NONMETALLIC MINERAL PROCESSING PLANT (CRUSHER) AIR GENERAL PERMIT EXAMPLE REGISTRATION WORKSHEET

Facility Identification Number - If known (seven digit number)

7775706-001

Registration Type

Check one:

INITIAL REGISTRATION - Notification of intent to:

- ☒ Construct and operate a proposed new facility.
- ☐ Operate an existing permitted facility not currently using an air general permit (e.g., a facility proposing to go from an air operation permit to an air general permit). If the facility currently holds one or more air operation permits, such permit(s) must be surrendered by the owner or operator upon the effective date of this air general permit. (See "Surrender of Existing Air Operation Permit(s)" below.)
- ☐ Operates an existing facility not currently permitted or using an air general permit.

RE-REGISTRATION (for facilities currently using an air general permit) - Notification of intent to:

- ☐ Continue operating the facility after expiration of the current term of air general permit use.
- ☐ Continue operating the facility after a change of ownership.
- ☐ Make an equipment change requiring re-registration pursuant to Rule 62-210.310(2)(e), F.A.C.
- ☐ Any other change not considered an administrative correction under Rule 62-210.310(2)(d), F.A.C.

Surrender of Existing Air Operation Permit(s) - For Initial Registrations Only, if Applicable

All existing air operation permits for this facility are hereby surrendered upon the effective date of this air general permit; specifically permit number(s):

_____

General Facility Information

Facility Owner/Company Name (Name of corporation, agency, or individual owner who or which owns, leases, operates, controls, or supervises the facility.)
Rainey Asphalt, LLC

Site Name (Name, if any, of the facility site; e.g., Plant A, Metropolis Plant, etc. If more than one facility is owned, a complete registration must be submitted for each.)
Portable Crusher

Facility Location (Physical location of the facility, not necessarily the mailing address.)
Street Address: **3470 Buena Vista Blvd**
City: **The Villages** County: **Sumter** Zip Code: **32163**

Facility Start-Up Date (Estimated start-up date of proposed **new** facility.)(N/A for existing facility.)
12/14/11

Facility Contact

Name and Position Title (Plant manager or person to be contacted regarding day-to-day operations at the facility.)
Print Name and Title: **Mike Byrd, Asphalt Plant Manager**

Facility Contact Telephone Numbers
Telephone: **352-689-0261** Fax: **352-689-0262**
Cell phone: **352-517-6022**
E-mail: **mbyrd@raineyconstruction.com**

Facility Contact Mailing Address
Organization/Firm: **Rainey Asphalt, LLC**
Mailing Address: **4477 East CR 462**
City: **Wildwood** County: **Sumter** Zip Code: **34785**

Other Contact/Representative (to serve as additional Department contact)

Name and Position Title
Print Name and Title: _____

Other Contact/Representative Telephone Numbers
Telephone: _____ Fax: _____
Cell phone: _____
E-mail: _____

Other Contact/Representative Mailing Address
Organization/Firm: _____
Mailing Address: _____
City: _____ County: _____ Zip Code: _____

Government Facility Code (check only one)

- ☒ **Facility not owned or operated by a federal, state, or local government.**
- ☐ **Facility owned or operated by the federal government.**
- ☐ **Facility owned or operated by the state.**
- ☐ **Facility owned or operated by the county.**
- ☐ **Facility owned or operated by the municipality.**
- ☐ **Facility owned or operated by a water management district.**

Type of Facility

Check one:

☐ **Stationary Facility** ☒ **Relocatable Facility**

Type(s) of Precautions Used to Prevent Unconfined Emissions

Check all that apply for the management of roads, parking areas, stock piles and yards:

☐ **Maintain Roads/Parking/Yards** ☒ **Use Water Application** ☐ **Use Dust Suppressant**
☐ **Remove Particulate Matter** ☒ **Reduce Stock Pile Height** ☐ **Install Wind Breaks**

Check the location of spray bars at the nonmetallic mineral processing plant:

☒ **Feeders** ☒ **Entrance to "Crusher"** ☐ **Exit of "Crusher"**
☐ **Classifier Screens** ☒ **Conveyor Drop Points**

Emission Unit Details

COMPONENT DESCRIPTION (e.g. primary, secondary crusher, screener, conveyor, RICE* engine and fuel type, etc.)	MANUFACTURER	DATE OF MANUFACTURE	MODEL NUMBER	SERIAL NUMBER	RATED CAPACITY (tons/hr, hp)	SUBJECT TO 40 CFR, PART 60, SUBPART OOO (Yes or No)**
Primary Crusher	Terex Pegson		4242sr		200 tons/hr	Yes
20" Closed Circuit Conveyor	Terex Pegson		4242sr		200 tons/hr	Yes
24" Wide Side Dirt Conveyor	Terex Pegson		4242sr		200 tons/hr	Yes
20" Wide Side Transfer Conveyor	Terex Pegson		4242sr		200 tons/hr	Yes
39" Wide Main Delivery Conveyor	Terex Pegson		4242sr		200 tons/hr	Yes
55" Wide Underscreen Conveyor	Terex Pegson		4242sr		200 tons/hr	Yes
11' X 5' Double Deck Sizing Screen	Terex Pegson		4242sr		200 tons/hr	Yes
Caterpillar diesel engine	Caterpillar		C-9		309 HP	

*RICE: Reciprocating Internal Combustion Engine

**NMMP Facilities subject to Subpart OOO:

Stationary sand and gravel plants with a machine *(or a maximum)* rated capacity greater than 150 tons per hour
Portable sand and gravel plants with a machine *(or a maximum)* rated capacity greater than 25 tons per hour
Clay and pumice plants with a machine *(or a maximum)* rated capacity greater than 10 tons per hour

Description of Facility

Below, or as an attachment to this worksheet, provide a description of the nonmetallic mineral processing plant operations at the facility in sufficient detail to demonstrate the facility's eligibility for use of this air general permit and to provide a basis for tracking any future equipment or process changes at the facility. Describe material(s) processed, all air pollutant-emitting processes, and identify any air pollution control measures used. Mobile source equipment information is not needed (eg.: trucks, bulldozers, front-end loaders, etc.)

