



SAFETY ALERT

Use of Chemicals Associated with IR Machines

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Subject: Safety Alert; Chemicals used with IR Machines – **Proper Ventilation**

Apache's offshore production operations personnel regularly use IR Machines to monitor discharged produced water. These machines require the use of two types of chemicals; solvents (i.e. Hexane) and Hydrochloric Acid Solution. **The purpose of this Safety Alert is to raise awareness regarding the ventilation requirements associated with these chemicals.**

Operators using these machines and the associated chemicals should confirm that the appropriate MSDS for each chemical is located in the MSDS Book at the facility. Operators must also be aware that these two types of chemicals generally have a ventilation requirement. For example, Fisher Scientific's MSDS on Hexane states the following:

“ 8. Exposure Controls / Personal Protection

Engineering Measures: Use only under a chemical fume hood. Use explosion-proof electrical/ventilating/lighting/equipment. Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location. ”

Apache's Policy regarding the inhalation hazard of chemicals can be found in Apache Safe Work Practice (SWP), Section E, Chapter 5 – Respiratory Protection. Specifically, the Respiratory Protection SWP contains the following:

“ Responsibilities

The Person In Charge (PIC), Lead Operator, or Consultant is responsible for:

- **Evaluating the need for the use of engineering controls where feasible. Such controls may include:**
 - **Local exhaust or general dilution ventilation ”**

Chemicals should only be used in accordance with the information contained in the MSDS. Not only should Operator's use all PPE that is listed within the MSDS when handling a chemical, but they **should also comply with the ventilation requirements to avoid inhalation exposure in excess of the PEL/TWA.**

Operators should also avoid working with these chemicals in non-ventilated locations that are regularly occupied, even when using a respirator (i.e. Operator's Control Room). The reason for this guidance is that elevated atmospheric concentrations of these chemicals may still be present in these non-ventilated areas for an extended period of time after the Operator has stored/disposed of the chemicals and removed their respirator.

Further, even when Operators are handling these chemicals in a ventilated area, consideration should still be given to the need for a respirator. Considering these chemicals are used in small quantities; if the work area is experiencing positive air movement (i.e. wind), the ventilation is likely to ensure that Operators will not be exposed to the PEL/TWA concentration via inhalation. However, in instances where ventilation doesn't meet this standard, it may be advisable to wear a respirator. Anyone needing guidance on this topic should contact their EHS Specialist for assistance.