



**PERMIT APPLICATION
REVIEW SUMMARY**

New Hampshire Department of Environmental Services
Air Resources Division
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Facility:	Cold River Materials	Engineer:	Colleen Higgins/ML
Location:	Walpole		
AFS #:	3300590296	Application #:	08-0199
		Date:	10/24/2008
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APPLICATION & OTHER COMMUNICATION:

<u>Date</u>	<u>Description</u>
07/02/08	Application received for generators
8/29/2008	Completeness letter sent

PROJECT DESCRIPTION

This application is for the renewal of State Permit to Operate FP-S-0222 for seven generators. The facility has been in operation since the 1960s.

FACILITY DESCRIPTION

The Lane Construction Corporation operates a rock crushing operation in Walpole, NH. There is a rock crushing plant and an asphalt plant at this location. The rock crushing operation is powered by seven stationary diesel generators. Two of them are portable for purposes of Env-A 3700. Since the rock crushing plant provides less than 50% of its sand and stone to the asphalt plant located on the site, and because the processes have different SIC codes, they are considered separate facilities. The asphalt plant is listed under AFS#3300500055 and the emissions are not counted as part of the “facility-wide” emissions for the crushing facility.

EU	Device	Permit Number	Permit Issued	Permit Expires	Status
N/A	Crushing Plant	GSP-NM-002	3/3/2004	11/30/2008	Pending renewal – Application #08-0305
EU01	H&B Hot Mix Asphalt Plant	PO-BP-2648	8/6/2003	8/31/2008	Pending renewal – Application #08-0143

DEVICE DESCRIPTION

The following table details the generators located at the facility:

Generator #	Manufacturer	Model #	Serial #	Installation Date	Nameplate Rating (MMBtu/hr)	Max. Fuel Flow Rate (gal/hr)	Use
Fresh Water Generator*	Caterpillar	3304B	083Z04322	1993	0.725	5.29	fresh water pump
Generator #885	Caterpillar	DITA 3406 TA	ZWB 3485	1987	3.425	25	primary generator for crusher
Generator #886	Caterpillar	DITA 3406 TA	ZWBO 4400	1987	3.425	25	primary generator for crusher
Generator #887	Caterpillar	DITA 3406 TA	ZWBO 4403	1987	3.425	25	powers the crusher
Generator #888	Caterpillar	DITA 3406 TA	ZWBO 4404	1987	3.425	25	powers the crusher
Generator #872	Caterpillar	DITA 3406 TA	ZWB 05751	1993	3.425	25	pumps wash water to the crusher
Generator #875*	Caterpillar	3412	085Z08737	1993	5.605	40.91	recycled water pump

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*Portable, but stationary at this location for more than one year.

Nameplate ratings were determined using the maximum fuel flow rate and a heating value of 137,000 Btu/gal for diesel fuel.

POLLUTION CONTROL EQUIPMENT

There is no pollution control equipment associated with the generators.

EMISSION CALCULATIONS

Emission rates for Generator #875 was calculated using USEPA AP-42 (5th Edition 1/95), Section 3.4, *Large Stationary Diesel and All Stationary Dual-Fuel Engines* (updated 10/96). Emission rates for all pollutants except NOx in the six smaller generators were calculated using AP-42, Section 3.3, *Gasoline and Diesel Industrial Engines* (updated 10/96). NOx emissions were calculated based on DES test data for small engines (4/18/96).

Potential emissions are based on the generators running at maximum capacity for 8760 hours/year. In order for the source to be a synthetic minor source for NOx and to opt-out of the NOx RACT requirements, the fuel usage in the generators will need to be restricted to 150,000 gal/yr, combined. The attached spreadsheet details the emissions from the individual devices and the facility.

STACK INFORMATION

The following table details the permitted stack parameters for the generators.

Generator Operating:	Inside Diameter (ft)	Minimum Height (ft)	Exhaust Flow (acfm)	Temperature (°F)	Stack Configuration
Fresh Water Generator	0.33	6	400	750	vertical - capped
Generator #885	0.5	30	2300	900	vertical - capped
Generator #886	0.5	30	2300	900	vertical - capped
Generator #887	0.5	30	2300	900	vertical - capped
Generator #888	0.5	25	2300	900	vertical - capped
Generator #872	0.5	20	2300	900	vertical - capped
Generator #875	0.67	7	2300	450	vertical - capped

MODELING

Modeling was conducted for the emissions from the generators in 2003 and 2004. In 2003, it was shown that the source could meet all the NAAQ standards as long as the fuel rate was restricted to 500,000 gal/yr for all the generators combined. In 2004, the facility was modeled again to consider the impacts of a new portable drum asphalt plant and generator on the property. The modeled emission rates showed compliance with NAAQS and AALs when the 7 generators were limited to 150,000 gallons per year combined. The facility has not requested additional fuel, so the existing permit limit will be retained in the renewal.

EMISSION TESTING

No emissions testing for the generators needs to be conducted at this time.

ANNUAL EMISSION REPORTS/FEEES/INSPECTIONS

Emissions reports are current through CY 2007. Emissions fees for 2007 were received 4/11/2008. The last compliance report was issued 4/10/2006. No significant issues were noted.

CHANGES FROM PREVIOUS PERMIT

Changes to the permit have been made based on rule changes and permit formatting.

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REVIEW OF REGULATIONS

State Regulations

Env-A 300 – Ambient Air Quality Standards

- Operation able to show compliance with all AAQS and PSD increment standards with annual fuel restriction.

Env-A 600 – Permitting

- 607.01(d) – Applicable – The generators have a combined design rating greater than 1.5 MMBtu/hr.
- 607.01 (n) – Applicable – The facility is a synthetic minor source for NOx.

Env-A 900 – Owner or Operator Recordkeeping and Reporting Obligations

- 903 – Applicable – record process information for dryer and fuel information for the combustor
- 904 and 908 – Applicable if VOC emissions > 10 tpy
- 905 and 909 – Applicable if NOx emissions > 10 tpy
- 907 – Applicable – annual emissions report
- 911 – Only 911.04(b)(1) applicable to minor sources

Env-A 1200 – Prevention, Abatement and Control of Stationary Source Air Pollution

- 1211.07 – Not Applicable – Facility opting out of NOx RACT by limiting NOx emissions to less than 50 tpy.

Env-A 1400 – Regulated Toxic Air Pollutants

- 1402.01 – Not Applicable – Not applicable to sources burning virgin fuel.

Env-A 1600 – Fuel Specifications

- 1604.01 – Applicable – The sulfur content of No.2 oil is limited to 0.4% sulfur by weight.

Env-A 2000 – Fuel Burning Devices

- 2002.02 – Applicable – visible emissions from the generators limited to 20%
- 2002.08 – Applicable – TSP emissions from the generators limited to 0.30 lb/MMBtu.

Env-A 3700 – NOx Emissions Reduction Fund for NOx-Emitting Generation Sources

- 3702.02 – Applicable – Five of the seven generators are stationary and subject to this fee. The fresh water generator and Generator #875 are portable. Therefore, they are not subject to the fee.

SUMMARY AND CONCLUSIONS

The facility will be capable of meeting all regulations and standards for air quality. A State Permit to Operate has been drafted for the facility.