

INSTRUCTIONS

The following DRAFT template was created using examples from audit reports submitted to the state during the past two years. Completion of the template is not intended to be a compliance substitute for the rule requirements in 30 Texas Administrative Code §115.788. Affected owners or operators are under no obligation to use this DRAFT template. Instructions for completing the DRAFT template appear in BLUE font. If you have questions regarding this DRAFT template please contact Lindley Anderson, TCEQ Air Quality Division, by phone at (512) 239-0003 or e-mail at landerso@tceq.state.tx.us.

The annual third-party audit report should be conducted and submitted to the Texas Commission on Environmental Quality (TCEQ) as follows.

§115.788(a)(2)(A): “The field survey must begin after the owner or operator's contracted or usual monitoring service has completed monitoring the valves for that monitoring period. The field survey must be completed by the end of the next monitoring period.”

§115.788(d): “The owner or operator shall furnish the Houston regional office and any local air pollution control agency having jurisdiction a copy of the results of the audit authored by the independent third-party organization within 30 days after completion of the audit requirements listed in subsection (a) of this section.”

The completed form, along with any supporting documentation, should be submitted to:

Texas Commission on Environmental Quality Houston Region 12 Office
Attn: HRVOC Audit Report
5425 Polk Avenue
Suite H
Houston, Texas 77023

**HIGHLY REACTIVE VOLATILE ORGANIC COMPOUNDS
FUGITIVE EMISSIONS
ANNUAL AUDIT REPORT
§115.788**

PERFORMED FOR:

Include the name of the company, the physical address, and the regulated entity number (RN) for the site.

COMPANY

ADDRESS

RN

ACCOUNT NUMBER

PERFORMED BY:

Include the name of the company, the names of the technicians working on the project, and the dates the audit field survey and the data review were conducted.

THIRD-PARTY AUDIT COMPANY

AUDIT STAFF

AUDIT DATE(S)

I. COMPONENT TAGGING

RULE REQUIREMENT

§115.788(d)(1): “Report the number of valves that were not tagged, but should have been tagged in accordance with §115.782(a) of this title.”

§115.782(a): “Tagging. Upon the detection or designation of a leaking component, a weatherproof and readily visible tag, bearing the component identification and the date the leak was detected, must be affixed to the leaking component. The tag must remain in place until the leaking component is repaired.”

SUMMARY OF COMPONENT TAGGING

Summarize the methodology and results of the leak tag verification. This summary should include the number of tags available for verification at the time of the audit, the total number of tags verified during the audit, and the number of valves improperly tagged. If the number of tags available for verification at the time of the audit is not the same as the number of tags verified during the audit, please explain the difference. If there are no leak tags to verify during the audit, then state so in the summary. Include some form of identifying tag information, such as the tag number, for all of the valves verified during the audit in the table below. If valves were not properly tagged, then describe the issues observed during the audit in the table below.

COMPONENT TAGGING		
TAG NUMBER	ISSUES NOTED? YES/NO	DESCRIPTION OF THE ISSUE

II. FIELD SURVEY

RULE REQUIREMENT

§115.788(d)(2): “Report the number of valves monitored during the field survey, the number of leaking valves found during the field survey, the percentage of leaking valves identified by the independent third-party organization during the field survey, and a detailed description of the sampling scheme used to ensure that a random sample of valves was selected so that each valve had an equal chance of being selected from the total number of valves being sampled.”

SUMMARY OF AUDIT FINDINGS

Summarize the results of the third-party field survey using the table below.

FIELD SURVEY RESULTS	
TOTAL NUMBER OF VALVES MONITORED	

NUMBER OF LEAKING VALVES	
PERCENT LEAKING VALVES	
DESCRIPTION OF THE AUDIT SAMPLING SCHEME	Provide a detailed description of the sampling scheme used to ensure that a random sample of valves was selected so that each valve had an equal chance of being selected from the total number of valves being sampled. The valves to be considered include all valves at the site in HRVOC service that are not exempt under §115.787 and are not listed as either difficult-to-monitor or unsafe-to-monitor.

