Fuels Safety Program	Ref. No.: FS- 175- 10	Rev. No.:
ADVISORY	Date: March 2010	Date:

Subject: Environmental Assessment Requirements to Abandon an Underground Fuel Storage Tank in Place or Re-Use an Out of Service Tank

Sent to: Posted on Web-Site and Distributed to Liquid Fuels Council and LFHC RRG

In order for the Fuels Safety Program (FSP) to consider an application for a variance under the *Technical Standards and Safety Act* (TSS Act), the applicant must provide an environmental assessment report in conjunction with a variance application. These variance applications are made under the TSS Act and the Liquid Fuels Handling Regulation (O.Reg. 217/01) and Code, and the Fuel Oil Regulation (O. Reg. 213/01) and Code. The variance applications are utilized when it may be necessary to consider: 1) the abandonment, in-place, of an underground storage tank (UST), 2) the application for a licence to operate a retail fuel facility when the previous licence had been lapsed for more then one year.

An environmental assessment must contain, as a minimum, the following:

- A **minimum** of four sampled boreholes. A total of two samples from each borehole must be submitted for laboratory analysis. A "worst case" soil sample (based on the field screening) is to be collected from each borehole along with a sample from a depth ranging from the base of each tank (or tank nest) to one (1) metre below the base of each tank (or tank nest). Borehole locations should be selected to provide adequate aerial coverage around the tank/tank nest. In-field soil vapour analyses in conjunction with visual and olfactory evidence should be used to direct soil sample selection for submission to an accredited laboratory.
- Laboratory analyses must include, as a minimum, benzene, toluene, ethylbenzene, xylenes (BTEX) and petroleum hydrocarbon fractions F1-F4 (PHC F1-F4). If groundwater is encountered and there is evidence of soil contamination, impact to groundwater quality must also be considered. Groundwater analysis shall include as a minimum BTEX and PHC F1-F4.
- The findings of the assessment must be documented in a report that presents the analytical results of all laboratory testing and include a scaled site plan illustrating the location of the storage tanks in relation to the boreholes drilled during the program. The report must also provide a concise opinion with consideration of applicable provincial laws and restoration guidelines as to whether environmental conditions are suitable for FSP to favourably consider the variance.
- All reports must be prepared and signed by a Qualified Person as outlined in the Ministry of Environment Regulation 153/04.

If environmental conditions around the subject tank(s) do not meet the applicable full-depth, Ministry of Environment Site Condition Standards, FSP will not approve a variance application. In such a situation the following options are available in order to support the application and allow FSP to consider approval of the variance:

- Restoring of the environment proximal to the subject tank to applicable full-depth criteria and providing confirmation of such to FSP in the form of a technical report;
- Submission of a Record of Site Condition (RSC), if applicable, to Ministry of Environment (MOE) with a copy of the acknowledgement from MOE provided to FSP; or
- Submission of a Risk Assessment (RA) to MOE with a copy of the approval from MOE provided to FSP.

Additional Information:

1. Variance to Abandon an Out of Use Fuel Oil Tank:

- If the variance is to abandon an out of use fuel storage tank in place, the report must provide an explanation for the constraint to removal of the tank.
- If a variance is granted, the TSSA requires all product to be removed from the tank(s), the tank(s) must be cleaned and purged and filled with concrete to protect against future collapse of the tank(s) and the fill and vent pipes must be removed.
- Tank(s) cannot be filled with sand.

2. Variance to Re-use Out of Service Tanks

- Refer to Fuels Safety Advisory FS – 081-06 R2 "Guidelines for Re-Use of Underground Single-Wall Tanks".

Should you have any additional questions or comments, please contact Stephen Hoyle at (416) 734-3444.