Rainey Asphalt, LLC is applying for an air general permit so they can rent a portable RAP crusher to crush recycled asphalt and concrete on various job locations. The crusher will be a Terex Pegson 4242sr Trakpaktor or similar unit. This is a mobile, closed-loop impact crusher equipped with spray bars for dust suppression. The crusher is rated at 200 tons per hour. Specifications of the crusher are attached along with drawings and a table of emission points. The emissions points are the same emission points listed in the current permit at their asphalt plant for the same crusher.

Since this will be a rental unit, the serial number and manufacture date are unknown at this time.

Helpful Definitions:

"Capacity" – Per 40 CFR 60.671, the cumulative rated capacity of all initial crushers that are part of the plant.
"Department" or "DEP" - The State of Florida Department of Environmental Protection.
"Emissions Unit" - Any part or activity of a facility that emits or has the potential to emit any air pollutant.
"Facility" - All of the emissions units which are located on one or more contiguous or adjacent properties, and which are under the control of the same person (or persons under common control).
"Owner" or "Operator" - Any person or entity who or which owns, leases, operates, controls or supervises an emissions unit or facility.
"Nonmetallic Mineral Processing Plant" – Per 40 CFR 60.671, any combination of equipment that is used to crush or grind any nonmetallic mineral wherever located, including lime plants, power plants, steel mills, asphalt concrete plants, portland cement plants or any other facility processing nonmetallic minerals except as provided in 40 CFR §60.670 (b) and (c).
"Relocatable Facility" - A facility such as, but not limited to, an asphalt plant, portable power generator, or relocatable nonmetallic mineral processing plant, which is designed to be physically moved to, and operated on, different sites by being wholly or partially dismantled and re-erected in essentially the same configuration. It shall not be operable while in transit.
"Screening Operation" – Per 40 CFR 60.671, a device for separating material according to size by passing undersize material through one or more mesh surfaces (screens) in series and retaining oversize material on the mesh surfaces (screens). Grizzly feeders associated with truck dumping and static (non-moving) grizzlies used anywhere in the nonmetallic mineral processing plant are not considered to be screening operations.
"Size" – Per 40 CFR 60.671, the rated capacity in tons per hour of a crusher, grinding mill, bucket elevator, bagging operation, or enclosed truck or railcar loading station; the total surface area of the top screen of a screening operation; the width of a conveyor belt; and the rated capacity in tons of a storage bin.

"Unconfined Emissions" - Emissions which escape and become airborne from unenclosed operations or which are emitted into the atmosphere without being conducted through a stack.

Attachment A
RAP Crusher Specifications

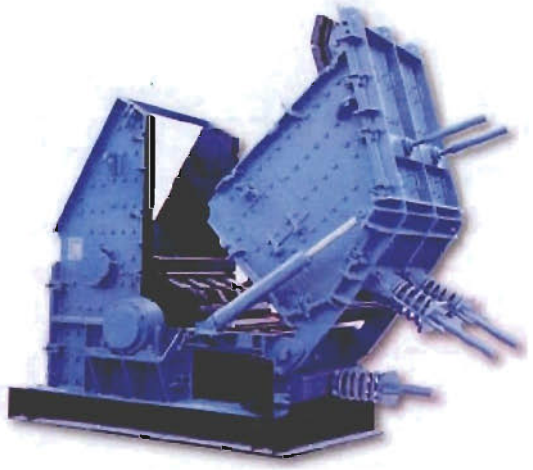
TEREX | PEGSON

4242SR SPECIFICATION

Above photograph features a 4242SR fitted with the optional side conveyor and magnet

IMPACT CRUSHER

Crusher type:	428 Fixed Hammer Impactor.
Feed opening:	1067mm x 711mm.
Rotor Width:	1066 mm.
Rotor Diameter:	1066 mm (Over Hammers).
Crusher frame:	Fabricated from steel plate and fitted with replaceable liner plates.
Rotor:	Runs in two heavy-duty spherical self aligning roller bearings and is fitted with four reversible and replaceable fixed blow bars.
Blowbars:	Two full size and two half size high manganese blow bars are fitted as standard.
Impact aprons:	Fitted in upper and middle positions and lined with wear resistant impact plates.
Drive:	Through wedge belts with screw tension adjustment on engine.
Engine pulley:	Machines built for stock are fitted with the standard speed pulley (suitable for quarry applications). The slower crusher pulley is supplied loose.
Maximum feed size:	400mm^3 depending on type of blow bar and material being processed.
Impactor speeds:	Slow 504 rpm (224mm diameter) Std. 630 rpm (280mm diameter)
Lubrication:	Greased roller bearings, inner and outer labyrinth seals.
Adjustment:	Manual adjustment on upper and lower aprons with overload compression springs on lower apron.
Maintenance:	Hydraulic case opening
Crusher Liners:	Fully lined internally with abrasion resistant steel.
Grinding path:	Optional grinding path with manual adjustment and overload compression springs suitable for certain quarry applications.

