

Emission Sources - Maximum Allowable Emission Rates

Permit Number 84719

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 (6) | |
|------------------------|-------------------------------|--------------------------|--------------------|---------|
| | | | lbs/hour | TPY (4) |
| EP1-1 | Washing Reactor 1 | VOC | 0.32 | < 0.01 |
| | | Non-VOC Organics | 0.47 | < 0.01 |
| EP1-2 | Washing Reactor 2 | VOC | 0.24 | < 0.01 |
| | | Non-VOC Organics | 0.35 | < 0.01 |
| EP1-3 | Washing Reactor 3 | VOC | 0.24 | < 0.01 |
| | | Non-VOC Organics | 0.35 | < 0.01 |
| FUG1-1 | Building 1 Fugitive Emissions | VOC | 0.01 | 0.04 |
| | | Non-VOC Organics | 0.05 | 0.21 |
| | | HF | 0.02 | 0.10 |
| | | F ₂ | < 0.01 | < 0.01 |
| FUG1-2 | Reduction Reactor 1 Fugitives | VOC | 0.02 | 0.07 |
| | | Non-VOC Organics | < 0.01 | 0.02 |
| | | HCl | < 0.01 | 0.02 |
| EP3-1 | Captured Reduction Reactor 1 | VOC | < 0.01 | < 0.01 |
| | | Non-VOC Organics | < 0.01 | < 0.01 |
| | | HCl | < 0.01 | < 0.01 |
| FUG1-3 | Reduction Reactor 2 Fugitives | VOC | 0.02 | 0.07 |
| | | Non-VOC Organics | 0.01 | 0.05 |
| | | HCl | < 0.01 | 0.01 |
| EP3-1 | Captured Reduction Reactor 2 | VOC | < 0.01 | < 0.01 |
| | | Non-VOC Organics | < 0.01 | < 0.01 |
| | | HCl | < 0.01 | < 0.01 |
| FUG2-1 | Building 2 Fugitives | VOC | < 0.01 | 0.01 |
| | | Non-VOC Organics | 0.01 | 0.05 |
| | | HF | < 0.01 | 0.03 |
| | | F ₂ | < 0.01 | < 0.01 |

Project Number: 354503

Emission Sources - Maximum Allowable Emission Rates

| | | | | |
|--------------------------------------|--|-------------------|--------|--------|
| EP3-1 | Captured Building 2 Fugitives | VOC | < 0.01 | < 0.01 |
| | | HF | < 0.01 | < 0.01 |
| | | F ₂ | < 0.01 | < 0.01 |
| | | Non-VOC Organics | < 0.01 | 0.02 |
| FUG-2 | Reduction Reactor 3 Fugitives | VOC | 0.02 | 0.07 |
| | | Non-VOC Organics | < 0.01 | 0.02 |
| | | HCl | < 0.01 | 0.01 |
| EP3-1 | Captured Reduction Reactor 3 | VOC | < 0.01 | < 0.01 |
| | | Non-VOC Organics | < 0.01 | < 0.01 |
| | | HCl | < 0.01 | < 0.01 |
| EP3-1 | Exhaust Gas Purification System | VOC | 1.10 | 0.59 |
| | | Non-VOC Organics | 1.00 | 3.81 |
| | | HF | 0.08 | 0.33 |
| | | F ₂ | < 0.01 | < 0.01 |
| | | Br ₂ | < 0.01 | < 0.01 |
| | | HCl | 0.21 | 0.91 |
| | | HBr | < 0.01 | < 0.01 |
| EP3-1 | Thermal Oxidizers | VOC | < 0.01 | 0.01 |
| | | NO _x | 0.02 | 0.08 |
| | | CO | 0.03 | 0.11 |
| | | SO ₂ | < 0.01 | < 0.01 |
| | | PM | < 0.01 | 0.01 |
| | | PM ₁₀ | < 0.01 | 0.01 |
| | | PM _{2.5} | < 0.01 | 0.01 |
| EP3-2 EP3-3 | Washing Reactor 4 Washing Reactor 5 | VOC | 0.32 | < 0.01 |
| | | Non-VOC Organics | 0.47 | < 0.01 |
| | | VOC | 0.24 | < 0.01 |
| | | Non-Organics VOC | 0.35 | < 0.01 |
| FUG3-1 Project Number: 354503 | Building 3 Fugitive Emissions | VOC | 0.01 | 0.04 |
| | | HF | 0.01 | 0.04 |
| | | F ₂ | 0.01 | 0.05 |
| | | Non-VOC Organics | 0.02 | 0.06 |

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| | | | | |
|--------|-------------------------------|------------------|--------|--------|
| | | HCl | 0.01 | 0.01 |
| EP3-1 | Captured Building 3 Fugitives | VOC | 0.01 | 0.03 |
| | | Non-VOC Organics | 0.01 | 0.03 |
| | | HF | < 0.01 | < 0.01 |
| | | F ₂ | < 0.01 | < 0.01 |
| | | Br ₂ | < 0.01 | < 0.01 |
| | | HCl | < 0.01 | < 0.01 |
| FUG3-2 | Reduction Reactor 4 Fugitives | VOC | 0.02 | 0.07 |
| | | Non-VOC Organics | 0.005 | 0.02 |
| | | HCl | 0.01 | 0.02 |
| EP3-1 | Captured Reduction Reactor 4 | VOC | < 0.01 | < 0.01 |
| | | Non-Organics VOC | < 0.01 | < 0.01 |
| | | HCl | < 0.01 | < 0.01 |
| FUG3-3 | Reduction Reactor 5 Fugitives | VOC | 0.02 | 0.07 |
| | | Non-VOC Organics | < 0.01 | 0.02 |
| | | HCl | < 0.01 | 0.01 |
| EP3-1 | Captured Reduction Reactor 5 | VOC | < 0.01 | < 0.01 |
| | | Non-Organics VOC | < 0.01 | < 0.01 |
| | | HCl | < 0.01 | < 0.01 |

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|--------|-------------------------------|------------------|--------|--------|
| FUG3-3 | Reduction Reactor 6 Fugitives | VOC | 0.02 | 0.07 |
| | | Non-VOC Organics | 0.01 | 0.04 |
| | | HCl | < 0.01 | 0.01 |
| EP3-1 | Captured Reduction Reactor 6 | VOC | < 0.01 | < 0.01 |
| | | Non-Organics VOC | < 0.01 | < 0.01 |
| | | HCl | < 0.01 | < 0.01 |
| EP1-4 | Distillation Reactor FM1 | Non-VOC Organics | 8.20 | 1.03 |
| EP1-5 | Absorber FM1 Drying Pump | Non-VOC Organics | 0.01 | < 0.01 |
| EP1-6 | Vacuum Pump FM1 | Non-VOC Organics | 0.18 | 0.02 |

Emission Sources - Maximum Allowable Emission Rates

- (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
HCl - hydrogen chloride
HF - hydrogen fluoride
F₂ - fluorine
Br₂ - bromine
Non-VOC Organics – acetone and fluorinated alkanes
- (4) Compliance with annual emission limits (tons per year) is based on a 12-month rolling period.
- (5) Emission rate is an estimate and is enforceable through compliance with the applicable special condition(s) and permit application representations.
- (6) Planned startup and shutdown emissions are included. Maintenance activities are not authorized by this permit.

Date: July 6, 2023