DISCUSSION DOCUMENT

Review of the *Storage Tank Systems for Petroleum Products and Allied Petroleum Products Regulations*

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Canada

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1. Introduction

1.1 Regulatory Stock Review Plan

The Cabinet Directive on Regulation sets out the Government of Canada's expectations and requirements for developing, managing and reviewing federal regulations. It requires departments and agencies to regularly review existing regulations to ensure that they continue to be appropriate, effective and achieve intended policy objectives.

In accordance with the Directive, Environment and Climate Change Canada (ECCC) is undertaking a review of the Storage Tank Systems for Petroleum Products and Allied Petroleum Product Regulations (the Regulations), which came into force in 2008, as part of the departmental Regulatory stock review plan. The objectives of the review of the Regulations are to ensure that:

- regulatory objectives are being achieved in an effective manner;
- unintended impacts, such as barriers to trade or innovation are mitigated; and
- references to technical standards are accurate and, where appropriate, incorporate the latest version.

1.2 Purpose of this Discussion Document

The document summarizes information on the Regulations and identifies specific areas in order to solicit feedback from Indigenous peoples and interested stakeholders.

All comments received will be considered when determining whether amendments to modify requirements set out in the Regulations are necessary to further improve and modernize the Regulations.

2. Background

2.1 Description of the Regulations

The purpose of the Regulations is to reduce the risk of contaminating soil and groundwater due to releases of petroleum products and allied petroleum products from storage tank systems (STS). The Regulations establish technical standards for the design and installation of storage tank systems, and include requirements for operation, maintenance, removal, reporting and record keeping.

The Regulations **apply to** storage tank systems that:

- are comprised of tanks that have a capacity of more than 230 litres and are designed to be installed in a fixed location; and
- contain petroleum products such as used oil, home heating oil, jet fuel, diesel and gasoline, or allied petroleum products such as biodiesel, general-purpose thinners for lacquers, isopropanol, uninhibited ethylene glycol and E85 fuel (see Schedule 1 of the regulations for a complete list of allied petroleum products); and
- are either:
  - located on **aboriginal land**, including systems owned or operated by band councils or private businesses such as gas stations;

    - located on **federal land**, including systems in federal parks owned or operated by private companies;
    - operated by a **federal department, board or agency**, or owned by the Crown regardless of where the systems are located;
    - operated to provide a service to, or belongs to, a **federal work or undertaking**, including a railway, a port authority, or an airport.

The Regulations do **not** apply to storage tank systems:

- located in a building that provides the required level of secondary containment;
- that have aboveground tanks whose total combined capacity is 2500 litres or less and are solely connected to a heating appliance or an emergency generator; or
- regulated by the National Energy Board Act or the Canada Oil and Gas Operations Act.

The regulated community consists of owners of storage tank systems such as:

- First Nations, Band Councils, private businesses such as gas stations, and individuals who own storage tank systems located on Aboriginal land;
- private businesses that own storage tank systems located on federal land such as tenants in federal parks, at airports located on federal land and at ports;
- federal departments, boards or agencies regardless of where the systems are located; and
- federal works or undertakings that are railways, port authorities or airports and other entities that operate storage tank systems that provide a service to one of these federal works or undertakings.

The regulated community also includes persons who deliver product to regulated storage tank systems.

2.2 Previous Amendments

The Regulations have been amended three times since their coming into force: in 2012, 2017 and 2020. In all cases, the amendments were minor including clarifications, updating references to standards already incorporated by reference, and correction of typographical errors. Over the past 13 years, no substantial requirements have been amended.

3. Review Topics

This section is organized using the same headings found in the Regulations. For each heading, the regulatory requirements are summarized, the specific discussion aspect is outlined followed by questions for which ECCC is seeking input.

The content and questions in each review topics aim to solicit feedback that aligns with current technology and industry best management practices. Overall, ECCC is seeking feedback on any challenges to complying with the Regulations.

Consult the Tank Tip series of factsheets as needed to become more familiar with the requirements set out in the Regulations. For the complete requirements, consult the full text of the Regulations.

While reading each review topic, keep in mind specific impacts or challenges that have arisen while implementing the Regulations. For tips on how to provide your feedback, please refer to section 5, Providing feedback.

3.1 Definitions (Section 1)

The purpose of the Interpretation section is to define terms used in the Regulations. ECCC is looking for input specifically on the following three (3) definitions. However, comments on other definitions within the Regulations are also welcome.

3.1.1 Allied Petroleum Product

Allied petroleum product is defined as "a product set out in Schedule 1." Schedule 1 of the Regulations lists 14 substances; nine of these substances must meet a specific standard to be considered within the scope of the Regulations. Some standards are withdrawn and may not be replaced.

ECCC is looking for feedback on the following:

1. Would removing the incorporation by reference and using the chemical names or describing product formulations in chemical terms to identify an allied petroleum product be an issue or useful?
2. Are there other allied petroleum products being used and stored that are not currently listed in Schedule 1?

3.1.2 Transfer Area and Section 15

Presently, the Regulations provide a definition for "transfer area" which is referenced in Section 15 as an area designed to contain any releases in liquid form in the environment that occur during the transfer process. This could be during product delivery/fuelling.

