

State of California  
AIR RESOURCES BOARD

Executive Order G-70-126M

Vapor Recovery Systems Installed on Gasoline Bulk Terminals

WHEREAS, pursuant to Health and Safety Code sections 39600, 39601, and 41954, the Air Resources Board (the "Board") has adopted Title 17, California Code of Regulations section 94013, which provides that gasoline vapor recovery systems at gasoline bulk terminals shall be certified in accordance with the Board's "Certification Procedure for Vapor Recovery Systems of Terminals" adopted April 12, 1996 (the "Certification Procedure CP 203");

WHEREAS, the companies listed in Exhibit 1 (attached) have applied for certification of their gasoline bulk terminal vapor recovery systems (the "Systems");

WHEREAS, the Certification Procedure CP 203 section 7 provides that evidence of certification shall be an Executive Order signed by the Executive Officer; and

WHEREAS, the Systems have been evaluated pursuant to the Certification Procedure CP 203, and Certification Reports document successful performance of the Systems according to the performance standards, performance specifications, and Test Procedure TP 203;

WHEREAS, I, Michael P. Kenny, Air Resources Board Executive Officer, find that the Systems listed in Exhibit 1 comply with all of the requirements set forth in the Certification Procedure CP 203.

NOW, THEREFORE, IT IS ORDERED that the Systems are hereby certified to meet the applicable certification performance standards.

BE IT FURTHER ORDERED that compliance with the applicable certification requirements and rules and regulations of the Division of Measurement Standards, the State Fire Marshal's Office and the Division of Occupational Safety and Health is made a condition of this certification.

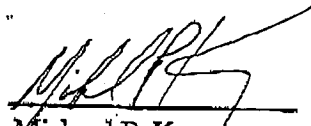
BE IT FURTHER ORDERED that compliance with the applicable rules and regulations of the applicable air pollution control district is made a condition of this certification.

BE IT FURTHER ORDERED that the Systems certified hereby shall operate at terminal gasoline throughput and emission limits not to exceed those listed in Exhibit 1. During delivery tank filling operations, the vapor recovery system shall not cause the pressure in the delivery tank to reach 18 inches of water. Gasoline throughput computer printouts or copies of delivery tank fueling receipts shall be available to the Air Resources Board and local air pollution control district upon request. The Systems in actual use shall perform as during the certification test. Compliance with these criteria and any special conditions listed on Exhibit 1 shall be conditions of this certification.

IT IS FURTHER ORDERED that any alteration in the equipment, parts, design or operation of the Systems certified hereby is prohibited, and deemed inconsistent with this certification, unless the alteration has been approved by the Air Resources Board Executive Officer or his or her designee.

IT IS FURTHER ORDERED this Executive Order shall supersede Executive Order G-70-126L dated July 31, 1995.

Executed at Sacramento, California this 5<sup>th</sup> day of December, 1996.



Michael P. Kenny  
Executive Officer

State of California  
AIR RESOURCES BOARD

Executive Order G-70-126M

CERTIFIED VAPOR RECOVERY SYSTEMS INSTALLED ON GASOLINE BULK TERMINALS

Company	Test Date	Type System	Throughput Limit (as gasoline unless otherwise noted) & Special Conditions	Emission Limit	Measured Emissions
Wickland Oil Terminals Crockett	1984	John Zink Charcoal Adsorption/ Absorption Unit	44,000 gal/hr 528,000 gal/day	0.08 lb/ 1000 gal gasoline	<0.08 lb/ 1000 gal gasoline
Mobil Oil Corporation 1477 Jefferson St., Anaheim	4/8- 9/87	John Zink Charcoal Adsorption/ Absorption Unit	90,000 gal/hr 900,000 gal/day	0.29 lb/ 1000 gal gasoline	0.026 lb/ 1000 gal gasoline
UNOCAL Company 1300 Canal Blvd., Richmond	3/7- 8/89	McGill Vapor Recovery Unit	90,000 gal/hr 900,000 gal/day	0.08 lb/ 1000 gal gasoline	0.016 lb/ 1000 gal gasoline
Shell Oil Company 1801 Marina Vista, Martinez	5/23- 24/89	John Zink Charcoal Adsorption/ Absorption Unit	112,800 gal/hr 1,967,262 gal/day	0.08 lb/ 1000 gal gasoline	0.016 lb/ 1000 gal gasoline
UNOCAL Corporation 13707 South Broadway Los Angeles	6/20- 21/89	McGill Vapor Recovery Unit	150,000 gal/hr 2,000,000 gal/day	0.29 lb/ 1000 gal gasoline	0.15 lb/ 1000 gal gasoline
Mobil Oil Corporation 2709 East 37th St. Los Angeles	6/21- 22/89	John Zink Charcoal Adsorption/ Absorption Unit	150,000 gal/hr 2,500,000 gal/day	0.29 lb/ 1000 gal gasoline	0.071 lb/ 1000 gal gasoline

