

PUBLIC HEARING TO CONSIDER THE ADOPTION OF AMENDMENTS TO THE VAPOR RECOVERY CERTIFICATION AND TEST PROCEDURES FOR GASOLINE MARKETING OPERATIONS AT SERVICE STATIONS

Staff's Suggested Modifications to the Original Proposal

PRESENTED AT THE DECEMBER 12, 2002 HEARING OF THE AIR RESOURCES BOARD

The following text contains a description of staff's suggested modifications to the originally proposed amendments to D-200, CP-201, TP-201.1C, TP-201.1D, TP-201.1E, TP-201.2D, and TP-201.2F. Staff is suggesting modifications to limited portions of the original proposal. The italicized commentaries provide explanations of the reasons for the suggested modifications to the original proposal and are not part of the actual regulations. The text of the originally proposed amendments is shown in underline to indicate additions and ~~strikeout~~ to indicate deletions. The modifications now proposed by staff are shown in double underline to indicate additions and ~~double strikeout~~ to show deletions. All proposed modifications will be made available to the public for a supplemental fifteen-day comment period prior to final adoption.

1. **Modify D-200 as follows:**

D-200 provides definitions and acronyms of vapor recovery terms used in the certification and test procedures.

- (a) *Clarify that Phase II upgrades to add ORVR compatibility are not considered "major modifications" and do not trigger Phase II EVR:*

major modification

the modification of an existing GDF that makes it subject to the same requirements to which a new installation is subject.

Modification of the Phase I system that involves the addition, replacement, or removal of an underground storage tank, or modification that causes the tank top to be unburied, is considered a major modification of the Phase I system.

Modification of the Phase II system that involves the addition, replacement or removal of 50 percent or more of the buried vapor piping, or the replacement of dispensers, is considered a major modification of the Phase II system. The replacement of a dispenser is not a major modification when the replacement is occasioned by end user damage to a dispenser. Phase II

system upgrades to make the systems ORVR compatible do not constitute a major modification.

(b) Add acronym for “NPT” which means “National pipe threads”.

2. Modify CP-201 as follows:

CP-201 is the certification procedure that contains the Phase I and Phase II standards and specifications and references the test procedures to be used during the certification of vapor recovery systems.

(a) *Modify Table 2-1 to change the ISD exemption throughput from 160,000 to 600,000 gallons/year to include service stations in the GDF2 category as requested by districts. The appropriateness of the GDF2 exemption level will be addressed in the ISD implementation review to be completed within 18 months after certification of the first ISD system.*

(b) *Modify Table 2-1 to reflect the change in effective and operative dates for ISD and Phase standards and specifications from April 1, 2003 to October 1, 2003. This is necessary to allow time to certify EVR Phase II systems.*

(c) *Modify Table 2-1 to conform the Table with the amendment of the post-refueling drops (“dripleless nozzle”) standard from 1 to 3 drops.*

Table 2-1

Performance Type	Requirement	Sec.	Effective Date	Operative Date
All Phase I Standards and Specifications	As specified in Table 3-1	3	April 1, 2001	July 1, 2001
ORVR Compatibility ¹	Interaction of Refueling ORVR Vehicles Shall Not Cause the System to Exceed the applicable Efficiency or Emission Standard, Including ORVR Penetrations to 80%	4.1	April 1, 2001	April 1, 2003

¹ Effective January 1, 2001, state law requires the certification of only those systems that are ORVR compatible (Health and Safety Code section 41954, as amended by Chapter 729, Statutes of 2000; Senate Bill 1300).

Nozzle Criteria	Post-Refueling Drips ≤ 4 <u>3</u> drop/refueling	4.7	April 1, 2003 <u>October 1, 2003</u>	April 1, 2004
Liquid Retention	≤ 350 ml/1,000 gals.	4.8	April 1, 2001	July 1, 2001
Liquid Retention Nozzle Spitting	≤ 100 ml/1,000 gals. ≤ 1.0 ml /nozzle/fueling	4.8	April 1, 2001 April 1, 2003 <u>October 1, 2003</u>	April 1, 2004
Spillage (including drips from spout)	≤ 0.24 pounds/1,000 gallons	4.3	April 1, 2001 April 1, 2003 <u>October 1, 2003</u>	April 1, 2004
For GDF > 1.8 mil. gal/yr.	ISD Requirements	App. <u>10</u>	April 1, 2003 <u>October 1, 2003</u>	Same
For GDF > 160,000-300,000- <u>600,000</u> gal/yr. ²	ISD Requirements	<u>10.1</u> , App.	April 1, 2004	Same
All other Phase II Standards and Specifications	As specified in Tables 4-1 through 8-2.	4,5,6, 7,8	April 1, 2003 <u>October 1, 2003</u>	Same

² GDF ≤ ~~160,000-300,000~~ 600,000 gal/yr are exempted from ISD requirements.