ECCC is looking for feedback on the following:

1. Is the definition of "transfer area" clear?
2. Would adding more description of what is included as part of the product transfer area be helpful? If so, what else could be included?
   For example, aspects on:
   - Supervision
   - Direction of flow
   - Volume transferred
   - Speed
   - Dispensing area
   - Manual transfers
   - Size/dimension
   - Other physical components

3.1.3 Temporary withdrawal

The Regulations do not define temporary withdrawal. The intent of the temporary withdrawal requirements is to ensure STS that will be put back into service are being maintained while they are temporarily withdrawn from service.

ECCC is looking for feedback on the following:

1. Are the obligations associated with temporary withdrawal clear for implementation purposes?
   a. If not, would a definition of temporary withdrawal be helpful?
      i. And if so, what aspects could be considered?
         For example, aspects on:
         - Intended usage; relocatable, seasonal, construction, etc.

- Duration

3.2 Storage Tank Systems Application (Section 2)

The Application provisions specify to whom and to which systems the Regulations apply. ECCC is reviewing exemptions found in the Application provisions of the Regulations.

3.2.1 Indoor STS (Subsection 2 [2] [a])

The Regulations exclude STS located in a building that provides secondary containment equivalent to a maximum hydraulic conductivity of 1 X 10^{-6} cm/s, on a continuous basis. It prevents product from reaching the environment in the case of a leak.

At a minimum, to meet the requirements for the current exemption, the building must be free of cracks and any openings to the environment (drains or door sills, for example) must be sealed. Most STS are not entirely located in a building meeting this maximum hydraulic conductivity of 1 X 10^{-6} cm/s, therefore, this requirement may not be necessary. It is not possible to exclude part of a system using 2(2)(a). The definition of a STS covers the whole system. Furthermore, multi-tank systems can be high-risk so excluding portions may increase the risk of a release to the environment.

ECCC would like additional feedback on the following:

1. What impacts would arise if all indoor STS were subject to the Regulations?

3.2.2 2,500 L storage tank systems connected to heating appliances and emergency generators (Subsection 2 [2] [c])

The Regulations exempt STS that have above-ground tanks in which the aggregate capacity of the tanks is 2500 L or less and the STS are connected to a heating appliance or emergency generator. The intent of the regulations is to prevent releases into the environment. The long-term goal of the Regulations was to minimize soil and groundwater contamination that results from the release of petroleum products and allied petroleum products from regulated storage tank systems. However, contaminated sites are still present on federal jurisdictions.

The Regulations do not define “emergency generator.”

ECCC is assessing the risk posed by these systems to determine the best instrument to manage these systems.

ECCC is looking for feedback on the following:

1. How are these systems managed and by whom?
2. What are the common issues with installation and operation of these systems?
3. Are these systems managed differently when they are located above 60th parallel or in remote locations?
    a. If so, what are the logistical challenges?
4. What impacts would arise if all STS connected to “emergency equipment” were subject to the Regulations regardless of their capacity?
5. Would a definition for “emergency generator” be helpful?
6. What are the risk posed by these systems, environmental or other?

3.3 General Requirements (Sections 3 to 13)

The intent of the General Requirements is to ensure the environmental risks posed by high-risk STS are mitigated and leaks are prevented. As part of these requirements, proper repairs to leaking systems must be completed to ensure the safety of users and to prevent spills and releases into the environment. If a storage tank system is found to be leaking or if a leak is suspected:

1. The STS or affected components must be withdrawn from service temporarily and the necessary repairs must be undertaken to ensure the system no longer leaks; and
2. If temporary withdrawal is impossible, ECCC must be notified and immediate and long-term harm to the environment and human life or health must be minimized.

3.3.1 Potential Prohibition and Requirement

In order to avoid high-risk systems, ECCC is assessing the benefits of prohibiting all single walled underground tanks and piping, regardless of the year of installation, and looking at potential requirements for damaged/faulty tanks or components that are currently in operation.

ECCC is looking for feedback on the following:

1. What impacts may affect your ability to remove single walled underground tanks and piping?
2. What impacts may affect your ability to hire "certified people or trained technicians" to perform repairs on faulty systems?

3.3.2 Use of secondary containment (Section 13)

The Regulations define secondary containment as a containment that prevents liquids that leak from a storage tank system from reaching outside the containment area and includes double-walled tanks and piping, liners and impermeable barriers. Secondary containment that is exterior to a tank, e.g., an impermeable dike around a tank, cannot be used for storage. Naturally occurring materials such as snow and rain can also present a problem as they may accumulate in the secondary containment, thereby reducing the secondary containment capacity and increasing the risk of a potential release into the environment. Therefore, accumulated snow and rain should be removed from the secondary containment within a reasonable time frame.

ECCC is looking for feedback on the following:

1. What factors may impact the removal of any accumulated surface water, snow or product that would reduce the fluid volume capacity of the secondary containment in a reasonable time?
2. What considerations should be made for regional climate variation and proximity of tanks to operators?

3.4 Compliance with Requirements (Design/Installation, Section 14)

The purpose of the Compliance with Requirements section on design and installation is to specify mandatory technical standards and establish prescribed requirements for the design and installation of storage tank systems.

