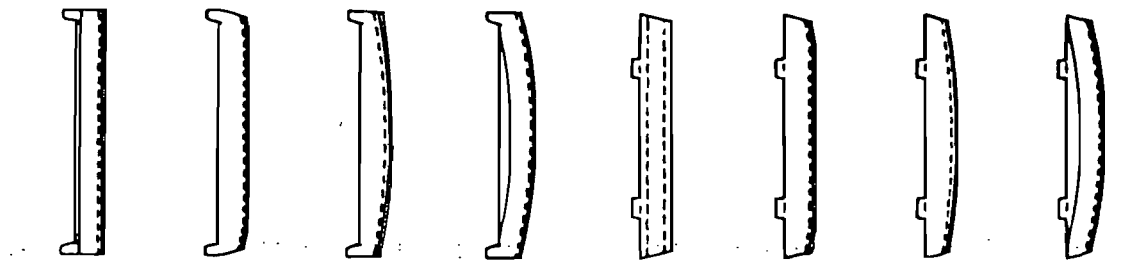
Crusher Jaws - Welded Base
Standard & Special



TYPE "FA" ROUND TOOTH DEEP CORRUGATION | TYPE "EP" POINTED TOOTH | TYPE "E" POINTED TOOTH | TYPE "F" ROUND TOOTH



STRAIGHT FACE | REGULAR CURVE | BELLIED | FULL BELLIED | STRAIGHT FACE | REGULAR CURVE | BELLIED | FULL BELLIED

STATIONARY JAW | MOVABLE JAW

SINGLE OVERHEAD ROLLER BEARING CRUSHER

WELDED BASE	STATIONARY				MOVABLE			
Model Number	Part Number	Style Tooth	Pitch (Inch)	Profile	Part Number	Style Tooth	Pitch (Inch)	Profile
1016	302	E	1-1/2	Straight	303B 305T	E	1-1/2	Reg Curve Full Bellied
1020	402A	E	1-1/2	Bellied	403 405	E	1-1/2	Reg Curve Full Bellied
1024	502	E	1-1/2	Bellied	503 505	E	1-1/2	Reg Curve Full Bellied
1036	602L	F	2	Bellied	603SS 605S	F F	2	Reg Curve Full Bellied
	602LH	F	2	Bellied	603SS 605S	F F	2	Reg Curve Full Bellied
	602UA	EP	3	Wedge	603UA 603VA	EP EP	3	Straight Full Bellied
	1036-049-01	FA	3-3/8	Bellied	1036-049-02 1036-049-03 1036-049-04	FA	3-3/8	Bellied Full Bellied Reg Curve
	1036-049-05	FA	3-3/8	Reg Curve	1036-049-02 1036-049-03 1036-049-04	FA	3-3/8	Bellied Full Bellied Reg Curve
	1036-049-06	FA	3-3/8	Full Bellied	1036-049-02 1036-049-03 1036-049-04	FA	3-3/8	Bellied Full Bellied Reg Curve

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Crusher Jaws - Welded Base
Standard & Special

