

Reliant Osceola-0970071

**Holtom, Jonathan**

**From:** Holtom, Jonathan  
**Sent:** Monday, March 09, 2009 10:53 AM  
**To:** 'Duncan, Michelle F.'  
**Cc:** Vielhauer, Trina; Kuberski, Garry  
**Subject:** RE: Reliant Energy Florida LLC, Osceola Power Plant

Tracking:	Recipient	Delivery
	'Duncan, Michelle F.'	
	Vielhauer, Trina	Delivered: 3/9/2009 10:53 AM
	Kuberski, Garry	Delivered: 3/9/2009 10:53 AM
	McWade, Tammy	Delivered: 3/9/2009 10:53 AM

Hi Michelle,

Thank you for this notification of your intent to install an emergency generator. Based on your intended use and statement that you will not be burning greater than 32,000 gallons of diesel fuel per year, I understand that you are claiming an exemption from the requirement to obtain an air construction permit prior to installing this engine. From the additional information you have submitted, it appears that you are claiming that the engine is a manufacturer's certified engine according to the provisions of 40 CFR 60, Subpart IIII - Standards of Performance for Stationary Compression Ignition Internal Combustion Engines. While you may claim the exemption from construction permitting if the provisions of the categorical exemption are continuously satisfied, the subjection to 40 CFR 60, Subpart IIII is an applicable requirement that must be included in your Title V permit the next time it is opened. If your facility is a major source of hazardous air pollutants, it will also be subject to 40 CFR 63, Subpart ZZZZ, which will also need to be rolled into the Title V permit. Once included in the Title V permit, as long as the engine continues to satisfy the requirements to maintain the manufacturer's certification, the engine will be treated basically as an insignificant or unregulated emissions unit.

Please keep this in mind and remember to address the applicability of 40 CFR 60, Subpart IIII and 40 CFR 63, Subpart ZZZZ the next time your Title V permit is revised or renewed. If you have any questions, please do not hesitate to contact me.

Jon Holtom, P.E., CPM  
 Title V Program Administrator  
 Bureau of Air Regulation  
 (850) 921-9531

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**From:** Duncan, Michelle F. [mailto:MFDuncan@reliant.com]  
**Sent:** Friday, March 06, 2009 1:38 PM  
**To:** trina.bielhauer@dep.state.fl.us; Holtom, Jonathan; Kuberski, Garry  
**Cc:** Bigos, Larry; Loudenslager, Cathy; Schmidt, Keith A  
**Subject:** Reliant Energy Florida LLC, Osceola Power Plant

Dear Trina Bielhauer:  
 Reliant Energy Florida, LLC intends to install an emergency generator at the Osceola Power Plant during March and April 2009 for use during power loss for

3/9/2009

emergency back-up power and as part of a hurricane shelter for employees. The cover letter and supporting documentation are attached for your review and approval.

Please contact me if you have concerns or questions.  
Thank you for your time and attention to this submittal,  
Michelle

*Michelle F. Duncan*

**Reliant Energy**

Environmental, Health, and Safety Dept.

121 Champion Way, Canonsburg, PA 15317

724-597-8631 desk phone 724-597-8870 fax

[mfduncan@reliant.com](mailto:mfduncan@reliant.com)



121 Champion Way  
Canonsburg, PA 15317

March 2, 2009

Ms. Trina Bielhauer,  
Chief, Bureau of Air Regulation  
Florida Department of Environmental Protection  
Permitting South Section  
Mail Station #5505  
2600 Blair Stone Road  
Tallahassee, FL 32399-0114

RE: Reliant Energy Florida, LLC - Osceola Power Plant  
Facility ID # 0970071  
Notification of installation of Emergency Generator

Dear Trina Bielhauer:

Reliant Energy Florida, LLC (Reliant Energy) intends to install an emergency generator at the Osceola Power Plant during March and April 2009 for use during power loss for emergency back-up power and as part of a hurricane shelter for employees. The emergency generator will only burn diesel fuel, will operate less than 500 hours per year, and will not consume more than 32,000 gallons of diesel fuel per year.