Under the current Regulations, storage tank systems installed after June 12, 2008, must:

- Have design documents stamped by a professional engineer (ss.34(1));
- Be installed by a person approved to do so by the province or supervised by a professional engineer (ss.33(1));
- Have a certification mark on specific components showing that they meet the standards set out in the Regulations (s.14) and;
- Have a product transfer area designed to prevent releases that may occur during the transfer (s.15). (Refer to section Compliance with Requirements (Product Transfer Areas)

A standard "is a document developed under an accredited process that provides specifications, characteristics, guidelines, or requirements to ensure the consistency and usability of materials, products, processes, and services"[1]. The Regulations incorporate by reference a number of standards or codes, and in doing so the respective standard or code becomes a mandatory requirement of the Regulations and is enforceable.

The Regulations incorporate by reference certain provisions of the Environmental Code of Practice for Aboveground and Underground Storage Tank Systems Containing Petroleum and Allied Petroleum Products, PN 1326 (PDF, 749 KB) established by the Canadian Council of Ministers of the Environment (CCME Code). These provisions from the CCME Code incorporate by reference design and inspection standards or codes such as Underwriters Laboratories of Canada (ULC), National Fire Code of Canada (NFC) and Canadian Standards Association B139 Installation Code for Oil Burning Equipment (CSA B139); these incorporated document's provisions are also enforceable.

Tanks, piping, and other components of storage tank systems must bear certification marks certifying conformity with the standards referenced in the Regulations. If these components do not bear a certification mark of one of the standards referenced in the Regulations, then they cannot be used.

Considerations for the Compliance with Requirements:

- The Regulations and the CCME Code chose to reference specific standards because they afforded an acceptable level of environmental safety. However, while technologies have evolved and new standards have been developed since the Regulations were first published, the CCME Code which references most of the incorporated standards has not been amended since 2003 and will not be updated in the near future.
- Regulations incorporate by reference CSA B139 and NFC requirements only related to piping for storage tank systems installed after the Regulations came into force.
- The installation of dual purpose aboveground tank usage (dual certification marks such as CAN/CGSB and ULC designed for transportation and stationary respectively) and utility tanks (designed to allow for relocation) have become a favored option on construction sites. The Regulations do not have requirements for these types of tank systems.
- The Regulations do not reference any standards for the reuse of tanks and piping and do not required inspection(s) if they are to be reused.
- There is no requirement for environmental considerations when installing tank systems in sensitive environments, such as determining minimum distances to water bodies, property lines or to other assets.
- Dispenser and nozzle are not part of the STS definition therefore these components are not currently regulated.

In short, ECCC is seeking input on any relevant standards and innovative technologies to align with other Canadian, provincial, and international jurisdictions.

ECCC is looking for feedback on the following:

1. Do the regulated communities face challenges with understanding the method of reference by incorporation?
    a. What options would make the Regulations easier to interpret?

[1] Standards Council of Canada, 2018. Guidelines for Incorporating Standards by Reference in Regulations to Support Public Policy Objectives.

Example: Less reliance on incorporation by reference

2. Are there any standards referenced that are no longer relevant?
3. Are there standards not currently referenced that would be compatible with the regulatory objective?
4. What challenges are related to the commissioning processes in coordination with other requirements part of the Regulations?
5. What may affect your ability to design and install dispensers up to the nozzle as per specific requirements to help reduce the risk of incidents and prevent contamination?
6. Are there any particular concerns or challenges with components of a system located inside a building, considering the whole system could be subject to the Regulations?
7. What criteria or standards for repurposing tanks or piping should be taken into consideration in the future policy development for the Regulations?
8. What manufactured dual purpose tanks are used in Canada?
    a. How are they being used?
9. Are there requirements that could help to reduce fire and/or environmental risks in sensitive areas (areas that contain natural features, proximity to bodies of water, etc.)?

3.5 Compliance with Requirements (Product Transfer Areas, Section 15)

The Regulations require that product transfer areas be designed to contain releases in liquid form in the environment prior to the first transfer. The Regulations also reference the *Canadian Environmental Protection Act, 1999 (CEPA)* for releases. The intent of this performance-based requirement is to allow designers, installers, owners and operators to risk managing the transfer areas by considering elements such as infrastructure, personnel training, or operation protocols. The requirement applies to a system if the aggregate capacity of its tanks is greater than 2,500 litres. The Regulations define a transfer area as “the area around the connection point between a delivery truck, railcar, aircraft or vessel and a storage tank system […]”. In other words, it is the area where product is transferred to or from a railcar, aircraft, vessel, or delivery truck.

The intent behind designing a product transfer area is to allow regulatees to assess their systems for potential releases while transferring the product, and determining the probabilities and consequences of such incidents, so that actions/conceptual designs can be put in place to contain releases into the environment.

In summary, this performance-based requirement is to allow for different strategies for compliance with the requirement to have a product transfer area designed to contain releases and reduce spills in a manner, which will protect the environment and perhaps minimize their future clean-up costs.

ECCC is looking for feedback on the following:

1. What is the cost associated with the design and implementation of a product transfer area?
2. What are the challenges with designing a product transfer area?
3. What type of guidance would be helpful to assist in risk managing a product transfer area?
4. Are there specific STS types where the probability of release is lower?
5. Are there restrictions related to the implementation of Section 15 prior the first transfer into the STS? (For example, during design, commissioning, etc.)

3.6 Leak detection (Sections 16 to 27)

The purpose of conducting leak detection and tank inspections is to identify the changing conditions of a storage tank system. With regular leak detection and monitoring the risk of release is reduced.

The Regulations prescribe leak detection and monitoring requirements for storage tank systems that were installed **before** June 12, 2008. However there are no leak detection requirements for:

- tanks and components installed on or after June 12, 2008;
- underground double-walled tanks and piping installed before June 12, 2008; and
- aboveground double-walled tanks and piping installed before June 12, 2008.

