

Emission Sources - Maximum Allowable Emission Rates

Permit Number 32835

This table lists the maximum allowable emission rates and all sources of air contaminants on the applicant's property covered by this permit. The emission rates shown are those derived from information submitted as part of the application for permit and are the maximum rates allowed for these facilities, sources, and related activities. Any proposed increase in emission rates may require an application for a modification of the facilities covered by this permit.

Air Contaminants Data

| Emission Point No. (1) | Source Name (2) | Air Contaminant Name (3) | Emission Rates | |
|------------------------|---|--------------------------|----------------|---------|
| | | | lbs/hour | TPY (4) |
| FV87820115 | Central Thermal Oxidizer (CTO) | Acetone | 0.02 | |
| | | CO | 3.28 | |
| | | HCl | 1.06 | |
| | | NH ₃ | 7.09 | |
| | | NO _x | 4.18 | |
| | | SO ₂ | 0.02 | |
| | | VOC | 0.57 | |
| | | PM | 0.17 | |
| | | PM ₁₀ | 0.17 | |
| | | PM _{2.5} | 0.17 | |
| FF87826211 | Vapor Combustor No. 1 (Production streams routed to backup control device)" | VOC | <0.01 | |
| | | NO _x | 9.88 | |
| | | CO | 1.02 | |
| | | NH ₃ | 0.64 | |
| | | HCL | 0.04 | |
| | | SO ₂ | 0.20 | |
| | | PM | 0.03 | |
| | | PM ₁₀ | 0.03 | |
| | | PM _{2.5} | 0.03 | |

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| | | | | |
|--|---|-------------------|-------|-------|
| FF87826303 | Vapor Combustor No. 2 (Production streams routed to backup control device)" | VOC | <0.01 | |
| | | NO _x | 3.77 | |
| | | CO | 4.85 | |
| | | NH ₃ | 0.63 | |
| | | SO ₂ | <0.01 | |
| | | PM | 0.11 | |
| | | PM ₁₀ | 0.11 | |
| | | PM _{2.5} | 0.11 | |
| FV87826152 | NSCR (Production streams routed to backup control device)" | VOC | 0.02 | |
| | | NO _x | 2.18 | |
| | | CO | 2.10 | |
| | | SO ₂ | 0.60 | |
| FV87820115, FF87826211, FF87826303, and FV87826152 | Annual Cap | Acetone | | 0.09 |
| | | CO | | 14.36 |
| | | HCL | | 4.64 |
| | | NH ₃ | | 31.05 |
| | | NO _x | | 18.31 |
| | | SO ₂ | | 0.38 |
| | | VOC | | 2.50 |
| | | PM | | 0.80 |
| | | PM ₁₀ | | 0.80 |
| | | PM _{2.5} | | 0.80 |
| FT878TDZ00 | TDZ Wastewater Tote | VOC | <0.01 | <0.01 |
| | | NH ₃ | <0.01 | <0.01 |

| | | | | |
|----------------------|------------|------------------|------|------|
| CTO-MSSATM /CTO-FRCK | Frac Tanks | Dinitrotoluene | 0.01 | 0.01 |
| | | Mononitrotoluene | 0.01 | 0.01 |

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| | | | | |
|------------------------------------|------------------------|------------------------|------|------|
| | | Total VOC | 0.02 | 0.02 |
| CTO-MSSATM /CTO-VACTR | Vacuum Trucks | Mononitrotoluene | 0.01 | 0.01 |
| | | Dinitrotoluene | 0.01 | 0.01 |
| | | Total VOC | 0.02 | 0.02 |
| CTO-MSSATM /CTO-INT | Instrument Clearing | Total VOC | 0.01 | 0.01 |
| CTO-MSSATM /CTO-CYL | Cylinder Usage | NO _x | 0.01 | 0.01 |
| | | CO | 0.01 | 0.01 |
| CTO-MSSATM /CTO-TKTR | Tank Trucks | Ammonia | 1.14 | 0.01 |
| | | HCl | 0.01 | 0.01 |
| CTO-MSSATM /CTO-UNCONT | Uncontrolled Equipment | Aminomethylcyclohexane | 0.01 | 0.01 |
| | | Toluidine | 0.01 | 0.01 |
| | | Mononitrotoluene | 0.24 | 0.01 |
| | | Toluene | 0.14 | 0.01 |
| | | Benzene | 0.01 | 0.01 |
| CTO-MSSATM /CTO-UNCONT (continued) | Uncontrolled Equipment | n-Propane | 0.01 | 0.01 |
| | | Aniline | 0.01 | 0.01 |
| | | Monochlorobenzene | 0.01 | 0.01 |
| | | Mononitrobenzene | 0.01 | 0.01 |
| | | Phenol | 0.01 | 0.01 |
| | | VOC | 0.46 | 0.10 |
| | | Aqueous Ammonia | 0.01 | 0.01 |
| | | HCl | 0.01 | 0.01 |

| | | | | |
|---------------------------|-----------------|---------------------|--------|--------|
| CTO-MSSCNT /CTO-MAINT (5) | CTO Maintenance | Aliphatics | < 0.01 | < 0.01 |
| | | Aniline | < 0.01 | < 0.01 |
| | | Benzene | < 0.01 | < 0.01 |
| | | Dichlorobenzene, o- | < 0.01 | < 0.01 |

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| | | | | |
|------------------------|--|-------------------|--------|--------|
| | | H,H-Toluidine | < 0.01 | < 0.01 |
| | | Monochlorobenzene | < 0.01 | < 0.01 |
| | | Mononitrobenzene | < 0.01 | < 0.01 |
| | | Mononitrotoluene | < 0.01 | < 0.01 |
| | | Phenol | < 0.01 | < 0.01 |
| | | Toluene | 0.01 | 0.01 |
| | | Toluenediamine | < 0.01 | < 0.01 |
| | | Toluidine | < 0.01 | < 0.01 |
| | | VOC | 0.02 | 0.02 |
| | | Ammonia | 1.27 | 0.95 |
| | | CO | 7.97 | 5.98 |
| | | HCl | 0.04 | 0.03 |
| | | NO _x | 15.83 | 11.88 |
| | | SO ₂ | 0.80 | 0.60 |
| | | PM | 0.14 | 0.11 |
| | | PM ₁₀ | 0.14 | 0.11 |
| | | PM _{2.5} | 0.14 | 0.11 |
| FV87820115 / CTO-CO | Excess CO Emissions on Start-up / Shutdown, MR III CO Purging, TDI II CO Purging | CO | 5.00 | 0.19 |
| | | NO _x | 0.24 | 0.01 |

- (1) Emission point identification - either specific equipment designation or emission point number from plot plan.
(2) Specific point source name. For fugitive sources, use area name or fugitive source name.
(3) VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1
NO_x - total oxides of nitrogen
SO₂ - sulfur dioxide
CO - carbon monoxide
NH₃ - ammonia
HCl - hydrochloric acid
PM - total particulate matter, suspended in the atmosphere, including PM₁₀ and PM_{2.5}, as represented
PM₁₀ - total particulate matter equal to or less than 10 microns in diameter, including PM_{2.5}, as represented
PM_{2.5} - particulate matter equal to or less than 2.5 microns in diameter
(4) Compliance with annual emission limits (tons per year) is based on a 12 month rolling period.
Project Number: 249847, 249848

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- (5) See Attachment C Footnote 1 in Special Conditions for CTO-MSSCNT. CTO-MSSCNT includes temporary control devices and EPNs: FF87826211, FF87826303, FV87826152, and FV87820115.

Date: November 8, 2017