

State of California  
AIR RESOURCES BOARD

Executive Order G-70-140

Certification of Integral Phase I and Phase II  
Aboveground Tank Configurations Using  
the Healy Phase II Vapor Recovery System

WHEREAS, the Air Resources Board (the "Board") has established, pursuant to Sections 39600, 39601, and 41954 of the Health and Safety Code, certification procedures for systems designed for the control of gasoline vapor emissions displaced during the filling of storage tanks at service stations ("Phase I vapor recovery systems") and for the control of 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" as last amended December 4, 1981 (the "Certification Procedures"), incorporated by reference in Section 94001 of Title 17, California Code of Regulations;

WHEREAS, the Board has established, pursuant to Sections 39600, 39601, and 41954 of the Health and Safety Code, test procedures for determining 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" as last amended September 1, 1982 (the "Test Procedures"), incorporated by reference in Section 94000 of Title 17, California Code of Regulations;

WHEREAS, James W. Healy of Cambridge Engineering, Incorporated has applied for certification of the Healy vacuum assist system for Phase II vapor recovery for aboveground gasoline storage tank systems utilizing a remote dispenser;

WHEREAS, Section VIII-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 Sections I through VII; and

WHEREAS, the Executive Order G-70-7 series contain the certification orders for Healy vacuum assist Phase II vapor recovery systems;

WHEREAS, I find that the Healy vacuum assist system for remote dispenser operation, when used with ARB Certified Phase I and Phase II aboveground tank balance systems, conforms with all the requirements set forth in Sections I through VII of the Certification Procedures;

NOW, THEREFORE, IT IS HEREBY ORDERED this certification shall apply to the use of the Healy vacuum assist system for Phase II vapor recovery for aboveground gasoline storage tank systems utilizing a remote dispenser. The systems certified hereby are shown in Exhibits 1 and 2 attached and may be used on aboveground single product tanks, split product tanks or multiple tanks which have been previously certified for Phase I and Phase II balance system operation.

IT IS FURTHER ORDERED that this system is certified to be at least 95 percent effective when used with a Board Phase I and Phase II certified integral aboveground gasoline storage tank system and Healy vacuum assist Phase II vapor recovery components, covered by current certification in the Executive Order G-70-7 series. A typical piping arrangement and parts list for the Healy Phase II system for a single dispenser located within two feet of the storage tank and where the vapor return piping is not routed below the level of the hose adaptor is shown in Exhibit 1. The piping arrangement and parts list for application to multiple nozzles, multiple tanks or where the vapor return piping is routed below the level of the hose adaptor (underground piping) is shown in Exhibit 2.

IT IS FURTHER ORDERED that a condensate trap as shown in Exhibit 2 shall be used when the vapor return piping is routed below the level of the hose adaptor. The remote dispenser shall not be located more than 15 feet from the aboveground tank. All exposed piping shall be insulated to the equivalent of 2 inches of material with a "K" value of 0.30 or less. The jet pump assembly shall be shaded by a sheet metal enclosure painted white.

IT IS FURTHER ORDERED that compliance with the rules and regulations of the local air pollution control district with jurisdiction where the installed system is located, shall be made a condition of this certification.

IT IS FURTHER ORDERED that the tank and associated piping and other equipment not specifically listed as approved Phase I or Phase II equipment in Executive Order G-70 series shall comply with the rules and regulations of the local fire officials with jurisdiction where the installed system is located, and that the use of a PV valve shall require the prior approval of such local fire official.

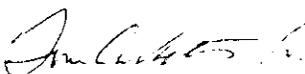
IT IS FURTHER ORDERED that compliance with all applicable certification requirements and rules and regulations of the Division of Measurement Standards, the Office of the State Fire Marshal, and the Division of Occupational Safety and Health of the Department of Industrial Relations shall be made a condition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

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

IT IS FURTHER ORDERED that the certified Healy Phase II vapor recovery system shall, at a minimum, comply with the manufacturer's recommended operation, installation and maintenance procedures.