A corrosion analysis program may be used to fulfill requirements for leak detection and monitoring. The Regulations are not prescriptive regarding the contents of a corrosion analysis program, beyond specifying that it must be developed and conducted by a corrosion expert and include at least an annual inspection.

ECCC is looking for feedback on the following:

1. What challenges could be foreseen for operators and inspectors should leak detection methods be imposed for all systems?
   a. STS type
   b. Location/Accessibility
   c. Qualification
   d. Cost
2. What leak detection designs are commonly used to detect a release of a petroleum product or allied petroleum product in liquid form and ensure proper monitoring?
3. What are the common maintenance and inspection programs and their frequency for both aboveground and underground tanks and their components?
4. Are the prescribed leak detection requirements in the Regulations practical and realistic?
5. What challenges might occur if annual testing of a detection monitoring system and its components is made mandatory?
6. Are there obstacles with conducting corrosion analysis program?

3.7 Identification (Section 28)

The intent of the identification requirements is to ensure ECCC officials have a fulsome and up-to-date profile of the systems under federal jurisdiction and to ensure delivery personnel are aware that they are filling a registered STS. All storage tank systems must be identified. Identification records must be updated within 60 days if there are any changes to the information required for the identification.

The Regulations require that the identification number be displayed "in a readily visible location on or near the storage tank system for which the number was issued". There is no prescribed way of marking the tank.

Considerations for Identification:

- The Regulations cover many regulatees and over 16,000 storage tank systems.
- An accurate list of regulatees and their STS is necessary to ensure that regulatees receive appropriate guidance and compliance promotion material.

ECCC is looking for feedback on the following:

1. Would having a prescribed way or getting more guidance when labelling the STS be helpful?
   a. If so, what are your recommendations?
2. When there are identification changes, is the 60-day timeline sufficient?
   a. If not, please provide your rationale why the 60-day timeline is insufficient.

3.8 Delivery of Petroleum Products or Allied Petroleum Products (Section 29)

The purpose of this section is to ensure delivery personnel supplies fuel solely to identified tank systems, reports release incidents and keeps a record of the identification number of the STS.

Considerations for Delivery of Products:

- There are no provisions in the Regulations about fuel delivery personnel certification, nor is there a prohibition against filling a STS that is not well maintained, potentially leaking, or actively leaking.
- Some provinces require that fuel be delivered by a licensed contractor. The license may hold the delivery personnel liable if they deliver fuel to a system that is faulty.
- In remote locations and/or outside of working hours of some properties, petroleum products or allied petroleum products may be delivered unattended, i.e., without operator or owner presence.
- The Regulations do not prescribe operating procedures for delivery personnel.

ECCC is looking for feedback on the following:

1. Would there be advantages or disadvantages to ensure there is a continuous supervision of the filling operations by personnel qualified to supervise such operations and document the date, time and name of the personnel?
2. When there is no supervision possible during filling operation, what could be considered to ensure filling operation is done properly to avoid releases into the environment?
3. Would prescribing that storage tanks shall not be filed beyond their safe filling level be helpful?
4. Would prescribing that standard operation procedure be in place prior to delivery be practical for the owner/operator and fuel supplier?

3.9 Emergency Plan (Sections 30–32)

The Regulations require that regulatees have an emergency plan for each storage tank system. This plan must be ready to be implemented before the first transfer of products into the system. Releases (e.g., leaks), fires and other accidents can happen, and regulatees must have an emergency plan to prevent and limit environmental damage and minimize the danger to people. Emergency plans may help to reduce clean-up costs by responding to emergencies safely, quickly, and effectively.

Considerations for Emergency Plan:

- The Regulations prescribe factors that must be considered in developing an emergency plan and information to be included in it.
- In some provincial jurisdictions, spill kits, fire extinguishers, and signage are mandatory to be present and maintained.

ECCC would like to learn more about the challenges related to the implementation of the emergency plan in terms of administration and execution.

1. What clarifications would be helpful to assist regulatees with the preparation of the emergency plan?
2. What are the administrative concerns that prevent a regulatee from adding all the descriptive information in the plan and/or to keep it up to date?
3. What is the cost associated with the development and implementation of the emergency plan?
4. Would there be an advantage to ensure a copy of the emergency plan be supplied to the local fire department?
5. Would mandatory spill kits, fire extinguishers and signage be helpful?

6. Are the emergency plan requirements in duplication with other legislations, bylaws, or codes?

3.10 Installation of Storage Tank Systems (Sections 33–34)

The purpose of the installation provisions is to minimize releases of products to the environment by ensuring that a STS is properly designed and installed. Overall, STS must be installed by a person specified in the Regulations and the design and as-built drawings must be stamped and signed by a professional engineer.

3.10.1 Installers

The intent of Section 33 is to ensure that STS are installed by people qualified by the province in which the system is to be installed. Some provinces or territories do not approve installers; therefore, installations in these jurisdictions must be supervised by a professional engineer.

ECCC is looking at the existing Canadian certification program and soliciting inputs on any challenges owners are facing to get qualified people to install their STS.

3.10.2 Design and drawing

The intent of Section 34 is to record limited aspects of installation of new aboveground or underground storage tank systems (new construction project) and its physical environment at final specifications as it is constructed which include the outline of all tanks, the centreline of all piping, the centrelines of all underground electrical power and monitor sensor conduits, the building foundation outlines, the property lines, and the secondary containment.

