

Table 1: Data Summary

Feb 2005 Test Results with PERMEATOR "OFF" PV OFF

	Pulses	%HC	Avg. Temp	ft3	mg of C3	lbm	mass gasoline	gallons liquid	GASOLINE SAVINGS	
									gallons liquid/day	% throughput
Open (Station)	1,773	24.78		884.40		30.41	45.61	8.77	11.94	
Closed (Station)	1,117	59.13		566.68		36.45	54.68	10.52	9.03	
Overall	2,889	42.29	71.06	1,450.58	30,318,967.89	66.84	100.26	19.28	21.31	0.111%

PV ON

	Pulses	%HC	Avg. Temp	ft3	mg of C3	lbm	mass gasoline	gallons liquid	GASOLINE SAVINGS	
									gallons liquid/day	% throughput
Open (Station)	284	27.81	72.46	71.60	1,027,415.96	2.27	3.40	0.65	6.53	
Closed (Station)	454	57.00	64.81	116.27	3,423,961.38	7.55	11.32	2.18	4.55	
									11.08	0.059%

Storage Tank Evaporative Losses

1999 CARB Study, " Total Hydrocarbon Emissions from Two Phase II Vacuum Assist Vapor Recovery Systems During Baseline Operation and Simulated Refueling of On-Board Refueling Vapor Recovery (ORVR) Equipped Vehicles"
Project Number: ST-98-XX, Compliance Division

a, b value explanation: since the p/v ON data did not yield meaningful data due to gross leaks until after 3:00 pm during the data collection period (data collection started at 10:00 am), ARID extrapolated the meanir to calculate the 2.031 lbm/1000 gallon figure at propane,C3H8. The gross leaks were not fixed until 3:00.

	A Gilbarco (PV ON) (lbm/1,000 gal)	B Dresser Wayne (PV ON) (lbm/1,000 gal)	C Dresser Wayne (PV OFF) (lbm/1,000 gal)	February-05 ARID Test, Gilbarco (PV ON) (lbm/1,000 gal)	February-05 ARID Test, Gilbarco (PV OFF) (lbm/1,000 gal)	ARID, Evap Loss Model (PV OFF) (lbm/1,000 gal)
Baseline	0.396	0.028	0.026			
44.9% ORVR penetration	0.782					
39.5% ORVR penetration		0.0524				
38.2% ORVR penetration			0.289			
40% ORVR penetration						
as C3H8	a	Matus		1.200	3.480	
gasoline vapor				3.047	5.775	6.578
as C3H8	b	ARID		2.031		4.385
	as C3H8					
	Result Ratio					
ARID/Gilbarco	1.53	a				
ARID/Gilbarco	2.60	b				
ARID/Wayne	22.90	PV ON	a			
ARID/Wayne	38.77	PV ON	b			
ARID/Wayne	12.04	PV OFF				

1.53 = 1.200 / 0.782
2.60 = 2.031 / 0.782

22.90 = 1.200 / 0.0524
38.77 = 2.031 / 0.0524
12.04 = 3.480 / 0.289

PERMEATOR "ON" Summary

	Retentate (Clean Air Exhaust)	Feed	Recovery Efficiency
Total flow scf	235.54	981.80	
Total mass grams	122.69	16,710.33	
Total mass lbm	0.27	36.84	99.27%