

Environmental Management and Pollution Control (Underground Petroleum Storage Systems) Regulations 2020

Explanatory Paper



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Proposed Changes to 2010 UPSS Regulations

New Draft UPSS Regulations

The current *Environmental Management and Pollution Control (Underground Petroleum Storage Systems) Regulations 2010* (UPSS Regulations) have been updated to better protect the owners and operators of underground petroleum storage systems (UPSS), the public and the environment from the impact of fuel leaks.

Leaking UPSS can cause extensive contamination and pose a significant risk to human health and the environment. In some situations groundwater can be impacted to such a level that it is no longer suitable to be used.

The impact and extent of contamination and remediation costs are likely to be significantly reduced if measures proposed in the regulatory model (eg loss monitoring) are undertaken. It is always better to prevent pollution than try to clean it up after it has occurred.

The UPSS Regulations have been in use for ten years and during that time the EPA's knowledge of UPSS has continued to develop and changes that need to occur to the Regulations have been identified. The key changes reflected in the new draft Regulations are provided below.

REMOVED

Reporting of change of responsible person

To lower the administrative load on the landowner, rather than the landowner sending in a registration form every time a system operator or infrastructure owner changes, the draft Regulations state that the landowner will need to keep records of who these people are and supply details to the EPA Director when requested to do so.

Requirements triggered by the commencement of the Regulations in 2010

Requirements that were triggered by the commencement of the Regulations in 2010 have been removed (eg initial registration of sites etc).

ADDED

Part 4 - Notification of LNAPL (Light Non-Aqueous Phase Liquid) in Groundwater Monitoring Wells

The presence of Light Non-Aqueous Phase Liquid (LNAPL) or inferred LNAPL in groundwater means that a leak has occurred from a storage system or a large spill has occurred on the site. The presence of LNAPL/inferred LNAPL is considered to be an indicator of the site being a contaminated site. The draft UPSS Regulations require the presence of LNAPL/inferred LNAPL to be notified to the EPA Director by any person who becomes aware of the LNAPL/inferred LNAPL. This includes a consultant or a potential purchaser of a site who has an environmental assessment undertaken prior to purchase. The infrastructure

owner must then undertake an environmental site assessment to determine the level of risk posed by the contamination.

The draft Regulations state that known LNAPL/inferred LNAPL on a site will also have to be retrospectively notified to the Director by a system operator, infrastructure owner or landowner within 6 months of the Regulations commencing. No notification to the Director is required if the Director is already aware of the LNAPL/inferred LNAPL.

Note: inferred LNAPL has been defined based on CRC Care Technical Report 23 – Petroleum hydrocarbon vapour intrusion assessment.

Part I - Loss monitoring

The impact and extent of contamination and remediation costs are likely to be significantly reduced the earlier a leak of fuel is detected. Loss monitoring methods provided by third parties also need to be of a standard where clients can rely on the results presented.

The draft Regulations require providers of loss monitoring services to use a method verified by an independent third party and that the service is undertaken in accordance with the verification certification. These certifications are listed on National Working Group Leak Detection Evaluations (NWGLDE) website: <http://www.nwglde.org/>. The results of the loss monitoring service will also have to be reported in a format specified in a protocol (ie report calculated leak rates etc).

For the two SIRA methods commonly used in Tasmania this is likely to result in a “FAIL” result now being triggered when a loss of 9.12L/day (0.38L/hr or 0.1 gallons/hour) or more is detected instead of a “FAIL” being triggered at 18.24L/day (0.76L/hr or 0.2 gallons/hour) or more. Some SIRA methods may be capable of detecting losses less than 9.12L/day, potentially even down to 4.56L/day. For example, if a SIRA method is capable of detecting a leak of 6L/day (at the accuracy stated in the draft Regulations) then a “FAIL” result will be given when a loss of 6L/day or more is detected. Note that a loss of 9.12L/day is still a significant amount of fuel (one bucketful a day).

