Central Florida Testing Laboratories, Inc.

Testing Development and Research

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10-17-2000
Bill
Shawn Hindle
Jason
Ben

October 11, 2000

RECEIVED
OCT 16 2000
BUREAU OF AIR REGULATION

Mr. William Leffler
State of Florida
Department of Environmental Protection
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Subject: Ajax Paving Industries, Inc.
Portable BCE Drum Mix Asphalt Plant
Request for Addition of Portable Crusher

Dear Mr. Leffler:

As discussed in our telephone conversation, this letter is to request that you and your department add an emission unit to Ajax Paving Industries, Inc. – Portable Drum Mix Plant Construction Application to include a portable reclaimed asphalt crushing unit on site.

Thank you for your cooperation in this matter. Should you have any further questions regarding this facility, or require any additional information, do not hesitate to contact our office. Included in this letter please emission calculations for a portable crusher at this site.

Sincerely,
Central Florida Testing Laboratories, Inc.

Bernard A. Ball Jr.

Bernard A. Ball, Jr.
Director of Environmental Services
BaB/bAb

xc : Mr. Robert Ray – Ajax Paving Industries, Inc.

EMISSION CALCULATIONS FROM PORTABLE CRUSHER

- **Grizzly Feeder Emissions**

PM10 = (200 lb/ton)(0.0021 lb/ton) = 0.42 lb/hr
$PM10_{yearly}$ [(0.42 lb/hr)(500 hr/yr)(0.0021 lb/ton)] / 2000 lb/ton = 0.44 ton/yr
PM = [(200 lb/ton)(0.0021 lb/ton)] (2.1) = 0.88 lb/hr
$PM10_{yearly}$ [(0.88 lb/hr)(500 hr/yr)(0.0021 lb/ton)] / 2000 lb/ton (2.1) = 0.92 ton/yr

Crusher Emissions
PM10 = (200 lb/ton)(0.0021 lb/ton) = 0.42 lb/hr
$PM10_{yearly}$ [(0.42 lb/hr)(500 hr/yr)(0.0021 lb/ton)] / 2000 lb/ton = 0.44 ton/yr
PM = [(200 lb/ton)(0.0021 lb/ton)] (2.1) = 0.88 lb/hr
$PM10_{yearly}$ [(0.88 lb/hr)(500 hr/yr)(0.0021 lb/ton)] / 2000 lb/ton (2.1) = 0.92 ton/yr

Vibrating Screener
$PM10_{yearly}$ = [(200 ton/hr)(500 hr/yr)(0.0048 lb/ton)] / (2000 lb/ton) = 0.24 ton/yr
$PM10_{hour}$ = [(200 ton/hr)(0.0048 lb/ton)] = 0.96 lb/hr
PM_{yearly} = [(200 ton/hr)(500 hr/yr)(0.0048 lb/ton)] (2.1) / (2000 lb/ton) = 0.50 ton/yr
PM_{hour} = [(200 ton/hr)(0.0048 lb/ton)] (2.1) = 2.02 lb/hr

Radial Stacker
PM10 = (200 lb/ton)(0.0048 lb/ton) = 0.96 lb/hr
$PM10_{yearly}$ [(200 lb/hr)(500 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)(500 hr/yr)(0.0048 lb/ton)] / 2000 lb/ton (2.1) = 3.14 ton/yr

Generator – No.2 Virgin Diesel Fired

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)(500 hrs/yr) / 2000 lb/ton = 0.27 ton/hr

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)(500 hrs/yr) / 2000 lb/ton = 3.80 ton/yr

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)(500 hrs/yr) / 2000 lb/ton = 0.82 ton/hr

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)(500 hrs/yr) / 2000 lb/ton = 0.25 ton/hr

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)(500 hrs/yr) / 2000 lb/ton = 0.31 ton/hr

Emissions calculated above are based on worst case scenario for a portable crushing unit at this facility crushing at 200 tph and 500 hours maximum per year.