Stage II Decommissioning
Questions and Answers

This document provides information about technical aspects of the Stage II decommissioning procedure. For more information about changes to Stage II vapor recovery requirements, refer to the Department of Natural Resources (DNR) Stage II Decommissioning Factsheet.

Questions about the Department of Agriculture, Trade, & Consumer Protection (DATCP) requirements discussed in this document can be directed to Greg Bareta, Storage Tank Regulation Section Chief, at (608) 224-5150 or greg.bareta@wisconsin.gov.

1) What is the authorization, notification or permitting process for Stage II decommissioning?

DATCP requires that facilities submit a formal notification within 15 days of decommissioning [s. ATCP 93.140 (2) (d) 2, Wis. Adm. Code]. This form can be accessed online at https://datcp.wi.gov/Documents/10903%20Stage%20II%20Decommissioned%20Notification.pdf (or visit datcp.wi.gov and search "ERS-10903").

The test report for the final pressure decay test performed during the decommissioning process should be submitted with the notification form.

Previously, facilities were required to notify the DNR in advance of decommissioning so that an agency staff member could witness the final pressure decay test. However, due to changes in Wisconsin law, the DNR is no longer involved in the decommissioning process, which means the agency does not need to be notified of or witness the tests.

2) What are the post decommissioning roles of DATCP and DNR in regards to the system that was decommissioned?

The installation and subsequent decommissioning requirements are contained in s. ATCP 93.230 (13), Wis. Adm. Code.

The DNR is offering grants to retail stations in the Stage II area on a first-come, first-serve basis to partially offset the cost of removing or decommissioning Stage II systems. For information about eligibility and how to apply, visit http://dnr.wi.gov/aid/documents/stageiigrantguidelines.pdf (or visit dnr.wi.gov and search "Stage II grant").

Due to changes in Wisconsin law, the DNR is no longer otherwise involved in Stage II system maintenance or the decommissioning process.

3) What are the recordkeeping requirements after a Stage II vapor recovery system is decommissioned?

Facilities should maintain copies of the formal decommissioning notification and the test report from the final pressure decay test for the life of the storage tank system (see Question 1). Note: these two documents must be included in an application for a DNR Stage II removal or decommissioning grant (see Question 2).

The DNR no longer requires maintenance of Stage II training records under ch. NR 420, Wis. Adm. Code, but recommends it as a best management practice.

4) Can the owner/operator of an existing Stage II facility stop operating and maintaining a Stage II system without decommissioning it?

No. Section ATCP 93.230 (10), Wis. Adm. Code requires that a Stage II system be maintained. The owner/operator shall formally decommission the system as required by s. ATCP 93.230 (13), Wis. Adm. Code if it is not being maintained. DATCP expects that PEI/RP 300-09 Ch. 14 be followed for formal decommissioning. This will ensure the continued effectiveness of Stage I controls where they are required. Stage I vapor recovery requirements are not changing because they continue to prevent significant VOC emissions.

Due to changes in Wisconsin law, the requirements for Stage II system operation and maintenance contained in ch. NR 420, Wis. Adm. Code no longer apply, but the DNR recommends following them as best management practices.

While removing or decommissioning Stage II systems is currently optional, the DNR is offering grants to retail stations in the Stage II area on a first-come, first-serve basis as an incentive for removal or decommissioning (see Question 2).

5) Is the pressure decay and tank-tie testing (PEI 300-09 Section 14.6.12) required annually after decommissioning?

Annual testing of either decommissioned or operating Stage II systems is no longer required under DNR regulations (due to changes in state law, the DNR is no longer enforcing the Stage II provisions of ch. NR 420, Wis. Adm. Code).

Other testing may be required under federal regulations (40 CFR part 63, subpart CCCCCC). U.S. EPA requires that sources with monthly throughput greater than 100,000 gallons actively maintain vapor balance systems, use submerged filling techniques, and perform triennial pressure decay tests of system functionality and integrity.

Sources required to maintain Stage I and p/v vent systems in accordance with ch.NR 420 are not required to test for pressure decay functionality unless required by the manufacturer.

6) Why should operators and owners hire a contractor to do the decommissioning?

A Stage II system involves flammable vapors and possibly flammable liquids. DATCP expects technicians trained and experienced in the various systems and configurations to have a better understanding of the risk factors and how they are tied in with overall fuel storage and dispensing systems. It is not likely that operators will have the test equipment necessary to perform the required testing or have the knowledge to reprogram dispensers. DATCP also requires that the company performing the Stage II decommissioning be a credentialed ATCP 93.240 Tank Specialty Firm.

