**Texas Commission on Environmental Quality**

**Table 8**

**Flare Systems**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Emission Point No. (EPN): | | | | | | | | | | | | | |
| Manufacturer: | | | | | | | Model No. (if available): | | | | | | |
|  | | | | | | | | | | | | | |
| Type  (elevated, ground level, pit) | | Assisted  (air, steam, non-assisted) | | | Operation  (routine, MSS, emergency, dual) | | | Flare Height  (ft.) | | | Flare tip inside diameter  (ft.) | | |
|  | |  | | |  | | |  | | |  | | |
| **Characteristics of Input** | | | | | | | | | | | | | |
| Waste Gas Stream Material  (identify stream) | | | Minimum Value Expected  (scfm [68°F, 14.7 psia]) | | | Average Value Expected  (scfm [68°F, 14.7 psia]) | | | | Design Maximum  (scfm [68°F, 14.7 psia]) | | | BTU/scf Rating |
|  | | |  | | |  | | | |  | | |  |
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|  | | |  | | |  | | | |  | | |  |
|  | | |  | | |  | | | |  | | |  |
| Percent of time this condition occurs: | | |  | | |  | | | |  | | |  |
| Commercial products appearing in our Effects Screening Levels (ESLs) list, such as gasoline, may appear on this table as such or as individual constituents. | | | | | | | | | | | | | |
| Number of Pilots | Type Fuel | | | Fuel Flow Rate  (scfm [70°F & 14.7 psia])  per pilot | | | Total Heat Release Rate (Btu/hr) | | Fuel Usage  (scfm)  Minimum | | | Fuel Usage  (scfm)  Maximum | |
|  |  | | |  | | |  | |  | | |  | |

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|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Stream | Flow Rate  (scfm [68°F, 14.7 psia])  Minimum Expected | | | | Flow Rate  (scfm [68°F, 14.7 psia])  Design Maximum | | | | Total Heat Release Rate Average  Btu/hr | | | Total Heat Release Rate Maximum  Btu/hr | | | Btu/scf | | | Temp.  °F | Pressure  (psig) |
| Assist Gas |  | | | |  | | | |  | | |  | | |  | | |  |  |
| Waste Gas |  | | | |  | | | |  | | |  | | |  | | |  |  |
| For Steam Injection | | | | | | | | | | | | | | | | | | | |
| Steam Pressure (psig)  Minimum Expected | | Steam Pressure (psig)  Design Maximum | | Total Steam Flow Rate (lb/hr) | | | Temp. °F | Velocity (ft/sec) | | | Number of Jet Streams | | | Diameter of Steam Jets (inches) | | Design basis for steam injected  (lb steam/lb hydrocarbon) | | | |
|  | |  | |  | | |  |  | | |  | | |  | |  | | | |
| For Water Injection | | | | | | | | | | | | | | | | | | | |
| Water Pressure  (psig)  Minimum Expected | | | Water Pressure  (psig)  Design Maximum | | | Total Water Flow Rate  (gpm)  Minimum Expected | | | | Total Water Flow Rate  (gpm)  Design Maximum | | | Number of Water Jets | | | | Diameter of Water Jets (inches) | | |
|  | | |  | | |  | | | |  | | |  | | | |  | | |
| Operating Schedule | | | | | | | | | | | | | | | | | | | |
| Normal  (hours/day) | | | Normal  (days/week) | | | Normal  (weeks/yr) | | | | Maximum  (hours/day) | | | Maximum  (days/week) | | | | Maximum  (weeks/yr) | | |
|  | | |  | | |  | | | |  | | |  | | | |  | | |
| Supply an assembly drawing, dimensioned and to scale, to show clearly the operation of the flare system. Show interior dimensions and features of the equipment necessary to calculate its performance. Also describe the type of ignition system and its method of operation. Provide an explanation of the control system for steam flow rate and other operating variables. | | | | | | | | | | | | | | | | | | | |