Considerations for design and commissioning:

- In the industry, contractors typically test the STS with petroleum or allied petroleum products prior to formal commissioning.
- The Regulations require that as-built/record drawings must be ready prior the first fill into the STS.

ECCC is looking at practices related to preparing design, as built and record drawings for different types of STS for either new or upgraded installations.

1. What are the most common types of drawings used during the course of a new installation project?
2. What would be the best terminology to be used when referring to a specific “drawings” during the course of a storage tank installation project?
3. Do additional terms need to be defined in the Regulations to add clarity from specific requirements during installation projects?
4. What is the common practice when it is time to stamp a specific drawing and who is responsible?
5. What is commonly present on record and/or as-built drawings for STS installations?

3.10.3 Qualifications and drawings for some aboveground storage tank

“Standalone aboveground storage tank”, such as small capacity used oil, dispensing and utility tanks, as well as generator sets (Genset) containing a sub tank, are designed to ensure rapid installation and commissioning. “Standalone aboveground storage tank” may also be relocated during their life cycle. ECCC is reviewing the necessary qualifications to install standalone systems and what drawing documentation is required.

ECCC is looking for feedback on the following:

1. What is the common practice in the industry when “standalone type tanks” are installed?
    a. Are design and other drawings required, if so, who signs off on them?
    b. Who is authorized to install and move them?

3.11 Operation and Maintenance (Sections 35–40)

The current purpose of the Operation and Maintenance provisions is to minimize risk of contamination primarily from oil-water separators (OWS) and water bottom. At the time the Regulations were published, no other maintenance work was considered.

Considerations for Maintenance:

- To ensure that STS are functioning properly, frequent inspections performed by qualified people help to maintaining the systems and increasing their life expectancy while reducing the risk of system failure.

ECCC is considering different options for testing STS based on their type and components as part of their operation and maintenance.

ECCC is looking for feedback on the following:

1. Are there other activities that can be completed on a regular basis to ensure that a system is well maintained?
2. Are there other time frames that should be considered for completing a regular inspection or other maintenance activity (i.e., for seasonal systems, upon start up)?
3. What are the best current minimum maintenance practices in the industry recommended by manufacturers?

3.11.1 Oil-water separators

Currently, oil-water separators (OWS) must be maintained by taking monthly measurements of oil layers or having a continuous monitoring system and have procedures for the proper disposal of free oil, separated solids and discharged water.

ECCC is looking for feedback on the following:

1. Are clarifications required to assist regulatees in determining whether an OWS is part of their STS operation?
2. Are the prescribed OWS maintenance methods realistic for all regions in Canada, including remote locations?

3.11.2 Water bottom removal

The Regulations do not require inspection to determine if tanks contain bottom water but rather provide requirements for how to dispose of it. According to the industry, water contamination of fuel is becoming more and more frequent and accelerates corrosion of metallic components. This excess water could lead to corrosion and eventual tank failure, which can potentially cause releases to the environment. In addition, poor fuel quality can damage engines. Internal corrosion can be controlled by the establishment of maintenance procedures based on testing and removal of water and solids from the bottom of the tank.

To align with best management practices and other Canadian jurisdictions, ECCC is assessing annual water bottom inspection for some steel tanks to avoid premature wear and risk of releases to the environment.

ECCC is looking for feedback on the following:

1. What would be the challenges of including more maintenance requirements for water bottom inspections for steel tanks?
    a. What would you recommend the frequency be?
2. Are there disposal challenges that ECCC should be aware of?

3.12 Release Report (Section 41)

The purpose of the release reports provisions is to track actual and potential releases of petroleum and allied petroleum to the environment from STS under federal jurisdiction and to protect the environment, public safety and human health. In the event of a release into the environment:

- a verbal notification must be made as soon as possible after a release or the likelihood of a release to the environment to regional spill lines across the country; and
- the verbal notification must be followed by a written notification directed to ECCC when 100 litres or more of product has been released into the environment.

ECCC is looking for feedback on the following:

1. If all releases are to be reported regardless of quantity or location, what would be the impact on the regulated community?

3.13 Withdrawal from Service (Section 42)

The Regulations prescribe two ways that a STS or any component of it may be withdrawn from service:
(*a*) temporarily if the withdrawal lasts less than two years; or
(*b*) permanently.

As mentioned in the Definition section (3.1), ECCC is looking for feedback as to whether further clarification may be required for "temporarily withdrawn from service" under various circumstances (e.g. tank usage, relocation and type of repair).

Consideration for Withdrawal from Service:

- In other jurisdictions, there are withdrawal requirements with associated timelines to give options for the reinstallation, re-use or disposal.

ECCC is looking for feedback on the following:

1. What activities related to withdrawal from service should be considered?
    a. Examples: intended usage, duration, etc.

3.13.1 Temporary withdrawal from service (Section 43)

The intent of the temporary withdrawal requirement is to ensure STS are being maintained while they are temporarily withdrawn from service with the intention to put them back in service.

While the STS is temporarily out of service, leak detection and maintenance are required.

ECCC is looking for feedback on the following:

1. Would a revision of the current timeline (less than 2 years) for when a temporary withdrawal must become a permanent withdrawal be helpful? If so, why?
2. Would exemptions, such as for research, be helpful if delays were still imposed for a maximum duration of the temporary withdrawal?

