

Project Name: **Confined Space Incident Investigation**

Site: Off Shore

Project Description:

EIS supplied a CIH to assist with an incident investigation of a near miss. Onboard the rig a planned confined space entry took place starting at approximately 0030 on November xx, 2010. This was the third tank entry to be conducted using level B (SAR) PPE within the week. A confined space entry plan (job safety analysis –JSA) had been created for the work task. This was the first entry for the night shift team, who were comprised of five contractors. During the entry a series of unplanned situations / events took place, they included:

- 1) Initial confusion as to the specific task sequence specified by the JSA. The confusion centered on when to put into service the aft emergency air manifold.
- 2) Misinterpreting the JSA initial instructions and step 9 (personnel connecting to the second airline manifold system).
- 3) Additional airlines were supplied and were connected to the existing lines.
- 4) Additional airlines were not locked with a zip-tie.
- 5) After the additional lines were added ten disconnects took place amongst the three personnel working within the tank.
- 6) Disconnects required the three workers in the tank to temporarily switch to emergency reserve cylinders.
- 7) One worker's 5-minutes emergency cylinder contained at least 950 ppm carbon monoxide.
- 8) After the 5-minutes emergency cylinder was found to be contaminated the job was not immediately stopped.

The CIH lead an intensive four day effort to complete and document the investigation.

The completed report listed:

The Report Identified:

- 1) Significant contributing factors to the incident
- 2) The root cause of the incident
- 3) The root cause of the exposure
- 4) The principle corrective actions to address the root cause of the incident
- 5) Additional suggested corrective actions