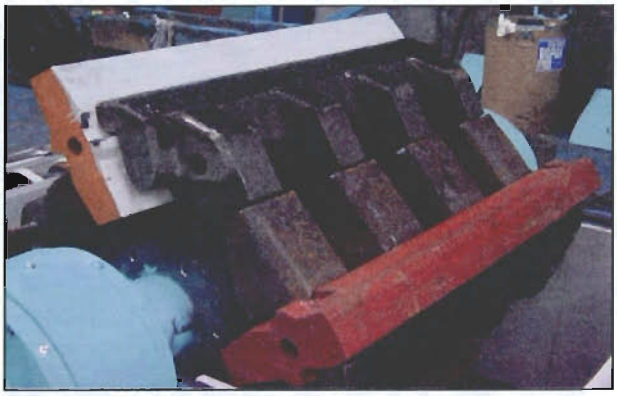
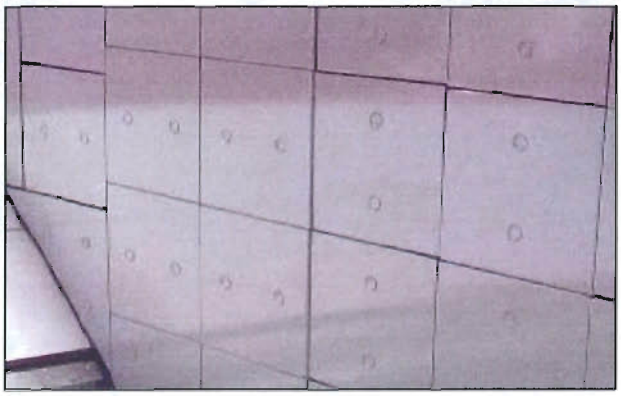
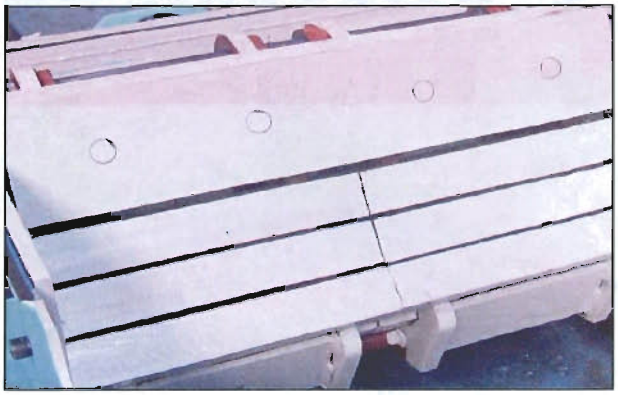


APPLICATIONS

This plant is designed for both demolition and quarrying applications. When fitted with manganese blow bars the crusher will tolerate small quantities of steel reinforcing bar in the feed. However, the machine is not designed to accept large pieces of steel or other uncrushable objects, and the feed material should be assessed / inspected for suitability prior to use. It is vitally important that large pieces of steel or similar uncrushable objects are not allowed to enter the crushing chamber as severe damage and injury may occur. When High Chrome bars are fitted, *no* steel should be allowed to enter the chamber, the machine should only be used on quarry applications, or clean materials such as asphalt.

242SR SPECIFICATION

IMPACT CRUSHER - INTERNAL

HOPPER

Hopper type:	Fixed Hopper.
Hopper length:	4m.
Hopper width:	2.1m.
Hopper capacity:	Up to 3.8m^3 gross depending on method of feed.
Hopper body:	Hardox wear resistant steel plate with suitably braced steel sections.

VIBRATING GRIZZLY FEEDER

Type:	Spring mounted vibrating pan.
Vibrating unit:	Twin heavy-duty cast eccentric shafts running in spherical roller bearings, gear coupled at drive end.
Length:	3.8m.
Width:	1.08m.
Pan:	12mm thick abrasion resistant steel bottom plate is included in the welded construction.
Drive:	Flange mounted hydraulic motor
Grizzly:	2.16m long double section of welded tapered finger bars at 50mm spaces fabricated in 20mm thick abrasion resistant steel.
Underscreen:	Removable rubber blanking mat fitted as standard. This can be substituted for various aperture wire meshes.
Control:	Variable speed control through a proportional flow control valve.

242SR SPECIFICATION

PLANT CHUTEWORK

Impactor feed chute: Fabricated in 10mm mild steel plate with full width single strand chain curtain and rubber curtain. Liners are fitted at wear points.

Grizzly fines chute: Chutework fabricated in 6mm mild steel plate is provided with two-way flapdoor. Material passing over the blanking mat is discharged to the main product conveyor via the bypass chute.

ON PLANT PRODUCT CONVEYOR

CONVEYOR 1

Conveyor type: Troughed belt conveyor with fixed tail end.

Belt type: Ripstop EP500/3 with 5mm top and 2mm bottom heavy-duty rubber covers.

Belt width: 1m.

Drive: Direct drive hydraulic motor

Feedboot: Fabricated in mild steel plate with abrasion resistant steel liners.

Control: Fixed speed.

Skirting: Fully skirted wear resistant rubber sealing along the conveyor length.

Belt covers: Canvas type removable dust covers are fitted at the head end.

Impact cradle: This is provided beneath the belt immediately below the impactor outlet.

