CATASTROPHE

October 30, 2006

On the evening of October 30, 2006, the combined crews (day and night shift) of a flow testing company were working at a new natural gas well site. Shift change was at 11:00 PM on this particular evening. The crews were working two 12-hour tours. This was the 7th day that this company had been performing flow testing on this location. This company was contracted by a major natural gas company to provide a process called 4 phase separation after the well had been fracked. Normally the shift change takes place at the on site office/change shack. On this particular night when the relief crew showed up and was ready for work the other crew was still in the separator/dehi building trying to adjust pressure settings with the Fisher Valve. Seeing that the other crew was still working the relief crew proceeded to the separator/dehi building to lend a hand.

Prior to the accident the Senior Operator/Night Shift Supervisor and his crew had been working with the Fisher Control Valve to try to adjust the pressure to the separator so it would automatically dump. Due to high down stream line pressures there was not enough pressure differential between the well pressure and the down stream line pressure to allow the separator to dump automatically. For the last 1.5 hours prior to shift change the supervisor had been working to regulate the pressures by adjusting the Fisher Control valve. Three members of the relief crew had dressed out and proceeded to the separator/dehi building to lend a hand and relieve the on duty crew. Four members of the combined crews were in the separator/dehi building. The supervisor of the crew being relieved was adjusting the Fisher Control Valve and three other crewmembers were watching him. A fifth crew member had just exited the West door of the building to check the well head pressure at the tree. The supervisor had finished his adjustments and he and the other three crew members were proceeding toward the East door of the building on their way to the office/change shack. One of the crew members remembered hearing a faint undistinguishable noise coming from the direction of the two men in front of him. All four men were near the West end of the building with the supervisor being about midway to the East door. One of the crew members remembers that immediately after hearing the faint noise he saw a blue flame which turned to white and then became an orange fireball. An explosion and flash fire ensued at this point. According to interviews and site evidence the fire ignited about waist level in the area of the Fisher valve and the Texsteam methanol pump. The supervisor received the fire and blast concussion to his back and the other three crew members received burns to their face and hands. The relief crew supervisor was just pulling onto the location at this time and stated that he heard the explosion with sparks and flames shooting out of the building. Another crew member who was standing midway to the tree also heard the explosion, ducked and turned to see a ball of flame coming out of the building. He also observed three of the crew exiting out the West door of the building, the same door that he had exited the building a few minutes previously. He then saw his supervisor exit the East door. None of the men were on fire at this time but all were shaken and in shock. The supervisor and one of the crew ran to the well and shut the well in to prevent further fire and possible involvement with the well itself. The two uninjured crew members then helped the injured crew members to the office/change shack and proceeded to make calls for help. The supervisor was the least injured of the crew and was treated at the local clinic and released. The other three crew members were transported to the Salt Lake City Burn Center for treatment.

All crew members have recovered at this time and have returned to work.

Significant Factors:

- First line supervisors were not following and enforcing established company policies.
- A hazard assessment of the operation had not been conducted.
- Natural gas from actuated equipment was not ventilated to the outside of the building.
- Ventilation was not being maintained in the building.
- Basic safety and hazard awareness training was not provided to employees.
- Hazard communication training was not provided to employees.
- Company had not provided any means to monitor possible hazardous gas levels/environment in the building.
- Noncompliant electrical devices were operating in the building.
- Company did not anticipate the needs of employees or equipment operating in a cold environment.

Recommendations :

- A hazard assessment of entire operation needs to be conducted.
- First line supervisors need to follow and enforce established company policies.
- Use equipment per manufacturer's recommendations.
- Make sure all natural gas actuated equipment is properly vented to the outside.
- Modify building to achieve maximum possible ventilation, that can't be altered by employees.
- Company conducts basic safety and hazard awareness training for all current and newly hired employees.
- Company needs to conduct hazard communication training for all current and newly hired employees.
- Company needs to incorporate the use of portable and fixed LEL monitors with visual warning lights for the site and make sure that employees are properly trained in there operation and calibration.
- Standard operating procedures (SOP's) need to be developed to insure that equipment is properly maintained and building remains well ventilated at all times.
- Company needs to ensure only intrinsically safe equipment is used in facility.
- Ensure that a detailed Job Safety Analysis (JSA) is done prior to starting any job and when the task or plans change.
- Brief all employees on the facts and circumstances of this accident.