



Winston H. Hickox
Agency Secretary

Air Resources Board

Alan C. Lloyd, Ph.D.
Chairman

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Gray Davis
Governor

July 23, 2002

To: All Vapor Recovery Manufacturers and Stakeholders

Dear Sir/Madam:

California Air Resources Board (CARB) staff is requesting comments on a proposed definition for "Rigid" piping as well as on proposed additional installation specifications for underground vapor recovery piping. These changes may be included in the next amendment to CP-201, Certification Procedure for Vapor Recovery Systems at Dispensing Facilities (CP-201).

CP-201 as last amended on July 25, 2001, Section 4.12.4 states the following:

"...The vapor return piping shall be constructed of rigid piping, or shall be contained within rigid piping, or shall have an equivalent method, approved by the Executive Officer, for ensuring that proper slope is achieved and maintained."

The term "rigid piping" as used within this section was not defined.

Staff proposes to define "rigid piping" as "any piping material with a bend radius that exceeds six feet." This definition is consistent with the draft marina Underwriters Laboratory (UL) standard definition for "rigid" piping. The bend radius test is based on the following concepts:

1. A ten (10) foot length of piping is centered on roller supports positioned six (6) feet apart.
2. A specified weight is hung from the center of the pipe.
3. After five (5) minutes, the deflection of the center of the pipe is measured in inches.
4. A measured deflection of 8.5 inches (8-1/2") or greater equates to a bend radius of less than six (6) feet.

A more detailed test procedure (TP-201.2G) is under development and will be available for review and comments in August 2002.

The energy challenge facing California is real. Every Californian needs to take immediate action to reduce energy consumption. For a list of simple ways you can reduce demand and cut your energy costs, see our Website: <http://www.arb.ca.gov>.

California Environmental Protection Agency

In addition to the definition and test procedure for rigid piping, staff is proposing the following installation specifications for underground vapor return piping:

Draft Underground Vapor Recovery Piping Installation Specifications

The current recommended and specifications include:

1. Two inch (2") minimum diameter vapor piping between dispensers.
2. Three inch (3") minimum diameter for main vapor return lines from islands back to the underground storage tanks (USTs).
3. Minimum 1/8" per foot slope from the dispensers and vent stacks back to the USTs. A slope of 1/4" per foot is recommended wherever feasible.

Proposed Additional Installation Specifications

4. Underground manifolding of USTs.
5. Minimum bend radius of piping shall be six feet as determined by TP-201.2G.
6. Vapor piping used shall be from straight pipe sections. No vapor piping sold or transported in rolls shall be used.
7. The ARB Executive Order certifying the piping would include the following requirements:
 - Verification of proper slope after final grade of the pipe bedding has been established and prior to back-filling piping trenches. Bedding material (pea gravel or like) would need to be brought up to at least 50% and no more than 90% of pipe diameter prior to inspection.
Level Specifications: 2' Electronic level sensor or equivalent.
 - Back pressure test and liquid blockage test as specified by TP-201.4 shall be performed 1) after final grade of vapor return pipe bedding has been established and prior to back filling, 2) once final grade of station has been established and all finished surfaces applied, and 3) annually thereafter.

We would appreciate comments on the rigid piping definition, test procedure concept for determining bend radius, and additional installation specifications by August 30, 2002. This would give us time to consider comments before the September 9, 2002 workshop.

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If you have questions or need further information, please contact Paul Thalken at (916) 445-9499 or via email at pthalken@arb.ca.gov, or Ranjit Bhullar at (916) 327-8528 or via email at rbhullar@arb.ca.gov.

Sincerely,

A handwritten signature in black ink that reads "George Lew". The signature is written in a cursive style with a large, prominent "G" and "L".

George Lew, Chief
Engineering and Certification Branch
Monitoring and Laboratory Division

cc: Ms. Teresa Sewell
Monterey Bay Unified APCD

Mr. Ben Shaw
South Coast AQMD