

# Retail Fueling Facility Compliance Guide

*For Owners and Operators*

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**2020 Edition**

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# Introduction

The Department of Agriculture, Trade and Consumer Protection's Bureau of Weights and Measures is responsible for the administration and regulation of the Wisconsin Administrative Code chapter ATCP 93 - Flammable and Combustible Liquids. The greatest potential threat from a leaking storage tank system is contamination of ground water. The Bureau of Weights and Measures works in partnership with industry to protect the environment and human health from potential releases.

The Bureau's administrative and regulatory functions under Wisconsin Administrative Code chapter ATCP 93 include:

- ◆ Reviewing of system design plans for storage or dispensing system installation, modification or upgrade
- ◆ Permitting and registration of aboveground and underground flammable and combustible liquid storage tanks
- ◆ Inspection of flammable and combustible liquid storage tank systems
- ◆ Maintaining the statewide aboveground and underground storage tank database
- ◆ Adoption of technical standards
- ◆ Credentialing individuals and companies working in storage tank-related specialties

The Bureau of Weights and Measures also ensures a fair marketplace for buyers and sellers in Wisconsin by regulating the devices used for weighing and measuring per Wisconsin Statute chapter 98 – Weights and Measures. This includes fuel dispensers. Weights and Measures inspectors are responsible for testing fuel dispensers for accuracy and safety. In addition, the Bureau of Weights and Measures tests liquid fuel products statewide to ensure that products meet the posted octane and ethanol levels, and that fuels sold in Wisconsin meet the required standards of Wisconsin Administrative Code chapter ATCP 94 – Petroleum and Other Liquid Fuel Products.

Standardized weights and measures business practices protect the environment, ensure that consumers get what they pay for, and are fundamental to fair competition among retailers. The goal of the Bureau of Weights and Measures is good communication and cooperation with Wisconsin retail fueling facilities to achieve and maintain compliance.



# Tank System Registration and Permitting

## Registration

All new or existing storage tanks that are used to store flammable, combustible, or hazardous liquids must be registered with the Department of Agriculture, Trade and Consumer Protection (DATCP), with the exception of:

- ◆ Aboveground storage tanks with a capacity of less than 5,000 gallons
- ◆ Tank vehicles
- ◆ Portable tanks and movable tanks, that are located on a property for less than 24 months
- ◆ Tanks that are located at a US EPA superfund site

To register a storage tank, the proper form must be submitted to the department within 15 business days of completion of the installation, change of ownership, or change of status to temporarily out-of-service. Underground storage tanks must be registered using form TR-WM-137. Aboveground storage tanks must be registered using form TR-WM-118. Forms are available on the DATCP website at:

[https://datcp.wi.gov/Pages/Programs\\_Services/PetroleumHazStorageTanksForms.aspx](https://datcp.wi.gov/Pages/Programs_Services/PetroleumHazStorageTanksForms.aspx)

An owner of a tank system that changes their name, mailing address, or the facility name is required to notify DATCP within 15 business days of the change.

## Financial Responsibility

Owners or operators of applicable storage tank systems are required to prove they are capable of covering any financial expenses or liability incurred as a result of a releases from the operation of the storage tank system. This is called financial responsibility. Applicable storage tank systems must have financial responsibility at all times.

Financial responsibility is required to have per-occurrence coverage of \$1,000,000 for petroleum underground storage tank facilities located at marketing facilities or facilities that have an average throughput of more than 10,000 gallons per month based on the annual throughput for the previous calendar year. All other storage tank systems are required to have per-occurrence coverage of \$500,000.

Facilities with 1 to 100 petroleum underground storage tanks are required to have a total annual aggregate coverage of \$1,000,000. Facilities with 101 or more petroleum underground storage tanks are required to have a total annual aggregate coverage of \$2,000,000.

Acceptable mechanisms of financial responsibility are:

- ◆ Insurance and risk retention group coverage
- ◆ Financial test of self-insurance
- ◆ Guarantee
- ◆ Surety bond
- ◆ Letter of credit
- ◆ Trust fund
- ◆ Standby trust fund
- ◆ Local government bond rating test
- ◆ Local government financial test
- ◆ Local government guarantee
- ◆ Local government fund

The most common form of financial responsibility is pollution liability insurance. Pollution liability insurance must be obtained from a qualified insurer or risk retention group that is licensed to transact the business of insurance or eligible to provide insurance as an excess or surplus lines insurer in one or more states. Federal law requires the following special provisions be included in the insurance policy:

- ◆ The amended endorsement or certificate of insurance must contain the exact language provided in 40 CFR 280.97(b)(1) or 40 CFR 280.97(b)(2), which provides “First Dollar” coverage that ensures disputes between the insurer and the insured over who is responsible for paying the amounts within the deductible limits will not interfere with prompt corrective actions or with third party compensation
- ◆ The legal defense costs must be excluded from the required amount of liability coverage
- ◆ An extended reporting period must be provided for claims made to the policy

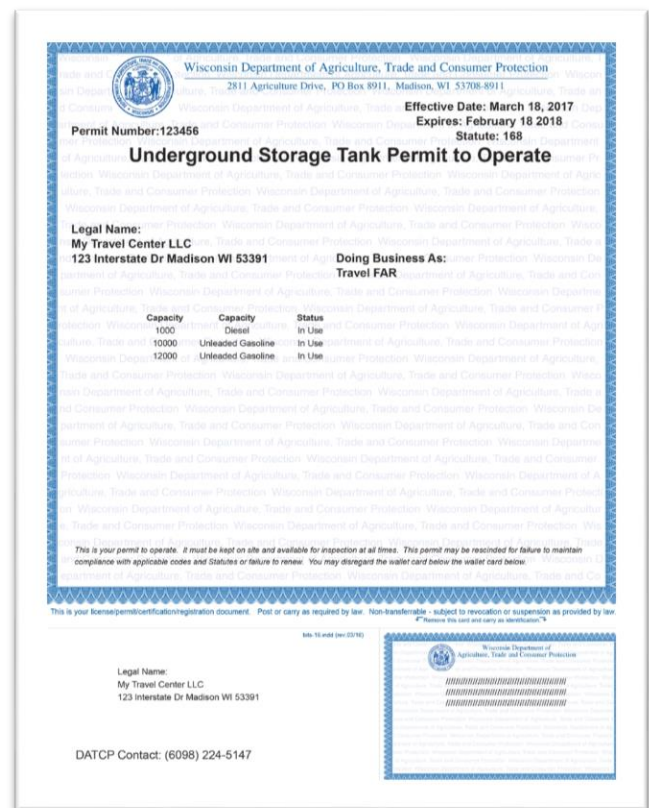
## Permits to Operate

All in-use and temporarily out-of-service storage tanks that are used to store flammable, combustible, or hazardous liquids must have a permit to operate, except:

