

**Workgroup Recommendations and Other Potential Control Measures**  
**Stationary Combustion Sources Workgroup**

**SCS004B – Flares in a Petroleum Refinery**

Control Measure Summary	Emissions (tons/year) in NJ State	
<b>2002 existing measure:</b> NSPS Subpart J	VOC in 2002	515
	SO <sub>2</sub> in 2002	332
	NO <sub>x</sub> in 2002	135
<p><b>Candidate Measure 1:</b> Flare Gas Recovery System</p> <p><b>Emission Reductions:</b> VOC and HAPs as well as NO<sub>x</sub> &amp; SO<sub>x</sub>. Percent emission reductions depend upon percent of flare gas recovered.</p> <p><b>Control Cost:</b> Capital cost of FGR system is \$1.0 to \$5.0 million.            Operation &amp; Maintenance Cost: \$100,000 to \$400, 000 per year.</p> <p><b>Timing of Implementation:</b> By the end of 2009</p> <p><b>Implementation Area:</b> OTC</p>	<p align="center"><b>VOC</b></p> 2002 Base: 515 Reduction: -186 2009 Remaining: 329	
	<p align="center"><b>NO<sub>x</sub></b></p> 2002 Base: 135 Reduction: -48 2009 Remaining: 87	
	<p align="center"><b>SO<sub>2</sub></b></p> 2002 Base: 332 Reduction: -105 2009 Remaining: 227	

**Policy Recommendation of State/Workgroup Lead:** Flare Gas Recovery (FGR) system is recommended to achieve reduction in VOC emissions and HAP emissions, as well as NO<sub>x</sub> & SO<sub>x</sub> emissions.

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**Brief Rationale for Recommended Strategy:** Beside major reduction in emissions, the FGR system allows cost savings because the recovered gases can be used as fuel or process feedstock. Cost savings due to recovery can be \$300,000 per year to \$1,000,000 per year; consequently, the annual cost can be low and the capital cost can be recovered in 3 to 7 years depending upon the facility and FGR system. The State of California has developed a specific rule for FGR system.