SINGLE OVERHEAD ROLLER BEARING CRUSHER								
WELDED BASE	STATIONARY				MOVABLE			
Model Number	Part Number	Style Tooth	Pitch (Inch)	Profile	Part Number	Style Tooth	Pitch (Inch)	Profile
1236	1236X01	F	2	Bellied	1236X02	F	2	Reg Curve
	1236X03	EP	3	Bellied	1236X04 1236X06	EP	3	Reg Curve Bellied
	1236X05	EP	3	Wedge	1236X04 1236X06	EP	3	Reg Curve Full Bellied
	1236-066-01	FA	3-3/8	Bellied	1236-066-02 1236-066-04 1236-066-05	FA	3-3/8	Full Bellied Reg Curve Bellied
	1236-066-03	FA	3-3/8	Reg Curve	1236-066-02 1236-066-04 1236-066-05	FA	3-3/8	Full Bellied Reg Curve Bellied
	1236-066-06	FA	3-3/8	Full Bellied	1236-066-02 1236-066-04 1236-066-05	FA	3-3/8	Full Bellied Reg Curve Bellied
1524	702L	F	2	Straight	703L 705A01	F E	2	Reg Curve Full Bellied
	9001-344	EP	3	Bellied	9001-345	EP	3	RegCurve
1830	1830B01	F	2	Straight	1830B02	F	2	Reg Curve
1836	1636-050-20	EP	3	Bellied	1636-050-21 1636-050-22	EP	3	Straight Bellied
	1636-050-23	FA	3-3/8	Bellied	1636-050-24 1636-050-28 1636-050-29	FA	3-3/8	Full Bellied Bellied Reg Curve
	1636-050-27	FA	3-3/8	Reg Curve	1636-050-24 1636-050-28 1636-050-29	FA	3-3/8	Full Bellied Bellied Reg Curve
2025	2025A04	E	2	Bellied	2025A05	E	2	Bellied
2036	802D	E	2	Straight	803D 805B	E	2	Straight Bellied
	802-01	EP	3	Bellied	803DA 805C	EP	3	Straight Bellied
	802DB	EP	3	Wedge	803DA 805C	EP	3	Straight Bellied
	2236-006-10	FA	4-3/8	Reg Curve	2236-006-11 2236-006-13	FA	4-3/8	Reg Curve Bellied
	2236-006-12	FA	4-3/8	Bellied	2236-006-11 2236-006-13	FA	4-3/8	Reg Curve Bellied
2225	2025A04	E	2	Bellied	2025A05	E	2	Bellied

Cedarapids
A Raytheon Company

Crusher Jaws - Welded Base
Standard & Special

SINGLE OVERHEAD ROLLER BEARING CRUSHER								
WELDED BASE	STATIONARY				MOVABLE			
Model Number	Part Number	Style Tooth	Pitch (Inch)	Profile	Part Number	Style Tooth	Pitch (Inch)	Profile
2226	802D	E	2	Straight	803D 805B	E	2	Straight Bellied
	802-01	EP	3	Bellied	803DA 805C	EP	3	Straight Bellied
	802DB	EP	3	Wedge	803DA 805C	EP	3	Straight Bellied
	2236-006-10	FA	4-3/8	Reg Curve	2236-006-11 2236-006-13	FA	4-3/8	Reg Curve Bellied
	2236-006-12	FA	4-3/8	Bellied	2236-006-11 2236-006-13	FA	4-3/8	Reg Curve Bellied
2248	2248-10-01	EP	3	Bellied	2248-100-02 2248-100-08	EP	3	Straight Bellied
	2248-10-09	FA	4-3/8	Straight	2248-100-10 2248-100-12	FA	4-3/8	Reg Curve Bellied
	2248-10-11	FA	4-3/8	Bellied	2248-100-10 2248-100-12	FA	4-3/8	Reg Curve Bellied
2436	2436-400-01 2436-400-05	EP	3	Reg Curve Full Bellied	2436-401-01	EP	3	Bellied
2540	901K	E	3	Straight	902K	E	3	Straight
	901KA	EP	3	Straight	902KA 902L	DS EP	3	Straight Bellied
	901KC	EP	3	Bellied	902KA 902L	DS EP	3	Straight Bellied
	901L	EP	3	Wedge	902KA 902L	DS EP	3	Straight Bellied
	2540-400-03	FA	5-3/8	Bellied	2540-400-04 2540-400-06	FA	5-3/8	Bellied Reg Curve
	2540-400-05	FA	5-3/8	Reg Curve	2540-400-04 2540-400-06	FA	5-3/8	Bellied Reg Curve
2540 H.D.	901HA	B	3	Bellied	902H	B	3	Bellied
	901KA	EP	3	Straight	902KA	DS		Straight
3042	3042-051-01	FA	6-3/8	Bellied	3042-051-02 3042-051-03	FA	6-3/8	Reg Curve Bellied
	3042-051-04	FA	6-3/8	Reg Curve	3042-051-02 3042-051-03	FA	6-3/8	Reg Curve Bellied
3054	3054-500-17	FA	6-3/8	Bellied	3054-500-18	FA	6-3/8	Bellied

