New Cingular Wireless PCS, DBA: AT&T Mobility: 89-0177-01 by EWK 08/23/2013

Permit Application Date: 06/06/2013 New Permit No. - 967419P

The equipment consists of a One (1) diesel-fired emergency backup engine (93.0 hp) subject to NSPS Subpart IIII

Heat-Input cap. $(MMBtu/hr)_{in}$	=	0.570	Engine-Output $(hp)_{out}$	=	93.0

Actual Emissions from EPA Certification Testing and AP-42, Table 3.2-3, at 500 hours of limited operations

The NSPS standard is from § 89.112, Table 1, Tier 3. The actual emissions are from the NSPS standard and AP-42 emit factors. The actual emissions for SO_2 are from AP-42 Table 3.2-3. The applicable standard for NOx is in terms of NOx + HC. Therefore, the VOC emissions are accounted for in NOx. Conversion factor is based on 500 hrs: 0.25 ton-hr/lbs-yr = (500 hr/yr) X (ton/2000 lbs)
The conversion from "g/kw-hr" to "lbs/hp-hr" is accomplished as follows:
CO: (5.00 g/KW-hr) X (1.0 lbs / 453.6 g) X (1.0 KW-hr / 1.341 hp-hr) = 0.008220 lbs/hp-hr
* The NSPS Standard for NOx includes both oxides of nitrogen and volatile organic compounds.

NSPS Standard			NSPS Standard			Actual Emissions		
Emit		standard	Emit		results	Emit		Testing
Emit	=	g/KW-hr	Emit	=	lbs/hp-hr	Emit	=	lbs/hp-hr
PM:	=	0.40	PM:	=	0.00066	PM:	=	0.00055
SO_2:	=	n/a	SO_2:	=	n/a	SO_2:	=	0.00205
CO:	=	5.00	CO:	=	0.00822	CO:	=	0.00220
*VOC:	=	n/a	*VOC:	=	n/a	*VOC:	=	n/a
*NO_x:	=	4.70	*NO_x:	=	0.00773	*NO_x:	=	0.00705

The following represents actual emissions:

Emit		E.F.		Power Output		result		Convert		Result
Emit	=	lbs/hp-hr	X	hp	=	lbs/hour	X	ton-hr/lb-yr	=	ton/year
PM:	=	0.00055	X	93.0	=	0.05	X	0.25	=	0.01
SO_2:	=	0.00205	X	93.0	=	0.19	X	0.25	=	0.05
CO:	=	0.00220	X	93.0	=	0.21	X	0.25	=	0.05
VOC:	=	n/a	X	93.0	=	n/a	X	0.25	=	n/a
NO_x:	=	0.00705	X	93.0	=	0.66	X	0.25	=	0.16

The following represents allowable emissions:

* The NSPS Standard for NOx includes both oxides of nitrogen and volatile organic compounds.

Emit		E.F.		Power Output		result		Convert		Result
Emit	=	lbs/hp-hr	X	hp	=	lbs/hour	X	ton-hr/lb-yr	=	ton/year
PM:	=	0.00066	X	93.0	=	0.06	X	0.25	=	0.02
SO_2:	=	0.00205	X	93.0	=	0.19	X	0.25	=	0.05
CO:	=	0.00822	X	93.0	=	0.76	X	0.25	=	0.19
*VOC:	=	n/a	X	93.0	=	n/a	X	0.25	=	n/a
*NO_x:	=	0.00773	X	93.0	=	0.72	X	0.25	=	0.18