This unit satisfies the definition of an "Emergency Generator" found in paragraph 62-210.200(119), FAC:

*(119) Emergency Generator is any stationary generator powered by an internal combustion engine which operates no more than 500 hours per year as a mechanical or electrical power source to provide power internal to a facility only when the primary power source for that facility has been rendered inoperable by an emergency situation.*

The installation of this Emergency Generator is exempt from obtaining an air construction permit pursuant to paragraph 62-210.300(3)(a)(35), FAC:

35. One (1) or more emergency generators located within a single facility provided:

- a. The unit is not subject to the Acid Rain Program, CAIR program, or any unit-specific applicable requirement.
- b. The unit shall not burn used oil or any fuels other than natural gas, propane, gasoline, and diesel fuel.
- c. Collectively, all units claiming this exemption at the same facility shall not burn more than the collective maximum annual amount of a single fuel, as given in sub-subparagraph d., or equivalent collective maximum annual amounts of multiple fuels, as addressed in sub-subparagraph e.
- d. If burning only one (1) type of fuel, the collective annual amount of fuel burned by all units claiming this exemption at the same facility shall not exceed 2,700 gallons of

gasoline, 32,000 gallons of diesel fuel, 144,000 gallons of propane, or 4.4 million standard cubic feet of natural gas.

e. If burning more than one (1) type of fuel,.... <this section not relevant>the equivalent

The emergency generator was manufactured by Deutz AG, and is a new nonroad compression-ignition engine which conforms in all material respects to the design specifications that applied to those engines described in the documentation required by 40 CFR 89, effective December 7, 2005. This particular machine is:

- model year 2006,
- engine family 6DZXL07.1055,
- Tier 3 Emission standard category;
- Engine Model TAD720GE; serial number 5310100127;
- Generator model 363C SL1607, serial number LM-662092-1005.

Please respond with your concerns or agreement to the installation plan of the Emergency Generator. If you require more information, please contact Michelle Duncan at 724-597-8631 or [mfducan@reliant.com](mailto:mfducan@reliant.com). Thank you for your review.

Sincerely,



Larry A. Bigos,  
Operations Manager, Osceola Power Plant

cc: Cathie Loudenslager  
Keith Schmidt

## Particulate emissions, data and evaluation - 1-Filter mode, C1 test

Engine BF6M1013FC, Code DE224  
 Rated power 224,9 kW @ 1800 rpm  
 Engine Ident.No: 828516

Test date:  
 Test site:  
 Operator particulate measurement:  
 Ident. number particulate system:  
 Particulate measurement method:  
 Test number particulate measurement:

12.08.2003  
 Porz, Test bed E13  
 Gilles, TK-DS, EK-TA  
 NOVA 1  
 Mass flow control  
 1\_0140

Remarks Certification for US Nonroad CI Engines  
 (40 CFR Parts 9 and 89)

Measuring point			1	2	3	4	5
Sampling time	tsample	sec	60	300	360	360	120
Effective weighting factor	WF		0,05	0,25	0,30	0,30	0,10
Fuel mass flow	GFUEL	kg/h	47,58	34,90	23,32	12,72	7,09
Exhaust mass flow	GEXH	kg/h	1178,3	975,5	746,8	542,9	462,5
Dilution air flow	GDIL	kg/h	5,733	5,863	6,013	6,143	6,192
Sample flow	GSAM	kg/h	6,502	6,500	6,500	6,500	6,501
Dilution ratio	q		8,455	10,204	13,347	18,207	21,039
Equiv. dil. flow carb.bal.	GEDF	kg/h	9963	9954	9968	9885	9731
GEDFc deviation	GEDFdev	%	0,48	0,39	0,53	-0,31	-1,86
Dilution air temperature	TAir	deg C	30,8	29,0	28,2	27,8	27,4
Exhaust temperature probe	TExh	deg C	208,2	212,0	208,5	213,9	208,9
Filter face temperature	TFil	deg C	39,0	44,5	44,5	42,2	38,4
Filter face velocity	vSam	cm/s	39,1	38,9	36,5	34,0	32,8
Filter pressure drop	dpFil	hPa	85,7	119,4	147,2	159,2	160,1
Sample mass	MSAM	kg	0,1080	0,5420	0,6500	0,6500	0,2170
Effective weighting factor	WFeff		0,0496	0,2492	0,2984	0,3009	0,1020
Eff. weighting factor deviation	WFeffdev		-0,0004	-0,0008	-0,0016	0,0009	0,0020
Abs. humidity of intake air	ha	g/kg	11,80	11,79	11,79	11,79	11,79
PT humidity correction factor	Kp		0,9857	0,9858	0,9858	0,9858	0,9858

Filter weight 1 before test	mFil1b	mg	202,276	Reference filter:	
Filter weight 1 after test	mFil1a	mg	204,238	before test	197,261 mg
Filter weight 2 before test	mFil2b	mg	200,689	after test	197,266 mg
Filter weight 2 after test	mFil2a	mg	200,823	difference:	0,005 mg
Particulate mass	mf	mg	2,096		
Total sample mass	MSAM	kg	2,1670		
Equivalent dilution flow carbon balance, weighted	GEDFc	kg/h	9915,5		
Particulate mass flow in C1 test	PTmass	g/h	9,591		
PT humidity correction factor, weighted	Kp		0,9858		
Particulate mass flow in C1 test, corrected	PTmasscorr	g/h	9,455		
Total test power, weighted	P test	kW	103,37		
Specific Particulate emission, weighted	PT	g/kWh	0.0915		