3. What would it be the impacts if regulatees were to report to ECCC the dates of the temporary withdrawals instead of keeping a record of them for five years? What would be the impact of reporting each time you temporarily withdraw a STS?
4. What are the current operational challenges to maintaining a STS during a temporary withdrawal?

3.13.2 Permanent withdrawal from service (Section 44)

The purpose of the permanent withdrawal from service is to establish specific minimal operation requirements to withdraw an unused system to protect the environment and human health.

ECCC is looking for feedback on the following:

1. Would reporting additional details about the permanent withdrawal to ECCC help with data management?
    a. Examples: Reason for withdrawal, confirmation if tanks, system was replaced or not, information on party performing withdrawal, etc.

3.14 Removal of Storage Tank Systems (Section 45)

The intent of the removal requirement is to physically remove the STS (e.g., from the ground for UST) by a certified person or supervised by a professional engineer as soon as possible if the system is out of service permanently, in order to avoid contamination of soil and groundwater, and subsidence of surrounding soil.

ECCC is looking for comments on the existing requirements to ensure the concept is clear which is to dispose the STS or component with the intent of preventing potential long-term contamination.

ECCC is looking for feedback on the following:

1. What would be a reasonable timeline to remove the STS and or components considering remote location?
2. Would it be helpful if the certified removal person or people supervised by professional engineer prepare a withdrawal/disposal report (closure report)?
    a. Would this help the owner with managing projects?
3. What would be the impact if specific details about the removal were reported to ECCC? (Reason for removal, STS removal details, information on party performing tank removal)
4. What are the challenges to physically remove a STS?

Consideration for Removal:

- It may not be possible to remove a storage tank system for reasons including ecological, heritage, historical, structural, or other substantial reasons.

ECCC is looking for specific examples when it is not possible to remove some parts of a STS and what is being done to avoid contamination and soil failure or other negative impacts related to abandonment.

1. Under what specific circumstances and conditions would a storage tank or components be abandoned in place?
    a. What is regulatees doing to prevent contamination?
    b. What records are being kept for historic, further site use and insurance purposes?

3.15 Record Keeping (Section 46)

The purpose of record keeping provisions is to provide proof of proper STS maintenance, installation, withdrawal, removal, etc., by recording activities that may result in the release of petroleum or allied petroleum products. Records allow owners and operators to track life cycle activities and potential leak trends allowing for better decision-making. Records must be kept for different lengths of time and location for different requirements.

Considerations for Record Keeping:

- There are no record retention requirements when repairs are done to leaking tank systems or components.
- Although a person who delivers fuel is prohibited from doing so for unidentified STS, there are no provisions to track deliveries and ensuring the delivery person retains the ECCC ID number.

ECCC is looking for feedback on the following:

1. What would be the impacts if some requirements were imposed on operators to keep records of the work maintenance and service work performed on storage tank systems?
    a. If so, what would be the additional level of effort?

3.16 Schedule 2

The purpose of Schedule 2 is to specify the information identifying to be submitted to ECCC.

ECCC is looking for feedback on the following:

1. What identification requirements are more challenging?
2. What reporting mechanism would be more effective and less time consuming?
3. Is there any storage tank system specific information missing that should be recorded and identified with ECCC?

4. Next steps

The key targets for the stock review process are outlined below:

- Interested parties are welcome to provide feedback on this document until October 10, 2022.
- ECCC will review and take into consideration all comments received in response to this engagement.
- It is expected that the outcome of the review and a brief summary of feedback will be published as part of the ECCC's regular online updates on the regulatory stock review plan once the review is completed.

5. Providing feedback

Here are some suggestions for preparing your comments. You may wish to follow the template in the Annex I. In addition to comments on Review Topics described, any other comments related to the review are also welcomed.

Broad questions:

- Are there obstacles that may affect your ability to meet any of the regulatory requirements (maintenance, inspection, delivery, installation, etc.)?
- Are there any areas requiring action (modification or addition) that could further contribute to managing storage tank systems more efficiently?
- Do the Regulations prevent the use of certain equipment or industry best practices that are compatible to store products and prevent releases into the environment?
- What measures could be taken to minimize the burden on small business without jeopardizing the environment?

- What are the costs associated with complying with the Regulations that are beyond what is considered “normal” in the industry with respect to the costs of operating a storage tank system?
- What improvements could be made with respect to the administrative aspects of the Regulations to reduce the burden (ex. record keeping, identification, release reporting) while still ensuring environmental protection?
- Are there any areas that do not align with other jurisdictions?

6. Contact information

You are invited to provide feedback and perspectives on the consultation topics described above by October 10, 2022, to ensure that they are considered as part of ECCC’s stock review process.

Please send your comments on this discussion document to the email or mailing address below. Please indicate “Discussion Document—Review of the Storage Tank Regulations” in the subject line of your message.

In addition, should you be interested in an information session to give you the opportunity to ask questions prior to submitting written comments, please indicate “Discussion Document—Review of the Storage Tank Regulations and Information Session” in the subject line of your message.

If you have any questions with respect to the consultation process, the discussion document, or the Regulations, please contact us at the email address or the telephone number indicated below.