Cedarapids
A Raytheon Company

Crusher Jaws - Welded Base
Standard & Special

SINGLE OVERHEAD ROLLER BEARING CRUSHER								
WELDED BASE	STATIONARY				MOVABLE			
Model Number	Part Number	Style Tooth	Pitch (Inch)	Profile	Part Number	Style Tooth	Pitch (Inch)	Profile
3240	901KA	EP	3	Straight	3040A05 3040-600-01	DS EP	3	Straight Full Bellied
	901KC	EP	3	Bellied	3040A05 3040-600-01	DS EP	3	Straight Full Bellied
	901L	EP	3	Wedge	3040A05 3040-600-01	DS EP	3	Straight Full Bellied
	2540-400-03	FA	5-3/8	Bellied	3040A05 3040-600-01	DS FA	5-3/8	Straight Reg Curve
	2540-400-05	FA	5-3/8	Reg Curve	3040A05 2640-001-27 2640-001-26	DS FA FA	5-3/8	Straight Bellied Reg Curve
3242	3242L01	E	7	Straight	3242L02	DS		Straight
	3242L01F	EP	7	Straight	3242L02 3242L02D	DS EP	7	Straight Full Bellied
	3242-050-06	FA	6-3/8	Bellied	3242L02 3242-050-07 3242-050-05	DS FA FA	6-3/8 6-3/8	Straight Bellied Reg Curve
	3242-050-04	FA	6-3/8	Bellied	3242L02 3242-050-07 3242-050-05	DS FA FA	6-3/8 6-3/8	Straight Bellied Reg Curve
3648	3645-049-20	FA	6-3/8	Reg Curve	3645-049-21 3645-049-30	FA	6-3/8	Reg Curve Bellied
	3645-049-22	FA	6-3/8	Bellied	3645-049-21 3645-049-30	FA	6-3/8	Reg Curve Bellied
3660	3660-049-02 3660-049-03	FA	6	Bellied Reg Curve	3660-049-01	FA	6	Bellied
4242	3242L01 3242L01F	E EP	7	Straight	3242L02	DS		Straight
	3242-050-06	FA	6-3/8	Bellied	3242L02 3242-050-07 3242-050-05	DS FA FA	6-3/8 6-3/8	Straight Bellied Reg Curve
	3242-050-04	FA	6-3/8	Reg Curve	3242L02 3242-050-07 3242-050-05	DS FA FA	6-3/8 6-3/8	Straight Bellied Reg Curve
4248	4248B01D 4248-049-01 4248-049-03	Swage FA FA	6 6 6	Bellied Reg Curve Bellied	4248B02 4248B02 4248-049-02	DS DS FA	6	Bellied Bellied Reg Curve
5460 Requires 2-piece Jaw	5460-001-85 5460-001-93	FA	6	Straight Bellied	5460-001-86 5460-001-92	FA	6	Straight Bellied
5748	4248B01D 4248-049-01 4248-049-03	Swage FA FA	6 6 6	Bellied Reg Curve Bellied	4248B02 4248B02 4248-049-02	DS DS FA	6	Bellied Bellied Reg Curve

Cedarapids
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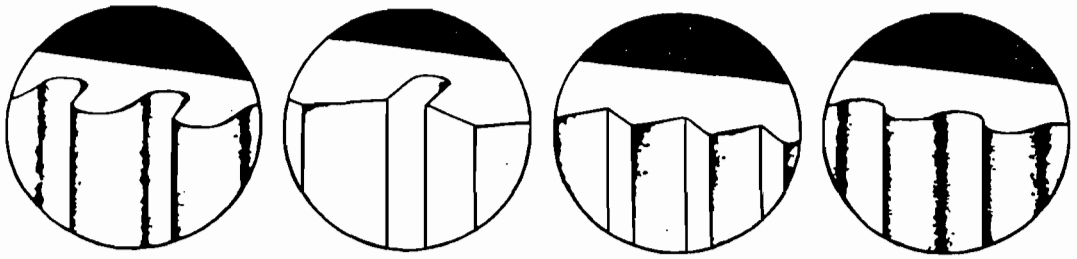
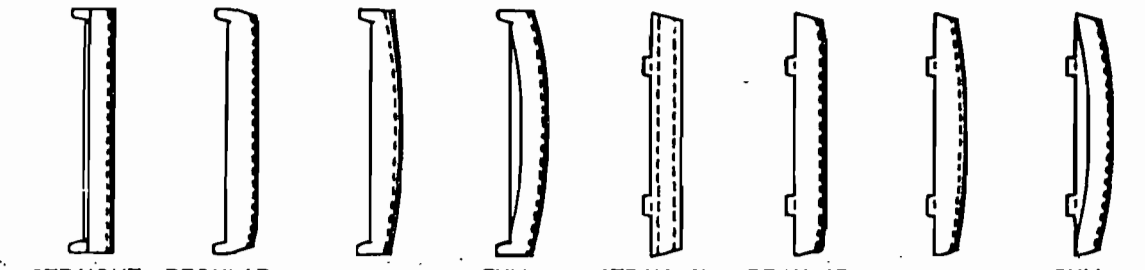
Crusher Jaws - Cast Base
Standard & Special