Engine type:	TAD722GE	Code :	DE224	Ident.No	828516	test date :	12.08.03
NOx measurement (1=dry, 0=wet):	1	Additional power (Blower):	7,00	kW at	1800	rpm	
Fuel data (mass %):	C : 86,400	H :	13,200	S :	0,041	O :	0,200
Stoich. air demand (kg/kg fuel):	14,47	Fuel dens. kg/dm <sup>3</sup> at 15 °C :	0,8444				
Measuring point			1	2	3	4	5
Measured data:							
Barometric pressure	Baro	HPa	1013,9	1013,9	1013,9	1013,9	1013,9
Engine speed	n	min <sup>-1</sup>	1801,0	1804,0	1804,0	1799,0	1801,0
Engine torque	Md	Nm	1134,0	837,0	541,9	246,8	77,6
Fuel consumption	QQF	dm <sup>3</sup> /h	57,1	41,9	28,0	15,3	8,5
Fuel temperature 1	TFD1P	°C	31,0	32,0	33,0	34,0	34,0
Fuel temperature 2	TFD2P	°C	31,0	32,0	33,0	34,0	34,0
Intake air flow	QQAD1	dm <sup>3</sup> /mi	16214,0	13480,0	10369,0	7595,0	6524,0
Int. air humidity at air flow meter	PHIAY	%	49,0	49,0	49,0	49,0	49,0
Intake air temp. at air flow meter	TAYD	°C	28,3	28,3	28,3	28,3	28,3
Differential pressure, air meter	PDADP	mbar	3,0	2,0	2,0	1,0	1,0
Intake air temp. into engine	TA2F	°C	29,0	30,0	30,0	30,0	30,0
Test condition parameter	fa ( valid: 0,98 - 1,		1,0166	1,0216	1,0216	1,0216	1,0216
CO dry	CO	ppm	141,0	90,0	92,0	153,0	292,0
CO2 dry	CO2	%	9,3	8,2	7,1	5,3	3,4
NOx dry	NOx	ppm	710,0	640,0	596,0	436,0	301,0
HC wet	HC	ppmC1	105,0	135,5	115,0	194,0	306,5
Engine power at test bench	P	kW	213,87	158,12	102,37	46,50	14,63
Additional power (fan / blower)	P-Gebl	kW	7,01	7,05	7,05	6,99	7,01
Engine gross power	P-korr	kW	220,89	165,17	109,42	53,48	21,64
Fuel mass flow	GFUEL	kg/h	47,58	34,90	23,32	12,72	7,09
Water part. press. in intake air	PVY	mbar	18,85	18,85	18,85	18,85	18,85
Abs. humidity of intake air	ha	g/kg	11,78	11,78	11,78	11,78	11,78
Intake air mass flow, dry	GAIRD	kg/h	1117,6	929,6	715,1	524,0	450,1
Intake air mass flow, wet	GAIRW	kg/h	1130,8	940,6	723,5	530,2	455,4
Exhaust mass flow	GEXH	kg/h	1178,33	975,46	746,81	542,92	462,52
Excess air factor	Lambda		1,62	1,84	2,12	2,85	4,39
Humidity corr. factor for NOx	KHDies		1,0124	1,0106	1,0088	1,0058	1,0027
Fuel spec. factor wet/dry	FFH		1,8895	1,8985	1,9075	1,9229	1,9388
Dry to wet correction factor	Kw		0,9010	0,9101	0,9192	0,9347	0,9509
Humidity corr. factor for PT	Kp		0,9860	0,9860	0,9860	0,9860	0,9860
CO, corrected	CO-K	ppm	127	82	85	143	278
NOx, corrected	NOx-K	ppm	648	589	553	410	287
Weighting factor	WF		0,050	0,250	0,300	0,300	0,100
CO emission	MCO	g/h	144,60	77,18	61,01	75,01	124,05
NOx-Emission	MNOx	g/h	1211,10	911,26	655,00	353,16	210,65
HC-Emission	MHC	g/h	59,26	63,31	41,14	50,45	67,90
Final results:							
Test power weighted:						103,37	kW
Humidity corr. factor for PT:						0,9858	
Break specific emission of Carbon Monoxid:		CO	79,73	g/h	0,77	g/kWh	
Break specific emission of Nitrogen Oxides:		NOx	611,98	g/h	5,92	g/kWh	
Break specific emission of Hydrocarbons:		HC	53,06	g/h	0,51	g/kWh	

 <b>AIR RESOURCES BOARD</b>	DEUTZ AG	EXECUTIVE ORDER U-R-013-0190
		New Off-Road Compression-Ignition Engines

Pursuant to the authority vested in the Air Resources Board by Sections 43013, 43018, 43101, 43102, 43104 and 43105 of the Health and Safety Code; and

Pursuant to the authority vested in the undersigned by Sections 39515 and 39516 of the Health and Safety Code and Executive Order G-02-003;

**IT IS ORDERED AND RESOLVED:** That the following compression-ignition engines and emission control system produced by the manufacturer are certified as described below for use in off-road equipment. Production engines shall be in all material respects the same as those for which certification is granted.

