State of California
AIR RESOURCES BOARD

Executive Order G-70-155

Certification of Petroleum Marketing Services' Aboveground Tank Filling & Dispensing Vapor Recovery Systems

WHEREAS, the Air Resources Board (the "Board") has established, pursuant to California Health and Safety Code sections 39600, 39601, and 41954, certification procedures for systems designed to control gasoline vapor emissions displaced during the filling of service station storage tanks ("Phase I vapor recovery systems") and for systems designed to control gasoline vapor emissions from motor vehicle fueling operations ("Phase II vapor recovery systems") in its "Certification Procedures for Gasoline Vapor Recovery Systems at Service Stations", amended December 4, 1981 (the "Certification Procedures"), and incorporated by reference in Title 17, California Code of Regulations section 94001;

WHEREAS, the Board has established, pursuant to California Health and Safety Code sections 39600, 39601, and 41954, test procedures to determine the compliance of Phase I and Phase II vapor recovery systems with emission standards in its "Test Procedures for Determining the Efficiency of Gasoline Vapor Recovery Systems at Service Stations", amended September 1, 1982 (the "Test Procedures"), incorporated by reference in Title 17, California Code of Regulations section 94000;

WHEREAS, Rex Dawson, president of Petroleum Marketing Services, has applied for certification of his company's aboveground gasoline storage tank vapor recovery system for use in balance Phase I and Phase II operations;

WHEREAS, Section VII-A of the Certification Procedures provides that the Executive Officer shall issue an order of certification if he or she determines that a vapor recovery system conforms to all of the requirements set forth in Certification Procedures Sections I through VII; and

WHEREAS, I, James D. Boyd, California Air Resources Board Executive Officer, have determined that the Petroleum Marketing Services' aboveground storage tank vapor recovery systems, when used with ARB Certified Phase I and Phase II balance vapor recovery components, conforms with all the requirements set forth in Sections I through VII of the Certification Procedures;

NOW, THEREFORE, IT IS HEREBY ORDERED that this certification applies to the Petroleum Marketing Services' aboveground gasoline storage tank vapor recovery systems. The systems certified by this order may be used on single product tanks between 550 and 6,000 gallons total capacity which utilize the same geometric configuration and design shown in Exhibits 1 and 2, attached, and are equipped with remote top loading Phase I and top dispensing Phase II vapor recovery equipment.

IT IS FURTHER ORDERED that the use of Air Resources Board certified Phase I and Phase II vapor recovery components shall be a condition of the certification. Certified vapor recovery components installed by Petroleum Marketing Services' on the aboveground storage tank vapor recovery systems
are identified in Exhibit 1, attached. In the alternative, Air Resources Board certified Phase I components from Exhibits 1 through 3 of Executive Order G-70-97-A, Exhibits 1 and 2 of Executive Order G-70-102-A, or Exhibits 1 and 2 of Executive Order G-70-142-A may be used and Air Resources Board certified balance system Phase II components from Executive Orders in the G-70 series may be used. Additional Phase I and Phase II components for use on Air Resources Board certified gasoline vapor recovery systems may be found in Vapor Recovery Approval letters signed by the Executive Officer's designee.

IT IS FURTHER ORDERED that in order to prevent spitback or condensate from blocking the vapor path between the vehicle fill pipe and the storage tank headspace, the routing of the coaxial hose shall be consistent with the configurations shown in exhibits 4 through 11a in CARB Executive Order G-70-52-AM, with the exception that the highest point in the vapor return path must be above the the top of the storage tank and there shall be no liquid trap in the vapor path between the highest point in the vapor return path and the storage tank vapor headspace during fuel dispensing. Furthermore, there shall be no liquid trap in the vapor path between the vehicle fill pipe and the highest point in the vapor return path during fuel dispensing unless the coaxial hose is equipped with a liquid removal system with the liquid pickup located at the liquid trap.

IT IS FURTHER ORDERED that inner tank be completely surrounded with an insulating blanket with a two inch thickness, a density of eight pounds per cubic foot and an R-Value of 2.0/inch at 600 degrees Fahrenheit.

IT IS FURTHER ORDERED that an Air Resource Board certified P/V valve shall be installed on the tank vent and that the pressure relief setting of such valve shall be between 2.5 and 3.5 inches of water column gage.

IT IS FURTHER ORDERED that the installed P/V valve shall extend to a height which is at least 12 feet above grade.

IT IS FURTHER ORDERED that the general exterior of the storage tanks be painted white.