- ◆ Aboveground tanks
- ◆ Farm and residential underground storage tanks which have a capacity of less than 1,100 gallons and which are used for storing motor fuel
- ◆ Underground storage tanks storing heating oil for consumptive use on the premises
- ◆ Tanks located at a US EPA superfund site

Tank owners must apply for a permit to operate after all requirements of plan approval and registration are completed and the tank is installed, but before the tank is placed into service. Applications for permits to operate must include:

- ◆ Signed permit application(s)
- ◆ Proof of financial responsibility
- ◆ Affidavit of financial responsibility
- ◆ Proof of leak detection method
  - ATG: three current and consecutive months of passing tank monitoring results, one day from each month, 28-32 days apart, for each tank
  - Interstitial monitoring: three current and consecutive months of passing tank monitoring results, one day from each month, 28-32 days apart, for each tank
  - Statistical inventory reconciliation: three current and consecutive months of passing summary reports from the company that conducted the analysis, for each tank
- ◆ Three current and consecutive months of line monitoring results, or the annual precision tightness test of the piping
- ◆ Annual line leak detector test report
- ◆ Cathodic protection test, for tanks and piping requiring it
- ◆ Lining inspection report at the appropriate interval, for tanks requiring it



New underground tanks or piping: If an owner/operator intends to begin operation immediately after the final inspection, they shall prepare and submit the documentation listed below at least 15 days prior to the final inspection:

- ◆ Form TR-WM-137 Underground Flammable/Combustible Liquid Storage Tank Registration
- ◆ A Wisconsin Operator Training designation form
- ◆ Affidavit of Financial Responsibility, certificate of insurance, and site schedule of covered locations and storage tanks

There is no fee for a permit to operate. Permits must be renewed annually. Tank system owners/operators are required to post the permits at the facility where the tank is located and in a location that is visible to the public. The permit must be maintained in a legible state.

Permits expire on the last day of the month specified in the initially issued permit except when there has been a change of ownership. Permits to operate are not transferrable to a new owner and expire upon completion of the real estate transaction.

## Temporarily Out-of-Service Tanks

When placing a tank into, or bringing it back from Temporarily Out-of-Service (TOS) status, DATCP must be notified.

To place an underground tank system into TOS, form TR-WM-137 must be submitted to DATCP within 15 business days of the change in service. While the tank system is in TOS, the owner or operator must comply with all of the following:

- ◆ Leak detection must be maintained unless all liquid has been removed from the tank and the associated piping so that no more than 1 inch of residue remains in the system
- ◆ Operation and maintenance of corrosion protection systems must be continued to include 60 day operator readings on impressed current systems
- ◆ The tank must be protected against flotation caused by flooding or soil saturation
- ◆ The tank, piping, dispensing equipment, lines, pumps, manways, and other ancillary equipment must be secured to prevent tampering
- ◆ All vent lines must be left open and functioning
- ◆ All periodic inspections and maintenance must be performed as if the tank were still in service including, but not limited to:
  - Monthly water checks, including empty tanks
  - Required testing of the cathodic protection system
  - Required lining inspections
  - PEI 900 inspections
- ◆ Permits to operate must be maintained
- ◆ Financial responsibility must be maintained

Before bringing the tank system back to in-use:

- ◆ DATCP must be notified using form TR-WM-137
- ◆ A precision tightness test must be performed on the tank and piping. The piping precision test must be documented on form TR-WM-125.
- ◆ The leak detection system must be verified and documented on form TR-WM-123



- ◆ Fully comply with ATCP 93, except double-wall construction is not required for tank systems installed before February 1, 2009
- ◆ Have all the respective components documented as functional on form TR-WM-139
- ◆ Tank systems out of service for more than 365 days must have:
  - A pressure test of the ullage portion to assure that tank connections are tight
  - Product removed from the tank
- ◆ Product stored in the tank during the TOS period must be tested and meet ATCP 94 standards prior to being sold

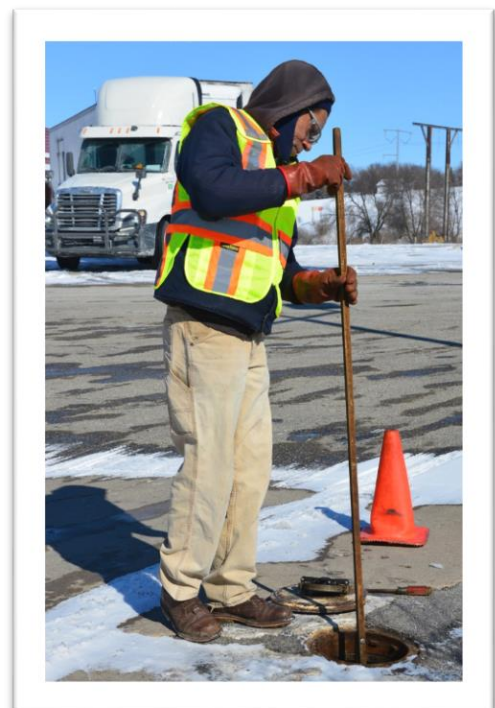
Single-walled tanks or piping installed more than 30 years ago shall be placed back into service within one year or be permanently closed per s. ATCP 93.560.

To place an aboveground tank system into TOS, form TR-WM-118 must be submitted to DATCP within 15 business days of the change in service. While the tank system is in TOS, owners or operators must comply with all of the following:

- ◆ Leak detection must be maintained unless all liquid has been removed from the tank and the associated piping so that no more than 1 inch of residue remains in the system
- ◆ The tank, piping, dispensing equipment, lines, pumps, manways, and other ancillary equipment must be secured to prevent tampering
- ◆ All vent lines must be left open and functioning
- ◆ All periodic inspections and maintenance must be performed as if the tank were still in service including, but not limited to
  - Required testing of the cathodic protection system annual testing and 60 operator day rectifier readings on impressed current systems
  - Required lining inspections
  - PEI 900 inspections as applicable to UST piping

Before bringing the tank system back to in-use:

- ◆ DATCP must be notified using form TR-WM-118
- ◆ The respective API 653 or STI SP001 inspection cycle shall be current for the tank
- ◆ All leak detection, overfill, vent and fire valve devices shall be verified as functional
- ◆ Tank systems out of service for more than 365 days must have a pressure test of the ullage portion to ensure that tank connections are tight
- ◆ Field-erected tank systems out of service for more than 365 days must be evaluated for suitability for service in accordance with API 653, to assure that the tank system is liquid- and vapor-tight



Underground or aboveground tanks systems that do not comply with all TOS requirements must be permanently closed within 60 days.

## Change of Ownership

New owners of storage tank facilities must notify DATCP of the change of ownership within 15 business days of completing the real estate transaction. Change of ownership must be submitted on form TR-WM-153, available online at <https://datcp.wi.gov/Documents/TR-WM-153.pdf>, or by calling DATCP at (608) 224-4942.