Company	Test Date	Type System	Throughput Limit (as gasoline unless otherwise noted) & Special Conditions	Emission Limit	Measured Emissions
San Diego Pipeline Company 9950 San Diego Mission Road San Diego	7/25- 26/89	Parker-Hannifin Vapor Processing Incinerator	4,000,000 gal/day with a bladder tank capacity loading rack shutoff	0.29 lb/1000 gal gasoline	0.001 lb/1000 gal gasoline
Time Oil Company 488 Wright Ave., Richmond	8/8- 9/89	Dual Tower Carbon Bed Vapor Recovery Unit	32,000 gal/hr 500,000 gal/day	0.08 lb/1000 gal gasoline	0.033 lb/1000 gal gasoline
Chevron U S A Inc. 611 Solono Way, Avon	8/9- 10/89	Dual Tower Carbon Bed Vapor Recovery Unit	58,000 gal/hr 742,000 gal/day	0.08 lb/1000 gal gasoline	0.030 lb/1000 gal gasoline
Texaco Refining & Marketing 100 Cutting Blvd., Richmond	9/28- 29/89	Vapor Processing Incinerator	32,000 gal/hr 327,000 gal/day	0.08 lb/1000 gal gasoline 95% efficiency	0.0009 lb/1000 gal gasoline 95.4% efficiency
Shell Oil Company 2015 Long Beach Avenue Los Angeles	12/4/89	Dual Tower Carbon Bed Vapor Recovery Unit	not applicable		
Shell Oil Company 2457 Redondo Avenue Signal Hill	2/6- 7/90	Dual Tower Carbon Bed Vapor Recovery Unit	115,000 gal/hr 2,118,404 gal/day	0.29 lb/1000 gal gasoline	0.0915 lb/1000 gal gasoline
Chevron USA, Inc. 1020 Berryessa St. San Jose	5/31/90- 6/1/90	John Zink Charcoal Adsorption/Absorption Unit	127,000 gal/hr 1,180,000 gal/day	0.08 lb/1000 gal gasoline	0.0005 lb/1000 gal gasoline

Company	Test Date	Type System	Throughput Limit (as gasoline unless otherwise noted) & Special Conditions	Emission Limit	Measured Emissions
Chevron USA, Inc. 222888 South Kassum Road Banta	7/19- 20/90	John Zink Charcoal Adsorption/ Absorption Unit	44,000 gal/hr 415,000 gal/day	0.5 lb/ 1000 gal gasoline	0.0018 lb/ 1000 gal gasoline
Martinez Terminals 2801 Waterfront Road Martinez	8/21- 22/90	Thermal Oxidizer	16,000 gal/hr 224,000 gal/day	0.08 lb/ 1000 gal gasoline	0.00005 lb/ 1000 gal gasoline
Chevron USA, Inc. Front Street Sacramento	9/19- 20/90	John Zink Charcoal Adsorption/ Absorption Unit	103,000 gal/hr 1,466,000 gal/day	0.08 lb/ 1000 gal gasoline	0.005 lb/ 1000 gal gasoline
Exxon Company, USA 3410 East 2nd Street Benicia	10/16- 17/90	John Zink Charcoal Adsorption/ Absorption Unit	56,000 gal/hr 1,149,000 gal/day	0.08 lb/ 1000 gal gasoline	0.002 lb/ 1000 gal gasoline
Shell Oil Company 135 North Access Road South San Francisco	10/18- 19/90	John Zink Charcoal Adsorption/ Absorption Unit	105,000 gal/hr 1,367,251 gal/day	0.08 lb/ 1000 gal gasoline	0.01 lb/ 1000 gal gasoline
ARCO 2295 East Harbor Drive San Diego	3/20- 21/91	Edwards Refrigeration Unit	107,000 gal/hr 2,019,000 gal/day	0.29 lb/ 1000 gal gasoline	0.16 lb/ 1000 gal gasoline
Pacific Refining 4901 San Pablo Avenue Hercules	3/29- 30/91	Zink Thermal Oxidizer w/ vapor holding tank and chiller unit	45,000 gal/hr 884,000 gal/day (Polish mode) 744,000 gal/day (By-pass mode) (air controller must be in proper operation)	0.08 lb/ 1000 gal gasoline	0.0076 lb/ 1000 gal gasoline