TYPE "FA" ROUND TOOTH DEEP CORRUGATION | TYPE "EP" POINTED TOOTH | TYPE "E" POINTED TOOTH | TYPE "F" ROUND TOOTH



STRAIGHT FACE | REGULAR CURVE | BELLIED | FULL BELLIED | STRAIGHT FACE | REGULAR CURVE | BELLIED | FULL BELLIED

STATIONARY JAW — MOVABLE JAW

SINGLE OVERHEAD ROLLER BEARING CRUSHER

CAST BASE	STATIONARY				MOVABLE			
Model Number	Part Number	Style Tooth	Pitch (Inch)	Profile	Part Number	Style Tooth	Pitch (Inch)	Profile
336	6	-Obsolete-			7	-Obsolete-		
336 Special	102	None		Full Bellied	103	None		Straight
1016	302	E	1-1/2	Straight	303B 305T	E	1-1/2	Reg Curve Full Bellied
1020	402A	E	1-1/2	Bellied	403 405	E	1-1/2 1-1/2	Reg Curve Full Bellied
1024	502	E	1-1/2	Bellied	503 505	E	1-1/2	Reg Curve Full Bellied
1036	602L	F	2	Bellied	603SS 605S	F F	2	Reg Curve Full Bellied
	602LH	F	2	Bellied	603SS 605S	F F	2	Reg Curve Full Bellied
	602UA	EP	3	Wedge	603UA 605VA	EP EP	3	Straight Full Bellied
	1036-049-01	FA	3-3/8	Bellied	1036-049-02 1036-049-03 1036-049-04	FA	3-3/8	Bellied Full Bellied Reg Curve
	1036-049-05	FA	3-3/8	Reg Curve	1036-049-02 1036-049-03 1036-049-04	FA	3-3/8	Bellied Full Bellied Reg Curve
	1036-049-06	FA	3-3/8	Full Bellied	1036-049-02 1036-049-03 1036-049-04	FA	3-3/8	Bellied Full Bellied Reg Curve

Cedarapids
A Raytheon Company

Crusher Jaws - Cast Base
Standard & Special

SINGLE OVERHEAD ROLLER BEARING CRUSHER								
CAST BASE	STATIONARY				MOVABLE			
Model Number	Part Number	Style Tooth	Pitch (Inch)	Profile	Part Number	Style Tooth	Pitch (Inch)	Profile
1524	702	E	2	Straight	703 705A	E	2	Reg Curve Obsolete
1524 Special	702L	F	2	Straight	703L 705A01	F E	2	Reg Curve Full Bellied
	9001-344	EP	3	Bellied	9001-345	EP	3	Reg Curve
1536	802X	E	2	Straight	803X 803Y	E	2	Reg Curve
1536 Special	802Y	F	2	Straight	803XY	F	2	Reg Curve
1836	802X	E	2	Straight	803X	E	2	Reg Curve
1836 Special	802Y	F	2	Straight	803XY 803Y	F	2	Reg Curve