To complete the change of ownership, submit the change of ownership form and include the following:

- ◆ Name and address of new owner and of a local contact person
- ◆ The date the documents evidencing the property transfer are executed
- ◆ The name of the previous owner
- ◆ The address of all locations included in the real estate transaction that have tanks which are required to be registered
- ◆ A copy of the newly recorded deed showing the new owner

Underground storage tanks also require a Permit to Operate and Proof of Financial Responsibility; contact DATCP for assistance with change of ownership requirements. All records that storage tank facilities are required to retain must be transferred to the new owner. See Records Requirements for additional information.

# A/B/C Operator Requirements

Any storage tank system that is required to have a permit under Wisconsin Administrative Code s. ATCP 93.145 must have Class A, B, and C operators. Class A and B operators can serve as Class C operators.

## Class A Operators

Class A operators are responsible for managing the resources and personnel to achieve and maintain compliance with

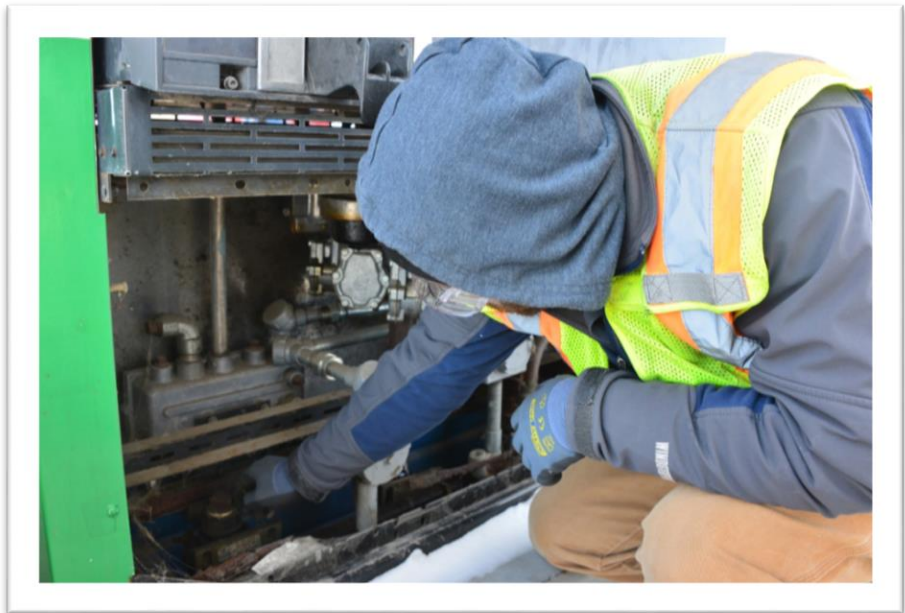
regulatory requirements. Class A operators must ensure that tank system registration and permit to operate requirements are met, and that the appropriate individuals do all of the following:

- ◆ Properly operate and maintain the underground storage tank system
- ◆ Receive training to operate and maintain the underground storage tank system and keep records
- ◆ Properly respond to emergencies or alarms relating to spills, leaks or releases from the underground storage tank system
- ◆ Make financial responsibility documents available as required by s. ATCP 93.830(1)(c)5.

## Class B Operators

Class B operators are responsible for ensuring that all of the following occur:

- ◆ Recordkeeping and reporting requirements are met for release detection methods and release prevention equipment
- ◆ All relevant equipment complies with performance standards
- ◆ Appropriate individuals are trained to properly respond to emergencies or alarms relating to spills, leaks or releases
- ◆ All Class C operators are provided with training and written instructions that include all of the following:
  - Emergency response procedures, including all of the following:
    - Procedures for overfill protection during delivery
    - Operation of emergency shut-off systems
    - Appropriate responses to all alarms
    - Reporting of leaks, spills and releases
    - Any site-specific emergency procedures
  - The name and other information needed for contacting appropriate parties if a leak, spill, release or alarm occurs



- ◆ A Class C operator is on site during all operating hours, or that the required emergency signage is posted at facilities which have hours of operation when no attendant is on duty
- ◆ Emergency signage posted in a conspicuous place that includes the hours of operation when no attendant is on duty, the emergency shut off procedure, the name, address and telephone number of the B operator, and the phone number for emergency responders

## Class C Operators

Class C operators are responsible for initially responding to alarms, spills, leaks or releases. In addition, Class C operators must notify the Class B or Class A operator and appropriate emergency responders, including 911 personnel, when necessary. Class C operators are responsible for monitoring the dispensing and sale of regulated substances.

Class C operators must be trained to take appropriate action in response to the following:

- ◆ Emergencies, including situations that pose an immediate danger or threat to the public or environment and which require immediate action
- ◆ Alarms caused by spills, leaks, or releases from an underground storage tank system

## Training Requirements

Class A and B operators must be trained by a DATCP approved training program. The list of approved training programs can be found on our website:

[https://datcp.wi.gov/Pages/Programs\\_Services/ABCOperatorInfo.aspx](https://datcp.wi.gov/Pages/Programs_Services/ABCOperatorInfo.aspx)

The approved training program must provide written documentation of the training. Training documentation must be kept at the storage tank facility and be available for inspection by DATCP.

Class A operator training programs must provide training in basic underground storage tank system requirements so that the Class A operator can make informed decisions regarding compliance and ensure appropriate individuals are fulfilling operation, maintenance, and record keeping requirements.

The training must cover all of the following:

- ◆ Spill prevention
- ◆ Overfill prevention
- ◆ Leak and release detection
- ◆ Corrosion protection
- ◆ Emergency Response
- ◆ Product compatibility
- ◆ Financial Responsibility documentation requirements
- ◆ Notification requirements
- ◆ Requirements for reporting obvious and suspected releases
- ◆ Requirements for permanently closing a tank system and for placing a tank system temporarily out of service
- ◆ Operator training requirements

Training programs for Class B operators must provide a more in-depth understanding of operation and maintenance aspects compared to Class A operator training, but may cover a more narrow scope of applicable regulatory requirements. Class B operator training programs may provide site specific training that is focused only on equipment used at the operator's underground storage tank system facility, or may

be broader training of regulatory requirements. Class B operator training programs must encompass all of the following:

- ◆ Components of underground storage tank systems
- ◆ Materials of underground storage tank system components
- ◆ Methods of leak and release detection, and leak and release prevention applied to underground storage tank system components
- ◆ Operation and maintenance requirements of this chapter which apply to underground storage tank systems and which address each of the following:
  - Spill prevention
  - Overfill prevention
  - Leak and release detection
  - Corrosion protection
  - Emergency response
  - Product compatibility
- ◆ Reporting and record keeping requirements
- ◆ Class C operator training requirements

Class C operators may be trained by a third party training program or by the facility's A or B operator. A certificate of training for A/B operators that want to train their own C operators is available on our website: <https://datcp.wi.gov/Documents/Class%20C%20UST%20Operator%20Certification.pdf>

Each Class C operator must be trained to understand and follow written instructions that include all of the following:

- ◆ Procedures for overfill protection during delivery
- ◆ Operation of emergency shut-off systems
- ◆ Appropriate responses to all alarms
- ◆ Reporting of leaks, spills and releases
- ◆ Any site-specific emergency procedures

Class A, B, and C operators must obtain the training and required documentation prior to assuming their responsibilities except for existing, compliant facilities that experience a personnel change. Existing, compliant facilities that experience a personnel change must have an incoming Class A or Class B operator obtain the required training and documentation within 30 days of assuming their responsibilities.