Lubrication: Grease nipples located on bearing housings at tailshaft.

TOP DECK SIDE TRANSFER CONVEYOR

CONVEYOR 2

Conveyor type: Plain belt.

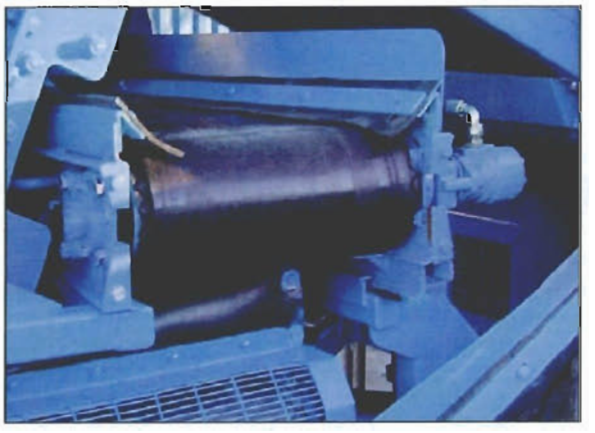
Belt type: EP400/2 with 5mm top and 1.5mm bottom rubber covers. A vulcanised joint is included.

Conveyor: Transfers material from the top deck of the sizing screen to the re-circulating conveyor.

Width: 500mm.

Drive: Direct drive hydraulic motor.

Lubrication: Grease nipples located on bearing housing at head and tailshaft.



4242SR SPECIFICATION

RE-CIRCULATING CONVEYOR

CONVEYOR 3

Conveyor type:	Chevron type troughed belt.
Belt type:	EP315/2 with 3mm top and 1mm bottom rubber covers, 35mm high cleats and a vulcanised joint.
Conveyor:	Returns oversize material transferred from the top deck back to the impactor for re-crushing. This conveyor can be slewed to enable oversize material to be stockpiled at the side of the plant.
Width:	500mm.
Drive:	Direct drive hydraulic motor
Lubrication:	Grease nipples located on bearing housing for tailshaft. Remote grease nipples for head drum.

FINES PRODUCT CONVEYOR

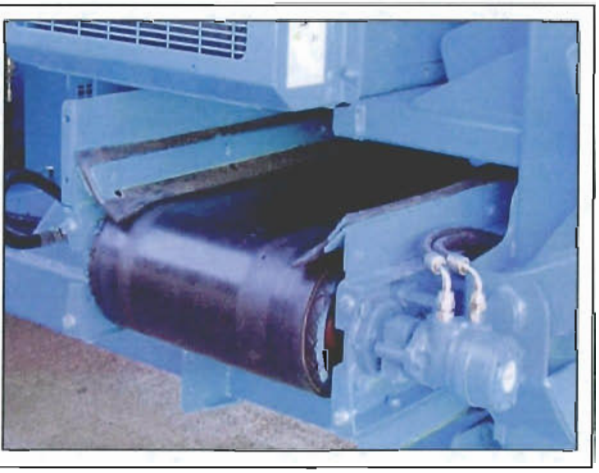
CONVEYOR 4

Conveyor type:	Plain troughed belt
Belt type:	EP400/2 with 5mm top and 1.5mm bottom rubber covers. A vulcanised joint is included.
Position:	Mounted beneath the sizing screen.
Width:	1.4m.
Discharge Height:	2.93m.
Drive:	Direct drive hydraulic motor.
Lubrication:	Grease nipples located on bearing housing at head and tailshaft.
Control:	Fixed Speed.

BOTTOM DECK SIDE TRANSFER CONVEYOR

CONVEYOR 5

Conveyor type:	Plain belt.
Belt type:	EP400/2 with 5mm top and 1.5mm bottom rubber covers. A vulcanised joint is included.
Conveyor:	Transfers material from the bottom deck of the sizing screen to the optional plant mounted stockpiling conveyor or the re-circulating conveyor when in position.
Width:	500mm.
Drive:	Direct drive hydraulic motor.
Lubrication:	Grease nipples located on bearing housing at head and tailshaft.



242SR SPECIFICATION

STOCKPILING CONVEYOR

CONVEYOR 6 (Optional extra)

Conveyor type:	Chevron type troughed belt
Belt type:	EP315/2 with 3mm top and 1mm bottom rubber covers, 35mm high cleats and a vulcanised joint.
Width:	500mm.
Drive:	Direct drive hydraulic motor.
Lubrication:	Grease nipples located on bearing housing at tailshaft. Remote grease nipples for head drum.
Conveyor:	Stockpiles material transferred from the bottom deck side transfer conveyor to the side of the plant.

SIZING SCREEN

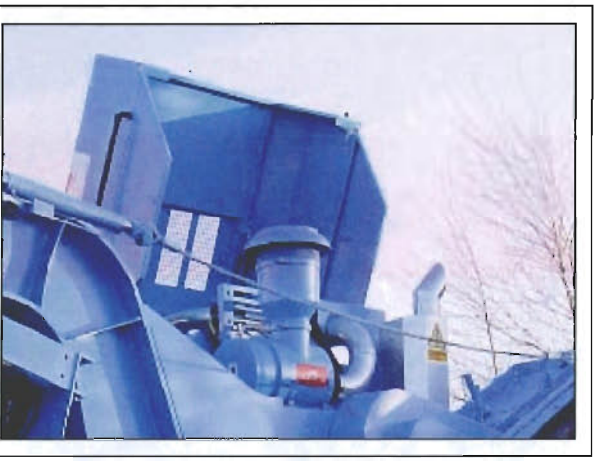
Type:	Double deck vibrating screen (Four bearing type)
Size:	1525 x 3350.
Position:	Mounted beneath the impactor product conveyor.
Drive:	Hydraulic drive.
Top deck:	45mm aperture fitted as standard
Bottom deck:	Optional mesh.
Control:	Fixed speed. (1100 rpm)
Lubrication:	Four grease nipples.
Access:	Fines conveyor and screen can be lowered for maintenance.