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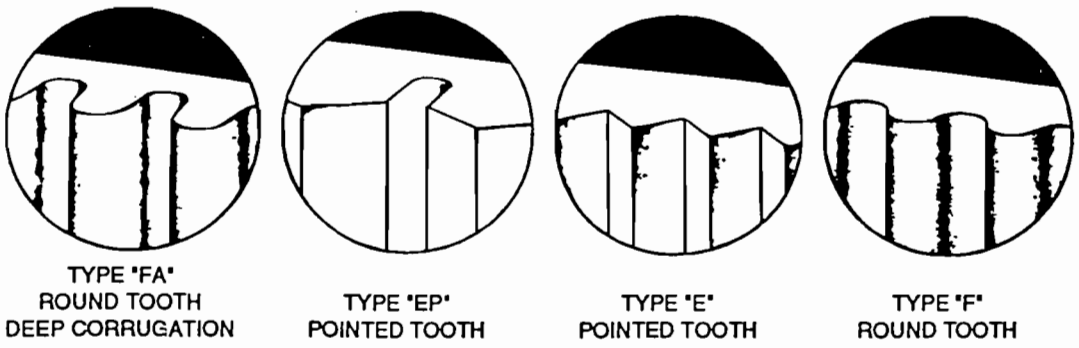
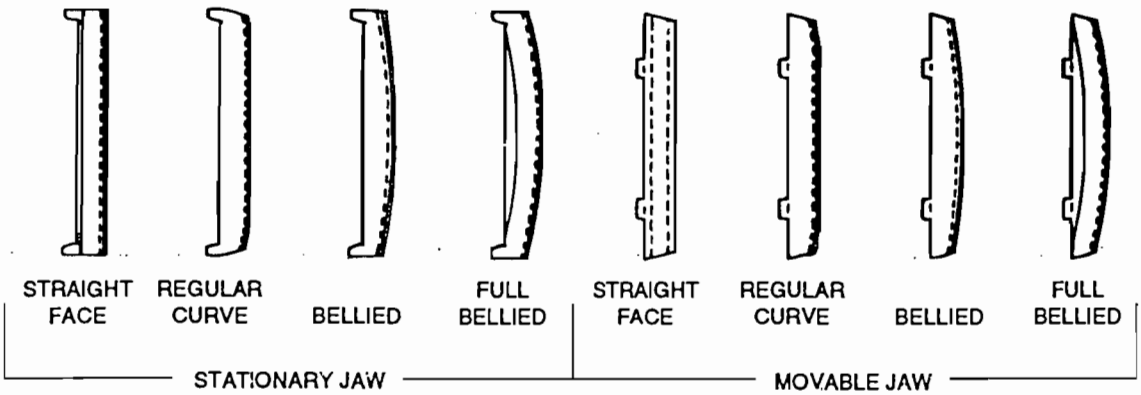
Crusher Jaws - Twin/Dual/Gyra
Standard & Special



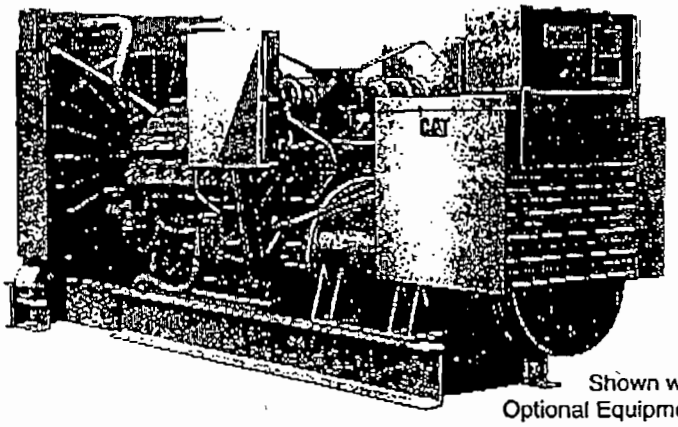


TWIN JAW ROLLER BEARING CRUSHER								
	STATIONARY				MOVABLE			
Model Number	Part Number	Style Tooth	Pitch (Inch)	Profile	Part Number	Style Tooth	Pitch (Inch)	Profile
1216					303U	F	2	Bellied
1236					1604A07 1640A07-02	EP	3	Reg Curve Wedge
1624					703T	F		Bellied
1836					1602A06 1602A06C 1602-001-05 1602-001-04 1602-001-03	E EP FA FA FA	3 3 3-3/8 3-3/8 3-3/8	Reg Curve Reg Curve Full Bellied Bellied Reg Curve
DUAL JAW ROLLER BEARING CRUSHER								
1640 640	1700-12A	E	3	Reg Curve	1700-13A	E	3	Bellied
1830 630	1702A07A	EP	3	Reg Curve	1702A08A	EP	3	Bellied
GYRA DUAL JAW ROLLER BEARING CRUSHER								
1036	1604A07	EP	3	Reg Curve	1606-002-01 1606-002-04	EP	3	Bellied Full Bellied