A, B and C operator certifications do not expire and are not required to be renewed. Facilities that are not in significant compliance may be ordered by DATCP to re-train their operators.

# Leak Detection Requirements

Leak detection means determining whether a discharge of regulated substance has occurred from a storage tank system into the environment or into the interstitial space between the storage tank system and its secondary containment around it. All underground tank systems that are used to store regulated substances must have leak detection. The only exceptions to this requirement are tanks with a capacity of less than 1,100 gallons which are located on a farm or at a private residence, and tanks storing class IIIB liquids that are not petroleum or CERCLA-listed products. Leak detection methods must be approved by DATCP.

If a tank system exhibits a continuing pattern of failing and then not failing leak detection testing, a precision tightness test must be done within 10 business days. If the tank system does not pass the precision tightness test, a site assessment must be performed to determine if there has been a release.

Leak detection information reports must have the site information including the name of the business, the street address and city. Reports must also contain tank system information including the owner designated identifier, the site identification number designated by the owner or operator, the tank capacity, the product in the tank, the type of pipe system, and whether there are pipe manifolds in the tank system. Test reports must include the name of the method or equipment used, the material approval number issued by DATCP, the date the test was performed, the threshold value used to declare a leak, the rate of volumetric change, whether the final result was a pass or fail, and the name and certification of the technician performing the test.

SENSOR LOCATION	STATUS
IS 1	NORMAL
IS 2	NORMAL
IS 3	NORMAL

## Leak Detection for Tanks

Tanks must be monitored at least every 30 days for leaks. If a facility does not get a passing monthly monitoring test of a tank for 2 consecutive months, a precision tightness test must be performed within 10 business days. If the tank system does not pass the precision tightness test, a site assessment must be performed to determine if there has been a release. If a tank system is accumulating water for no apparent reason, the leak detection is providing erratic results, or the tank system is tested with different leak detection methods that show different results, a precision tightness test may be ordered. The most common forms of monthly leak detection for tanks are automatic tank gauging, statistical inventory reconciliation, and interstitial monitoring.

### Automatic Tank Gauge

An automatic tank gauge (ATG) is a monitoring device that provides continuous 24 hour monitoring for the detection of a release or leak of vapor or product and immediately communicates the detection of the release or leak. Tank systems utilizing an ATG as their leak detection method must have a passing test as least every 30 days. ATGs must have a printer and an audible and visual alarm. ATG test reports must include the start date and time and end date and time of the test, the volume of liquid in the tank during the test, the measured leak rate in gallons per hour and whether the leak rate indicates a pass or fail, and the specific identification of the tank and any associated piping being tested.

To see examples of monthly monitoring reports for different ATG systems, please visit our website:

[https://datcp.wi.gov/Pages/Programs\\_Services/LeakDetectionStorageTanks.aspx](https://datcp.wi.gov/Pages/Programs_Services/LeakDetectionStorageTanks.aspx)

## *Statistical Inventory Reconciliation*

Statistical inventory reconciliation (SIR) is a leak detection method in which daily gauging of the tanks, withdrawals and deliveries which are recorded over a designated period of time and then statistically evaluated by an independent consultant on a regular basis. Tank systems or portions of tank systems using SIR must be monitored and evaluated for leaks at least every 30 days, and have a conclusive result of “pass” or “fail” within the 30-day monitoring period. Tank system data must be submitted to the vendor according to the vendor’s requirements for producing an evaluation report within the 30-day monitoring period. The daily tank product inventory records must be current and on site. The SIR vendor must analyze the data and supply an evaluation report to the operator within the 30-day monitoring period. Operators using statistical inventory reconciliation must review the vendor summary report within 24 hours of receiving it. If the summary report indicates a failure, the operator must take immediate action for assessing and responding to a release. Operators who receive summary reports that indicate a failure must take immediate action in accordance with ATCP 93 to assess and respond to that failure. If the results of the summary reports are inconclusive or missing, another method of leak detection must be used to determine a conclusive pass or fail for that monitoring period. Statistical inventory reconciliation may not be used as a method of precision tightness testing. Before changing from another method of leak detection to statistical inventory reconciliation, the operator is required to provide the department with proof of a precision tightness test completed within the previous 12 months showing the tank system to be tight.

## *Interstitial Monitoring*

Interstitial space is the area between the inner and outer walls of double-wall tanks or piping. Interstitial monitoring is a leak detection method in which the ATG or other approved interstice console monitors the interstitial space for a change in steady-state conditions.

## **Leak Detection for Piping**

Unless all of the piping is visible, pressurized underground piping must have an automatic line leak detector capable of detecting a leak rate of 3 gallons per hour at 10 pounds per square inch within 1 hour, and which restricts or shuts off flow when a leak is detected. Single-wall piping must have either an annual precision tightness test at a 0.1 gallon per hour rate or monthly monitoring to the 0.2 gallon rate. Double-wall piping installed prior to February 1, 2009, may also use annual precision tightness testing or monthly monitoring to the 0.2 gallon rate, or statistical inventory reconciliation or continuous interstitial monitoring. Double-wall piping installed on or after February 1, 2009, must use interstitial monitoring. If a facility does not get a passing monthly monitoring test of the piping for 2 consecutive months, a precision tightness test must be performed within 10 business days. If the piping does not pass the precision tightness test, a site assessment must be performed to determine if there has been a release.

Suction piping that is not entirely visible must either conduct a precision tightness test every 3 years or have interstitial monitoring as its method of leak detection. Leak detection is not required for suction piping that meets all of the following requirements:

1. The below-grade piping operates at less than atmospheric pressure
2. The below-grade piping is sloped so that the contents of the pipe will drain back into the storage tank if the suction is released
3. Only 1 check valve is included in each suction line
4. The check valve is visibly located directly below and as close as practical to the suction pump
5. A method is provided that allows compliance with 2 - 4 to be readily observed or otherwise determined

To see examples of various monthly monitoring reports for piping, visit our website:  
[https://datcp.wi.gov/Pages/Programs\\_Services/LeakDetectionUndergroundPiping.aspx](https://datcp.wi.gov/Pages/Programs_Services/LeakDetectionUndergroundPiping.aspx)

### *Annual Testing*

Functionality of leak detection equipment must be verified every 12 months by a qualified service technician. This is called annual equipment verification or annual functionality testing. The annual equipment verification must be recorded on form TR-WM-139 and kept at the facility. In addition, facilities that do not have monthly monitoring of the pipelines must have a precision tightness test of the piping conducted annually. Precision tightness testing must be performed by a Wisconsin registered Tank Specialty Firm using certified a Tank System Tightness Tester technician.





