



Mel Carnahan, Governor • Stephen M. Mahfood, Director

## DEPARTMENT OF NATURAL RESOURCES

DIVISION OF ENVIRONMENTAL QUALITY

P.O. Box 176 Jefferson City, MO 65102-0176

MAY 24 1999

Mr. Scott Negley  
Product Manager, Dispensers  
Wayne Dresser Industries  
P. O. Box 1859  
Salisbury, MD 21802-1859

### APPROVAL LETTER

99-04

Dear Mr. Negley:

This is to inform you of the approval of the Balance Stage II Vapor Recovery dispensers which your company submitted for MOPETP testing and approval. These dispensers are the Wayne Vista 390, V390U D4 GQUY (vapor equipped/vapor ready models). The MOPETP testing took place at the Mobil Mart, 5840 South Lindbergh, St. Louis, Missouri.

The dispensers must be manufactured, sold, and installed as tested at the MOPETP site. The dispenser must be installed such that there are no constrictions in the connections between the dispenser vapor piping and the underground piping. It is preferred that the dispensers are installed with all vapor piping preinstalled by the manufacturer (GQY). However, vapor ready systems (GQUY) may be installed **IF** all vapor piping and connections installed by the contractor are the same as those used by the manufacturer.

It is the responsibility of the contractor to assure that the proper vapor piping and other components are used in installing the dispenser. It is the responsibility of the manufacturer to make clear in the installation instructions manual the proper requirements for the vapor piping.

The Wayne Vista 390 dispensers must be supplied with the appropriate modification kit (P/N 918942M-kit) when used with the OPW 11 VF nozzles or other long spout nozzles as require use of other specific modification kits as

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described in the Wayne installation documentation. The nozzles must not be adjusted in the pockets before the Static Leak Decay test. If such adjustment is needed before the system can pass the Static Leak Decay test, then the nozzles may not be used with the dispenser as equipped. The dispensers should be used with components with back pressures such that the total system back pressures will be within the acceptable criteria.

The Missouri Department of Natural Resources' (MDNR's) Air Pollution Control Program (APCP) approves the equipment listed below, subject to the terms and conditions of approval listed above and on **MOPETP Approval APCP-0002-001-99**. The equipment below is approved for use on all Approved Balance Vapor Recovery systems.

Manufacturer	Model	Component
Wayne Dresser Ind.	Wayne Vista 390 V390U D4 GQY	Dispenser

Attached please find **MOPETP Approval APCP-0002-001-99**. MDNR's APCP thanks you for your cooperation and diligence.

Sincerely,

AIR POLLUTION CONTROL PROGRAM



Roger D. Randolph  
Director

RDR:bpp

Attachment

**Performance & Installation  
Specifications  
EXHIBIT 2**

**Husky Nozzles**

Husky nozzles generally performed very well in the MOPETP tests. Various bench leak tests were conducted on the nozzles throughout the testing period. Results of the July 21, 1997, testing indicated slight leaking of nozzles from O-rings. These 1.5" ID, 0.070 cross section, National Buna-N C9-70 compound, Husky # 000395, rings were apparently shrinking, causing the slight leak. These were replaced with a larger size, 2" ID, 0.070 cross section, National Buna-N C9-70 compound, Husky # 002095, in all nozzles. This modification cured the leaks. Therefore, approved Husky nozzles # 5010 V and 5210 V must have the larger # 002095 O-rings. Husky nozzles must be manufactured, sold, and installed exactly as tested at the MOPETP site.

**OPW**

OPW Fill Adapters, tested in the Husky Balance MOPETP, showed a tendency to become loosened during bulk fuel deliveries. It is cautioned that these components must be kept tight to avoid system leaks. Failure to keep these tight may expose station owners to additional violations and leak tests. OPW components must be manufactured, sold, and installed exactly as tested at the MOPETP site.

**GILBARCO DISPENSERS**

Gilbarco Advantage Series 5+1 B7D dispensers must employ the same materials and methods as those used for the replaced manifold vapor lines in the dispensers at the MOPETP site. Back pressure is a critical issue in Balance systems. Dispensers should be installed with close attention to issues affecting back pressure and to choosing hanging components which will result in acceptable total system back pressure. System back pressure standards are equal to or less than 0.16" WC for 40 scfh, equal to or less than 0.35" WC for 60 scfh, equal to or less than 0.62" WC for 80 scfh. Advantage Series 5+1 B7D dispensers were MOPETP tested at 0.50, 0.124, 0.227" WC respectively. Although it is not required to hit these figures exactly, it is generally expected that the dispenser alone will be responsible for no more than 1/3<sup>rd</sup> of the acceptable system back pressure. Gilbarco dispensers must be manufactured, sold, and installed exactly as tested at the MOPETP site.

## **DAYCO HOSES**

### **V2000 Petroflex 2000 Model 7574BTF and 2000 Petroflex 2000 Model 7574BTF**

2000 Petroflex 2000 Model 7574BTF hoses were tested with the Husky VLX nozzles. However, the Husky VLX nozzles have been removed from the request for approval by Husky, as they are discontinuing the production of these nozzles. The 2000 Petroflex 2000 Model 7574BTF hoses can be used only with an approved nozzle with Venturi for liquid removal or for approved Balance system dispensers which do not require liquid removal. At present time there are no such dispenser or nozzles approved. They are included in this approval only for use as whip hoses or in expectation of future compatible component approvals.

The V2000 Petroflex 2000 Model 7574BTF hoses are approved for use in the Balance systems. Hoses must be installed such that the slurpie tube for liquid removal is adjusted to the appropriate point for the length of the hose and the specific facility needs. The hoses should be used with components with back pressures such that the total system back pressures will be within the established criteria. The Dayco hoses must be manufactured, sold and installed exactly as tested at the MOPETP site.

## **GOODYEAR HOSES**

Goodyear hoses Maxxim Premier were tested with the Husky VLX nozzles. However the Husky VLX nozzles have been removed from the request for approval by Husky, as they are discontinuing the production of these nozzles. The Goodyear Maxxim Premier hoses can be used only with an approved nozzle with Venturi for liquid removal or for approved Balance system dispensers which do not require liquid removal. At present time, there are no such dispenser or nozzles approved. They are included in this approval only for use as whip hoses or in expectation of future compatible component approvals. The Goodyear Maxxim Premier Plus vapor recovery hoses are approved for installation in Balance Systems. Hoses must be installed such that the slurpie tube for liquid removal is adjusted to the appropriate point for the length of the hose and the specific facility needs. The hoses should be used with components with back pressures such that the total system back pressures will be within the established criteria. The Goodyear hoses must be manufactured, sold and installed exactly as tested at the MOPETP site.

**Performance & Installation  
Specifications  
*Continued***

**GENERAL GUIDELINES**

At this time, several Balance system vapor recovery equipment manufacturers are conducting MOPETP tests for approval. As additional Balance system components are approved, those components will be approved as alternates to these components. The APCP foresees a wide selection of Balance system components available within the next year. These various approved components will be available to "mix and match" to other approved Balance components.

Back pressure is a critical issue in Balance systems. It has been estimated that for each additional 0.1" WC back pressure the system will lose 1% efficiency. Careful judgement should be taken to ensure that the components selected will result in total system back pressures within the acceptable limits. An example would be that during the Husky Balance MOPETP, one hose manufacturer had to be eliminated due to excessive hose back pressure. The general guideline for back pressure sharing is 1/3<sup>rd</sup> for the hanging gear, 1/3<sup>rd</sup> for the dispenser, 1/3<sup>rd</sup> for the underground plumbing and UST.