



Intel Air Dispersion Modeling

Effect of Removing Boiler Rain Caps

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What in model is changed from 2007*

- Removed rain caps from 1250 boiler horse power (BHP) boilers – increased exit velocity from 0.001 meter per second to 7.09 meter per second (notification to NMED on 11/11/08)
- Added new ammonia wastewater treatment unit – source of NO_x, CO, VOC, SO₂, and particulates (Permit 325-M9-R19)
- Removed four North Energy Center 500 BHP boilers from permit - sources of NO_x, CO, VOC, SO₂, and particulates (Permit 325-M9-R18)
- Increased stack height of Munters thermal oxidizers to 30m (Permit 325-M9-R15, stack height 23.2m)

*Last modeling was completed as part of the Munters Technical Permit Revision submitted November 2007 – all modeling is done for the entire site will all permitted emission sources



What in model is the same as 2007* ...

- EPA/NMED approved dispersion model - AERMOD
- Meteorological data
- All other emission sources - emission rates, stack parameters, and stack locations (including location of Munters thermal oxidizer stacks)

*Last modeling was completed as part of the Munters Technical Permit Revision submitted November 2007 – all modeling is done for the entire site with all permitted emission sources

Effect of Removing Boiler Rain Caps

Pollutant	Averaging Time	Max Impact Intel Only Without Rain Caps ($\mu\text{g}/\text{m}^3$)	Max Impact Intel Only With Rain Caps ($\mu\text{g}/\text{m}^3$)	Ratio of Without/ With Rain Caps	% Reduction
PM2.5	8 th Highest 24 Hr	11.70	19.31	0.61	39%
PM2.5	Annual	4.36	6.90	0.63	37%
CO	1 hr	533	2377	0.22	78%
CO	8 hr	212.3	695	0.31	69%

PM2.5 – Particulate Matter with a diameter of 2.5 microns or less

CO – Carbon Monoxide

Averaging time – based on EPA standards that are set for the various pollutants

$\mu\text{g}/\text{m}^3$ – micrograms per cubic meter in the air at ground level