







INVENTORY CONTROL IS REQUIRED BY ATCP 93.503

ATCP 93.503

(2) Inventory control.

(a) General methodology. Inventory control that is used as the leak detection method shall be conducted in accordance with API 1621 and with this subsection.

(b) Prescriptive requirements. Product inventory control shall be conducted monthly and reconciled to detect a leak rate of at least 0.5 percent of throughput on a monthly basis, in the following manner:

Note: A leak rate of 0.5 percent is equal to 5 gallons out of every 1000 gallons of throughput.

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ATCP 93.503 (2)(b)

1. Inventory volume measurements for inputs, withdrawals, and the amount still remaining in the tank shall be recorded each operating day.

2. The equipment used shall be capable of measuring the level of product over the full range of the tank's height, to the nearest one-eighth of an inch.

3. a. The inputs shall be reconciled with delivery receipts by measurement of the tank inventory volume before and after delivery.

b. Where tanks are interconnected by a manifold, reconciliation may address all of the interconnected tanks as a group rather than as individual tanks.

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ATCP 93.503 (2)(b)

4. The measurement of any water level in the bottom of the tank shall be electronically or manually gauged to the nearest oneeighth of an inch at least once a month and recorded.

(c) Product losses. Tank systems that exceed the losses allowed under par. (b) for 2 consecutive months shall follow the requirements in ss. ATCP 93.575 to 93.585 for assessing and responding to a release.

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ATCP 93.503 (2)

(d) Precision tightness test. A precision tightness test shall be performed within 10 business days of notification from the authorized agent or the department for any of the following reasons:

1. Failure to provide monthly inventory control data for the past 12 months.

2. Incomplete or inconsistent data entry reflected during any 2 months of data entry out of the most recent 3 months of inventory control record keeping.





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STEP 2: RECORD THE AMOUNT PUMPED

- At the end of the day it is crucial to collect these at the same time:
 - "Product Sales"
 - "Midgrade Sales" (if blending)
 - "End Inventory"

Most errors in inventory are caused by "Product Sales" collected at a different time than "End Inventory."

Customers filling up overnight, or late night/early morning product deliveries will make overages and shortages appear larger than they are if not collected at same time.



STEP 2: RECORD THE AMOUNT PUMPED													
► If ble the the I	If blending for midgrade, enter the Midgrade Pumped into the "Midgrade Total Sales" column. Midgrade sales is from the Point of Sale system, not from the Automatic Tank Gauge.												
Dat	Beginning Inventory gallons /18 8000	Product Sales (gallons)	Receipts Deliveries (gallons)	Beginning book Inventory minus (-) sales (+) receipts 6750	End Inven monitor Inches	tory (from or stick) Gallons 6745	Daily Over (+) or Short (-) ["End" - "Book"]	Daily Accumu lative Over/ short	Midgrade Total Sales	Midgrade 50% Sub from Beginning Book 250			
01/0	/18 6745	2000	1000	6745		0/40	-6745	-6750		0			



STEP 3: RECORD FUEL DELIVERIES													
► Use "Rec	the amo ceipts a	ount and De	of proe	duct es" co	in ga ɔlumr	llons fi 1.	om th	e BOI	- to fill	in the			
 01/0	Beginning Inventory e gallons 1/18 8000 2/18 0	Product Sales (gallons) 2000	Receipts Deliveries (gallons) 1000	Beginning book <u>Inventory</u> minus (-) sales (+) receipts 7000	End Inver monito Inches	n <u>tory</u> (from r or stick) Gallons	Daily Over (+) or Short (-) ["End" - "Book"] -7000	Daily Accumu lative Over/ short -7000	Midgrade Total Sales	Midgrade 50% Sub from Beginning Book			
	2/18 0			- 0	1		0	-7000		0	1		