(d) Clarify that the EVR exemption for districts in attainment with the state ozone standard includes the exemption for ISD and provide time for facilities to come into compliance if the district is redesignated as non-attainment. Also clarify that Phase II upgrades to add ORVR compatibility are not considered “major modifications” and do not trigger Phase II EVR:

2.4.4 Gasoline Dispensing Facilities in districts that ARB determines are in attainment with the state standard for Ozone ~~may be~~ are exempted from the Enhanced Vapor Recovery performance standards and specifications set forth in sections 3 through 8, and 10, inclusive, with the exception of the requirement for compatibility with vehicles that are equipped with Onboard Refueling Vapor Recovery (ORVR) systems as specified in subsections 4.1, 4.4, and 13.4.1. New GDFs, and those undergoing major modifications, are not exempt. Phase II system upgrades to make the systems ORVR compatible do not constitute a major modification as defined in D-200. If exempt facilities become subject to EVR due to a subsequent reclassification of their district from attainment to non-attainment, the facilities will have four years to come to compliance.

- (e) *Correct reference for ORVR compatibility standard in Table 4-1. The reference in column three should be "4.4", not "4.1".*
- (f) *Remove language relating to assist systems in section 8, as processors may be used on both assist and balance systems.*
- (g) *Modify language to section 19 to clarify criteria for systems that will be allowed to be sold and installed if systems meeting the operative EVR standards are not commercially available as follows:*

19. CERTIFICATIONS THAT HAVE BEEN TERMINATED

This section applies ~~only to systems for which the certification was terminated but that are allowed to remain in use pursuant to section 41956.1 of the Health and Safety Code.~~ Systems that were installed as of the effective operative date of the adoption of a new standard, or that are otherwise subject to Health & Safety Code section 41956.1, may remain in use for the remainder of their useful life or for up to four years after the effective date of the new standard, whichever is shorter, provided they comply with all of the specifications of this ~~Section. This shall include a~~All components and parts of the terminated system, shall be subject to the following requirements of paragraph 19.1. Systems whose certifications have terminated shall be permitted to be installed as provided in paragraph 19.2.

19.1 Replacement of Components or Parts of a System with a Terminated Certification

- 19.1.1 Components and replacement parts meeting the ~~most currently and prospectively operative~~ performance standards or specifications may be certified for use with the no-longer-certified system for the remainder of the allowable in-use period of the system.
- 19.1.2 A component or replacement part not meeting the ~~most currently operative~~ performance standards or specifications, but which was certified for use with the system prior to the termination of the certification, shall be used as a replacement only if no compatible component or part that meets the new standards or specifications has been certified as a replacement and are commercially available. The certification of the component or part shall terminate at the end of the allowable in-use period for the system unless otherwise specified in the certification of the replacement component or part.
- 19.1.3 A component or part that was not certified for use with the system prior to the termination of certification, and that does not meet all of the ~~the most currently~~ operative standards or specifications, may be certified as a replacement part or component for use on the system provided that there are no other

commercially available certified parts meeting the most current performance standards or specifications.

19.1.4 When a certified, compatible component or replacement part that meets the new operative standards or specifications becomes commercially available, only that component or part shall be installed. This shall not require the replacement of already-installed equipment prior to the end of the useful life of that part or component. Components or parts installed at the time the system reaches the end of the allowable in-use period for the system, may no longer be used even if the end of their useful life has not been reached.

19.1.5 Non-unihose configuration dispensers installed before April 1, 2003, may remain in use for the remainder of the useful life and may be replaced with non-unihose configuration dispensers as prescribed in section 4.11.

19.2 Installation of Systems with Terminated Certifications

19.2.1 When the Executive Officer determines that a certified Phase I or II system that meets the applicable operative performance standards and specifications by operative dates specified in Table 2-1 of CP-201 is not commercially available, the Executive Officer may change the operative date of new performance standards and specifications by renewing the certification for any system whose certification has been terminated provided that:

~~(a) Renewal preference shall be given to a systems that are certified as being ORVR compatible, and meets one or more of the currently and prospectively operative standards and specifications of CP-201;~~

~~(b) Certifications shall be renewed for systems that do not meet any of the currently and prospectively operative standards and specifications of CP-201 only if there is no system that meets any of the currently and prospectively operative standards and specifications; and~~

~~(e)~~ (b) The renewal shall be valid for a period to be determined by the Executive Officer with a maximum renewal period of six months.

19.2.2 Renewed certifications shall be posted on the CARB's Internet site. Systems whose certifications are posted as renewed certifications are permitted to be installed upon the Executive Officer's finding that a certified system is not commercially available.