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Shell Oil Company Stockton	4/22- 23/91	John Zink Charcoal Adsorption/ Absorption Unit	71,000 gal/hr 895,018 gal/day	0.50 lb/ 1000 gal gasoline	<0.005 lb/ 1000 gal gasoline
Santa Fe Pacific Pipeline Partners 950 Tunnel Avenue Brisbane	6/25- 26/91	Rheem Superior w/vapor holding tank and Zink Incinerator	250,000 gal/hr (Polish/By-pass mode) 100,000 gal/hr (Direct mode) 2,400,000 gal/day	0.08 lb/ 1000 gal gasoline	<0.008 lb/ 1000 gal gasoline
Santa Fe Pacific Pipeline Partners 1350 N Main, Orange	5/21- 22/91	Edwards Refrigeration Unit	153,000 gal/hr 2,000,000 gal/day	0.29 lb/ 1000 gal gasoline	0.21 lb/ 1000 gal gasoline
ARCO Products Company 1306 Canal Street Richmond	3/28- 29/91	Edwards Refrigeration Unit	66,000 gal/hr 774,000 gal/day unless a CEM/automatic shutdown system is installed and operated to ensure continuous compliance as required by the BAAQMD	0.08 lb/ 1000 gal gasoline	0.029 lb/ 1000 gal gasoline
ST Services Aten Road, Imperial	5/15- 16/91	Thermal Oxidizer	56,000 gal/hr 648,000 gal/hr	90% vapor recovery efficiency	97.5% vapor recovery efficiency
Santa Fe Pacific Pipelines Riverside Avenue Colton	2/19- 20/92	Dual Edwards Refrigeration Units, NAO Thermal Oxidizer, Dual Vapor Holding tanks with pressure relief valves set at a minimum of 2.5 in. water gauge	4,800,000 gal/day Both Edwards must operate unless in defrost or down for repair work. Continuous monitors required for vapor tank pressure, Edwards coil section temperatures and oxidizer exhaust temperature. Vapor tank pressure not to exceed two (2) inches water gauge.	0.11 lb/ 1000 gal gasoline	0.003 lb/ 1000 gal gasoline

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Chevron USA, Inc. 2351 East Harbor Drive San Diego	6/16- 17/92	John Zink Charcoal Adsorption/ Absorption Unit	50,000 gal/hr 625,000 gal/day	0.29 lb/ 1000 gal gasoline	0.032 lb/ 1000 gal gasoline
Santa Fe Pacific Pipeline Partners 2150 Kruse Drive San Jose	8/29- 30/89 & 8/8/92	Vapor Processing Incinerator	200,000 gal/hr 4,000,000 gal/day (direct mode limit) Normal and by-pass: unlimited provided loading rack automatic shutdown system operational	0.08 lb 1000 gal gasoline	0.01 lb/ 1000 gal gasoline
Time Oil Company 3015 Navy Drive Stockton	5/27- 28/93	Dual Carbon Adsorbers	37,145 gal/hr 204,344 gal/day	0.08 lb/ 1000 gal gasoline	<0.01 lb/ 1000 gal gasoline
ARCO 2149 East Sepulveda Carson	1/11/94	Edwards Refrigeration Unit	3,200,000 gal/day (Polish mode only)	0.29 lb/ 1000 gal gasoline	0.007 lb/ 1000 gal gasoline
ARCO 8601 South Garfield South Gate	1/12/94	Edwards Refrigeration Unit	11,000,000 gal/day (Polish mode only)	0.29 lb/ 1000 gal gasoline	0.003 lb/ 1000 gal gasoline
Chevron USA, Inc. 155 Castro Street Richmond	1/15/94	Rheem Vapor Recovery Unit, Vapor Holding Tank & Flare	1,850,000 gal/day (Polish mode only) (Direct mode per BAAQMD permit only)	0.026 lb/ 1000 gal gasoline	0.009 lb/ 1000 gal gasoline

Company	Test Date	Type System	Throughput Limit (as gasoline unless otherwise noted) & Special Conditions	Emission Limit	Measured Emissions
Santa Fe Pacific Pipeline Partners, 2901 Bradshaw Road Rancho Cordova	2/2/94	Edwards Refrigeration Unit, Vapor Holder Tank & John Zink flare	2,231,000 gal/day 91,000 gal/hr (Direct mode); in Direct mode simultaneous use of more than two loading arms is prohibited; automatic rack shutdown system w/monitors & safeties operational; pressure relief valve settings on racks & vapor holder tank shall not be modified without ARB approval.	0.080 lb/ 1000 gal gasoline	0.0005 lb/ 1000 gal gasoline
Shell Oil Company 8100 Haskel Avenue Van Nuys	3/23- 24/94	John Zink Dual Carbon Bed Vapor Recovery Unit	1,138,000 gal/day Automatic rack shutdown system w/monitors & safeties operational; pressure relief valve settings at racks, vapor holder tank & wastewater storage tanks shall not be modified without ARB approval.	0.29 lb/ 1000 gal gasoline	0.0013 lb/ 1000 gal gasoline
Santa Fe Pacific Pipeline Partners 2570 Hegan Lane Chico	4/29/94	Edwards Refrigeration Unit w/Vapor Holder Tank & John Zink vapor burner	1,846,000 gal/day 80,000 gal/hr (Direct mode); in Direct mode simultaneous use of more than two loading arms is prohibited & written notice of such shall be posted at racks while in Direct mode; automatic shutdown system w/monitors and safeties operational; pressure relief valve settings at racks & vapor holder tank shall not be modified without ARB approval.	0.08 lb/ 1000 gal gasoline	0.0002 lb/ 1000 gal gasoline



