

LAER GUIDANCE TABLE - DRAFT

This table is designed to give a brief description of the latest reviewed LAER controls required to meet §116.150 or §116.151 requirements for various types of equipment and process operations. Because LAER is a progressive technology standard, past determinations do not necessarily indicate current LAER. Additional information can be found in individual permit files and in letters issued by the TCEQ.

VOC

| Source | Application/description | Permit # | Accepted LAER Control | Details |
|---|--|---|--|---|
| Cooling Towers | resin, hexene, support facilities AN production, rubber | 5562A/N006, 37969/N008, 37978/N009(NI) 38336/N011, 38755/N016 | monthly sample, AP-42 factor | |
| | PVC Plant | 18384/N002 | monthly sample to 0.05 ppmw | |
| | ethylene cracker | 36644/N007 | monthly sample, AP-42, exchangers welded if possible | |
| Flares | Refinery, resin, hexene, rubber | 32025/N003(NI), 5562A/N006 37969/N008, 38755/N016 | meet 40 CFR 60.18 | |
| | ethylene cracker | 36644/N007 | meet 40 CFR 60.18, btu monitor | |
| Fugitives | PVC Plant Refinery, turbines, support facilities, AN storage, AN production, rubber | 18384/N002 32025/N003(NI), 37227/N005, 37978/N009(NI), 38998/N011 38336/N011, 38755/N016 | 28LAER (some changes but net to 28VHP) 28LAER | section guidance |
| | resin, ethylene cracker, hexene | 5562A/N006, 36644/N007, 37969/N008 | 28LAER, quarterly flange | |
| Heaters, boilers, and turbines | Refinery, turbines ethylene cracker | 32025/N003(NI), 37227/N005 36644/N007, 41775/N017 | fuel gas/natural gas with low NOx burners, propose combustion control | Survey of industry permits and regs |
| Loading | Refinery - marine loading | 32025/N003(NI) | Vacuum loading routed to flare (>0.5 psi) | survey of regs and outstanding refinery permits |
| | hexene | 37969/N008 | to flare, annual XX leak check for trucks | |
| | support facilities | 37978/N009(NI) | leak check annually, vent to a scrubber with 99.9% DRE | |

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| Polymer residual | PVC Plant | 18384/N002 | stripped to 70 ppmw | |
| | K resin | 5562A/N006 | stripped to < 200 ppmw | |
| | rubber - finishing | 38755/N016 | to rto with 98 % DRE | |
| Process Off-Gases/Vents | Refinery, resin, hexene, rubber (all but pyrophoric) | 32025/N003(NI), 5562A/N006, 37969/N008, 38755/N016 | to flare | |
| | polymer off gases | 4437A/N014 | to fuel gas system | |
| | brewery | 8904/N012 | no add on control, process improvement | surveyed breweries |
| Relief Valves | ethylene cracker, AN production | 36644/N007, 38336/N011 | routed to flare | |
| Storage Tanks | Refinery, >0.5 psia hexene, >0.5 psia | 32025/N003(NI) 37969/N008 | IFR, 2 seals, welded deck IFRs, 2 seals | Survey of industry permits and regs |
| | ethylene cracker | 36644/N007 | welded decks with construction meeting limited fitting loss factor requirements | |
| | support facilities | 37978/N009(NI) | 99.9% scrubber, liquid confidential | |
| | AN production | 38336/N011 | to absorbers then boilers (99.99%) for >0.5 psi | |
| | rubber, <25,000 gal | 38755/N016 | fixed roof | |
| Wastewater | PVC Plant | 18384/N002 | stripped to 10 ppm | |
| | Refinery | 32025/N003(NI) | <0.01 TPY due to low vp liquids | |
| | ethylene cracker, AN production | 36644/N007, 38336/N011 | enclosed, steam stripped, collection to flare | |

NOx

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|----------------|-----------------------------|----------------|----------------------------------|---------|
| Boiler | support facilities - boiler | 37978/N009(NI) | 0.043 lb/MMBtu | |
| Turbine | cogeneration facility | 41775/N017 | 3.0 ppmvd - average annual basis | |

NI - reviewed and accepted but not issued