

Vapor Recovery
Rulemaking Workshop
October 18, 2005

California Air Resources Board

Vapor Recovery Workshop

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Agenda

- Proposed CP-201 Changes
- Proposed D-200 Changes
- Proposed TP-201.1E CERT
- Proposed TP-201.2I
- Proposed Changes to Equipment Defect List Update Process
- Projected Rulemaking Schedule

Proposed CP-201 Changes

- Section 1, Coordination Requirements
 - add SWRCB approval (AB 2955)
- Section 2
 - update EVR Phase II and ISD dates
- Section 3.5 and Table 3-1
 - P/V Valve Specifications
 - change positive cracking specification
- Clarify Executive Order Amendment Process
- Section 4.3 and Table 4.1
 - Change spillage standard
- General CP Clean-up

Proposed CP-201 Changes Section 2

Table 2-1, effective and operative dates

- Update Table 2-1
 - EVR Phase II; April 1, 2005
 - ISD, GDF > 1.8 mil. gal/yr. ; September 1, 2005
- Change
 - ISD, GDF > 600,000 gal/yr. ; September 1, 2006

Proposed CP-201 Changes

Section 3.5, P/V Valve Specifications

Cracking Pressure Settings

2.5 to 6.0 (~~3.0 ± 0.5~~) inches H₂O Positive Pressure

6.0 to 10.0 (~~8.0 ± 2.0~~) inches H₂O Negative Pressure

Proposed CP-201 Changes

Section 3.5, P/V Valve Specifications

Leakrate

at +2.0 inches H₂O ≤ 0.17 CFH

at -4.0 inches H₂O ≤ 0.21 CFH

~~Total Additive Leakrate from All P/V Valves ≤ 0.17 CFH
at 2.0 inches H₂O~~

- May certify to a more strict positive pressure leak rate
 - to certify a system with multiple P/V valves
 - each valve will be held to stricter standard
 - e.g., to ≤ 0.05 CFH

Proposed CP-201 Changes
Section 4.3, Spillage Standard

- Spillage Standard and Testing
 - ~~0.24~~ 0.05 pounds/1,000 gallons
 - ~~1,000~~ 500 refueling operations
 - ~~400~~ 200 fill-ups
 - Based on Healy certification data
- Proposed effective date
 - January 1, 2008

Proposed CP-201 Changes

Current Certification Sections

- Additional Requirements of Certification Section 9
- In-Station Diagnostic Systems Section 10
- Application Process Section 11
- Engineering Evaluation of VR Systems Section 12
- Vapor Recovery System Certification Testing Section 13
- Alternate Test Procedures & Inspection Procedures Section 14
- Certification of Systems Section 15
- Cert of VR Systems and Components Section 16
- Documentation of Certification Section 17
- Duration and Conditions of Certification Section 18
- Certifications that have been Terminated Section 19

Proposed CP-201 Changes

Re-organize Certification Sections

- Additional Requirements of Certification Section 9
- In-Station Diagnostic Systems Section 10
- Application Process Section 11
- Engineering Evaluation of VR Systems Section 12
- Vapor Recovery System Certification Testing Section 13
- Alternate Test Procedures & Inspection Procedures Section 14
- Certification of Systems Section 15
- Cert of VR Systems and Components Section 16
- Documentation of Certification Section 17
- Duration and Conditions of Certification Section 18
- Certifications that have been Terminated Section 19

Proposed CP-201 Changes

Re-organize Certification Sections

- Section 9
- In-Station Diagnostic Systems Section 10
- Application Process Section 11
- Engineering Evaluation of VR Systems Section 12
- Vapor Recovery System Certification Testing Section 13
- Alternate Test Procedures & Inspection Procedures Section 14
- Section 15
- Section 16
- Documentation of Certification Section 17
- Duration and Conditions of Certification Section 18
- Certifications that have been Terminated Section 19

Proposed CP-201 Changes

Re-organize Certification Sections

- In-Station Diagnostic Systems Section 9
- Section 10
- Application Process Section 11
- Engineering Evaluation of VR Systems Section 12
- Vapor Recovery System Certification Testing Section 13
- Alternate Test Procedures & Inspection Procedures Section 14
- Documentation of Certification Section 15
- Duration and Conditions of Certification Section 16
- Section 17
- Section 18
- Certifications that have been Terminated Section 19

