

MONTHLY STATISTICAL INVENTORY RECONCILIATION (SIR) REPORT

Month _____ Year _____

Facility Name:			
Facility Location:	Street Address:		City:
	Phone: ()		
Tank Owner:	Address:		
	City:	State:	Zip:
Tank Operator:	Name:		Phone: ()

SIR Provider:			Phone: ()
SIR Version:			Date of SIR Report:
Performance Standard:			
Period Covered:	What is the required number of usable inventory days per tank?		

Tank Number	Tank Content	Tank Capacity (gallons)	Usable Number of Data Records (days)	Current Month						Last Month			
				Leak Threshold (gph)	MDL (gph)	Calculated Leak Rate (gph)	Pass(P), Fail(F), Inconclusive(I)			Pass(P), Fail(F), Inconclusive(I)			
							P	F	I	P	F	I	

*MDL = minimum detectable leak; gph = gallons per hour

1. The tank owner is required to have a complete SIR report for each month [Cal. Code Regs., tit. 23, § 2643(b)(3)].
2. The tank owner is required to submit the minimum number of data records to the SIR provider. Data submission to the SIR provider, and subsequent receipt of SIR reports from the provider for each month must be completed within 20 days of the data collection period [Cal. Code Regs., tit. 23, § 2646.1(c)].
3. Monthly reports must be submitted to the local agency upon request [Cal. Code Regs., tit. 23, § 2712(b)].
4. If for any reason the test is neither “pass” nor “fail”, the “inconclusive” column must be marked.
5. The local agency must be notified of a tank that does not pass the SIR test within 24 hours of receipt of the report. The “fail” or “inconclusive” SIR report must be submitted to the local agency by the owner/operator within 10 days of receipt of the report [Cal. Code Regs., tit. 23, § 2646.1(d)].
6. Quantitative and Qualitative SIR Methods:
 - a. A test result is “pass” only if the absolute value of the calculated leak rate is less than the leak threshold and both the minimum detectable leak (MDL) and the leak threshold are less than or equal to the certification performance standard (i.e., 0.1 or 0.2 gph).
 - b. If the absolute value of the calculated leak rate for a tank is greater than or equal to the leak threshold, the tank failed the SIR test.
 - c. If the MDL rate for a tank is greater than the certification performance standard (i.e., 0.1 or 0.2 gph) and the absolute value of the calculated leak rate is less than the leak threshold, the test is “inconclusive” for that month.
 - d. Two consecutive “fail” and/or “inconclusive” results require a piping tightness test, and, if necessary, a tank integrity test within 15 calendar days from the date of receipt of the second consecutive report [Cal. Code Regs., tit. 23, § 2646.1(h)].

RECOMMENDATIONS/COMMENTS FOR “FAIL” OR “INCONCLUSIVE” RESULTS:

Person conducting evaluation:	
Signature:	Date:

REPORTING OF STATISTICAL INVENTORY RECONCILIATION (SIR) TEST RESULTS

1. MDL \leq 0.2 gph Certification Performance Standard

	Th	MDL	0.2 gph
Calculated Leak Rate < Th PASS		Calculated Leak Rate \geq Th FAIL	

2. MDL > 0.2 gph Certification Performance Standard

	Th	0.2 gph	MDL
Calculated Leak Rate < Th INCONCLUSIVE		Calculated Leak Rate \geq Th FAIL	

NOTES:

"Th" is the threshold leak rate set to provide a probability of false alarm (P_{FA}) of 5% or less.

"MDL" is the leak rate that has a probability of detection (P_D) of 95% for a threshold that has a specified false alarm rate of 5%. In other words, MDL is the minimum leak rate the SIR method is capable of achieving for a P_D of 95%.

"Calculated Leak Rate" is the absolute value of the leak rate calculated by the SIR provider using the data provided by the owner/operator. Gains and losses must be reported using the same criteria.