POWERPACK

Powerpack type:	Caterpillar C-9.
Performance:	309 HP (230kW) at 1800 rpm at sea level.
Engine:	Six cylinders, four stroke, direct Injection.
Fuel tank capacity:	463 Litres.

CLUTCH

Clutch type:	Manually operated twin disc clutch.



DUST SUPPRESSION SPRAYS

Sprays bars with atomiser nozzles are mounted over the impactor discharge point and the fines product conveyor head piped to an inlet manifold for client's pressured water supply.

Type:	Clean water multi atomising nozzles.
Inlet:	Single Point.
Pressure required:	2.8 bar (42 psi).
Water supply:	7 litres per minute.
Frost protection:	Via system drain valves.
Pump:	Optional extra.

4242SR SPECIFICATION

CRAWLER TRACKS

Type:	Heavy-duty tracks fitted as standard.
Pitch:	160mm.
Longitudinal centres:	3800mm.
Track width:	400 mm.
Climbing grade:	29° maximum.
High speed:	0.8 km/hr.
Slow speed:	0.322 km/hr.
Drive:	Hydraulic integral motors
Track tensioning:	Hydraulic adjuster, grease tension.

GUARDS

Wire mesh or sheet metal guards are provided for all drives, flywheels, pulleys & couplings.

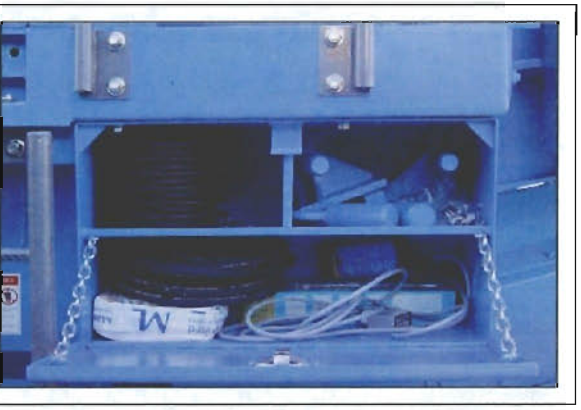
The guards provided are designed and manufactured to CE & ANSI standards.

PLATFORMS

A steel grid maintenance platform is provided on one side of the feeder and impactor fitted with double row handrails and access ladders. Platforms are also included to gain access to the rear of the crusher and the powerpack.

TOOLBOX

A plant mounted lockable toolbox is provided containing the slower speed pulley, operators manual, impactor stops, spanner, door open locking pins, screen mesh tensioning hoses, blow bar ejector hoses and a grease gun.



242SR SPECIFICATION

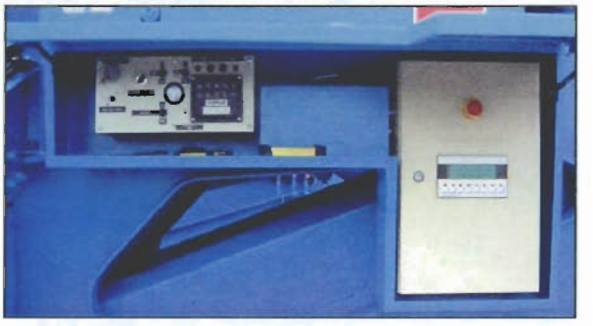
CHASSIS

Heavy duty steel fabricated I section of welded construction.

PLC CONTROLS

A PLC control system is fitted onto the plant to operate the following items: -

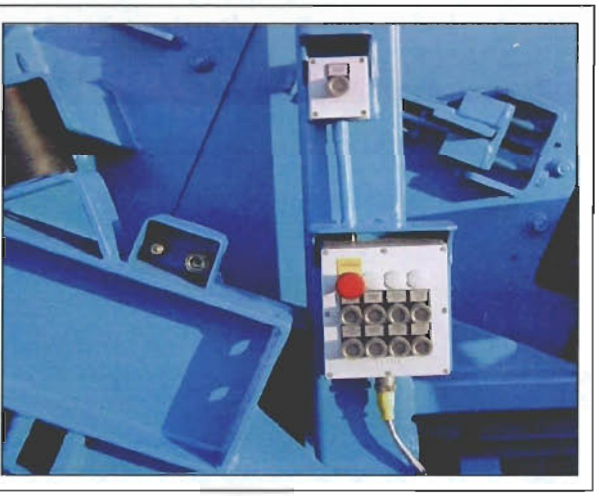
- Feeder (Start/Stop/Speed).
- Optional Dirt Conveyor (Start/Stop).
  (Also operates Re-Circulating, stockpiling and side transfer conveyors)
- Product Conveyor (Start/Stop).
- Screen and fines conveyor (Start/Stop).



SET UP CONTROLS

Controls are fitted onto the plant to operate the following items: -

- Side chute (Raise/Lower).
- Screen/Fines Conveyor (Raise/Lower).
- Recirculating Conveyor (Raise/Lower).
- Dirt Conveyor (Raise/Lower)



UMBILICAL CONTROL

An umbilical control unit is also supplied with the plant. This is fitted with controls for the track motion, feeder stop, start and a stop button for the plant.