At least one manufacturer of Stage II vapor recovery equipment requires that decommissioning of their equipment be performed by a company-authorized service contractor.

7) A gasoline dispensing facility has been looking to upgrade dispensers at the site over a period of time. The dispensers are currently Stage II equipped. What is the policy on switching out dispensers?

In general, a facility cannot switch out part of a Stage II system. However, the type of Stage II vapor recovery system and the site-specific configuration may allow multiple systems to be phased out individually if the systems are entirely independent and separately tracked. DATCP would have to know the configuration specifics and the phase-out plan.

8) Since the Stage II nozzles are expensive, can they continue to be used after decommissioning until they wear out?

PEI 300-09 Section 14.6.9 requires the replacement of Stage II hardware with conventional hardware. When a person tops off or the auto-shutoff fails, gas will run into the vapor holes in a Stage II nozzle and collect in the vapor tube. When that happens with a deactivated vacuum pump,

1) The vapor will not be voided from that vapor line, and
2) The nozzle no longer shuts off to provide a warning that the vapor path is blocked.

This can easily lead to excess fugitive liquid and/or vapor loss from the nozzle during normal operations. Manufacturers of nozzles agree that PEI 300-09 Section 14.6.9 must be followed.

9) Many installations have used an impact valve to make the vapor pipe connection to the dispenser. If the piping above the impact valve is removed between the dispenser and the top of the impact valve, can the impact valve be left in place but plugged?

No, because the sealing off point would not be below the base of the dispenser. PEI 300-09 Section 14.6.6 requires securely sealing off the below grade vapor piping at the height below the base of the dispenser. Equipment manufacturers are also stating, “Disconnect the lower vapor line at the base of the dispenser.”

DATCP has received inquiries about whether the following three scenarios meet the Section 14.6.6 requirement:

1) Unbolting the shear, putting a plug in the top of the shear, and dropping it into the sump so it is below the base of the dispenser.
2) Disconnecting the flex connector from the shear valve, plugging it, and dropping it into the sump.
3) Breaking the shear valve, removing the top half, and bolting a plate on the top of the bottom half.

These three scenarios are not acceptable. DATCP expects a minimum number of leak points in any liquid or vapor system, which these scenarios do not achieve. The dispenser sump is not intended to become a storage area for excess equipment. A flex or shear valve lying in the sump may be exposed to or collect liquids or debris and possibly interfere with sump sensors, product line shear valves, etc. Allowing excess equipment to be in the sump also interferes with the required visual inspections of the sump and components.

Though these three practices may be cheaper methods to accomplish the disconnection, using them is not in the best interest of the system operator for sump inspection, for sump or component maintenance, or when future service will be performed in the sump area.

Ideally, the disconnection and plug will be at the lowest point possible or at a point closest to where the vapor line enters the sump. However, DATCP does recognize the potential for damage to existing components and entry boots when attempting to accomplish this.

One contractor has asked if it is acceptable to disconnect and securely mount the vapor shear valve below the base of the dispenser with a Universal 521 mounting kit. This would be acceptable.

There may be some very unusual situations where an exception is justified. To request an exception, provide DATCP with electronic photos and the reason an alternative should be considered. Email this information to greg.bareta@wisconsin.gov.

10) When a product line is abandoned in the dispenser, the impact valve is plugged and left in place, so why would the vapor line need to be treated any differently?

It is not acceptable to "abandon" a product line. Product lines are "in-use," "temporarily out of service," or "closed." Closure entails removal or closure in place. DATCP expects that a product line closed in place will have the impact valve removed and the pipe capped.

11) Is there an inspection process to determine whether the vapor line has been sealed below the base of the dispenser?

DATCP does not currently have a formal inspection process for Stage II decommissioning. The decommissioning technician completes and signs the notification form stating that the decommissioning complies with state code, the PEI standard, and DATCP requirements (see Question 1). The final pressure decay test will demonstrate tightness of the seal.

12) If a visual verification is required under PEI 300-09 Section 14.6.13, why are the pressure decay and tank-tie tests required under Section 14.6.12? It would appear that the tests are an unnecessary cost.

You cannot see vapor leaks, so the Section 14.6.13 visual inspection cannot replace a decay test. The visual inspection ensures that something was not left unattached or not tightened on the plug side of the system (dispenser), because these issues would not be identified by the pressure decay and tank-tie tests. Sections 14.6.12 and 14.6.13 work together to ensure tightness and are not redundant.

13) How should I perform and interpret the pressure decay test once the Stage II equipment is fully decommissioned?