# Corrosion Protection

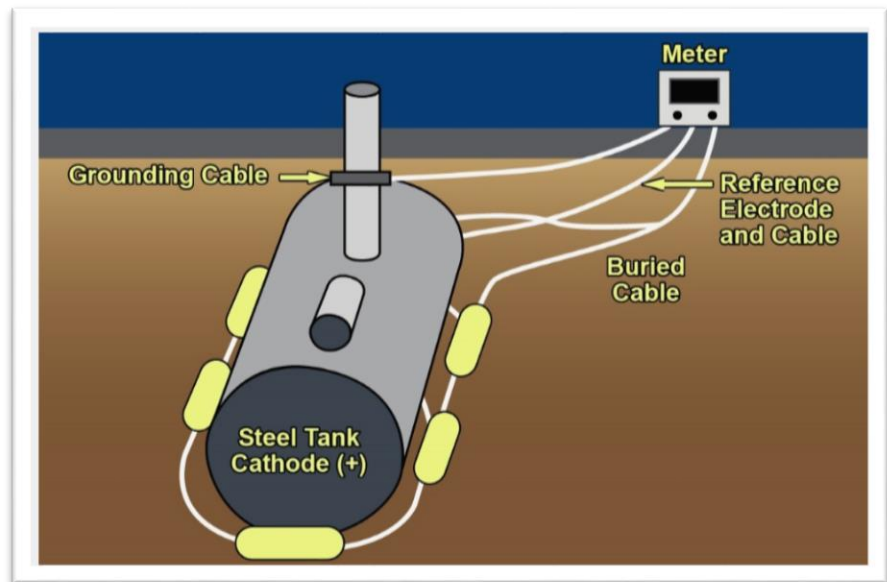
Vent lines, vapor lines and any portion of a single or double-wall tank system that routinely contains product and is in contact with the ground or with water must be protected from corrosion. Tank systems constructed from inherently corrosion-resistant material, such as fiberglass, are not required to have corrosion protection. Tank systems requiring corrosion protection must operate and maintain the corrosion protection system for the life of the tank system.

With the exception of STI-P3 tanks, all corrosion protection systems must be tested within 6 months of installation or repair, and at least annually. STI-P3 tanks must be tested within 6 months of installation and at least every 3 years until the tank is 10 years old. STI-P3 tanks must be tested annually once the tank is 10 years old. Testing must be recorded on form TR-WM-141 and kept at the site. Testing must be performed by a Wisconsin registered Tank Specialty Firm using a Wisconsin-certified Cathodic Protection Tester.

## Sacrificial Anode Systems

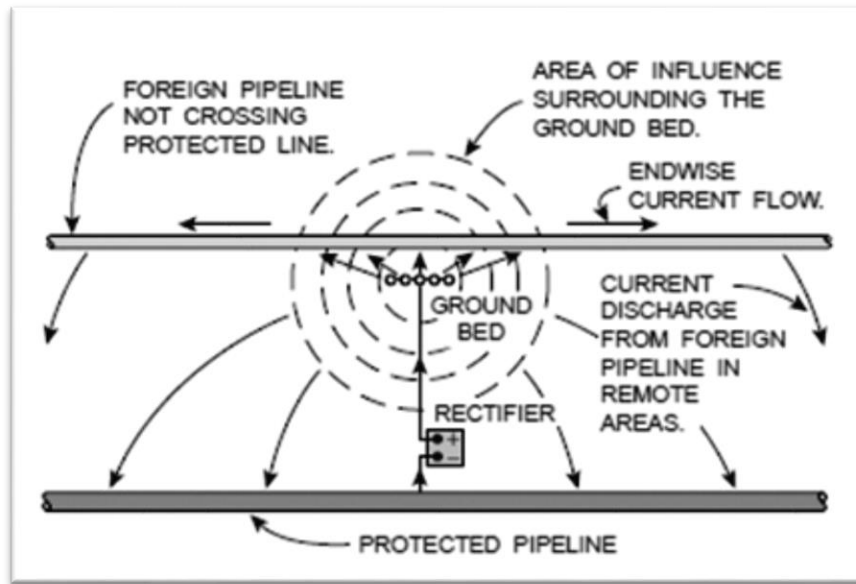
A sacrificial anode system is a method of corrosion protection that generates cathodic current from the galvanic corrosion of an expendable anode which is more electrochemically active than the structure being protected. Sacrificial anode systems must maintain the standard protection threshold reading of at least negative 850 millivolts.

When a sacrificial anode system fails, unless arrangements are made with DATCP to conduct follow-up testing, the cause of the failure must be investigated and repaired within 90 days of the failed reading; or the entire tank system must be emptied within 90 days of the failed reading, and must remain empty until the repair is completed. If more than 2 years has elapsed since the previous corrosion protection test, or if the corrosion protection system has been inoperative for 2 years or more, an internal inspection must be performed by a third party. If the tank fails the internal inspection, the tank system must be permanently closed; or be lined, or have any present lining repaired, and have an impressed current corrosion protection system installed. After an inspection, if the tank is not closed, a precision tightness test must be performed on the tank system that tests the ullage portion of the tank.



## Impressed Current Systems

An impressed current system is a method of corrosion protection that generates cathodic current from an external, direct-current power source. Equipment for impressed current systems must be served by a dedicated and clearly marked electrical circuit that remains energized at all times. Impressed current systems must maintain either an instant-off reading of at least negative 850 millivolts, or a 100 millivolt or greater polarization shift from the instant-off reading standard protection level.



If impressed current corrosion protection readings taken indicate the system is not maintaining adequate continuous protection, the system must be analyzed by a certified Corrosion Expert for site corrosion potential and qualification of system functionality.

Impressed current systems that have been inoperative for 120 days or less must restore the power and have the system tested by a certified Cathodic Protection Tester for system functionality. In addition, if the impressed current system is damaged or inoperable, a certified Corrosion Expert must repair, survey and re-commission the system.

Impressed current systems that have been inoperative for 121 to 180 days must have a precision tightness test performed on the tank system within 15 days of discovery. In addition, power must be restored and the system must be tested for system functionality by a certified Cathodic Protection Tester. If the impressed current system is damaged or inoperable, a certified Corrosion Expert must repair, survey and re-commission the system.

Impressed current systems that have been inoperative for 181 to 365 days must have a precision tightness test performed on the tank system within 15 days of discovery. In addition, a certified Corrosion Expert must assess, survey and re-commission the impressed current system and perform any necessary repairs.