The draft Regulations state that loss monitoring providers will also have to notify the Director if a client has a site where three months of consecutive FAIL or INCONCLUSIVE results are detected. This has been added to the Regulations to ensure that FAILs are being followed up (as they may be indicating that the UPSS is leaking) and that sites with INCONCLUSIVE results (which are due to poor data) have data quality issues resolved so that a conclusion can be reached as to whether the UPSS is leaking or not.

Part I - Equipment Integrity Tests

The draft Regulations require providers of Equipment Integrity Tests (EITs) to undertake the EIT in accordance with the method’s independent third party validation (eg as listed on National Working Group Leak Detection Evaluations website at <http://www.nwglde.org/>). Some of these validations have specific criteria such as ullage ranges that must be present when the tank is tested. The results of the EIT will also have to be reported in a format specified in a protocol (ie state calculated leak rates etc).

In addition, the draft Regulations state that if the EIT returns a result indicating that the storage system is not providing full and continuous containment, the person undertaking the EIT must notify the Director. This requirement applies to all EITs (ie including those conducted as part of due diligence prior to purchasing a property) not just tests required under the Regulations and has been added to the Regulations to ensure that the Director is aware of these leaks.

Part 1 - Defining a suitably qualified person to produce an environmental site assessment and decommissioning assessment report

To ensure that the infrastructure owner receives an assessment report that is to the required standard and is likely to be acceptable to EPA, a clause has been added to the draft Regulations requiring that:

A person who authors and manages the works and actions required for an environmental site assessment report or decommissioning assessment report, must be a person:

- certified under the Certified Environmental Practitioner Site Contamination (CEnvP SC) scheme (<https://www.cenvp.org/directory/>) or
- any other scheme approved by the Director or
- be an individual approved by the Director.

This reflects the requirement already contained in the decommissioning guidelines and will ensure the environmental site assessment report is to a similar standard.

Part 2 - Cathodic Protection

Cathodic protection protects steel infrastructure from rusting. The installation and maintenance of cathodic protection is necessary to help prevent leaks of fuel. The draft Regulations contain the requirements that:

- New UPSS infrastructure installed under the regulations must have cathodic protection in accordance with AS4897 if steel, and
- Cathodic protection on all tanks must be maintained in accordance with AS4897.

Schedule 1 - Environmental Infringement Notices (new Schedule)

The references to penalties in the *Environmental Management and Pollution Control (Environmental Infringement Notices) Regulations 2016* that relate to the UPSS Regulations have moved into the draft UPSS Regulations in a new Schedule.

Part 4 - Notification of Contamination in Groundwater Monitoring Wells in Groundwater Protection Zones (GPZ)

The draft Regulations state that water from these wells will need to be analysed once every 12 months and, if contamination is detected, the Director must be notified. Note: No GPZ are currently defined.

SIMPLIFIED AND CLARIFIED

Part 6 - Decommissioning

Decommissioning requirements have been simplified in the draft Regulations, so that:

- A form is submitted when the UPSS ceases to be used
- Temporary decommissioning will only be possible through an exemption request, applied for using the above Form
- Timing regarding the completion of the Decommissioning Assessment Report and submission of the Decommissioned UPSS Form is simplified so that the Decommissioned UPSS Form is due 6 months after ceasing use.

An ability to charge for reviewing Decommissioning Reports has been included to allow for cost recovery.

Part 2 - Abandoned Tanks

The draft Regulations state that tanks that haven't been used since 2010 will not be able to be brought back into service, although an exemption can be applied for.

Part 3 - Loss Monitoring and Loss Investigation

Terminology has been updated eg "loss of petroleum" has been replaced by "not providing full and continuous containment" to encompass water entering a UPSS.

Also a requirement has been added such that inconclusive results have to be followed up.

OTHER CHANGES

- A small storage system is now defined as a system where all storage systems on a parcel of land have a combined capacity of less than 5,500L.
- It is clarified that the Regulations do not apply to above ground fuel tanks with underground fuel lines.
- The definition of "in use" has been altered and now has separate definitions for waste oil tanks and tanks attached to backup generators.
- Interstitial monitoring now reflects AS4897 requirements.
- Groundwater monitoring wells – general requirements have been separated from requirements on monitoring wells in groundwater protection zones.



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