CATERPILLAR®

Generator Set

3512
3412
60 Hz
910KW



Shown with Optional Equipment

Prime Power – 545 kW
Standby Power – 600 kW

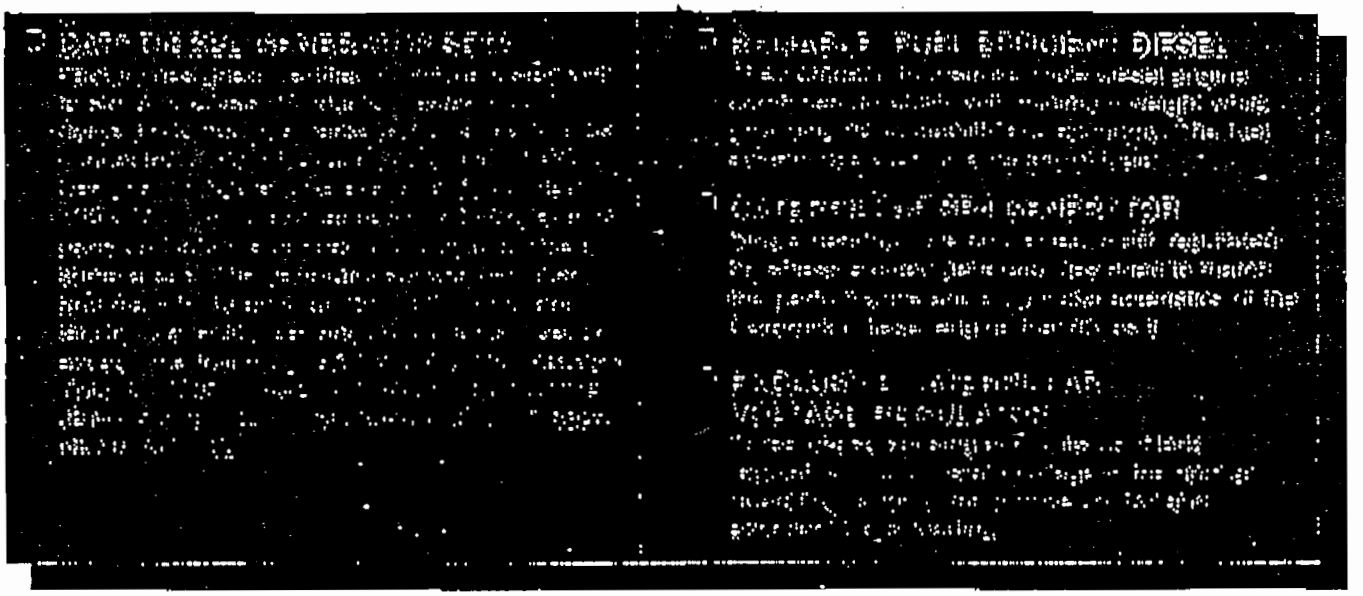
SPECIFICATIONS

Watercooled Diesel, four stroke, V-12

Bore—mm (in)	137 (5.4)
Stroke—mm (in)	152 (6.0)
Displacement—L (cu in)	27.0 (1,649)
Aspiration	Turbocharged-Aftercooled
Compression ratio	14.5:1

CATERPILLAR ENGINE FACILITIES ISO 9001 CERTIFIED

FEATURES



CATERPILLAR SR4 GENERATOR

Frame size	589
Type	Static regulated brushless excited
Construction	Single bearing, close coupled
Three phase	wye connected
Insulation	Class F with tropicalization
Terminal box	Drip proof IP 22
Overspeed capability	150%
Paralleling capability	Standard with adjustable voltage droop
Voltage regulator	3 phase sensing with Volts-per-Hertz Adjustable – 25% + 10%
Voltage regulation	Less than ± 1/2% (steady state) Less than ± 1% (no load to full load)
Voltage gain	Adjustable to compensate for engine speed drop and line loss
Wave form	Less than 5% deviation
TIF	Less than 50
THD	Less than 5%