Proposed CP-201 Changes

Re-organize Certification Sections

- In-Station Diagnostic Systems Section 9
- Certification of Vapor Recovery Systems Section 10
- Application Process Section 11
- Engineering Evaluation of the Application Section 12
- Vapor Recovery System Certification Testing Section 13
- Alternate Test Procedures & Inspection Procedures Section 14
- Documentation of Certification Section 15
- Duration and Conditions of Certification Section 16
- Section 17
- Section 18
- Certifications that have been Terminated Section 19

Proposed CP-201 Changes

Re-organize Certification Sections

- In-Station Diagnostic Systems Section 9
- Certification of Vapor Recovery Systems Section 10
- Application Process Section 11
- Engineering Evaluation of the Application Section 12
- Vapor Recovery System Certification Testing Section 13
- Alternate Test Procedures & Inspection Procedures Section 14
- Documentation of Certification Section 15
- Duration and Conditions of Certification Section 16
- Certification Renewal Section 17
- Section 18
- Certifications that have been Terminated Section 19

Proposed CP-201 Changes

Proposed Certification Sections

- In-Station Diagnostic Systems Section 9
- Certification of Vapor Recovery Systems Section 10
- Application Process Section 11
- Engineering Evaluation of the Application Section 12
- Vapor Recovery System Certification Testing Section 13
- Alternate Test Procedures & Inspection Procedures Section 14
- Documentation of Certification Section 15
- Duration and Conditions of Certification Section 16
- Certification Renewal Section 17
- Amendments to Executive Orders Section 18
- Certifications that have been Terminated,
Revoked, Superseded or that have Expired Section 19

Proposed CP-201 Changes

17. CERTIFICATION RENEWAL

17.1 Request for Renewal

17.2 Review of the Request

(respond within 60 days)

17.3 Evaluation of System Deficiencies

17.4 Letter of Intent

17.5 Renewal of Executive Order

(subject to CAPCOA review)

Proposed CP-201 Changes

18. AMENDMENTS TO EXECUTIVE ORDERS

- Clarify EO Amendment Process
- Component Changes
 - Modification of components on existing EO
 - Transfer component from another certified system
 - Add new component
- Other Changes
 - System configuration
 - Software upgrades

Proposed CP-201 Changes

18. AMENDMENTS TO EXECUTIVE ORDERS

18.1 Request for an EO Amendment

18.2 Review of the Request

18.3 Required Testing

- operational testing

- equipment defect, challenge, or bench testing

18.4 Letter of Intent

18.5 Issuance of Executive Order

Proposed CP-201 Changes

18.1 Request for an EO Amendment

- Request shall include:
 - EO number to be amended
 - Description of the change
 - Changes to the EO
 - Part numbers/model numbers
 - Updated system or component drawings
 - Fuel and System Compatibility
 - Other applicable changes
 - Changes to Installation, Operations, and Maintenance Manual
 - Updates to training programs

Proposed CP-201 Changes

18.2 Review of the Request

- Engineering evaluation
 - Is the component part of the vapor recovery control system?
 - If ARB determines no, then ARB will respond that approval is not necessary... but other agency approvals may be required
 - Will the component change affect the performance of the vapor recovery control system?
 - If ARB determines no, then ARB testing is not necessary, however, an amendment to the EO may be required
 - other agency approvals may be required

Proposed CP-201 Changes

18.2 Review of the Request

- Level of Testing; General Criteria
 - Extent of physical changes
 - Extent of material changes
 - Changes that may affect the durability
 - Whether performance specifications are the same
 - Similarity of system designs
 - Information from previous certification testing

Proposed CP-201 Changes

18.2 Review of the Request

- Determination of level of operational testing
 - 180-day/ Full operational tests
 - Abbreviated/ Full operational tests
 - 180-day/ Limited operational tests
 - Abbreviated/ Limited operational tests
- May also require other testing