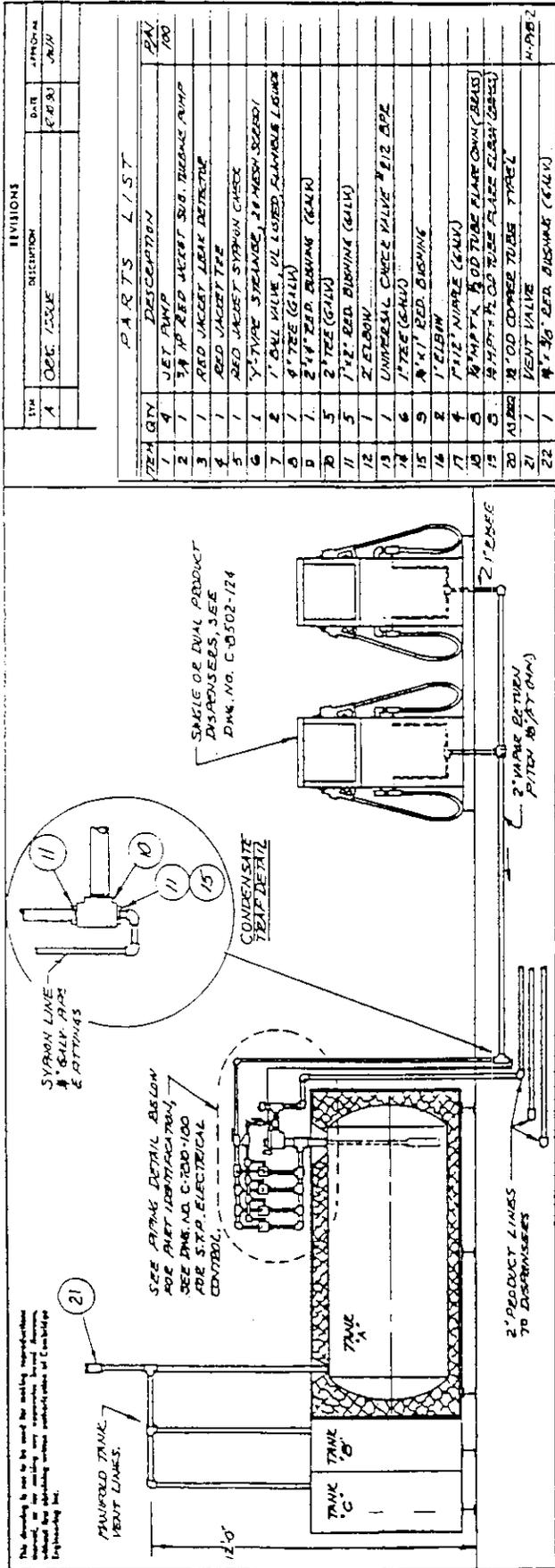
IT IS FURTHER ORDERED that the Healy Phase II vapor recovery system nozzle, jet pump, control valve and multi-jet pump shall be 100 percent performance checked at the factory including checks of proper operation in all aspects of performance.

Executed this 17 day of March 1992, at Sacramento, California.

  
James D. Boyd  
Executive Officer



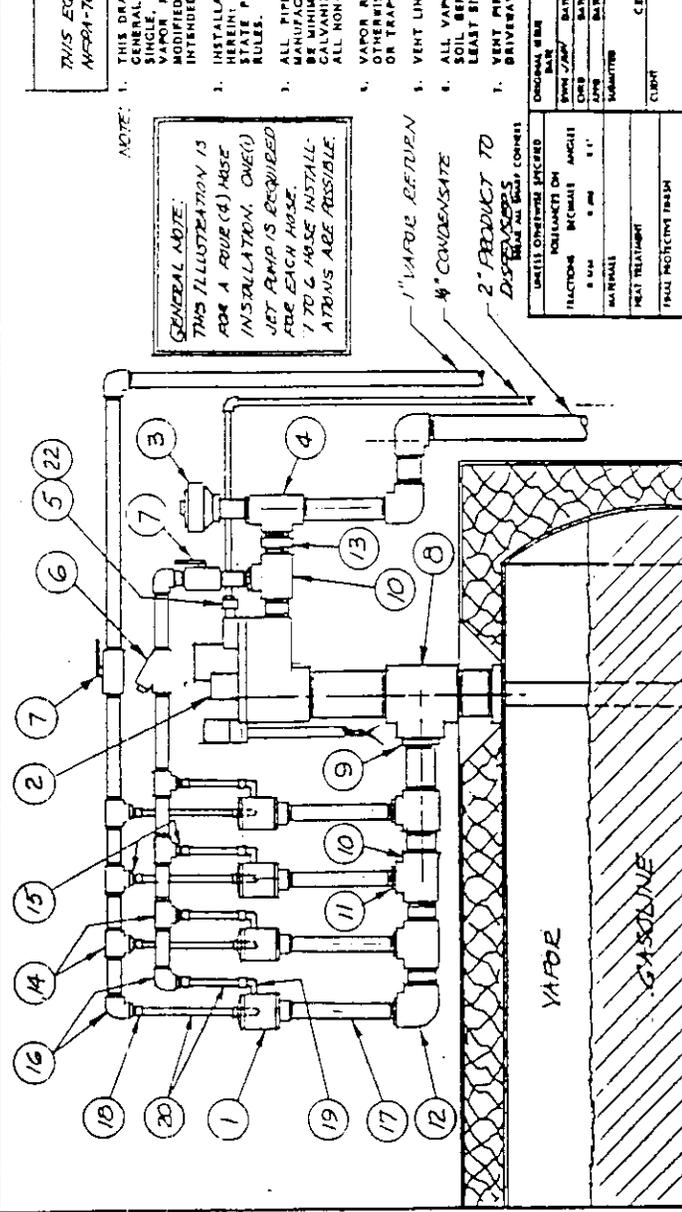
Healy Phase II Vapor Recovery System for Integral Aboveground Gasoline Tank Systems Utilizing a Remote Dispenser