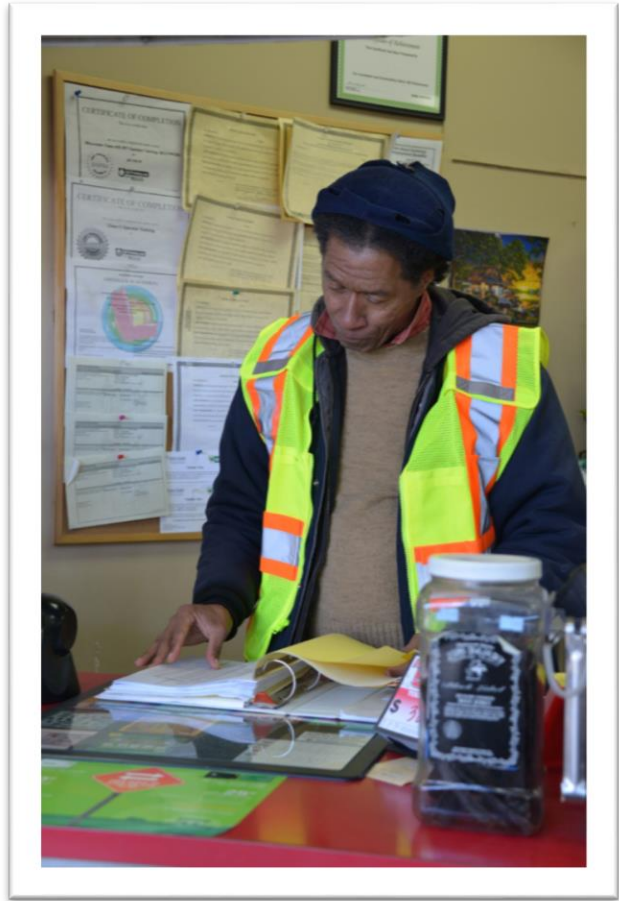
Impressed current systems that have been either inoperative or not tested for more than 365 days must have internal inspection of the tank performed. If the tank fails the internal inspection, the tank owner must either have the tank repaired and lined, have the lining repaired, or have the tank permanently closed and removed. If the tank is not closed, a certified Corrosion Expert must assess, survey and re-commission the impressed current system and perform any necessary repairs. If the tank is not closed, a precision tightness test must be performed on the tank system. The tightness test must include the ullage portion of the tank.

# Records Requirements

## Storage Tank Records

Operators of **underground and aboveground** storage tank systems are required to maintain all of the following records:

- ◆ Documentation of any system repairs, alterations or upgrades, including software and hardware upgrades, and required testing and inspections
- ◆ Response to, and investigation of leak detection alarms
- ◆ Documentation maintained for all calibration, inspection, monitoring, testing, repair, and periodic performance verification of any corrosion protection equipment permanently located on-site
- ◆ Records of any environmental information that has accrued for a site, such as from site inspections or investigations, phase I or II environmental site assessments, or repairs, or from tank-system site assessments
- ◆ Results of functional testing of impact and emergency shut-off valves
- ◆ Electrical continuity testing for dispensers of motor fuels that are Class I liquids
- ◆ One set of stamped, approved plans and specifications and a copy of the approval letter, including any approved variance documents concerning the system as installed
- ◆ Documentation of compliance with the compatibility requirements in s. ATCP 93.680(3)(c)1. or (6)(c)1., as applicable to the ethanol or biodiesel blend



In addition, operators of **underground** storage tank systems are required to maintain all of the following records:

- ◆ Documentation demonstrating conformance with leak detection requirements, and the manner in which these claims have been justified or tested by the equipment manufacturer and certified installer, including all of the following:
  - Information pertaining to the leak detection system, including the material approval as issued under s. ATCP 93.130 that was valid when the system was installed; operator manual; warranty; and documentation verifying that the equipment has been installed, programmed and tested to perform as required in this chapter.
  - Testing results obtained from leak detection equipment, as retained from the equipment's printer or a hand-written log kept on site.
  - Documentation maintained for all calibration, inspection, monitoring, testing, repair, and annual performance verification of leak detection equipment permanently located on-site

- ◆ Analysis from a corrosion expert of site corrosion potential if corrosion protection equipment is not used (this situation is extremely rare)
- ◆ Documentation of product inventory verification at retail sales locations

Operators of **aboveground** storage tank systems are required to maintain all of the following records as well:

- ◆ Documentation of any system repairs, alterations or upgrades--including software and hardware upgrades--and any required inspections or testing
- ◆ Testing results obtained from any leak detection equipment, as retained from the equipment's printer or a hand-written log kept on site
- ◆ Documentation maintained for all calibration, inspection, monitoring, testing, repair and annual performance verification of any leak detection equipment, if so equipped
- ◆ Response to, and investigation of, any leak detection alarms
- ◆ Documentation maintained for all calibration, inspection, monitoring, testing, repair, and periodic performance verification of any corrosion protection equipment permanently located on site
- ◆ Records of any environmental information that has accrued for a site, such as from site investigations, phase I or II environmental site assessments, repairs and tank-system site assessments
- ◆ Results of functional testing of impact and emergency shut-off valves
- ◆ Results of functional testing of emergency electrical shutoffs
- ◆ Electrical continuity testing for Class I liquid dispensers
- ◆ One set of stamped, approved plans and specifications and a copy of the approval letter, including any approved variance information
- ◆ Documentation of compatibility requirements

Operators must maintain the required records at the facility and make them available for inspection. Unattended facilities must make the records available for inspection at the site within 72 hours of notice. Inspectors can request to see any of the required records, but will always check the following records at inspection:

- ◆ All annual test reports of the tanks, lines, and ATG
- ◆ Annual functionality verification form TR-WM-139
- ◆ Monthly ATG monitoring reports for all tanks
- ◆ Monthly line monitoring, where applicable
- ◆ Monthly PEI RP900 inspections
- ◆ Monthly inventory reconciliation
- ◆ A/B/C operator certificates

Records may be kept electronically, provided they are in a format acceptable to the department. The approved plans and specifications and approval letter shall be kept on site and available to the authorized agent or the department during all phases of installation. After installation is completed, the approved plans and specifications and approval letter shall be made available to the authorized agent or the department upon request.

Records are required to be maintained for the following periods from the date of the most recent test, inspection or upgrade:

- ◆ Monthly leak detection monitoring — 1 year
- ◆ Annual precision tightness testing — 1 year
- ◆ Periodic precision tightness testing in association with inventory control — until the next test is conducted
- ◆ Impressed current corrosion protection system, 60-day inspection — the previous 3 inspections
- ◆ Corrosion protection system, annual test — the previous 3 tests
- ◆ Internal 5 year inspection associated with underground tank lining — 10 years
- ◆ Annual performance verification of leak detection equipment and flow restrictor — 2 years
- ◆ Results of functional testing of impact and emergency shut-off valves and electrical continuity testing for dispensers — 2 years
- ◆ The owner's manual provided by the leak detection equipment manufacturer — until the leak detection system is replaced or no longer used
- ◆ Any tank or pipe system modification or repair — the operational life of the system
- ◆ Inspection or testing records — 3 years or the interval between required inspections or testing, whichever is longer
- ◆ Tank-system site assessments and other environmental assessments, such as assessments for property transactions — 3 years after completion of any permanent closure, upgrade, repair or change in service. These records shall be maintained at one of the following locations:
  - With the owner or operator who took the UST system out of service
  - With the current operator of the UST system site
  - With the department if records cannot be maintained at the closed facility
- ◆ Leak detection alarm investigation — 2 years
  - All leak detection records should be retained. The documentation could be helpful to exclude the site as a possible source of contamination at a later date.
- ◆ Product inventory verification in accordance with s. ATCP 93.500(9) — 10 years
- ◆ Statistical inventory reconciliation in accordance with s. ATCP 93.515(6) — 10 years
- ◆ One set of stamped, approved plans and specifications and a copy of the approval letter — the life of the system
- ◆ Equipment or component compatibility for ethanol or biodiesel blends under s. ATCP 93.680(3)(c)1. or (6)(c)1.—the operational life of the equipment or component