RULE REQUIREMENT

§115.788(d)(3): “Report the total number of valves in HRVOC service that are not exempted from quarterly monitoring by §115.787 of this title and are not listed on either the difficult-to-monitor or the unsafe-to-monitor lists monitored based on the average of the previous four quarters of monitoring, the total number of leaking valves found at the site by the owner or operator's contracted or usual monitoring service based on the average of the previous four quarters of monitoring, and the percentage of leaking valves based on the average of the previous four quarters of monitoring.”

SUMMARY OF THE PREVIOUS FOUR QUARTERS OF MONITORING

Summarize the methodology used to review the previous four quarters of monitoring. Report the results of the third-party records review using the table below. Provide additional information in the summary if necessary to clarify the data in the table. The total population valve count is all of the valves in HRVOC service that are not exempted from quarterly monitoring by §115.787 of this title and are not listed on either the difficult-to-monitor or the unsafe-to-monitor lists based on the average of the previous four quarters of monitoring.

SUMMARY OF THE PREVIOUS FOUR QUARTERS OF MONITORING			
	VALVE COUNT	NUMBER OF LEAKERS	PERCENT LEAKING VALVES
PREVIOUS QUARTER 1 MONTH-MONTH			
PREVIOUS QUARTER 2 MONTH-MONTH			
PREVIOUS QUARTER 3 MONTH-MONTH			
PREVIOUS QUARTER 4			

MONTH-MONTH			
AVERAGE*			
* The average of the previous four quarters monitoring data should be equal to the total population valve count and the average of the percent leaking valves should be equal to the company claimed leaker rate multiplied by 100.			

RULE REQUIREMENT

§115.788(d)(4): “Report the methodology used to select the field survey sample size. If the alternative provided in subsection (a)(2)(C) of this section was used to determine the number of valves to be sampled in the field survey, documentation must include the actual Type I and Type II error rates associated with the sample size used and a detailed description of the methodology used to calculate the sample size.”

SUMMARY OF THE FIELD SURVEY SAMPLE SIZE METHODOLOGY

The rule provides two options for determining the sample size: (1) §115.788(a)(2)(B) Table 1, or, (2) §115.788(a)(2)(C) Alternative Methodology. Detail the methodology used by the third-party auditor to determine the field survey sample size below. Only the details for the methodology used during the field survey need to be included in the final audit report.

If §115.788(a)(2)(B) Table 1 was used to determine the sample size then list the values used for the Total Population Valve Count and the Company Claimed Leaker Rate.

§115.788(a)(2)(B) TABLE 1	
TOTAL POPULATION VALVE COUNT	The total population valve count is all of the valves in HRVOC service that are not exempted from quarterly monitoring by §115.787 of this title and are not listed on either the difficult-to-monitor or the unsafe-to-monitor lists based on the average of the previous four quarters of monitoring.
COMPANY CLAIMED LEAKER RATE	The company claimed leaker rate is the number of leaking valves found in the total population valve count based on the previous four quarters of monitoring divided by the total population valve count.

If the alternative was used to determine the number of valves to be sampled in the field survey, documentation must include the actual Type I and Type II error rates associated with the sample size used and a detailed description of the methodology used to calculate the sample size.

§115.788(a)(2)(C) ALTERNATIVE METHODOLOGY	
TOTAL POPULATION VALVE COUNT	The total population valve count is all of the valves in HRVOC service that are not exempted from quarterly monitoring by §115.787 of this title and are not listed on either the difficult-to-monitor or the unsafe-to-monitor lists based on the average of the previous four quarters of monitoring.
COMPANY CLAIMED	The company claimed leaker rate is the number of leaking valves found in the total population valve count based on the previous four quarters of monitoring

LEAKER RATE	divided by the total population valve count.
TYPE I ERROR RATE	The Type I error rate must be less than or equal to 0.05. A Type I error occurs when the company claimed leaker rate accurately reflects the true proportion of leakers, yet the test falsely indicates that the true percentage of leakers is greater than reported (false positive).
TYPE II ERROR RATE	The Type II error rate must be less than or equal to 0.20, when the minimum difference between the company's claimed leaker rate and the true population leaker rate is at least 2%. A Type II error occurs when the true leaker rate is in fact greater than the reported rate, but the test fails to so indicate (false negative).
DESCRIPTION OF THE ALTERNATIVE METHODOLOGY	Provide a detailed description of the methodology used to determine the number of valves to be monitored during the third-party audit field survey. The valves to be considered include all valves at the site in HRVOC service that are not exempt under §115.787 and are not listed as either difficult-to-monitor or unsafe-to-monitor. The required sample size must be calculated using a hypergeometric distribution that characterizes sampling from a given finite population of valves without replacement and reported leaker rate. Commercially available statistical software programs may be used.