DIVISIONS		DESCRIPTION	DATE	APPROVAL
1	1	0001 ISSUE	6/28/83	JRM

PARTS LIST		QTY	DESCRIPTION	2A
1	4	1	JET PUMP	100
2	1	3/4" NPT RED VACUUM SUB. THERM. SW. PUMP		
3	1	RED VACUUM LEAK DETECTOR		
4	1	RED VACUUM CHECK		
5	1	Y-TYPE STRAINER, 3/4" MESH, 304 SS		
6	1	1" BALL VALVE, UL LISTED, FLAMMABLE LIQUID		
7	1	4" TEE (GALV)		
8	1	2" TEE (GALV)		
9	1	1/2" RED BRASS (GALV)		
10	1	2" ELBOW		
11	1	UNIVERSAL CHECK VALVE #12 BPE		
12	1	1" TEE (GALV)		
13	1	4" X 1" RED BRASS		
14	1	1" ELBOW		
15	1	1" PIPE WARE (GALV)		
16	1	1/2" NPT X 1/2" OD TUBE FLARE ON (BRASS)		
17	1	1/2" NPT X 1/2" OD TUBE FLARE (BRASS)		
18	1	1/2" OD COPPER TUBE 1/2" TYPICAL		
19	1	VENT VALVE		
20	1	4" X 3/8" RED BRASS (GALV)		



**REFERENCE CODES**

THIS EQUIPMENT TO BE INSTALLED IN ACCORDANCE WITH NFPA-70 AND AUTOMOTIVE & MARINE SERVICE CODE NFPA-30A

1. THIS DRAWING IS FOR ILLUSTRATION PURPOSES ONLY. THIS PLAN SHOWS A GENERAL ARRANGEMENT AND IS INTENDED AS A GUIDE FOR TYPICAL SINGLE, DUAL OR MULTIPRODUCT DISPENSERS. USING CENTRAL VACUUM RECOVERY EQUIPMENT. THE GENERAL ARRANGEMENT SHALL BE MODIFIED TO SUIT INDIVIDUAL INSTALLATION AND CONDITIONS AND IS NOT INTENDED TO BE USED FOR ACTUAL DESIGN AND INSTALLATION.

2. INSTALLATION SHALL BE IN COMPLIANCE WITH THE REQUIREMENTS SPECIFIED HEREIN: CALIFORNIA AIR RESOURCES BOARD REGULATIONS, CALIFORNIA STATE FIRE MARSHAL REGULATIONS, SUB-CHAPTER 11.1 AND LOCAL APCD RULES.

3. ALL PIPING AND FITTINGS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS AND SPECIFICATIONS. METAL PIPE SHALL BE MINIMUM SCHEDULE 40 WELDED OR SEAMLESS STEEL PIPE PER ASTM A-11, GALVANIZED. AND FITTINGS SHALL BE 1500 MALLEABLE IRON, GALVANIZED. ALL NON-METALLIC PIPE AND FITTINGS SHALL BE UL LISTED.

4. VAPOR RETURN LINES AND VENT LINES TO BE 2" DIAMETER PIPE UNLESS OTHERWISE NOTED. SLOPE MUST BE MINIMUM 1/4" PER FOOT. WITHOUT SAGS ON TRAPS, DRAINING UNIFORMLY TOWARD PRODUCT STORAGE TANK.

5. VENT LINES MUST BE SEPARATED BY PRODUCT.

6. ALL VAPOR PIPING TRENCHING MUST BE COMPACTED TO 14" UNDISTURBED SOIL BEFORE THE PIPE IS LAYED. TRENCHES MUST BE BACKFILLED WITH SAND AT LEAST SIX INCHES BELOW AND ABOVE THE PIPING.

7. VENT PIPES SHALL BE MANIPULATED AT MINIMUM HEIGHT OR 13 FEET ABOVE DRIVEWAY LEVEL. DO NOT SCALE THE DRAWING.

ORIGINAL SIZE	DATE	BY
SCALE	DATE	BY
REVISIONS	DATE	BY
DATE	BY	

CLIENT: C.E. INC.

PROJECT: ABOVE GROUND TANK VAPOR RECOVERY PIPING FOR 100 JET PUMPS.

DATE: 6/28/83

SCALE: 1/4" = 1'-0"

CAMBRIDGE ENGINEERING, INC. SYSTEMS, INC.

9000-913