Sample Fugitive Emission Rate Calculations
Chemical Plant Implementing the 28VHP LDAR Program

Component Name	Stream Type	Number of Components	SOCMI w/o C_2 Emission Factors	LDAR Program	Control Efficiency	Controlled Emission Rates	
						lb/hr	tons/year
Valves	Gas/Vapor	1,019	0.0089	28VHP	97%	0.27	1.19
Valves	Light Liquid	2,263	0.0035	28VHP	97%	0.24	1.04
Pumps	Light Liquid	14	0.0386	28VHP	85%	0.08	0.36
Connectors	Gas/Vapor	1,435	0.0029	28VHP	97%*	0.12	0.55
Connectors	Light Liquid	3,056	0.0005	28VHP	97%*	0.05	0.20
Compressors	Gas/Vapor	1	0.5027	28VHP	85%	0.08	0.33
Relief Valves	Gas/Vapor	12	0.2293	28VHP	100%†	0.000	0.00
Open-Ended Lines	Gas/Vapor	3	0.0040	28VHP	100%††	0.00	0.00
Total Fugitive Emission Rates						**0.84**	**3.67**

* Flanges monitored at 500ppmv; therefore, he valve control credit is applied.

† Relief valves routed to a flare; therefore, 100% control credit is applied.

†† The 28 series LDAR Programs require open-ended lines to be equipped with a cap, blind flange, plug, or a second valve for 100% control credit. The connector count is increased by the number of open-ended lines to account for the credit.

Fugitive Emission Speciation for Sample Calculations

Chemical Name	Weight Percent in Stream	Controlled Fugitive	
		lb/hr	tons/year
Propane	4%	0.03	0.15
Benzene	7%	0.06	0.26
Toluene	62%	0.52	2.28
Xylene	8%	0.07	0.29
Ethylbenzene	17%	0.14	0.62
Hydrogen Sulfide	2%	0.02	0.07
Total VOC	**98%**	**0.82**	**3.60**
Hydrogen Sulfide*	**2%**	**0.02**	**0.07**

* Calculation method assumes that the maximum off-property impact will not exceed ESL or Regulation II limits for H2S. See Section II, Odorous/Inorganic Compounds, and Section III, Audio/Visual/Olfactory Walk-Through Inspection, for additional information.