Proposed CP-201 Changes

19. CERTIFICATIONS THAT HAVE BEEN TERMINATED, REVOKED, SUPERSEDED or that have EXPIRED

- Terminated: as of the operative date of new standards
- Revoked: Executive Officer determination that the system does not meet the applicable standards and specifications
- Superseded: an amendment to an Executive Order results in a new revision; i.e., a, b, c, d, ... Previous versions are superseded.
- Expired: as of the expiration date of the Executive Order

Proposed CP-201 Changes

Other Changes:

- The applicant shall provide:
 - List of equipment defects (Section 11.10)
 - Test protocols
 - Potential challenge modes (Section 11.11)
 - Test protocols

Proposed D-200 Changes

- Certification Tests
 - Operational tests
 - 180-day/ Full
 - 180-day/ Limited
 - Abbreviated/ Full
 - Abbreviated/ Limited
 - Bench tests
 - Equipment defect tests
 - Challenge/Failure mode tests

Proposed D-200 Changes

- Rigid Piping
 - Bend Radius > 6 feet
 - TP-201.2G
 - “deflection distance”
- Add the maximum deflection distance that will provide a bend radius > 6 feet
 - 9 5/8 inches

Proposed TP-201.1E CERT

- Adopt new TP-201.1E CERT
 - Certification only
 - Based on recently approved alternate test procedure
- Leave existing TP-201.1E on the books
 - Can be used for compliance testing

Proposed TP-201.1E CERT

- Improve Representativeness and Accuracy of Procedure By:
 - Using a 6 liter surge volume
 - To more slowly apply pressure/vacuum
 - Require use of digital manometers
 - with “max-hold” capability
 - Leak check ball valve if necessary
 - Include 3 test runs and averaging
 - Include error tolerance calculation

Proposed TP-201.1E CERT

Tolerance (precision) for testing error example :

Positive pressure crack results of

- Run 1: 3.89" H₂O
- Run 2: 3.99" H₂O
- Run 3: 3.72" H₂O
- Ave 3.87" H₂O

$$3.87" \text{ H}_2\text{O} \pm 9.3 \% = 3.87 \pm 0.36" \text{ H}_2\text{O}$$
$$= 3.51 \text{ to } 4.23" \text{ H}_2\text{O}$$

$$\text{Rounded to 2 sig figs} = 3.5 \text{ to } 4.2" \text{ H}_2\text{O}$$

Proposed TP-201.2I Change (TP for ISD Systems)

- TP-201.2I
 - Delete Section 9.12
“UST Ullage Pressure-Phase I Overpressure Response”

Vapor Recovery Equipment Defects List Update Process

ARB Defect Obligation

California Health & Safety Code, Section 41960.2(c):

The executive officer of the state board shall identify and list equipment defects in systems for the control of gasoline vapors resulting from motor vehicle operations that substantially impair the effectiveness of the systems in reducing air contaminants.

Board Hearing no longer necessary

Equipment Defect History

- Adopted 1982 California Code of Regulations, Title 17, Section 94006
- Subsequent identification of defects stated in Executive Orders
- In 2002 defects consolidated into one Vapor Recovery Equipment Defects (VRED) List

Proposed Regulatory Changes

- Minimum three year review
- List no longer incorporated by reference in title 17
- Public hearing no longer necessary
- List changes (update) made by the ARB Executive Officer's approval
- List available on internet:
<http://www.arb.ca.gov/vapor/vapor.htm>

Requirements to Update VRED List

- Requirements to Modify Existing VRED List (1.5 to 2 year process)
 - Public review – workshop(s)
 - ISOR/Staff Report
 - Economic Impact Statement
 - 45 Day Notice
 - Proposed Regulation Order/Executive Order
 - CalEPA summaries
 - FSOR
 - Hearing Officer's Report
 - Updated Informative Digest

Proposed Process to Update VRED List

- Requirements to Modify Proposed VRED List (3 to 6 month process)
 - Public review – workshop(s)
 - Executive Officer approval
 - Executive Order

Projected Rulemaking Schedule

November 3, 2005

- Comments due on proposed changes

December, 2005

- Hold additional workshop if necessary

February 3, 2006

- Release staff proposal and start 45-day comment period

March 23-24, 2006

- Board hearing

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