

AUG 22 2010

Southwest District



## MEMORANDUM

**To:** Nancy Knight – FDEP SW District  
**From:** Veronica Sgro – Koogler and Associates, Inc. VS  
**Date:** August 19, 2010  
**Re:** Permit No. 7775176-003-AO –  
• Crusher System (EU 002) Amendment

In response to our teleconference on Tuesday, July 27, 2010 that included persons from FDEP (Cindy Zhang-Torres, Danielle Henry, Nancy Knight), our firm (Veronica Sgro and Max Lee), and Joseph Shuler with C. W. Roberts Contracting, please find attached a list of potential reclaimed asphalt pavement (RAP) crushing system equipment associated with C.W. Roberts Contracting, Inc.'s Wildwood Facility (Permit No. 7775176-003-AO), EU 002 (Portable RAP Crushing System). In addition, potential emission calculations for the potential equipment are provided. Please note the potential emissions from this list of equipment are below the potential emissions submitted in the permit renewal application dated June 11, 2009. This list of equipment is the maximum amount of equipment that could be included in a current or future crusher system.

The format of the crusher system equipment listing allows for the maximum permutations of connections of the crusher equipment while identifying the individual equipment parts which can be individually assessed for applicability of the NSPS rules and tested accordingly. The format of the equipment listing also provides the FDEP the information to incorporate specific IDs for each emission point into its computer database and affords the flexibility to C.W. Roberts to use a range of setups as needed to maximize efficient use of operations equipment.

### **Discussion – RAP Crusher Equipment**

Instead of listing the equipment by potential emission points, the potential equipment list presents the equipment by category in order to provide flexibility in the RAP crusher configuration.

The list identifies two screen belts. The term “screen belt” is a general term used for conveyor belts used to process material coming from the screen(s). The term “screen belt” may be used as a substitute for a belt associated with the screening process in a general permit. For example, if an air general permit identifies a conveyor belt as a “fines belt” and fines belt process fine screened material, the screen belt identified in the equipment list would be synonymous with the fines belt.

Furthermore, due to the variations in RAP crusher configurations, three intermediary belts are identified in the conveyor belt category. The term “intermediary” may be used as a substitute for a belt identified differently in a general permit. For example, if an air

general permit identifies a conveyor belt as a “short belt,” the intermediary belt identified in the equipment list would be synonymous with the short belt. These intermediary belts may be used to transport material between any two pieces of equipment.

Based on conversations with the Department, it is our understanding that RAP crushing equipment not subject to 40 CFR 60, Subpart OOO is not required to conduct annual testing. In addition, truck dumping of nonmetallic minerals into any screening operation, feed hopper, or crusher is exempt from 40 CFR 60, Subpart OOO [Rule Reference 40 CFR 60.672(d)]. Moreover, per 40 CFR 60, Subpart OOO, in regards to conveying operations, nonmetallic mineral being transferred to a stock pile is *not* considered a transfer point [Rule Reference 40 CFR 60.671]. As 40 CFR 60, Subpart OOO addresses transfer points on belt conveyors, drop points from conveyor belts to stock piles do not need to be observed since it is not considered a “transfer point.”

Currently, C. W. Roberts Contracting, Inc. has three portable RAP crushing systems permitted under air general permits. The facility identification numbers and maximum rated capacities for each of these crushers are presented below.

Crusher ID	Facility ID No.	Maximum Rated Capacity
Crusher No. 1: Inertia Machine	7775155	300 TPH <sup>1</sup>
Crusher No. 2: Estee Crusher	7775170	75 TPH <sup>2</sup>
Crusher No. 3: Terex Finley	7775581	80 – 160 TPH <sup>1</sup>

<sup>1</sup> Based on manufacturer information. Actual rates may vary depending on type and condition of material.

<sup>2</sup> Based on information provided for Permit No. 7775170-002-AG.

It is our understanding that any visible emission test conducted on the crusher while at the Wildwood Facility will satisfy the annual testing requirements for Permit No. 7775176-003-AO and the crusher’s air general permit. Also, it is requested that the on-site test requirement addressed in Permit No. 7775176-003-AO, Specific Condition B.9 be revised as presented below. Deletions are indicated with a ~~strike through~~; added language is indicated in ***shaded bold italics***.

***B.9. On-Site Test Requirements*** – If adequate documentation as required by Specific Condition No. B.8. is not available, the permittee shall test ~~Emission Point Nos. 2 through 14~~ (as applicable) for visible emissions ***within the federal fiscal year*** ~~as soon as possible but no later than 30 days of placing the crushing system into operation after the effective date of this permit.~~ Once tested, the crushing system may not operate in a configuration that has more pieces of equipment and/or emission points than were operating during the test unless a new compliance test is conducted with the greater number of pieces of equipment and/or emission points. In no case shall the pieces of equipment and/or emission points exceed those in Specific Condition No. B.4. If the crusher remains on-site, the crushing system shall be tested for visible emissions annually during each federal fiscal year (October 1 – September 30) the crushing system is on-site.

[Rules 62-4.070(3) and 62-297.310(7)(a), F.A.C.]

## **Discussion – Potential Particulate Matter (PM) Emissions from RAP Crusher**

The potential emissions from the amended RAP crusher are based on an annual throughput rate of 200,000 TPY and emission factors provided by AP-42, Table 11.19.2-2. This procedure is the same as followed for the original application. The annual throughput rate is based on Permit No. 7775176-003-AO, Specific Condition B.3. The potential PM emissions from the portable RAP crushing system are 1.17 tons per year (TPY). It should be noted that not all of these pieces of equipment may be represented in a single crushing system; however, potential PM emission calculations were calculated for each piece of equipment in order to provide a conservative estimate.