- Email: registrereservoir-tankregistry@ec.gc.ca
- Telephone: 1-844-672-8038
- Mailing address:

  Storage Tank Program
  Environment and Climate Change Canada
  351 St. Joseph Blvd.
  Gatineau QC K1A 0H3

ECCC welcomes the distribution of this document to other potential interested parties. Anyone wishing to be on our contact list to receive information related to the Regulations, please contact us at the email address above.

Annex I: Proposed template for recording comments on the Regulations

Examples of how to fill out the table are provided. Delete the current text if you intend to use this template.

Topic/Questions	Section of the Regulations	Issue (operational, administrative, conflict, financial/economic, quality assurance, technical, environment quality)	Suggestions to address the identified issue
Emergency Plan	*33*	*Administrative burden*	<u>*Example:*</u> *To avoid frequent update of the plan, insert position title rather than individual's name*
Repairs—Is it possible to increase assurance that repairs are well done to prevent releases of products from the storage tank system?	*3(1)*	*Quality assurance*	<u>*Example:*</u> *Repairs are inspected by a person approved to do so before the system is put back into service and keep a record of the inspection*
As-built drawing	*34*	*Conflict with Professional Engineer Association*	*...*

Annex 2: Summary of Questions

The questions in this Annex are the same as those in the Discussion Document and are intended to help guide the reader to provide their issues related to the management of their storage tanks. However, the reader should not limit their comments to only these questions. The questions are organized based on the review topics using the same headings found in the Regulations.

Definitions (Section 1)

1. Would removing the incorporation by reference and using the chemical names or describing product formulations in chemical terms to identify an allied petroleum product be an issue or useful?
2. Are there other allied petroleum products being used and stored that are not currently listed in Schedule 1?
3. Is the definition of “transfer area” clear?
4. Would adding more description of what is included as part of the product transfer area be helpful? If so, what else could be included?
   For example, aspects on:
   - Supervision
   - Direction of flow
   - Volume transferred
   - Speed
   - Dispensing area
   - Manual transfers
   - Size/dimension
   - Other physical components
5. Are the obligations associated with temporary withdrawal clear for implementation purposes?
   a. If not, would a definition of temporary withdrawal be helpful?
      i. And if so, what aspects could be considered?
         For example, aspects on:
         - Intended usage; relocatable, seasonal, construction, etc.
         - Duration

Storage Tank System Application (Section 2)

1. What impacts would arise if all indoor STS were subject to the Regulations?
2. How are these systems managed and by whom?
3. What are the common issues with installation and operation of these systems?
4. Are these systems managed differently when they are located above 60^{th} parallel or in remote locations?
   a. If so, what are the logistical challenges?
5. What impacts would arise if all STS connected to “emergency equipment” were subject to the Regulations regardless of their capacity?
6. Would a definition for “emergency generator” be helpful?
7. What are the risk posed by these systems, environmental or other?

General Requirement (Section 3 to 13)

1. What impacts may affect your ability to remove single walled underground tanks and piping?
2. What impacts may affect your ability to hire ‘’certified people or trained technicians’’ to perform repairs on faulty systems?
3. What factors may impact the removal of any accumulated surface water, snow or product that would reduce the fluid volume capacity of the secondary containment in a reasonable time?
4. What considerations should be made for regional climate variation and proximity of tanks to operators?

Compliance with Requirements (Design/Installation, Section 14)

1. Do the regulated communities face challenges with understanding the method of reference by incorporation?
    a. What options would make the Regulations easier to interpret?
        Example: Less reliance on incorporation by reference
2. Are there any standards referenced that are no longer relevant?
3. Are there standards not currently referenced that would be compatible with the regulatory objective?
4. What challenges are related to the commissioning processes in coordination with other requirements part of the Regulations?
5. What impacts or conflicts may affect your ability to design and install dispensers up to the nozzle as per specific requirements to help reduce the risk of incidents and prevent contamination?
6. Are there any particular concerns or challenges with components of a system located inside a building, considering the whole system could be subject to the Regulations?
7. What criteria or standards for repurposing tanks or piping should be taken into consideration in the future policy development for the Regulations?
8. What manufactured dual purpose tanks are used in Canada?
    a. How are they being used?
9. Are there requirements that could help to reduce fire and/or environmental risks in sensitive areas (areas that contain natural features, proximity to bodies of water, etc.)?

Compliance with Requirements (Transfer Area, Section 15)

1. What is the cost associated with the design and implementation of a product transfer area?
2. What are the challenges with designing a product transfer area?
3. What type of guidance would be helpful to assist in risk managing a product transfer area?
4. Are there specific STS types where the probability of release is lower?
5. Are there restrictions related to the implementation of Section 15 prior the first transfer into the STS? (For example, during design, commissioning, etc.)

Leak Detection (Sections 16 to 23)

1. What challenges could be foreseen for operators and inspectors should leak detection methods be imposed for all systems?
    a. STS type

b. Location/Accessibility
c. Qualification
d. Cost

2. What leak detection designs are commonly used to detect a release of a petroleum or allied petroleum product in liquid form and ensure proper monitoring?
3. What are the common maintenance and inspection programs and their frequency for both aboveground and underground tanks and their components?
4. Are the prescribed leak detection requirements in the Regulations practical and realistic?
5. What challenges might occur if annual testing of a detection monitoring system and its components is made mandatory?
6. Are there impacts with conducting corrosion analysis program?