(h) *Modify Section 10.1.1 throughput exemption from 300,000 to 600,000.*

(i) *Modify section 10.1.9 to change 30 days to 365 days.*

- (j) *Modify section 10.1.11 to use the word maintenance rather than failure.*
- (k) *Modify section 10.2.1(b) to use "ratio" rather than "range" which is a better description of the Air to Liquid relationship.*
- (l) *Modify section 10.2.1(c) to use "ratio" rather than "range" which is a better description of the Air to Liquid relationship.*
- (m) *Modify 10.2.4(d) to clarify that the requirement is a minimum value and provide a reference to section 4.2 (which is the leak rate standard).*
- (l) *Move the recording requirement into the daily report section 10.3.3 (a) for clarity.*
- (n) *Add Phase 1 Vapor Transfer Monitoring to section 10.2.5 and renumber. This monitoring was in the origin requirement, but was mistakenly associate to the "excluded time" in section 10.2.4, which was removed. After further review, the Phase I transfer monitoring should remain in section 10.*
- (o) *Modify reporting requirements in section 10.3.1 to add (b) for "operating requirements." The system's operating requirements were part of the Appendix as originally drafted and were inadvertently left off when the formatting was changed from a paragraph to a list. In section 10.3.1, eliminate the "ten most recent events" in each category. The monthly reports will include all warnings, failures and event logs. Paragraph (g) relating to the clock adjustment was meant to be part of the event log and have therefore been incorporated into the "event log" provision proceeding it.*
- (p) *Add Section 10.3.2 for clarity. The Appendix was not clear as to what information would be required in an electronic monthly report and what information was necessary on a monthly report that could be printed on site. The phrase "summary status" was used to suggest the report would not be the same as a monthly report, but did not go far enough to distinguish the differences. To address this confusion the "monthly report" and the "monthly printout version" have been detailed in sections 10.3.1 and 10.3.2 respectively.*
- (q) *Modify section 10.3.3 include (a), the "ISD up-time." This language was moved from section 10.1.9. Add (h), which is a processor assessment. Section 10.2.6 requires that a daily assessment be made, however the daily printout did not incorporate that requirement.*
- (r) *Modify 10.3.4 to clarify on-site printing requirements.*

- (s) *Clarify 10.3.5 to specify that daily reports and monthly printout versions should also be maintained in the event of power outages.*
- (t) *Sections 10.8 and 10.9 were merged into section 10.8 and renamed "Electronic Access." The monthly and daily reports contain all the information which is required to be accessible, therefore the detailed list in the paragraph is not necessary.*

10. IN-STATION DIAGNOSTIC SYSTEMS

~~Specific requirements for an ISD system are listed in the CP-201 ISD Appendix. Gasoline dispensing facilities that dispense less than or equal to 160,000 gallons per year are exempted from ISD requirements.~~

10.11. GENERAL REQUIREMENTS General Requirements

- 10.1.1 All ~~gasoline dispensing facility (GDF)~~ vapor recovery systems, unless specifically exempted, shall be equipped with an In-Station Diagnostic (ISD) system. Gasoline dispensing facilities that dispense less than or equal to 6300,000 gallons per year are exempted from ISD requirements.
- 10.1.2 All GDF vapor recovery systems shall be equipped with an ISD system or device that has the capability to automatically prohibit the dispensing of fuel and has the capability to automatically inform the station operator in the event of either a malfunction, failure, or degradation of the system ~~that substantially impairs, as defined below in Section 10.2, the effectiveness of the system.~~
- 10.1.3 All ISD systems shall be equipped with an RS232 port to remotely access ISD status information using standardized software.
- 10.1.4 The ISD manufacturer shall provide a means of testing and calibrating the sensors or devices installed on the GDF vapor recovery ISD system, including procedures for verifying that the ISD system operates properly. The means of testing and calibration shall be verified and subjected to failure mode testing during the certification process.
- 10.1.5 Personnel trained and certified by the Executive Order certification holder, ISD manufacturers, or California Contractors State License Board shall test and calibrate the installed vapor recovery ISD system sensors or devices annually, at a minimum, with test equipment calibrated to National Institute of Standards and Technology-traceable standards. The minimum annual calibration frequency requirement may be waived and replaced with a frequency to be determined during certification testing if the ISD system manufacturer demonstrates equivalent self testing and automatic calibration

features. All vapor recovery ISD system sensors or devices not performing in conformance with the manufacturer's specifications shall be promptly repaired or replaced.

10.1.6 Subject to the Executive Officer approval, other monitoring strategies may be used provided the manufacturer provides a description of the strategy and supporting data showing such strategy is equivalent to these requirements. Information such as monitoring, reliability, and timeliness shall be included.