AP-42, Table 11.19.2-2 does not provide emission factors for hoppers or storage bins. However, in typical operations, a conveyor belt may feed a hopper or storage bin. As a result, it is assumed that conveyors will be feeding into a hopper or storage bin and that the emission factor for a conveyor transfer point can adequately estimate potential emissions from a hopper or storage bin.

For conveyor belt transfer points, it is assumed that there are two transfer points per belt – material being transferred *onto* the conveyor belt and material being transferred *off* of the conveyor belt. Based on this assumption, potential emissions from conveyor belt transfer points are based on doubling the product of the throughput and conveyor transfer point emission factor.

If you have any questions regarding the potential RAP crusher equipment list or potential PM emissions, please feel free to contact me at (352) 377-5822 or at [vsgro@kooglerassociates.com](mailto:vsgro@kooglerassociates.com).

Dept. of Environmental Protection

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## REPLACEMENT INFORMATION FOR PERMIT SPECIFIC CONDITION B.4

C. W. Roberts Contracting, Inc.  
 Wildwood, Sumter County, Florida  
 Facility ID 7775176  
 Permit No. 7775176-003-AO

### EU 002: Portable Reclaimed Asphalt Pavement (RAP) Crushing System Maximum RAP Crusher Equipment

Category A		Category B		Category C		Category D		Category E	
Hopper ID	Description	Crushing ID	Description	Screening ID	Description	Conveyor Belt ID	Description	Storage Bin ID	Description
A1	Hopper 1	B1	Crusher 1	C1	Single Deck Screen	D1	Feed Belt	E1	Storage Bin 1
A2	Hopper 2			C2	Double Deck Screen	D2	Return Belt	E2	Storage Bin 2
A3	Hopper 3			C3	Triple Deck Screen	D3	Undercrusher Belt	E3	Storage Bin 3
						D4	Screen Belt 1 <sup>(1)</sup>		
						D5	Screen Belt 2 <sup>(1)</sup>		
						D6	Underscreen Belt		
						D7	Stacker Belt		
						D8	Stacker Belt		
						D9	Intermediary Belt 1 <sup>(2)</sup>		
						D10	Intermediary Belt 2 <sup>(2)</sup>		
						D11	Intermediary Belt 3 <sup>(2)</sup>		

<sup>(1)</sup> Screen Belt may be a conveyor belt used to process material coming from a screen(s).

<sup>(2)</sup> Intermediary Belt may be a conveyor belt that transports material between any two pieces of equipment (e.g. belt to belt; crusher to screen; crusher to belt; screen to belt; etc.)

C. W. Roberts Contracting, Inc.  
 Wildwood, Sumter County, Florida  
 Facility ID 7775176  
 Permit No. 7775176-003-AO

**EU 002: Portable Reclaimed Asphalt Pavement (RAP) Crushing System  
 Potential Emission Calculations**

**PM Emissions**

Operation	Throughput <sup>(1)</sup>	Emission Factor <sup>(2)</sup>	Emissions (TPY)
Crusher	200000 TPY	0.0012 lb/ton	0.12
Single Deck Screen	200000 TPY	0.0022 lb/ton	0.22
Double Deck Screen	200000 TPY	0.0022 lb/ton	0.22
Triple Deck Screen	200000 TPY	0.0022 lb/ton	0.22
Hopper 1 <sup>(3)</sup>	200000 TPY	0.00014 lb/ton	0.01
Hopper 2 <sup>(3)</sup>	200000 TPY	0.00014 lb/ton	0.01
Hopper 3 <sup>(3)</sup>	200000 TPY	0.00014 lb/ton	0.01
Storage Bin 1 <sup>(3)</sup>	200000 TPY	0.00014 lb/ton	0.01
Storage Bin 2 <sup>(3)</sup>	200000 TPY	0.00014 lb/ton	0.01
Storage Bin 3 <sup>(3)</sup>	200000 TPY	0.00014 lb/ton	0.01
<b>Transfer Points <sup>(4)</sup></b>			
Feed Belt	200000 TPY	0.00014 lb/ton	0.03
Return Belt	200000 TPY	0.00014 lb/ton	0.03
Undercrusher Belt	200000 TPY	0.00014 lb/ton	0.03
Screen Belt 1 <sup>(5)</sup>	200000 TPY	0.00014 lb/ton	0.03
Screen Belt 2 <sup>(5)</sup>	200000 TPY	0.00014 lb/ton	0.03
Underscreen Belt	200000 TPY	0.00014 lb/ton	0.03
Stacker Belt	200000 TPY	0.00014 lb/ton	0.03
Stacker Belt	200000 TPY	0.00014 lb/ton	0.03
Intermediary Belt 1 <sup>(6)</sup>	200000 TPY	0.00014 lb/ton	0.03
Intermediary Belt 2 <sup>(6)</sup>	200000 TPY	0.00014 lb/ton	0.03
Intermediary Belt 3 <sup>(6)</sup>	200000 TPY	0.00014 lb/ton	0.03
<b>Total</b>			<b>1.17</b>

<sup>(1)</sup> Throughput rate based on Permit No. 7775176-003-AO, Specific Condition B.3.

<sup>(2)</sup> Emission Factor based on AP-42, Table 11.19.2-2.

<sup>(3)</sup> Potential emissions calculation based on conveyor transfer point emission factor.

<sup>(4)</sup> Assumes two transfer points per belt. Potential emissions calculation is double the product of the throughput and conveyor transfer point emission factor.

<sup>(5)</sup> Screen Belt may be a conveyor belt used to process material coming from a screen(s).

<sup>(6)</sup> Intermediary Belt may be a conveyor belt that transports material between any two pieces of equipment (e.g. belt to belt; crusher to screen; crusher to belt; etc.).