## Fuel Delivery Records

Liquid fuel wholesalers/transporters are required under Wisconsin law to provide the following information on the paperwork provided with liquid fuel deliveries:

- ◆ Receipt date of shipment in order to verify inventory records
- ◆ Name or grade of fuel delivered
- ◆ Quantity of fuel delivered/received in gallons without temperature correction
- ◆ Certification of automotive fuel rating for deliveries to a retail outlet. A few examples of automotive fuel rating are:
  - For gasoline, the octane as determined by  $(RON+MON) \div 2$

- For ethanol flex fuels, the numerical value representing the volume percentage of ethanol in the fuel followed by the percentage sign and then by the term “ETHANOL”
- For biodiesel blends containing more than 5 percent and no greater than 20 percent biodiesel by volume, the capital letter “B” followed immediately by the numerical value representing the volume percentage of biodiesel in the fuel (e.g., “B20”) and then by the term “Biodiesel Blend”

- ◆ Statement of ethanol content

This information may be on delivery tickets, bills of lading, waybills, bills of sale, or other documentation that is provided to the person receiving fuel at the time of delivery. Anyone receiving fuel must have this information in order to ensure that fuel is properly labeled for re-sale or retail.

These records must be kept by retailers, wholesalers, and transporters for 10 years and made available to state inspectors. Inspectors would most commonly request these records in order to investigate and verify octane ratings, ethanol content, inventory records/levels, and fuel sources.

Gasoline, kerosene, fuel oil, diesel fuel or alternative fuels sold via a vehicle tank meter must include a delivery ticket printed from the meter’s ticket printer that includes the following:

- ◆ Name and address of seller
- ◆ Name and address of purchaser
- ◆ Description of liquid fuel delivered
- ◆ Meter reading showing volume of liquid fuel delivered

# Inventory Reconciliation

Underground storage tank systems at retail fueling facilities are required to verify the inventory levels and maintain the integrity of delivered products. Reconciling inventory records is an important tool that can tell operators if the storage tank has leaked, or if there has been a misdelivery of product into the storage tank system.

- ◆ Inventory verification must be performed on a monthly basis for the life of the tank system, and reconciled in the following manner:
- ◆ Inventory volume measurements for regulated substance inputs, withdrawals, and the amount still remaining in the tank are recorded each operating day
- ◆ The equipment used is capable of measuring the level of product over the full range of the tank's height, to the nearest one-eighth of an inch
- ◆ The regulated substance inputs are reconciled with delivery receipts by measurement of the tank inventory volume before and after delivery
  - Where tanks are interconnected by a manifold, reconciliation may address all of the interconnected tanks as a group rather than as individual tanks
- ◆ Product dispensing is metered and recorded in accordance with applicable requirements in Wisconsin Administrative Code chapter ATPC 92 for meter calibration
- ◆ The measurement of any water level in the bottom of the tank is made to the nearest one-eighth of an inch at least once a month

DATCP has inventory reconciliation forms and instructions for completing the forms for different types of tank systems available on our website:

[https://datcp.wi.gov/Pages/Programs\\_Services/InventoryVerificationReconciliationForms.aspx](https://datcp.wi.gov/Pages/Programs_Services/InventoryVerificationReconciliationForms.aspx)

The image displays three overlapping forms used for inventory reconciliation. The top-left form is a 'Monthly Inventory Record' with fields for Station, Tank, Product, Reg. Unit, and Month. It includes a table with columns for Date, Beginning Inventory (gallons), Product Sales (gallons), Receipts Delivered (gallons), Beginning book inventory minus (-) sales (+) receipts, End Inventory (from tank monitor) in inches and Gallons, Daily Over (+) or Short (-) in inches and Gallons, and Migrate Total Sales. The top-right form is another 'Monthly Inventory Record' with similar fields and a table with columns for Beginning Inventory (gallons), Product Sales (gallons), Receipts Delivered (gallons), Beginning book inventory minus (-) sales (+) receipts, End Inventory (from tank monitor) in inches and Gallons, and Daily Over (+) or Short (-) in inches and Gallons. The bottom-center form is a 'Monthly Inventory Verification' form for Station, Tank, Product (Unleaded, Reg. Unit 65% Red), and Month (January). It includes a table with columns for Date, Beginning Inventory (gallons), Product Sales (gallons), Receipts Delivered (gallons), Beginning book inventory minus (-) sales (+) receipts, End Inventory (from monthly receipt) in inches and Gallons, Daily Over (+) or Short (-) in inches and Gallons, Daily Accumulative Over/Short, Migrate Total Sales, and Migrate 0.5% Sub from Beginning Book. A 'Total Throughput' field is at the bottom.

# Periodic Inspections – PEI RP900

Operators of new and existing storage tank systems are required to conduct routine and periodic inspection and maintenance as described in PEI RP900. These inspections are an important mechanism for preventing problems and catching deficiencies at the onset.

Routinely inspecting the tank system is the best way to identify and correct minor problems before they become major problems. These inspections are designed to:

- ◆ Ensure leak detection is functioning and there are no alarms
- ◆ Spot leaking components
- ◆ Prevent water intrusion into the tank system such as through sumps, spill buckets, and vent pipes
- ◆ Identify tank system components in need of repair or replacement
- ◆ Make certain that the tank system is maintained and operating according to manufacturer specifications

Printable copies of the PEI RP900 daily, monthly, and annual inspection forms are available on the DATCP website: [https://datcp.wi.gov/Pages/Programs\\_Services/PetroleumHazStorageTanksForms.aspx](https://datcp.wi.gov/Pages/Programs_Services/PetroleumHazStorageTanksForms.aspx)

Operators must maintain records of the required periodic inspections, and have those records available on site for inspection.