10.1.7 The vapor recovery ISD system shall include self-testing including the ISD system and sensors that will be verified during the certification process.

10.1.8 The ISD system shall maintain an electronic archive of monthly reports for a period of 12~~24~~ months and an archive of daily reports for the last rolling 365~~30~~ days.

10.1.9 The vapor recovery ISD system shall be operational a minimum of ninety five percent (95%) of the time, based on an annual basis or prorated thereof, and shall record the percentage of ISD up-time on a daily basis.

10.1.10 The Executive Officer shall, during certification testing, verify that the system is capable of detecting failures (of a size defined in each subsection, below) with at least a 95% probability while operating at no more than a 1% probability of false alarms. A false alarm occurs when the ISD system issues an alarm, but the vapor recovery system is functioning normally; i.e., the vapor recovery system is operating within the parameter limits required by CP-201 and specified in its Executive Orders.

10.1.11A system using ISD shall have no equipment failures during the first 90 days of the certification testing. A maximum of 5% downtime is allowed for ISD-detected maintenance failures. ISD-detected maintenance failures shall be included in the maintenance manual.

10.1.12 Certification testing shall be performed in accordance with TP-201.21 (Test Procedure for In-Station Diagnostic Systems).

10.2 ~~MONITORING REQUIREMENTS~~ Monitoring Requirements

10.2.1 ~~VAPOR COLLECTION MONITORING REQUIREMENTS~~ Air/Liquid (A/L) Ratio Vapor Collection Monitoring

2.1.1 ~~Air/Liquid (A/L) Ratio Monitoring~~

2.1.1.1(a) Requirement

The GDF vapor recovery ISD system shall monitor the Air to Liquid (A/L) ratio for vapor recovery systems which have A/L limits required by CP-204, Section 6 and specified in their Executive Orders.

2.1.1.2(b) Malfunction Criteria – Gross Failure

The GDF vapor recovery ISD system shall assess, on a daily basis, based on a minimum of 15 non-ORVR dispensing events, when the A/L ratio is at least 75% below the lower certified A/L ratio or at least 75% above the upper certified A/L ratio, shall activate a warning alarm, and shall record the event. This condition must be detected with a probability of 95%. If fewer than 15 non-ORVR dispensing events occur in a day, the ISD system may accumulate events over an additional day or days until a minimum of 15 non-ORVR events is reached. When two such consecutive failed assessments occur, the ISD system shall activate a failure alarm, record that event, and prohibit fuel dispensing from the affected fueling point(s). The ISD system shall have the capability of re-enabling dispensing, and shall record that event.

For example, for a vapor recovery system that is certified to operate with an A/L ratio between 0.9 and 1.0, a failed assessment shall occur if the daily A/L ratio range is less than or equal to .22 (25% of .9) or if the daily ratio range is greater than or equal to 1.75 (75% more than 1.0). ~~When the ISD system assesses two consecutive failures A/L ratios equal to or less than 25%(0.9), or 0.22, or equal to or greater than 175%(1.0), or 1.75,~~ the ISD system shall activate an alarm.

2.1.1.3(c) Malfunction Criteria - Degradation

The GDF vapor recovery ISD system shall assess, on a weekly basis, based on a minimum of 30 non-ORVR dispensing ~~fueling~~ events, when the A/L ratio is at least 25% below the lower certified A/L ratio or at least 25% above the upper certified A/L ratio, shall activate a warning alarm, and shall record the event. This condition must be detected with a probability of 95%. If fewer than 30 non-ORVR dispensing events occur in a week, the ISD system may accumulate events over an additional day or days until a minimum of 30 non-ORVR events is reached. When two such consecutive failed assessments occur, the ISD system shall activate a failure alarm, record that event, and prohibit fuel dispensing from the affected fueling point(s). The ISD system shall have the capability of re-enabling dispensing, and shall record that event.

For example, for a vapor recovery system that is certified to operate with an A/L ratio between 0.9 and 1.0, a failed assessment shall occur if the weekly A/L ratio range is less than or equal to .68 (75% of .9) or if the weekly ratio range is greater than or equal to 1.25 (25% more than 1.0). ~~When the ISD system assesses two consecutive failures~~ When the ISD system assesses two consecutive failures ~~ratios equal to or less than 75%(0.9), or 0.68, or equal to or greater than 125%(1.0), or 1.25,~~ the ISD system shall activate an alarm.

2.1.210.2.2 Balance Flow Performance Vapor Collection Flow Performance Monitoring

2.1.2.1(a) Requirement

The GDF vapor recovery ISD system shall monitor vapor collection flow performance for balance vapor recovery systems. Flow performance is defined as the amount of vapor collected relative to fuel dispensed.