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m	onthly thr	ouah	nuit is		l to c	alculate t	ne all	owah	le ove	r and	
		Jugin	putit	usee				owar		and	
Sr	nort of the	tank.									
	31 10/22/18	9635	1899		7692	7694	2	-33.5	88	44	
	32 10/23/18	7694	1919		5729.5	5731	1.5	-32	91	45.5	
	33 10/24/18	5731	2100		3576	3574	-2	-34	110	55	
	34 10/25/18	3574	1900	8000	9618.5	9614	-4.5	-38.5	111	55.5	
	35 10/26/18	9614	2100		7449	7451	2	-36.5	130	65	
	36 10/27/18	7451	1900		5501	5500	-1	-37.5	100	50	
	37 10/28/18	5500	1800		3640	3620	-20	-57.5	120	60	
	38 10/29/18	3620	2000	6000	7520	7501	-19	-76.5	200	100	
	39 10/30/18	7501	2111		5295	5281	-14	-90.5	190	95	
	40 10/31/18	5281	1912		3279	3221	-58	-148.5	180	90	
	41										
	42 Total Throug	hput	63630.5								
	43										
	44 Leak Test			318.1525		End of Month Accumulati	ve Total	PASS			
	HH Leak lest										



END	OF	Ν Δ			I LE	AK					
The the r or sh gallo	spread month lort for ons is 3 [°]	shee and the 18.15	et will a then month	add u calcu n. In t	up the Ilate t he ex	e total sales he 0.5% giv ample belo	for the ing an ow the	e produ allowa Leak Te	ct for ble o est	ver	
3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	1 10/22/18 2 10/23/18 3 10/24/18 4 10/25/18 5 10/26/18 5 10/26/18 6 10/27/18 7 10/28/18	9635 7694 5731 3574 9614 7451 5500	1899 1919 2100 1900 2100 1900 1800	8000	7692 5729.5 3576 9618.5 7449 5501 3640	7694 5731 3574 9614 7451 5500 3620	2 -33 1.5 -3 -2 -3 -4.5 -38 2 -36 -1 -37 -20 -57	5 88 2 91 4 110 5 111 5 130 5 100 5 120	44 45.5 55.5 55.5 65 50 60		
3 3 4 4 4 4 4 4 4 4 4	3 10/29/18 9 10/30/18 0 10/31/18 1 1 2 Total Throug 3 4 Leak Test	3620 7501 5281 hput	2000 2111 1912 63630.5	6000 318.1525	7520 5295 3279 End	7501 5281 3221	-19 -76 -11 00 -58 -148 PASS	5 200 190 5 180	100 95 90		



END OF MONTH LEAK CALCULATION The spreadsheet below we have a shortage of -120.5 Gallons and we have 20,894.5 in sales for the month. Using the 0.5% from the sales the sheet calculates we have a allowable variance of 104.4725. In this example the tank shortage is greater than the Leak Test and the test is a FAIL! 31 32 01/22/09 10000 2000 7800 100 105 2100 3000 7800 8595 01/23/09 8600 -95 210 33 34 01/24/09 1900 6580 -114.5 201 100.5 8600 6599.5 -19. 01/25/09 01/26/09 2000 2200 6580 4480 4450 -144.5 200 100 -30 35 4450 5155 190 95 97.5 3000 5150 -149.5 2000 2001 36 01/27/09 5150 3052.5 3060 7. 195 -142 37 6000 6958.5 -140.5 100.5 01/28/09 6960 3060 1. 201 38 01/29/09 39 01/30/09 6960 2005 4852.5 4860 205 102.5 -13 175 4860 1900 2872.5 2880 125 87.5 40 01/31/09 2 41 42 Total Throughput 2880 1800 6985 -120.5 20894.5 43 44 Leak Test 104.4725 End of Month Accumulative Total FAIL 45

END OF MONTH LEAK (ALCULATION) What to do in the event of a Failed Leak Test: 1. The most common reason for a failed leak test is an error in data input. Check for obvious signs of transposed numbers and date. 2. Go back into the Bills of Lading and make sure gross volume is being used and not the net volume. 3. Check the ATG slips and make sure the gross volume is being used and not temp corrected.