MODEL YEAR	ENGINE FAMILY	DISPLACEMENT (liters)	FUEL TYPE	USEFUL LIFE (hours)
2006	6DZXL07.1055	7.1	Diesel	8000
SPECIAL FEATURES & EMISSION CONTROL SYSTEMS			TYPICAL EQUIPMENT APPLICATION	
Direct Diesel Injection, Turbocharger, Charge Air Cooler, Electronic Control Module, Smoke Puff Limiter, Exhaust -Gas Recirculation			Loader, Excavator	

The engine models and codes are attached.

The following are the exhaust certification standards (STD) and certification levels (CERT) for hydrocarbon (HC), oxides of nitrogen (NOx), or non-methane hydrocarbon plus oxides of nitrogen (NMHC+NOx), carbon monoxide (CO), and particulate matter (PM) in grams per kilowatt-hour (g/kW-hr), and the opacity-of-smoke certification standards and certification levels in percent (%) during acceleration (Accel), lugging (Lug), and the peak value from either mode (Peak) for this engine family (Title 13, California Code of Regulations, (13 CCR) Section 2423):

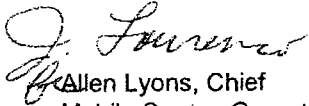
RATED POWER CLASS	EMISSION STANDARD CATEGORY		EXHAUST (g/kW-hr)					OPACITY (%)		
			HC	NOx	NMHC+NOx	CO	PM	ACCEL	LUG	PEAK
130 ≤ kW ≤ 225	Tier 3	STD	N/A	N/A	4.0	3.5	.20	.20	15	50
		CERT	-	-	3.7	0.5	.11	4	7	8

**BE IT FURTHER RESOLVED:** That for the listed engine models, the manufacturer has submitted the information and materials to demonstrate certification compliance with 13 CCR Section 2424 (emission control labels), and 13 CCR Sections 2425 and 2426 (emission control system warranty).

Engines certified under this Executive Order must conform to all applicable California emission regulations.

**This Executive Order is only granted to the engine family and model-year listed above. Engines in this family that are produced for any other model-year are not covered by this Executive Order.**

Executed at El Monte, California on this 28<sup>th</sup> day of April 2006.

  
 Allen Lyons, Chief  
 Mobile Source Operations Division





UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, DC 20460

2006 Model Year Certificate of Conformity

Manufacturer: **DEUTZ AG**  
Engine Family: **6DZXL07.1034**  
Certificate Number: **DZX-NR5-06-01**  
Intended Service Class: **NR 5 (75-130 KW)**  
Fuel Type: **DIESEL**  
FELs: **NMHC+NOx: N/A      NOx: N/A      PM: N/A**  
Effective Date: **12/7/2005**  
Date Issued: **DEC 07 2005**



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Merrylin Zaw-Mon, Director  
Compliance and Innovative Strategies Division  
Office of Transportation and Air Quality

Pursuant to Section 213 of the Clean Air Act (42 U.S.C. section 7547) and 40 CFR Part 89, and subject to the terms and conditions prescribed in those provisions, this certificate of conformity is hereby issued with respect to the test engines which have been found to conform to applicable requirements and which represent the following nonroad engines, by engine family, more fully described in the documentation required by 40 CFR Part 89 and produced in the stated model year.

This certificate of conformity covers only those new nonroad compression-ignition engines which conform in all material respects to the design specifications that applied to those engines described in the documentation required by 40 CFR Part 89 and which are produced during the model year stated on this certificate of the said manufacturer, as defined in 40 CFR Part 89.

It is a term of this certificate that the manufacturer shall consent to all inspections described in 40 CFR 89.129-96 and 89.506-96 and authorized in a warrant or court order. Failure to comply with the requirements of such a warrant or court order may lead to revocation or suspension of this certificate for reasons specified in 40 CFR Part 89. It is also a term of this certificate that this certificate may be revoked or suspended or rendered void ab initio for other reasons specified in 40 CFR Part 89.

This certificate does not cover nonroad engines sold, offered for sale, or introduced, or delivered for introduction, into commerce in the U.S. prior to the effective date of the certificate.