2.1.2.2(b) Malfunction Criteria

The GDF vapor recovery ISD system shall assess, on a daily basis, based on a minimum of 15 non-ORVR dispensing events, when the vapor collection flow performance is less than 50%, shall activate a warning alarm, and shall record the event. This condition must be detected with a probability of 95%. If fewer than 15 non-ORVR dispensing events occur in a day, the ISD system may accumulate events over an additional day or days until a minimum of 15 non-ORVR events is reached. When two such consecutive failed assessments occur, the ISD system shall activate a failure alarm, record that event, and prohibit fuel dispensing from the affected fueling points. The ISD system shall have the capability of re-enabling dispensing, and shall record that event.

2.1.310.2.3 Central Vacuum Unit Monitoring

2.1.3.1(a) Requirement

The GDF vapor recovery ISD system shall verify that the central vacuum unit is operating within the specified~~certified~~ range by measuring and recording the vacuum at a minimum of one reading every minute.

2.1.3.2(b) Malfunction Criteria

The GDF vapor recovery ISD system shall assess, on a continuous rolling 20 minute basis, when a vacuum failure occurs as determined by the Executive Officer for each Phase II system, shall activate a failure alarm, record the event, and prohibit fuel dispensing from the affected fueling points. This condition must be detected with a probability of 95%. The ISD system shall have the capability of re-enabling dispensing and will disable the central vacuum unit monitoring for 24 hours, and shall record that event.

2.210.2.4 VAPOR CONTAINMENT MONITORING REQUIREMENTS Ullage Pressure Vapor Containment Monitoring

2.2.1 — UST Ullage Pressure Monitoring

2.2.1.1(a) Requirement

The GDF vapor recovery ISD system shall measure and record the pressure of each ~~in the~~ UST ullage at a minimum of one reading every minute. One pressure monitoring device may be used for multiple USTs that have common vapor recovery piping.

~~UST ullage pressure data associated with Phase I fuel deliveries is considered "excluded time". All other UST ullage pressure data is considered "non-excluded time."~~

2.2.1.2(b) Malfunction Criteria – Gross Failure

The GDF vapor recovery ISD system shall assess, on a weekly basis, when the UST ullage pressure exceeds 1.5" wcg for at least 5% of the ~~non-excluded~~ time, shall activate a warning alarm, and shall record the event. This condition must be detected with a probability of 95%. When two such consecutive failed assessments occur, the ISD system shall activate a failure alarm, record that event, and prohibit fuel dispensing from the affected fueling point(s). The ISD system shall have the capability of re-enabling dispensing, and shall record that event.

2.2.1.3(c) Malfunction Criteria – Degradation

The GDF vapor recovery ISD system shall assess, on a monthly basis, when the UST ullage pressure exceeds 0.50" wcg for at least 25% of the ~~non-excluded~~ time, shall activate a warning alarm, and shall record the event. This condition must be detected with a probability of 95%. When two such consecutive failed assessments occur, the ISD system shall activate a failure alarm, record that event,

and prohibit fuel dispensing from the affected fueling points. The ISD system shall have the capability of re-enabling dispensing, and shall record that event.

2.2.1.4(d) Malfunction Criteria –Pressure Integrity

The ISD system shall detect the potential for excessive rates of vapor leakage from the UST system. The ISD system shall assess, on a weekly basis, when the ~~EVR~~ vapor recovery system vapor space leaks at a rate which can be represented by an orifice which leaks at a rate which is at least 2 times the rate allowable allowed in Section 4.2 CARB tight system standard in TP-201.3 ("Determination of 2 Inch WC Static Pressure Performance of Vapor Recovery Systems of Dispensing Facilities"), shall activate a warning alarm, and shall record the event. This condition must be detected with a probability of 95%. When two such consecutive failed assessments occur, the ISD system shall activate a failure alarm, record that event, and prohibit fuel dispensing from the affected fueling point(s). The ISD system shall have the capability of re-enabling dispensing, and shall record that event.

~~2.2.2 Phase 1 - Vapor Transfer Monitoring~~

~~2.2.2.1 Requirement~~

~~The GDF vapor recovery ISD system shall detect excessive UST ullage pressure during Phase I fuel deliveries.~~

~~2.2.2.2 Malfunction Criteria~~

~~The GDF vapor recovery ISD system shall assess, on a continuous rolling 20 minute basis, when the UST ullage pressure exceeds 2.5" wcg for at least 25% of the time, shall activate a failure alarm, and shall record the event. This condition must be detected with a probability of 95%.~~

10.2.5 Phase 1 - Vapor Transfer Monitoring

(a) Requirement

The GDF vapor recovery ISD system shall detect excessive UST ullage pressure during Phase I fuel deliveries.