The result for the pressure decay test conducted per PEI 300-09, Chapter 8 is based on Table A-1 using 1-6 affected nozzles and the applicable level of ullage rounding to the closest level of gallons represented in the chart. As an alternative to conducting the pre-test under Section 8.4.3, a tester may introduce nitrogen using a single vapor adapter as long as a passing result is verified by the soaping of the adapter with no visible leaks.

14) Summary of November 14, 2012 decommissioning discussion with petroleum equipment company representatives:

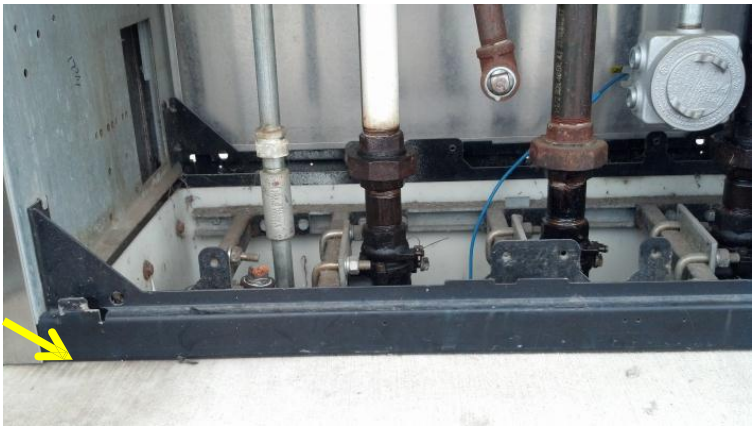
The discussion centered on a lack of consistency in how contractors are performing the Stage II decommissioning activities, primarily in regard to the shear valve disconnection and the disconnection or removal of pump or processing equipment. A subsequent point that was made is a need for more regulatory oversight to ensure that contractors are following the PEI 300-09 standard and not cutting corners.

The DATCP interpretation of PEI 300-09, Chapter 14 is that the objective of proper Stage II decommissioning is to ensure that the system is properly disconnected (both electrically and mechanically), liquid is evacuated from the system, and any vapors remaining within the system are sealed in.

- The only time that the pipe connection at the tank can remain in place is if the disconnection and capping would require excavation (Section 14.6.7).
- Vacuum-assist systems with vapor pumps at each fueling position must be removed if they cannot be rendered liquid-free (Section 14.6.4).
- Vacuum-assist systems with a centrally located vapor pump must be removed (Section 14.6.5).
- The ch. ATCP 93, Wis. Adm. Code requirement that equipment be functionally maintained or removed only applies to fire and leak prevention and detection components of the system [s. ATCP 93.230 (10) (d) & (e)].

There was considerable discussion related to the Stage II piping disconnection from the dispenser, typically at the shear valve. For example, what is acceptable, what is the dispenser base line of demarcation, etc.?

- How the disconnection is made is up to the service contractor. The break must be below the base of the dispenser. The base of the dispenser is considered to be where the dispenser base rail frame meets the concrete (refer to the arrow in the image below).



- If the top of the shear valve is above the baseline of the dispenser it must be lowered. This may involve fabricating a bracket to secure it to the original or new mounting support hardware. To accommodate field fabrication and maintain an inspection tolerance dimension, the measurement tolerance must be no more than 3/8” above the base.
- The shear valve cannot be dropped into the dispenser sump because it may become a collection point for debris or impede a sump sensor.

- The response to Question 9 of this document states, “Ideally, the disconnection and plug will be at the lowest point possible or at a point closest to where the vapor line enters the sump.” While this point of disconnection is not a requirement, it is ideal because it removes an inactive component from the dispenser sump, allowing better access for inspection, maintenance, and service.

How should facilities handle Stage II systems that were installed (with the anticipation that the facilities may be required to implement them at a future date) but never functional? Many of these systems are not in the defined Stage II area.

- Numerous stages or configurations of installation may be considered functional, and PEI 300-09 addresses several specific disconnection points. DATCP’s interpretation of the application of PEI 300-09 is not affected by a facility’s location (in or outside the Stage II area). For these reasons, any facility with an installed Stage II system should either maintain the system in accordance with ch. ATCP 93, Wis. Adm. Code or decommission the system in accordance with PEI 300-09 and DATCP’s reporting requirements (see Question 1).

How will DATCP address decommissioning that does not meet the expectations outlined in PEI 300-09, Chapter 14?

- Improper decommissioning will be considered a fire safety concern under s. ATCP 93.010 (1), Wis. Adm. Code.