III. DATA REVIEW

RULE REQUIREMENT

§115.788(d)(5): “Include a summary of the independent third-party organization's review of all data generated by monitoring technicians in the previous quarter by the owner or operator's contracted or usual monitoring service for each of the categories specified in subsection (a)(3)(A) and (B) of this section. Section 115.788(a)(3)(A) requires this to include the identification of data patterns indicative of failure to properly implement Test Method 21 including, but not limited to, a review of the number of valves monitored per technician and the time between monitoring events to validate that the sampling procedures accurately reflect the requirements of Test Method 21 including identification of specific instances in which a monitoring technician recorded data faster than was physically possible due to the hydrocarbon gas analyzer response time and/or the time required for the technician to move to the next component. Section 115.788(a)(3)(B) requires a review of records to verify that the calibration requirements of Test Method 21 have been properly implemented.”

SUMMARY OF TECHNICIAN MONITORING DATA FROM THE PREVIOUS QUARTER

Summarize the review of all monitoring data generated in the previous quarter for the number of valves monitored per technician. The summary should include a description of the methodology used to review the records. Include some means of identifying the technician (such as identification number), the number of valves monitored per day, and indicate if the number of valves monitored is indicative of a failure to properly implement Test Method 21. If the data review is indicative of a failure to properly implement Test Method 21 then provide a detailed description of those instances.

TECHNICIAN MONITORING DATA FROM THE PREVIOUS QUARTER			
TECHNICIAN ID	NUMBER OF VALVES MONITORED PER DAY	WERE ISSUES NOTED? YES/NO	IF YES, PROVIDE A DESCRIPTION OF THE ISSUE

SUMMARY OF TIME BETWEEN MONITORING EVENTS IN THE PREVIOUS QUARTER

Summarize the review of all monitoring data generated in the previous quarter for the time between monitoring events. The summary should include a description of the methodology used to review the records. Include some means of identifying the event such as an identification time and/or date stamp. The summary should also include the total number of monitoring events reviewed by the third-party during the audit. Describe specific instances where that time was faster than physically possible in the chart below.

TIME BETWEEN MONITORING EVENTS IN THE PREVIOUS QUARTER	
TIME BETWEEN MONITORING EVENT ID	DESCRIPTION OF ISSUE

SUMMARY OF CALIBRATION RECORDS FROM THE PREVIOUS QUARTER

Summarize the review of all calibration records generated in the previous quarter. The summary should include a description of the methodology used to review the records. The records review should be conducted to determine compliance with Test Method 21 requirements. Examples of calibration records that may be reviewed include Calibration Precision (Test Method 21 §8.1.2), Response Time (Test Method 21 §8.1.3) if applicable during that quarter, and Instrument Calibration (Test Method 21 §8.2 and §10). The summary should describe the type of calibration records that were reviewed. The summary should also describe specific issues, if any, with the proper implementation of Test Method 21. If the calibration procedure was observed, this should be detailed in the summary. If the records for the calibration gas and/or the zero gas were reviewed, this should also be detailed in the summary.

CALIBRATION RECORDS FROM THE PREVIOUS QUARTER		
CALIBRATION RECORD ID	TYPE OF CALIBRATION RECORD REVIEWED	DESCRIPTION OF ISSUE

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IV. CORRECTIVE ACTION PLAN

RULE REQUIREMENT

§115.788(e): “If the results of the independent third-party audit indicate deficiencies in the implementation of Test Method 21, the **owner or operator** shall submit a corrective action plan with the audit report to the Houston regional office or any local air pollution control agency having jurisdiction.”

CORRECTIVE ACTION PLAN
Identify the cause of the deficiencies. Provide a detailed description of measures to correct the deficiencies identified by the third-party audit. Include follow up measures to ensure the corrective actions are effective. Ensure the plan is thorough and designed for the long-term success of the fugitive emissions monitoring program.

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