(b) Malfunction Criteria

The GDF vapor recovery ISD system shall assess, on a continuous rolling 20 minute basis, when the UST ullage pressure exceeds 2.5"

wcg for at least 25% of the time, shall activate a failure alarm, and shall record the event. This condition must be detected with a probability of 95%.

~~2.310.2.56~~ VAPOR — PROCESSING — MONITORING — REQUIREMENTS Vapor Processing Monitoring

~~2.3.1~~ — Processor Monitoring

~~2.3.1.1~~(a) Requirement

The GDF vapor recovery ISD system shall verify that the processor is functioning properly as specified in ~~CP-201~~ Section 8 and the Executive Order.

~~2.3.1.2~~(b) Malfunction Criteria

The GDF vapor recovery ISD system shall assess, on a daily basis, when the vapor processor is malfunctioning ~~and at risk of releasing excessive hydrocarbons, benzene, or HAPS into the environment, as defined in CP-201 Section 8 and the Executive Order,~~ shall activate a warning alarm, and shall record the event. When two such consecutive failed assessments occur, the ISD system shall activate a failure alarm, record that event, and prohibit fuel dispensing from the affected fueling points. The ISD system shall have the capability of re-enabling dispensing, and shall record that event.

~~3.~~ — IMPLEMENTATION SCHEDULE

~~Implementation of an ISD system is subject to the implementation schedule prescribed in CP-201, with the following exception: ISD systems installed prior to April 1, 2004 are exempt, until April 1, 2004, from the requirement that the ISD system prohibit fuel dispensing to affected fueling points when the ISD system detects or assesses a failure.~~

10.34. Records

10.3.1 The GDF vapor recovery ISD system shall generate a monthly report which includes the following:

- (a) ISD operational time (as a percentage);
- (b) Vapor Recovery system's operating requirements;
- ~~(c)~~ Vapor recovery system pass time (as a percentage);
- ~~(d)~~ ISD monitoring requirements;

- ~~(de)~~ Warnings - this shall include the time and date at least ten of the most recent warnings;
- ~~(ef)~~ Failures - this shall include the time and date at least ten of the most recent failures;
- ~~(fg)~~ Event log describing re-enabling action taken - this shall include the time and date of at least the ten most recent log exceptions; and the
- ~~(g)~~ Time and date the ISD system clock was adjusted.

~~listing the daily and monthly assessment of the ISD system; the vapor recovery system's operating requirements; the ISD system operational time (as a percentage); the EVR system pass time (as a percentage); the ISD monitoring test requirements; a list of the periods of non-compliance including the time and date (both warning alarms and failure alarms); an Event log describing the re-enabling action taken including the time and date; and the time and date the ISD system clock was changed. See Attachment 1 for a sample Monthly Report.~~

10.3.2 The GDF vapor recovery ISD system shall generate a monthly printout version on demand which includes the following:

- (a) ISD operational time (as a percentage);
- (b) Vapor recovery system pass time (as a percentage);
- (c) Warnings - this shall include the time and date of the last ten warnings in the selected month;
- (d) Failures - this shall include the time and date of the last ten failures in the selected month;
- (e) Event Log - this shall include the time and date of the last ten logged exception events in the selected month including re-enabling actions taken and any ISD system clock adjustments

10.3.23 ~~_____~~ The GDF vapor recovery ISD system shall generate a daily report which includes the following:

- (a) Record of the percentage of ISD up-time on a daily basis
- ~~(b)~~ Highest ullage pressure;
- ~~(c)~~ Lowest ullage pressure;
- ~~(d)~~ 75th percentile ullage pressure;
- ~~(e)~~ 95th percentile ullage pressure;
- ~~(f)~~ Daily measured values of each fueling point; and
- ~~(g)~~ Daily pass or fail assessment for each fueling point.
- (h) Processor Assessment

listing the UST's highest ullage pressure; the UST's lowest ullage pressure; the UST's average ullage pressure; the UST's 75th percentile ullage pressure; the UST's 95th percentile ullage pressure; and the daily assessment of each fueling point, including the measured values and the pass or fail assessment of each fueling point. See Attachment 2 for a sample Daily Report.