CATERPILLAR CONTROL PANEL

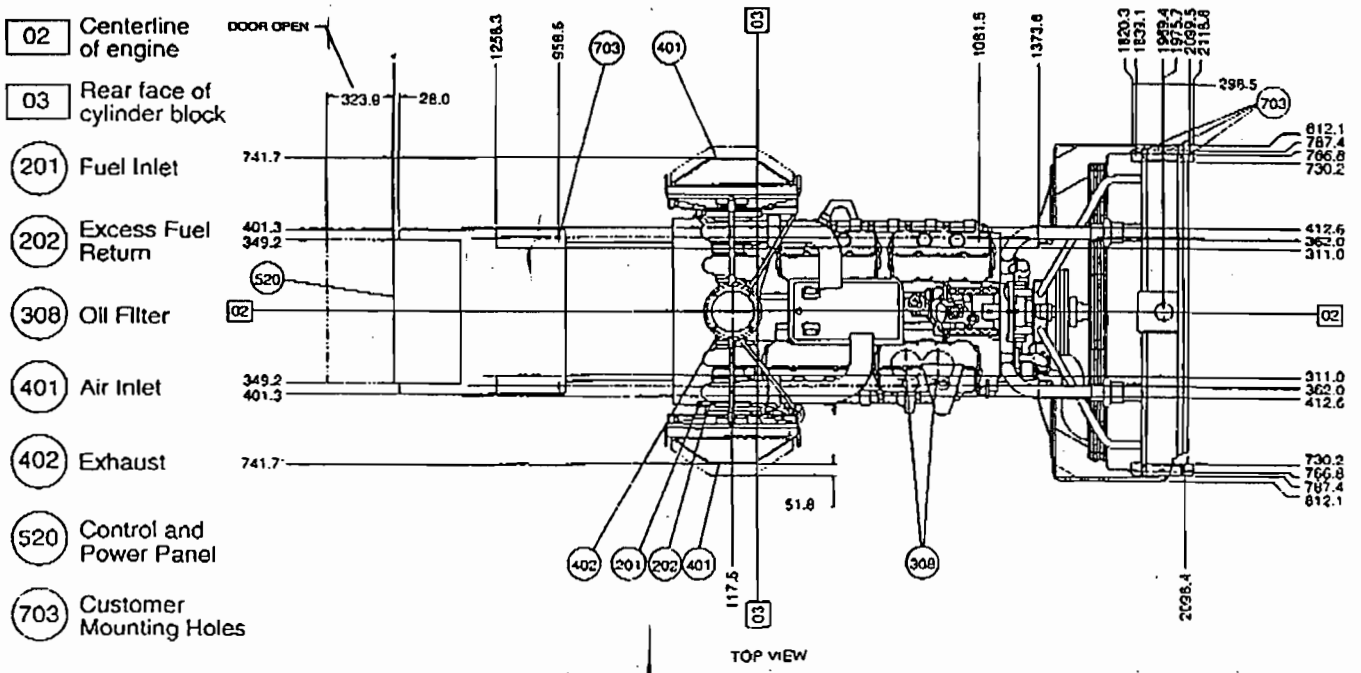
24 Volt DC Control
Terminal box mounted
Vibration isolated
NEMA 1, IP 22 enclosure
Electrically dead front
Lockable door
Generator instruments meet ANSI C-39-1

Voltages Available
(Consult Price List)