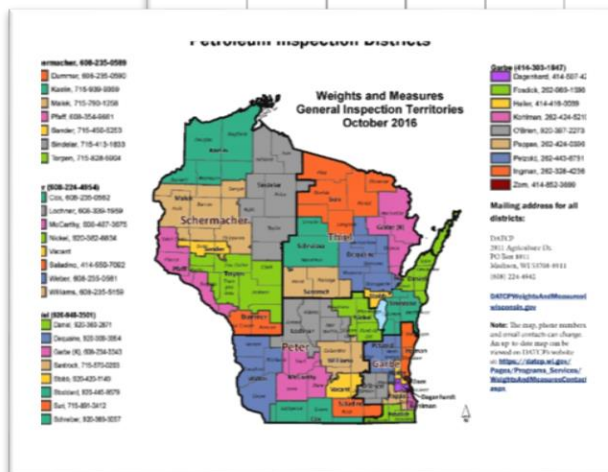
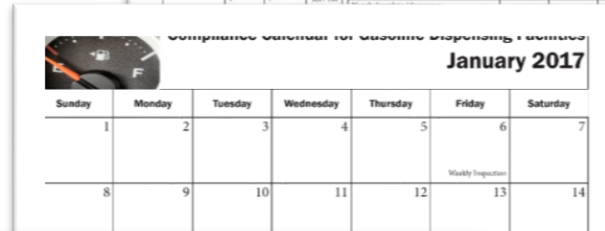
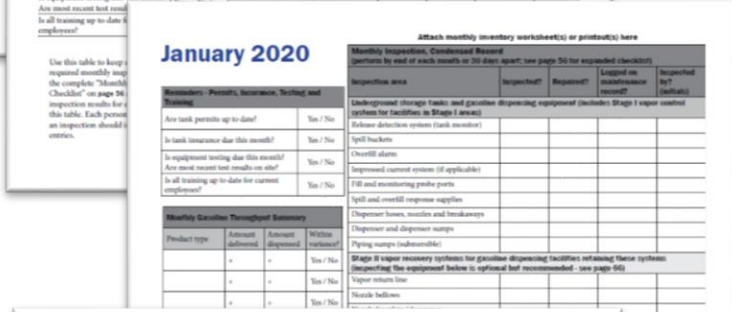
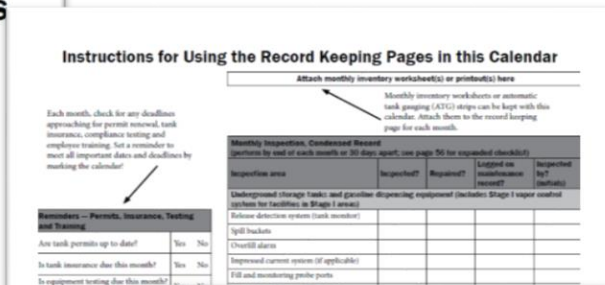
# Fuel Quality

DATCP tests fuels throughout the state for compliance with the requirements of Wisconsin Administrative Code chapter ATCP 94 – Petroleum and Other Liquid Fuel Products. Weights and Measures inspectors take samples of gasoline at retail stations to ensure the product matches the posted ethanol content and octane, and conforms to the specifications of ASTM D4814. In addition, inspectors routinely take samples of diesel fuel to ensure it meets the required specifications of ASTM D975. When conducting a fuel quality inspection, Weights and Measures inspectors also check for water in storage tanks, evidence of delivery of the incorrect fuel product into a storage tank, and other fuel quality problems that may harm consumers' vehicles.



# Compliance Calendar for Gasoline Dispensing Facilities

The Small Business Environmental Assistance Program at the Wisconsin Department of Natural Resources publishes a compliance calendar for gasoline dispensing facilities. This calendar is an excellent tool to help owners and operators meet compliance requirements. It contains detailed information to help track periodic inspections, records requirements, maintenance and repair documents, and reminders for permitting, insurance, testing and training. This calendar is available on the DNR website: <https://dnr.wi.gov/files/PDF/pubs/am/AM494.pdf>



*This calendar is an excellent tool to help owners and operators meet compliance requirements. It contains detailed information to help track periodic inspections, records requirements, maintenance and repair documents, and reminders for permitting, insurance, testing and training.*

# Bureau of Weights and Measures Info

Wisconsin Department of Agriculture, Trade and Consumer Protection

Bureau of Weights and Measures

2811 Agriculture Drive

PO Box 8911

Madison, WI 53708-8911

Phone: 608-224-4942

Website:

[https://datcp.wi.gov/Pages/Programs\\_Services/PetroleumHazStorageTanks.aspx](https://datcp.wi.gov/Pages/Programs_Services/PetroleumHazStorageTanks.aspx)

Email:

[datcpweightsandmeasures@wi.gov](mailto:datcpweightsandmeasures@wi.gov)

For specific DATCP Storage Tank contacts or to find your inspector,  
please visit the contacts page of our website:

[https://datcp.wi.gov/Pages/Programs\\_Services/StorageTankContacts.aspx](https://datcp.wi.gov/Pages/Programs_Services/StorageTankContacts.aspx)

# Resources and Reference Materials

Wisconsin Administrative Code Chapter ATCP 93 *Flammable, Combustible and Hazardous Liquids*  
[http://docs.legis.wisconsin.gov/code/admin\\_code/atcp/090/93](http://docs.legis.wisconsin.gov/code/admin_code/atcp/090/93)

Wisconsin Administrative Code Chapter ATCP 94 *Petroleum and Other Liquid Fuel Products*  
[https://docs.legis.wisconsin.gov/CODE/ADMIN\\_CODE/ATCP/090/94](https://docs.legis.wisconsin.gov/CODE/ADMIN_CODE/ATCP/090/94)

Wisconsin Statute Chapter 168 *Petroleum Products and Dangerous Substances*  
<https://docs.legis.wisconsin.gov/statutes/statutes/168>

Wisconsin Administrative Code Chapter ATCP 92 *Weights and Measures*  
[https://docs.legis.wisconsin.gov/code/admin\\_code/atcp/090/92/Title](https://docs.legis.wisconsin.gov/code/admin_code/atcp/090/92/Title)

Wisconsin Statute Chapter 98 *Weights and Measures*  
<http://docs.legis.wisconsin.gov/statutes/statutes/98/Title>

DATCP Webpage: Petroleum/Hazardous Liquids Storage Tanks  
[https://datcp.wi.gov/Pages/Programs\\_Services/PetroleumHazStorageTanks.aspx](https://datcp.wi.gov/Pages/Programs_Services/PetroleumHazStorageTanks.aspx)

DATCP Fact Sheets  
<https://datcp.wi.gov/Pages/Publications/WeightsAndMeasuresBureauFactSheets.aspx>

DATCP Storage Tank Forms  
[https://datcp.wi.gov/Pages/Programs\\_Services/PetroleumHazStorageTanksForms.aspx](https://datcp.wi.gov/Pages/Programs_Services/PetroleumHazStorageTanksForms.aspx)

DATCP Storage Tank Contacts  
[https://datcp.wi.gov/Pages/Programs\\_Services/StorageTankContacts.aspx](https://datcp.wi.gov/Pages/Programs_Services/StorageTankContacts.aspx)

Compliance Calendar for Gasoline Dispensing Facilities  
<https://dnr.wi.gov/files/PDF/pubs/am/AM494.pdf>





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