~~10.3.34~~ ~~The GDF vapor recovery ISD system shall maintain an electronic record of the monthly reports for the previous 1224 calendar months. The monthly reports and the periods of non-compliance shall be stored in such a manner as to be electronically accessed, such as downloading to a personal computer or a laptop, or electronically transmitted, such as through a telephone modem. In addition, the daily and monthly summary status of the stored monthly reports and a minimum of the most recent 10 each of warning, failure and event log exception events Daily reports (as outlined in Section 10.3.3) and monthly printout versions (as outlined in Section 10.3.2) shall be available for printing, on demand, at the GDF site from the integral ISD printer. Daily reports shall be available for printing for the previous 30 days. Monthly printout versions shall be available for printing for the previous 12 months.~~

~~10.3.45~~ ~~The ISD system shall store the electronic records of the monthly reports, monthly printout versions, and daily reports, such that the records are maintained despite loss of power to the ISD system.~~

~~10.45. TAMPERING PROTECTION~~Tampering Protection

The GDF vapor recovery ISD system sensors or devices shall be designed and installed in a manner designed to resist unauthorized tampering and to clearly show by visual inspection if tampering has occurred. The ISD system shall be designed and installed so that the station can not dispense fuel unless the ISD system is operating. The manufacturer shall include measures to prevent tampering of the GDF vapor recovery ISD system in the application. All tampering features are subject to Executive Officer approval.

~~10.56. READINESS/FUNCTION CODE~~Readiness/Function Code

The GDF vapor recovery ISD system shall store a code upon first completing a full diagnostic check of all monitored components and systems. This is applicable when the GDF vapor recovery ISD system is initially installed or when power is restored.

~~10.67. STORED VAPOR RECOVERY SYSTEM CONDITIONS~~Stored Vapor Recovery System Conditions

Upon detection of a vapor recovery component or system failure the GDF vapor recovery system conditions shall be stored in computer memory. Subject to Executive Officer approval, stored GDF vapor recovery system conditions shall

include, but are not limited to, the time, date, which fueling point was shut down (if applicable), and the fault code.

~~8 DESCRIPTION OF GDF VAPOR RECOVERY ISD SYSTEM~~

~~The manufacturer shall include the following documentation with the certification application.~~

~~8.1 A written description of the functional operation of the GDF vapor recovery ISD system.~~

~~8.2 A table providing the following information shall be included for each monitored component or system, as applicable:~~

- ~~(A) Corresponding fault code;~~
- ~~(B) Monitoring method or procedure for malfunction detection;~~
- ~~(C) Primary malfunction detection parameter and its type of output signal;~~
- ~~(D) Fault criteria limits used to evaluate output signal of primary parameter;~~
- ~~(E) Other monitored secondary parameters and conditions (in engineering units) necessary for malfunction detection;~~
- ~~(F) Monitoring time length and frequency of checks;~~
- ~~(G) Criteria for storing fault code;~~
- ~~(H) Criteria for notifying station operator; and~~
- ~~(I) Criteria used for determining out of range values and input component rationality checks.~~

~~8.3 A logic flowchart describing the general method of detecting malfunctions for each monitored emission-related component or system.~~

~~8.4 A written detailed description of the recommended inspection and Maintenance procedures, including inspection intervals that will be provided to the gasoline dispensing facility operator.~~

~~8.5 A written detailed description of the training plan to train and certify system testers, repairers, installers, and rebuilders.~~

~~8.6 A written description of the manufacturer's recommended quality control checks.~~

~~8.7 A written description of calibration and diagnostic checks.~~

~~9. MONITORING SYSTEM DEMONSTRATION REQUIREMENTS~~

~~The manufacturer shall demonstrate, to the satisfaction of the Executive Officer, that the GDF vapor recovery ISD system complies with the performance standards under actual field conditions and simulated failures. Such demonstrations shall include the~~

~~submission of test results with the certification application. After review of the application, the Executive Officer shall conduct, or shall contract for and observe, evaluation and testing of the vapor recovery systems (including the ISD system) in accordance with the provisions of CP-201 Section 13. Such evaluation and testing shall demonstrate that the GDF vapor recovery system (including ISD system) complies with the performance standards under actual field conditions and simulated failures.~~

10.7 FAILURE MODE TESTING~~Failure Mode Testing~~

~~In the application for certification the applicant shall include a list of system components that are monitored by the ISD system and test procedures for failure mode testing. The Executive Officer may modify the list or test procedures based on an engineering evaluation. Additional procedures may be developed as necessary to verify that the system's self-check and self-test features perform accurately.~~

The Executive Officer shall conduct, or shall contract for and observe, failure mode testing using test procedures to verify that the ISD system can detect various types of failures, record the incidence of such failures, and respond accordingly with alarms and/or by prohibiting fuel dispensing, as applicable. The ISD system shall have the capability of re-enabling dispensing, and shall record that event. Failure mode testing shall include verification that interaction with ORVR-equipped vehicles will not cause the ISD to inappropriately identify a failure condition. ISD systems with false positive determinations in excess of one percent (1%) shall not be certified.