3512 910KW **BEST AVAILABLE COPY**

3512 GENERATOR SET

CATERPILLAR®



TECHNICAL DATA

			Metric			English	
			Prime	Standby		Prime	Standby
Rating Information	Rating type						
	Power rating @ 0.8 PF with fan	kW	545	600	kW	545	600
	Power rating @ 0.8 PF with fan	kV•A	681	750	kV•A	681	750
Dimensions	Generator frame size		589	589		589	589
	Length	mm	3874	3874	in	152.5	152.5
	Width	mm	1624	1624	in	63.9	63.9
	Height	mm	2154	2154	in	84.8	84.8
	Weight (dry)	kg	4875	4875	lb	10,000	10,000
Lubrication & Cooling Systems	Engine lubricating oil capacity	L	117	117	qts	124	124
	Engine coolant capacity w/o radiator	L	58.6	58.6	gal	15.5	15.5
	Engine coolant capacity with radiator	L	128.6	128.6	gal	34.0	34.0
	Standard radiator arrangement data:						
	Air flow (max. @ rated speed)	m³/min	1070	1070	cfm	37,787	37,787
	Air flow restriction (after radiator)	kPa	.06	.06	in water	0.25	0.25
	Ambient air temperature (consult T.I.F.)	deg C	52	53	deg F	125	125
	Coolant pump external resistance (max. allowable)	m water	5.1	5.1	ft water	16.8	16.8
	Coolant pump flow @ max. allowable resistance	L/min	530.6	530.6	gpm	140	140
Exhaust System	System backpressure (max. allowable)	kPa	6.7	6.7	in water	27	27
	Exhaust flange size (internal dia.)	mm	200.2	200.2	in	8	8
Performance Data @ Rated Conditions	Fuel consumption (100% load) with fan	L/hr	152.8	170.1	gph	40.4	44.9
	Fuel consumption (75% load) with fan	L/hr	114.5	127.0	gph	30.2	33.5
	Combustion air inlet flow rate	m³/min	51	56	cfm	1815	1981
	Exhaust gas flow rate	m³/min	134	149	cfm	4736	5265
	Heat rejection to coolant (total)	kW	350	382	Btu/min	19,896	21,742
	Heat rejection to exhaust (total)	kW	519	578	Btu/min	29,515	32,870
	Heat rejection to atmosphere from engine	kW	149	175	Btu/min	8473	9952
	Heat rejection to atmosphere from generator	kW	36	41	Btu/min	2039	2308
	Exhaust gas stack temperature	deg C	503	517	deg F	937	963

CATERPILLAR®

3412 GENERATOR SET

STANDARD EQUIPMENT

Engine
Aftercooler
Air cleaner with service indicator
Base, structural steel
Breather, crankcase
Cooler, lubricating oil
Exhaust fitting and flange
Filters, right hand
Fuel, full flow
Governor
Lifting eyes
Lubricating oil, gear driven
Manifold, exhaust, dry
Pumps,
  fuel transfer, gear driven
  lubricating oil, gear driven
  jacket water, gear driven
Radiator
Shutoff, manual
Starting, electric, 24 Volt DC

Generator
SR4 brushless with VR3
Automatic voltage regulator

Control Panel
Auto start-stop control module
  w/cycle crank and cooldown
Digital ammeter, voltmeter,
  phase selector switch,
  frequency meter
Digital DC voltmeter, tachometer,
  hourmeter
Digital oil pressure and water
Emergency stop push button
Engine control switch for auto,
  start/run, off/reset, stop
Lamp display
  temperature gauges
Shutoffs with indicators for:
  low oil pressure
  high water temperature
  overspeed
  overcrank
  emergency stop push button
System diagnostic codes
  digital readout
Voltage adjust rheostat

OPTIONAL EQUIPMENT

Engine/Base
Air cleaner, heavy duty
Air precleaner
Battery chargers
Battery/racks
Charging alternator
Cooling system
  high ambient radiators
  fan drives
  heat exchangers
Exhaust system
  fittings, elbows, pipe
  flex, mufflers
Governor, Woodward
Jacket water heaters
Primary fuel filter
Protection devices
Tachometer drive
Vibration isolators

Generator
Manual voltage control
MIL Std. 461B, Part 9
Permanent magnet exitation
RFI N Level (VDE 875), BS800
Space heater

Switchgear
Circuit breaker
  manual
  electric operated
Enclosure — Floor standing NEMA 1
Main load buss
Paralleling
  manual
  permissive
  auto (consult factory)
Protective relays

Control Panel
Auxillary relay
Enclosure, NEMA 12/IP 44
Governor speed switch
Illuminating lights
Installed speed sensing
  governor (Woodward)
Provision for:
  alarm module
  alarm module – NFPA 99
  alarm module – NFPA 110
Reverse power relay
Starting aid switch
Synchronizing lights