242SR SPECIFICATION

OPTIONAL EXTRAS

(For prices refer to your dealer)

- High Chrome hammers (only for use when no steel in feed).
- Single idler belt weigher with integrator and speed sensing wheel fitted to fines conveyor.
- 500mm wide stockpiling conveyor from the bottom oversize transfer conveyor.
- Four full size hammers in lieu of two full and two half hammers.
- Re-fuelling pump kit.
- Radio remote control.
- Overband magnetic separator
- Side/dirt conveyor.
- Wire meshes for feeder underscreen to separate scalpings at 10mm, 20mm, 30mm, 40mm or 50mm. The optional dirt conveyor must be fitted.
- Grinding path (not suitable for demolition applications) fitted in the lower position and lined with wear resistant impact plates on the upper section, and reversible manganese impact bars on the lower section. When fitted greater control of the product size is achieved together with improved product shape.

RECOMMENDED OPTIONAL EXTRAS

- Engine fire extinguisher system.
- Hydraulic driven water pump assembly to provide a pressurised water supply to the dust suppression sprays.

REMOTE CONTROL (OPTIONAL EXTRA)

This option will control the tracking function and also provides stop and start controls for the vibrating grizzly feeder, together with a stop button for the plant. **This facility is only available in certain countries where type approval has been obtained.** For a full list of countries, please consult TP or your dealer.

ON PLANT DIRT/SIDE CONVEYOR (OPTIONAL EXTRA) CONVEYOR DC

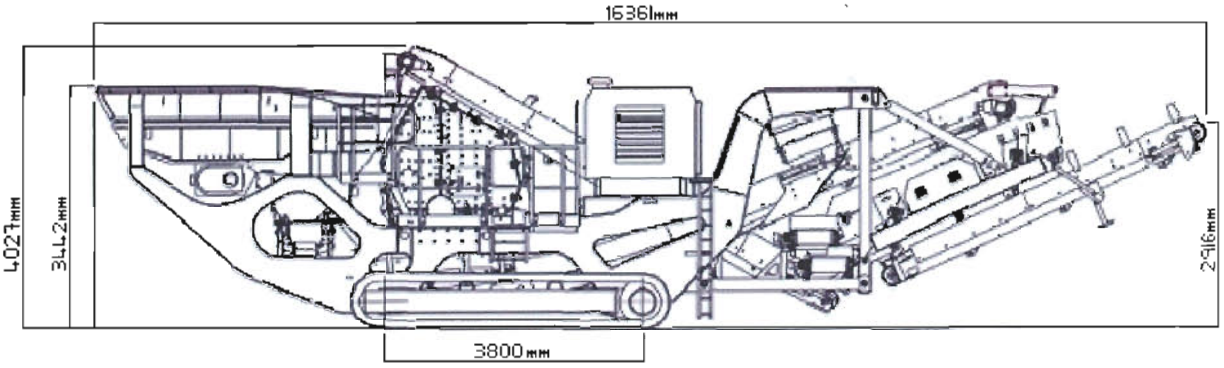
Conveyor type:	Plain troughed belt, hydraulic folding for transport.
Width:	600mm.
Discharge height:	2.0m.
Drive:	Direct drive hydraulic motor.
Lubrication:	Grease nipples located on bearing housing at head and tailshaft. Remote greasing at tail drum.
Skirts:	Full length.
Position:	Mounted to discharge on near side of plant.

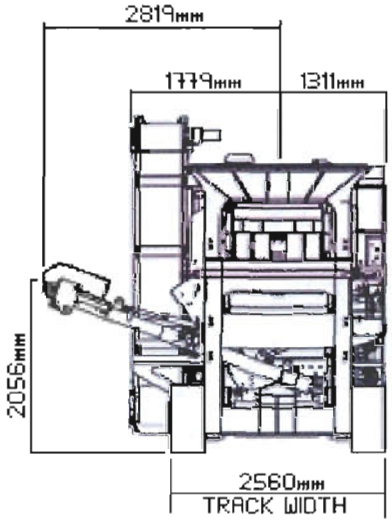
4242SR SPECIFICATION

MAGNET
(OPTIONAL EXTRA)

Magnet Type:	Suspended self-cleaning overband, fitted with endless belt.
Magnet Width:	750mm.
Magnet length:	1000mm.
Drive:	Hydraulic Motor.
Control:	Pre-set variable speed.
Discharge chute:	Via stainless steel shedder plate.
Power:	570 Gauss at 200mm. 450 Gauss at 250mm.

PLANT DIAGRAM





APPROXIMATE OVERALL PLANT WEIGHTS & DIMENSIONS

Operating Length:	**16361 mm**
Operating Height:	**4027 mm**
Transport Length:	**16361 mm**
Transport Width:	**3090 mm**
Transport Height:	**3442 mm**
Total plant weight:	***44500 Kg***

PAINTING

The plant is finish painted RAL 5015 Blue. The tracks and handrails are painted RAL 7012 Grey.

GENERAL

TEREX | Pegson equipment complies with CE requirements.

