

## **Closing the Loop on Existing Demil Technologies: Solving Emissions & Waste Challenges**

There are demilitarization technologies such as Molten Salt, Water Jet Cutting, Pyrolysis, Washouts, Incineration, and EDS/Nutralent for CWA's that deal effectively with demilitarization issues of primary concern. However, they face limitations in process applications due to the generation of contaminated liquid and air emissions that may have lethal, toxic, or explosive characteristics. The existing technology gaps need to be filled in order to provide complete, pure solutions.

In addition, there are external constraints that affect the ability to achieve a full demilitarization process solution. These constraints include: undesirable environmental emissions (SO<sub>x</sub>, NO<sub>x</sub>), generation and disposal of waste (ie., spent carbon), the use of undesirable chemicals, operator safety, community acceptance (NIMBY), life-cycle cost, and mobility.

This paper will discuss methods of closing the loop on existing demilitarization solutions, and solving the external constraints. Technologies and process solutions that are available to treat the off-gas stream, and purify wash waters for reuse without generating waste, are proven solutions that are cost effective, highly reliable, safe, and minimize greenhouse gas emissions.

This paper will include such examples of installations currently in use for demilitarization applications.