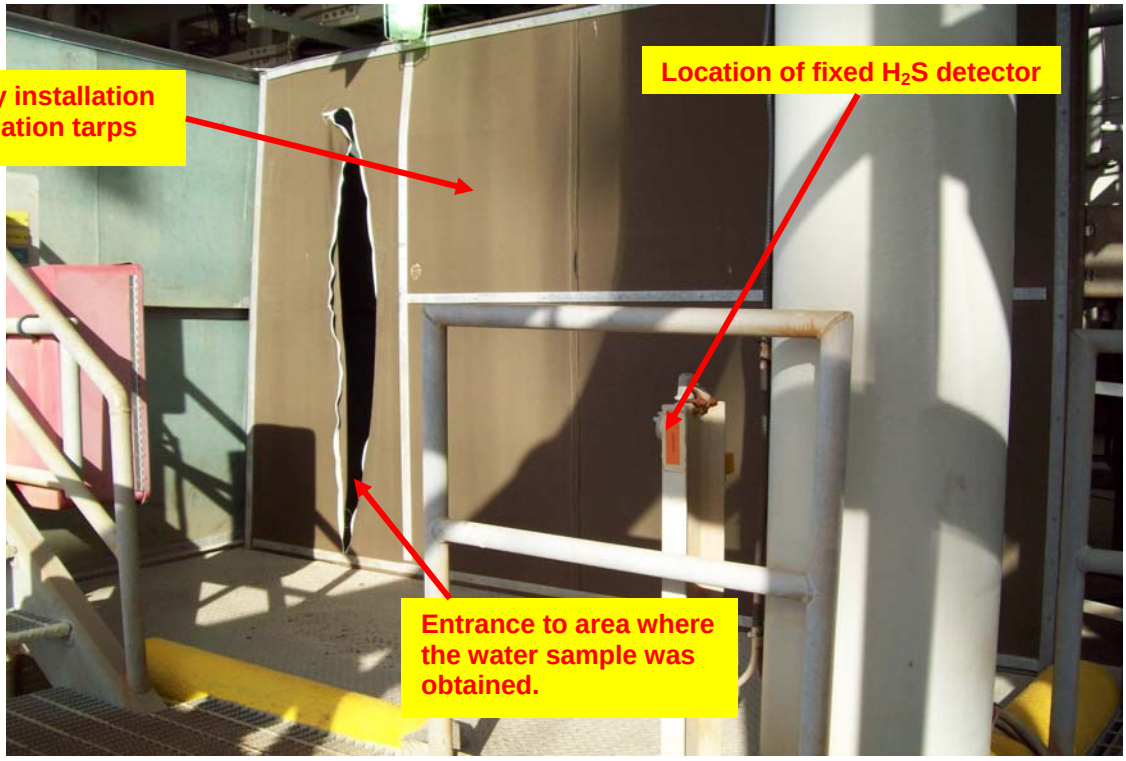
INJURY ALERT

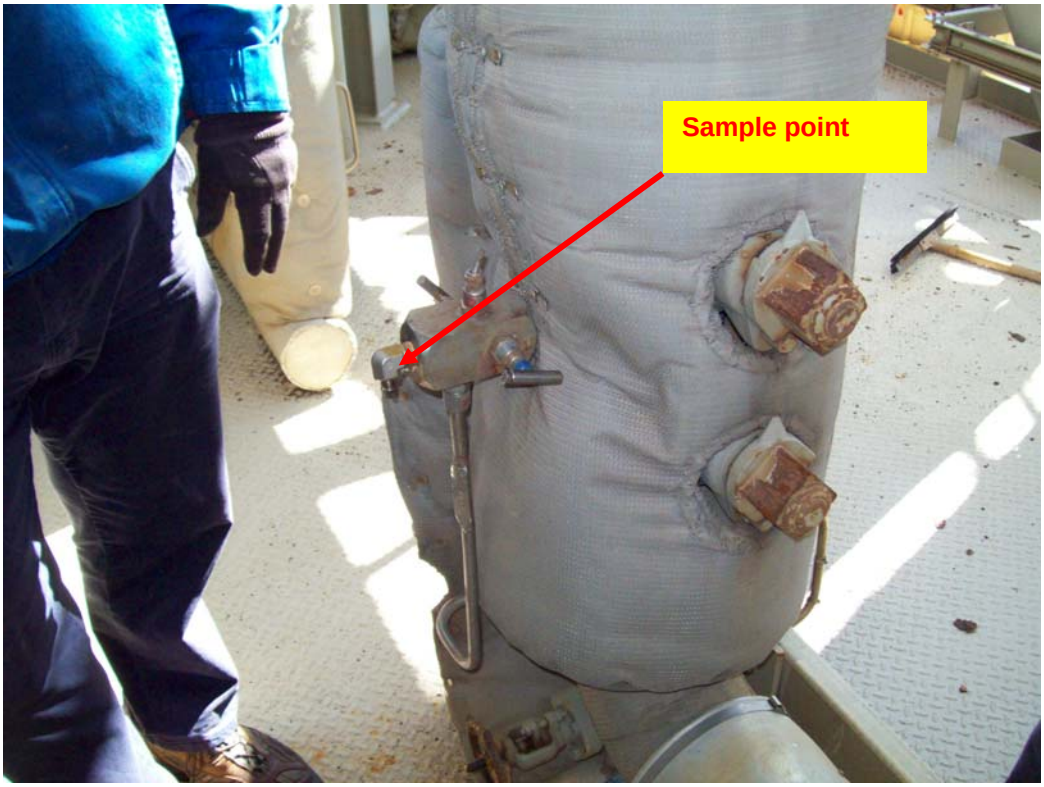
Title: Employee Overcome by Hydrogen Sulfide

IA.2008-01

Injury Description:	An employee was overcome by hydrogen sulfide (H_2S) and unresponsive for a short period.
Incident Details:	The employee was obtaining a water sample from a free water knock-out vessel (FWKO) and was overcome by H_2S, resulting in momentary loss of consciousness. The collection area was enclosed by winter tarps allowing for poor ventilation and the accumulation of gas. After a preliminary assessment of the individual, the employee was transported to a medical facility for observation.
Causes: (based on Pro-Safe - CBI definitions)	**1.0 BJSA** 1.2 BJSA Current – Does the BJSA reflect the current working conditions? 1.3 BJSA Reviewed/Updated - Has the person(s) written or reviewed a BJSA specific to the task and work environment? 1.6 Hazards are addressed – Are all hazards identified and addressed with safe procedures? 1.7 LMRA - StepBack 5X5 Process - Was the Stepback 5x5 process utilized to identify hazards associated with this task when conditions (i.e. winter tarps) changed before, during, or after the task was performed? **5.0 Personal Protective Equipment** 5.1 Protecting Breathing - Is respiratory protection used where respiratory hazards exist in the workplace?
Prevention Focus Items: (Taproot Technique Utilized)	1. Develop CAS procedures for sample collection (liquid and gas) that require the use of proper PPE (SAR/SCBA). ➢ Review Interim Directive 2008.01 with all personnel ➢ Are tasks being performed without needed procedures? 2. Ensure workers receive instruction in proper PPE use during H_2S operations. 3. Train workers on proper placement of personal gas monitors. 4. Consider placement of temporary wind breaks, etc. to prevent blocking of detection devices. 5. Review the Upstream Safety Manual, Section 8, Bonding & grounding for sample containers on page 8-27


Temporary installation of winterization tarps
Location of fixed H_2S detector
Entrance to area where the water sample was obtained.


Facing toward the opening in the winterization tarps
Sample point & container


Sample point