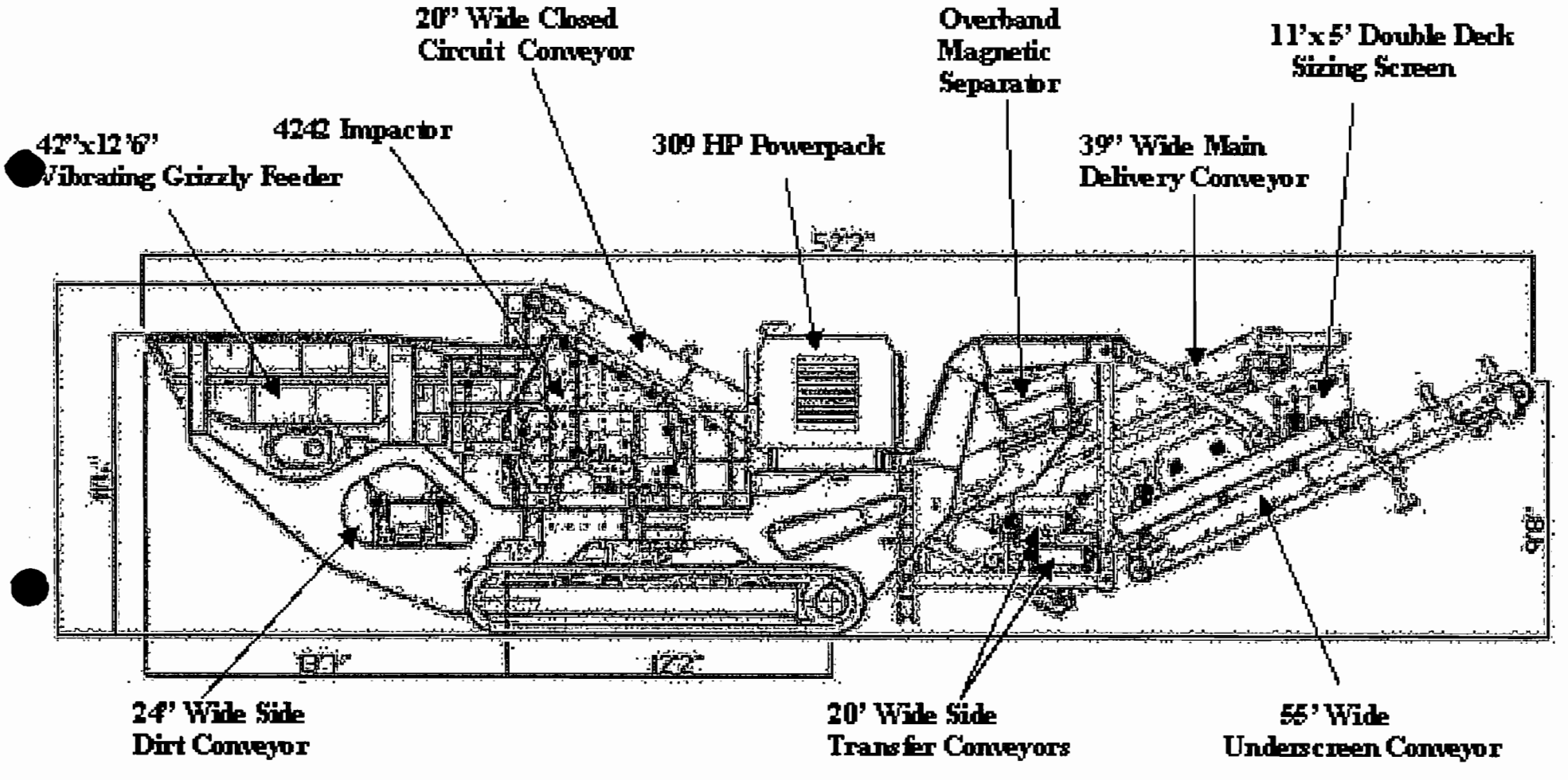
The plant is designed to operate between ambient temperatures of between -10c and 40c at altitudes up to 1000 meters above sea level. For applications outside this range please consult with Terex Pegson Limited.