<u>Company</u>	<u>Test Date</u>	<u>Type System</u>	<u>Throughput Limit (as gasoline unless otherwise noted) &amp; Special Conditions</u>	<u>Emission Limit</u>	<u>Measured Emissions</u>
Santa Fe Pacific Pipeline Partners 4149 South Maple Avenue Fresno	8/9-10/94	Edwards Refrigeration w/bladder tank & John Zink vapor burner	2,400,000 gal/day 173,500 gal/hr in direct mode	0.08 lb/1000 gal gasoline	0.005 lb/1000 gal gasoline
Santa Fe Pacific Pipeline Partners Aten Road Imperial	8/18/94	Thermal Oxidizer	82,000 gal/hr 1,045,000 gal/day No more than four loading arms shall be in simultaneous use	90% vapor recovery efficiency	93.3% vapor recovery efficiency (0.28 lb/1000 gal)
ARCO 2700 West Washington St. Stockton	4/21-22/93 & 3/9-94	John Zink Vapor Burner w/bladder tank	Direct mode limits: 70,000 gal/hr 1,000,000 gal/day	0.08 lb/1000 gal gasoline	0.0011 lb/1000 gal gasoline
ARCO 1701 South River Road West Sacramento	12/7/94	John Zink Vapor Burner w/bladder tank	In bladder tank mode: 3,000,000 gal/day (all products) In direct mode: 63,000 gal/hr; vapor blower shall not operate more than 5 consecutive min. or more than 20 min. total in any one hour period. Alarm & shutdown set points for VRS process control shall not be modified without ARB approval.	0.08 lb/1000 gal gasoline	0.06 lb/1000 gal gasoline
Shell Oil Company 1509 South River Road West Sacramento	4/11-12/95	Dual Tower Carbon Bed w/bladder tank	1,355,000 gal/day No more than two loading arms per cargo tanker allowed in simultaneous use	0.08 lb/1000 gal gasoline	0.0001 lb/1000 gal gasoline

Company	Test Date	Type System	Throughput Limit (as gasoline unless otherwise noted) & Special Conditions	Emission Limit	Measured Emissions
Santa Fe Pacific Pipeline Partners 9950 San Diego Mission Road San Diego	5/10/95	Edwards Ref. & Vapor Tank w/ NAO Flare Combustion Unit	4,610,000 gal/day in polish; 5,170,000 gal/day in by-pass mode; operation of vapor satuator prohibited; auto shutdown system shall be operational; NAO flare exhaust temperature, Edwards unit coil temperature and vapor return manifold pressure shall be monitored and recorded; loading at Texaco rack shall be halted in the event of automatic system shutdown; cargo tank pressure during loading shall not exceed 90% of rated setting of P/V valve at rack; simultaneous use of more than two loading arms is prohibited at Texaco rack.	0.29 lb/1000 gal gasoline	0.0009 lb/1000 gal gasoline (by-pass mode) 0.0105 lb/1000 gal gasoline (polish mode)
Texaco Refining & Marketing 6451 Rosedale Highway Bakersfield	11/15/95	Refinery Vapor Processing/Fuel Gas System	170,000 gal/hr 4,100,000 gal/day	0.08 lb/1000 gal gasoline	0.006 lb/1000 gal gasoline
Shell Oil Company 2165 O'Toole Ave. San Jose	1/4-5/96	John Zink Charcoal Adsorption/Absorption Unit w/bladder tank	1,859,150 gal/day	0.024 lb/1000 gal gasoline (permit cond.)	0.001 lb/1000 gal gasoline
Texaco Refining & Marketing 1926 East Pacific Coast Hwy Wilmington	5/29/96	Refinery Vapor Processing/Fuel Gas System	200,000 gal/hr 4,000,000 gal/day Two vapor return lines must be used when loading three products simultaneously while more than two trucks are at the loading rack	0.29 lb/1000 gal gasoline	0.136 lb/1000 gal gasoline