10.811. STANDARDIZATION~~Standardization~~

~~All ISD systems shall be equipped with an RS232 port to remotely access ISD status information for on-site (e.g., through a laptop computer) and remote download capability (e.g., the console will have an RS232 interface port accessible on the exterior of the console for telephone modem access). All ISD systems shall be electronically accessible with standardized software.~~

10.9812. SIGNAL ACCESS~~Signal Electronic Access~~

~~The monthly and daily reports The following signals (as applicable) and information shall be made available on demand through an the RS-232 serial port on a the standardized data link connector. All ISD reports shall be electronically accessible with standardized software. ~~the current monthly report; the historical monthly reports; each fueling point's A/L ratio current status (for vacuum assist vapor recovery systems); each fueling point's vapor collection flow performance current status (for balance vapor recovery systems); central vacuum pump current operational status; processor current operational status; and UST ullage pressure.~~~~

3. Modify TP-201.1C as follows:

TP-201.1C provides a certification and compliance test procedure for measuring the leakrate of the drop tube/drain valve assembly of Phase I systems.

Proposed amendments to TP-201.1C have changed it into more of a compliance test procedure, rather than amending it as a certification test procedure. Staff is proposing to modify the Proposed Amendments to TP-201.1C so that the test procedure can be used as a certification procedure. Proposed modifications include the following:

- (a) Modify Section 1 by deleting references that procedure can verify "zero leak limit of drop tube seals and threaded components." The procedure is applicable for determining the leak rate of the drain valve and drop tubes with no overfill prevention devices.*
- (b) Modify Section 3 by stating vehicle refueling or bulk drops will bias results and state that no vehicle fueling or bulk drop should occur during testing.*
- (c) Modify Section 4 by deleting proposed revisions.*
- (d) Modify Section 5 by deleting brand name of equipment and replace it with equipment specifications and references to traffic cones and caution tapes.*
- (e) Modify Section 6 by deleting references to traffic cones and caution tapes.*
- (f) Modify Section 7.2 by stating that the nitrogen flow rate shall be adjusted to three times the allowable drain valve leak rate specified in CP-201.*
- (g) Modify Section 7.3 by deleting changes*
- (h) Modify Section 7.3.1 by deleting changes*
- (i) Modify Section 7.3.2 by deleting changes and by stating that the nitrogen flow rate at steady pressure represents the leak rate of the drain valve.*
- (j) Modify Section 8 by deleting references to traffic cones and caution tape.*

4. Modify TP-201.1D as follows:

TP-201.1D provides a certification and compliance test procedure for measuring the leakrate of the Phase I system drop tube overflow prevention devices and spill container drain valve which passes liquid into the drop tube. .

- (a) *Specify that all pressure measuring devices must be calibrated with an inclined manometer or NIST traceable standard at least once every six months and such calibration shall be performed at appropriate full scale calibration points. Also indicate the accuracy shall be within five percent of each calibration point.*
- (b) *Clarify that the maximum leak rate in Section 7.3 is the sum allowable leak rate of the drain valve and overflow prevention device as specified in CP-201.*
- (c) *Modify Section 7.3 as follows:*
 - 1 *Specify that maximum leak rate is defined in Section 7.3 rather than section 7.4.1.*
 - 2 *Indicate when the nitrogen flow rate when the pressure reaches steady state represents either the leak rate of the overflow prevention device (if no drain valve is present) or the leak rate of both the drain and overflow prevention device.*
 - 3 *Specify that Section 7.5 must be followed when a drain valve is present.*
- (d) *Delete Section 7.6.*
- (e) *Modify Section 9.2 by stating the leak rate of the overflow prevention is determined by the difference in maximum leak rate as determined by Section 7.4.2 and Section 7.5.*

5. Modify TP-201.1E as follows:

TP-201.1E provides a certification and compliance test procedure for measuring the leakrate and cracking pressure of pressure/vacuum (P/V) vent valves for Phase I systems.

- (a) *Modify the text and the forms in the test procedure to remove the value of the standard tested and replace with references to the applicable certification procedure. This will allow the test procedure to be used to measure multiple standards.*

6. Modify TP-201.2D as follows:

TP-201.2D is the certification test procedure for determining the number of post-fueling nozzle drops.

- (a) Staff withdraws the proposed amendments to TP-201.2D dated October 25, 2002.*
- (b) Staff proposes to modify TP-201.2D adopted February 1, 2001 to make clarifications to the test procedure that include: latching the nozzle in the full open position, changing the conversion of gasoline volume from 15 to 20 drops per milliliter, and commencing counting drops as the nozzle is removed from the vehicle.*

7. Modify TP-201.2F as follows:

- (a) Revise equation 9.1.1 and make other changes as necessary to reduce the potential for over-estimating pressure-related fugitive emissions in response to comments made by the American Petroleum Institute (API).*
- (b) Review the default hydrocarbon concentrations specified for equation 9.3.1 and adjust if necessary.*