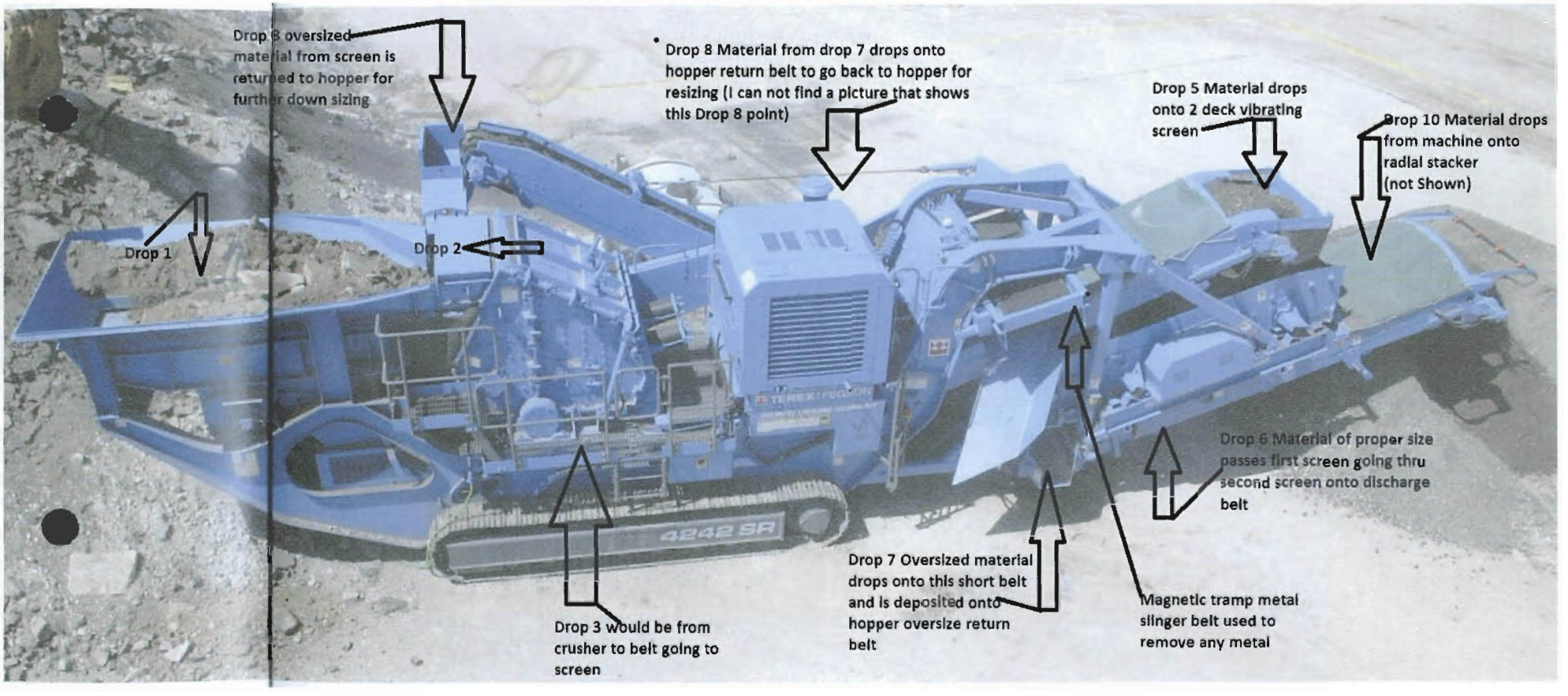
Above line drawings feature a 4242SR with optional magnet and side conveyor.

Please consult TEREX | Pegson if you have any other specific requirements in respect of guarding, noise or vibration levels, dust emissions, or any other factors relevant to health and safety measures or environmental protection needs. On receipt of specific requests, we will endeavour to ascertain the need for additional equipment and, if appropriate, quote extra to contract prices. Every endeavour will be made to supply equipment as specified, but we reserve the right, where necessary, to amend the specifications without prior notice as we operate a policy of continual product development. It is the importers responsibility to check that all equipment supplied complies with local legislation.

Attachment B

RAP Crusher Pictures


20' Wide Closed
Circuit Conveyor
Overband
Magnetic
Separator
11'x5' Double Deck
Sizing Screen
42"x12'6"
Vibrating Grizzly Feeder
4242 Impactor
309 HP Powerpack
39" Wide Main
Delivery Conveyor
24' Wide Side
Dirt Conveyor
20' Wide Side
Transfer Conveyors
55' Wide
Undercreen Conveyor


Drop 3 oversized material from screen is returned to hopper for further down sizing
Drop 8 Material from drop 7 drops onto hopper return belt to go back to hopper for resizing (I can not find a picture that shows this Drop 8 point)
Drop 5 Material drops onto 2 deck vibrating screen
Drop 10 Material drops from machine onto radial stacker (not Shown)
Drop 1
Drop 2
Drop 6 Material of proper size passes first screen going thru second screen onto discharge belt
Drop 7 Oversized material drops onto this short belt and is deposited onto hopper oversize return belt
Magnetic tramp metal slinger belt used to remove any metal
Drop 3 would be from crusher to belt going to screen
4242 SR

Attachment C
List of Emission Points

Emission Point Number	Description of Emission Points
1	Front End Loader to Feeder Hopper
2	Feed hopper to crusher
3	Crusher
4	Crusher discharge to conveyor belt
5	Conveyor belt discharge to screen
6	Screen
7	Screen to oversize conveyor belt
8	Oversize conveyor belt to feed hopper
9	Screen to finished product conveyor belt
10	Finished product conveyor belt transfer to stacker belt
11	Discharge stacker belt to stockpile

Note: Emission points 2 & 3 and 5 & 6 are at the same location and require only one VE

3752

GROVE
SCIENTIFIC & ENGINEERING

November 9, 2011

RECEIVED
NOV 16 2011
DIVISION OF AIR
RESOURCE MANAGEMENT

FDEP
Receipts
3800 Common Wealth Blvd
Tallahassee, Florida 32399

RE: Rainey Asphalt, LLC
Application for Portable RAP Crusher
Air General Permit Registration Worksheet

Dear FDEP:

Enclosed is one (1) copy of the above referenced application along with a check in the amount of $100.00 for the application fee.

If you have any questions, please call me at (407) 298-2282 or e-mail me at sara@grovescientific.com.

Respectfully,
GROVE SCIENTIFIC & ENGINEERING COMPANY

Sara Greivell

Sara Greivell
Project Manager

Cc: Mike Byrd – Rainey Asphalt, LLC

Rainey Asphalt Portable Crusher general permit notification Sub Letter to FDEP 11 / 337300 / 110911

FLORIDA DEPARTMENT OF REVENUE
2011 NOV 10 AM 9:20

GROVE SCIENTIFIC & ENGINEERING COMPANY
6140 EDGEWATER DRIVE ■ SUITE F ■ ORLANDO, FLORIDA 32810
PHONE (407) 298-2282 ■ FAX (407) 290-9038 ■ WEBSITE www.grovescientific.com