JRM 01-05 (09/24/01)

SAFETY GRAM

Safety in the Workplace

Note: Safety Grams are used to communicate hazards or actual incidents which have occurred within the Company or other industries in an effort to prevent similar occurrences at McDermott. *Please post and review with all employees*.

WHAT HAPPENED?

PIPE STACKING FATALITY

On August 10, 2001 a rigging crew (made up of one crane operator and two riggers) was assigned to remove several 24 inch diameter steel tubulars from a random stack in the warehouse stockyard of the JRM Dubai fabrication facility. The tubulars were originally stacked and chocked as shown in Stage-A of the attached diagram. During the operation, the #3 tubular on the bottom layer needed to be retrieved. To gain access, the crew began rearranging the tubulars as shown in Stages B and C. The two riggers were positioned on each end of the stack to assist the crane operator with hook-up and to guide the tubulars out with tag lines. Once the #3 tubular was removed as shown in Stage D, an open slot with two unstable stacks was created between #4 and #5. For reasons that cannot be verified, one of the riggers then stepped into the slot, although it is believed he was either placing chocks or following the tag line on the #3 tubular being removed. At that time, the force of tubular #0 located on the top row, pushed down on #4 causing it to roll toward #5. The rigger was caught between the two pipes and received severe crushing injuries to his pelvic area. Emergency crews transported him to the local hospital were he later died from his sustained injuries.

WHAT CAN BE LEARNED FROM THIS INCIDENT?

- The stack of tubulars was not properly chocked and secured against movement between each tubular on the bottom layer when they were originally unloaded.
- The warehouse stockyard is not an area of regular production activity and was not regularly inspected to ensure proper storage of tubulars.
- One the day of the incident, the entire rigging crew (including the three men involved in the incident) met to conduct a pre-shift toolbox meeting and JSA, but the JSA only covered work being done at a project work site in another part of the yard to perform a main deck wing stacking. At that time, this work was considered higher risk while the work in the stockyard was considered routine.
- The best industry practice for removing a tubular from the bottom layer of a stack is to first remove all pipe from the upper layers. This was not a regular practice at the yard. Instead the routine practice was similar to that performed on the day of the incident which allows the tubulars to shift into position.

LESSONS LEARNED:

- All areas must ensure there are detailed rigging procedures coupled with a comprehensive rigging training program developed and implemented to cover best industry practices of handling, stacking, and storage of materials.
- Existing field safety assessment programs must be reviewed to insure all areas of the yard or vessels are covered including non-production areas such as warehouses and stockyards.
- All areas must ensure through proper training that employees (particularly supervisors) know how to conduct task risk assessments/JSA's of all their daily jobs including inspections of work areas as part of the JSA and identification of adequate controls for lowering risk to as low as reasonably practicable.
- As always, each area's management must stress to its employees the company's expectations of stopping unsafe work and their intention of holding employees accountable when they do not.