



ENVIRONMENTAL HEALTH
HAZARDOUS MATERIALS
HOUSING

COUNTY OF SACRAMENTO

ENVIRONMENTAL MANAGEMENT DEPARTMENT
Mel Knight, Acting Director

Mr. Rudy Caparros
TGO Technologies
3450 Regional Parkway, Suite C
Santa Rosa, CA 95403

Subject: Evaluation of Total Containment Vessel

Dear Mr. Caparros:

I have completed my evaluation of the TGO Technologies' Total Containment Vessel. I reviewed the situation of the TGO Vessel with a one ton container of toxic gas connected on-line within the TGO Vessel. An unanticipated release of toxic gas from the one ton container, by any means, will be contained within the TGO Vessel. The TGO Vessel is designed so that the remaining toxic gas from the one ton container and the TGO Vessel can be extracted for use outside of the TGO Vessel. This is done without having to open up the TGO Vessel and cause a release to the surrounding atmosphere.

There are shut-off valves on the TGO Vessel to stop the flow of toxic gas from the interior of the TGO Vessel, and hence the one ton container, if a toxic gas release external to the TGO Vessel were sensed to have occurred. Such a release will be small since the toxic gas line external to the TGO Vessel is extracting toxic gas under vacuum conditions. A break in that external feed line will cause the toxic gas flow to cease due to the loss of the vacuum suction on the line.

The question arose as to whether the TGO Vessel with a one ton container of toxic gas connected on-line within the TGO Vessel can be considered as a passive device for the Worst Case scenario to be done for the Federal Risk Management Plan (RMP). This means that shut-off valves or other active components in the TGO system cannot be considered to function. As noted earlier, even with the TGO system active components non-functional, there will be no release to the surrounding atmosphere unless the toxic gas line external to the TGO Vessel were to break. Even then, the maximum toxic gas release will be limited to the amount in the line at the time of the break.

There is a short period of vulnerability when the one ton container is being loaded into the TGO Vessel and connected on-line. This is a normal operational procedure during which a possibility of a leak and release could occur. The operator is anticipating such an event and is relatively prepared for its occurrence. There can be no release when the one ton container is being disconnected from on-line and unloaded from the TGO Vessel due to the fact that the TGO Vessel is not opened until the one ton container is empty of toxic gas. The TGO Vessel is in use when the one ton container of toxic gas is connected on-line within the TGO Vessel and the TGO Vessel is closed and sealed. The period of vulnerability is a small fraction of the total operational time of the TGO Vessel. The consideration of the TGO Vessel for the Worst Case is when the TGO Vessel is in use acting as an enclosure.

The RMP Offsite Consequence Analysis Guidance document states that the Worst Case scenario can consider the mitigation factor provided by an enclosure in which a toxic gas container resides. The TGO Vessel being an enclosure for the one ton container of toxic gas can then be considered as a mitigating factor for the Worst Case scenario. The mitigation factor has a numerical value of zero in that none of the toxic gas release within the TGO Vessel enclosure is released from the enclosure to the surrounding atmosphere.

Based upon these considerations, it is concluded that the TGO Vessel can be considered as a passive device in the Worst Case scenario for the RMP .

The TGO Vessel is considered in its normal functional operational mode for the Alternative Release scenarios for the RMP .

Sincerely,

Ronald J. Baschiere
RMP Program Manager

RJB/sg