Identification (Section 28)

1. Would having a prescribed way or getting more guidance when labelling the STS be helpful?
    a. If so, what are your recommendations?
2. When there are identification changes, is the 60-day timeline sufficient?
    a. If not, please provide your rationale why the 60-day timeline is insufficient.

Delivery of Petroleum Products or Allied Petroleum Products (Section 29)

1. Would there be advantages or disadvantages to ensure there is a continuous supervision of the filling operations by personnel qualified to supervise such operations and document the date, time and name of the personnel?
2. When there is no supervision possible during filling operation, what could be considered to ensure filling operation is done properly to avoid releases into the environment?
3. Would prescribing that storage tanks shall not be filed beyond their safe filling level be helpful?
4. Would prescribing that standard operation procedure be in place prior to delivery be practical for the owner/operator and fuel supplier?

Emergency Plan (Sections 30-32)

1. What clarifications would be helpful to assist regulatees with the preparation of the emergency plan?
2. What are the administrative concerns that prevent a regulatee from adding all the descriptive information in the plan and/or to keep it up to date?
3. What is the cost associated with the development and implementation of the emergency plan?
4. Would there be an advantage to ensure a copy of the emergency plan be supplied to the local fire department?
5. Would mandatory spill kits, fire extinguishers and signage be helpful?
6. Are the emergency plan requirements in duplication with other legislations, bylaws, or codes?

Installation of Storage Tank Systems (Sections 33-34)

1. What are the most common types of drawings used during the course of a new installation project?

2. What would be the best terminology to be used when referring to a specific “drawings” during the course of a storage tank installation project?
3. Do additional terms need to be defined in the Regulations to add clarity during installation projects?
4. What is the common practice when it is time to stamp a specific drawing and who is responsible?
5. What is commonly present on record and/or as-built drawings for STS installations?
6. What is the common practice in the industry when “standalone type tanks” are installed?
    a. Are design and other drawings required, if so, who signs off on them?
    b. Who is authorized to install and move them?

Operations and Maintenance (Sections 35-40)

1. Are there other activities that can be completed on a regular basis to ensure that a system is well maintained?
2. Are there other time frames that should be considered for completing a regular inspection or other maintenance activity (i.e., for seasonal systems, upon start up)?
3. What are the best current minimum maintenance practices in the industry recommended by manufacturers?
4. Are clarifications required to assist regulatees in determining whether an OWS is part of their STR operation?
5. Are the prescribed OWS maintenance methods realistic for all regions in Canada, including remote locations?
6. What would be the challenges of including more maintenance requirements for water bottom inspections for steel tanks?
    a. What would you recommend the frequency be?
7. Are there disposal challenges that ECCC should be aware of?

Release Report (Section 41)

1. If all releases are to be reported <u>regardless of quantity or location</u>, what would be the negative impact on the regulated community?

Withdrawal from Service (Sections 42 to 44)

1. What activities related to withdrawal from service should be considered?
    a. Examples: intended usage, duration, etc.
2. Would a revision of the current timeline (less than 2 years) for when a temporary withdrawal must become a permanent withdrawal be helpful? If so, why?
3. Would exemptions, such as for research, be helpful if delays were still imposed for a maximum duration of the temporary withdrawal?
4. What would be the impact if regulatees were to report to ECCC the dates of the temporary withdrawals instead of keeping a record of them for five years? What would be the impact of reporting each time you temporarily withdraw a STS?
5. What are the current operational challenges to maintaining some aspects of the STS during a temporary withdrawal?

6. Would reporting additional details about the permanent withdrawal to ECCC help with data management?
    a. Examples: Reason for withdrawal, confirmation if tanks, system was replaced or not, information on party performing withdrawal, etc.

Removal of Storage Tank Systems (Section 45)

1. What would be a reasonable timeline to remove the STS and or components considering remote location?
2. Would it be helpful if the certified removal person or people supervised by professional engineer prepare a withdrawal/disposal report (closure report)?
    a. Would this help the owner with managing projects?
3. What would be the impact if specific details about the removal were reported to ECCC? (Reason for removal, STS removal details, information on party performing tank removal)
4. What are the challenges to physically remove a STS?
5. Under what specific circumstances and conditions would a storage tank or components be abandoned in place?
    a. What is regulatees doing to prevent contamination?
    b. What records are being kept for historic, further site use and insurance purposes?

Record Keeping (Section 46)

1. What would be the impacts if some requirements were imposed on operators to keep records of the work maintenance and service work performed on storage tank systems?
    a. If so, what would be the additional level of effort?

Schedule 2

1. What identification requirements are more challenging?
2. What reporting mechanism would be more effective and less time consuming?
3. Is there any system specific information missing that should be recorded and identified with ECCC?

Broad Questions

1. Are there obstacles that may affect your ability to meet any of the regulatory requirements (maintenance, inspection, delivery, installation, etc.)?
2. Are there any areas requiring action (modification or addition) that could further contribute to managing storage tank systems more efficiently?
3. Do the Regulations prevent the use of certain equipment or industry best practices that are compatible to store products and prevent releases into the environment?
4. What measures could be taken to minimize the burden on small business without jeopardizing the environment?
5. What are the costs associated with complying with the Regulations that are beyond what is considered “normal” in the industry with respect to the costs of operating a storage tank system?

6. What improvements could be made with respect to the administrative aspects of the Regulations to reduce the burden (ex. record keeping, identification, release reporting) while still ensuring environmental protection?
7. Are there any areas that do not align with other jurisdictions?