

# Vapor Recovery Emissions Reductions

Stage II and ORVR

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Attribute	(A) Decommission Stage II with sole reliance on ORVR	(B) Enhance Stage II & Stage I with Processor	(C) Decommission Stage II & Enhance Stage I with Processor	Comments
<b>Refueling Emissions</b>	<b>Increase</b>	Decrease	<b>Increase</b>	A = C
<b>Storage Tank Emissions <sup>1</sup></b>	<b>Increase</b>	Decrease	Decrease	B ≈ C
<b>Soil/Groundwater Contamination</b>	<b>Increased Risk</b>	Decreased Risk	Decreased Risk	
<b>Vapor Intrusion</b>	<b>Increased Risk</b>	Decreased Risk	Decreased Risk	
<b>Adverse Health Effects</b>	<b>Increased Risk</b>	Decreased Risk	<b>Somewhat Decreased</b>	A > C > B
<b>Ozone Formation Impact</b>	<b>Increased</b>	<b>Decreased</b>	Decreased	C > B
<b>EJ Burden of Refueling Emissions</b>	<b>YES</b>	NO	<b>YES</b>	
<b>Premature Retiring of Useful Assets</b>	<b>YES</b>	NO	<b>YES</b>	
<b>Decommissioning Expense</b>	<b>YES</b>	NO	<b>YES</b>	
<b>Future Expense Burden of Premium Hardware <sup>2</sup></b>	<b>YES</b>	NO	<b>YES</b>	
<b>Continuous Pressure Monitoring Expense</b>	<b>YES</b>	NO <sup>3</sup>	NO	
<b>Conservation of Fossil Fuels</b>	<b>NO</b>	<b>YES</b>	YES	B > C
<b>Energy Savings</b>	<b>NO</b>	<b>YES</b>	YES	B > C
<b>Net Present Value (Saved Fuel - Expense) <sup>4</sup></b>	<b>Negative</b>	<b>Positive</b>	Positive	B > C B ≈ C <sup>5</sup>
<b>GDF Incentive to maintain “tight site”</b>	<b>NONE</b>	LARGE	LARGE	
<b>Non-Road Emissions Impact <sup>6</sup></b>	<b>Increased</b>	<b>Decreased</b>	<b>Increased</b>	A = C
<b>Utility of Continuous Pressure Monitoring</b>	<b>NONE</b>	LARGE	LARGE	
<b>GDF Product/Service Differentiation</b>	<b>NONE</b>	LARGE	LARGE	

<sup>1</sup> Includes emissions during bulk tanker loading and in the interval between tanker deliveries

<sup>2</sup> Dripless Nozzles, low permeation hoses, continuous pressure monitoring

<sup>3</sup> Included with ARID processor

<sup>4</sup> Capital equipment purchase and “shared savings business model” available

<sup>5</sup> Need to confirm with field testing; savings = f (RVP, Temp, V/L, GDF Flow Profile)

<sup>6</sup> Non-Road emissions generated during refueling of gas cans, motorcycles, boats, snowmobiles; ORVR will never be used on these tanks



**What kind of world will we live in if the United States of America sees a dictator brazenly violate international law with poison gas, and we choose to look the other way?.....**

***What kind of world will we live in if Regulatory Personnel see innocent motorists, children and GDF employees exposed to poison gas (benzene vapor), and they choose to look the other way ?.....***



**But when, with modest effort and risk, we can stop children from being gassed to death, and thereby make our own children safer over the long run, I believe we should act.....**

***But when, with modest effort and no risk, we can stop children from being exposed to benzene vapor, and thereby make our own children safer and healthier over the long run, I believe we should act.....***

*(Executive Order 13563; 24 May 2011, "Improving Our Regulations: A Preliminary Plan for Periodic Retrospective Reviews of Existing Regulations")*

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**That's what makes America different. That's what makes us exceptional. With humility, but with resolve, let us never lose sight of that essential truth.**