IT IS FURTHER ORDERED that the components and piping configuration used to connect the cargo truck bulk delivery line and vapor return line to the storage tank fill line and vapor recovery line shall be consistent with Air Resources Board Executive Order G-70-102-A and that the liquid leak rate upon disconnecting the delivery line shall be no more than 10 ml per disconnect computed from the average of three disconnect operations.

IT IS FURTHER ORDERED that prior to using any Petroleum Marketing Systems tank for storage of gasoline the complete vapor recovery system shall be leak checked at 150 percent of the maximum working pressure of the system (P/V vent setting), or 5 inches of water column pressure, whichever is greatest, and verified to be vapor tight. Thereafter, the complete system shall be checked once a year to ensure a vapor tight system and proper operation of the vapor recovery equipment. Leak checks shall be conducted in accordance with the test Procedures.

IT IS FURTHER ORDERED that during bulk deliveries the cargo truck pumping system shall be operated at a steady flow rate which is less than 80 gallons per minute. Using the pump to clear fuel from the delivery line is prohibited if it results in pumping vapor through the gasoline storage tank since this practice may result in significant vapor growth and additional venting from the Storage tank vent line.
IT IS FURTHER ORDERED that compliance with the rules and regulations of the local air pollution control district with jurisdiction over the location where the system is installed, shall be made a condition of this certification.

IT IS FURTHER ORDERED that the tank, associated piping and other equipment not specifically listed as approved Phase I equipment in Exhibits 1 through 3 of Executive Order G-70-97-A, Exhibits 1 and 2 of Executive Order G-70-102-A or Exhibits 1 and 2 of Executive Order G-70-142-A, nor specifically listed as approved Phase II equipment in the Executive Order G-70 series shall comply with the rules and regulations of the local fire officials with jurisdiction over the location where the system is installed and that the use of a P/V vent shall require the prior approval of such local fire official.

IT IS FURTHER ORDERED that compliance with all applicable certification requirements and rules and regulations of the Division of Measurement Standards, the Office of the State Fire Marshal, and the Division of Occupational Safety and Health of the Department of Industrial Relations shall be made a condition of this certification.

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

Executed this 12 day of March, 1994 at Sacramento, California.

James D. Boyd
Executive Officer
Exhibit 1

Executive Order G-70-155
Petroleum Marketing Systems Aboveground Tank Filling/Dispensing Vapor Recovery System

Petroleum Marketing Services Aboveground Fuel Storage Tank

Component Identification List
As Tested Prototype Installation

1. Primary Tank
2. Insulating Blanket
3. Secondary Tank
4. Suction Tube
5. Product Piping Pump Supply
6. Product Piping Pump Discharge
7. Phase II Vapor Return Line
8. Bell Reducer
9. Coaxial Hose Adaptor
10. High Hang Hose Retractor
11. Coaxial Hose
12. Phase II Nozzle
13. Fuel Pump and Totalizing Meter
14. Anti-Siphon/Sieve Valve
15. Primary Tank Emergency Vent
16. Secondary Tank Emergency Vent
17. 2" Vent Pipe & FY Relief Valve
18. Bulk Fill Drop Tube
19. Bulk Fill Line
20. Bell Valve
21. Bulk Fill Dry Break
22. Bulk Fill Line Cap
23. Phase I Vapor Return Line
24. Phase I Poppetted Vapor Return Line Adaptor
25. Vapor Return Line Cap
26. Annsul Level Sate
27. Fuel Level Gauge

UL 142 Listed
2 inch thickness @ lb/ft³ density
UL 142 Listed
1" Schedule 40
1" Schedule 40
2" Schedule 40
2.5/8" Schedule 40
OPW 38 CS
Pomaco 100 AG
Thermoid Superlite
OPW 11VF
FILLRITE 702 VR
Tokheim 62 valve
6" Morrison 244
6" Morrison 244
Hazlett 8-FPB-1. 3"H2O pressure
9"H2O vacuum
OPW 617
2" Schedule 40
3" Domr
OPW 1611-AB-2000
OPW 624 BK-0100
3" Schedule 40
OPW 1611-NV
OPW 1711T
Kruger
Kruger

Notes:

See Executive Order G-70-97-A (Exhibits 1, 2 & 3) and Executive Order G-70-142-A (Exhibits 1 & 2) for a listing of ARB certified Phase I two-point and coaxial vapor recovery equipment and components which may be used as an alternative to the equipment above.

See Executive Order G-70 series for ARB certified Phase II balance system vapor recovery equipment and components which may be used as an alternative to the equipment above.
NOMINAL DOUBLEWALL ABOVEGROUND TANK LENGTH CHART

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