

Safety Alert 305
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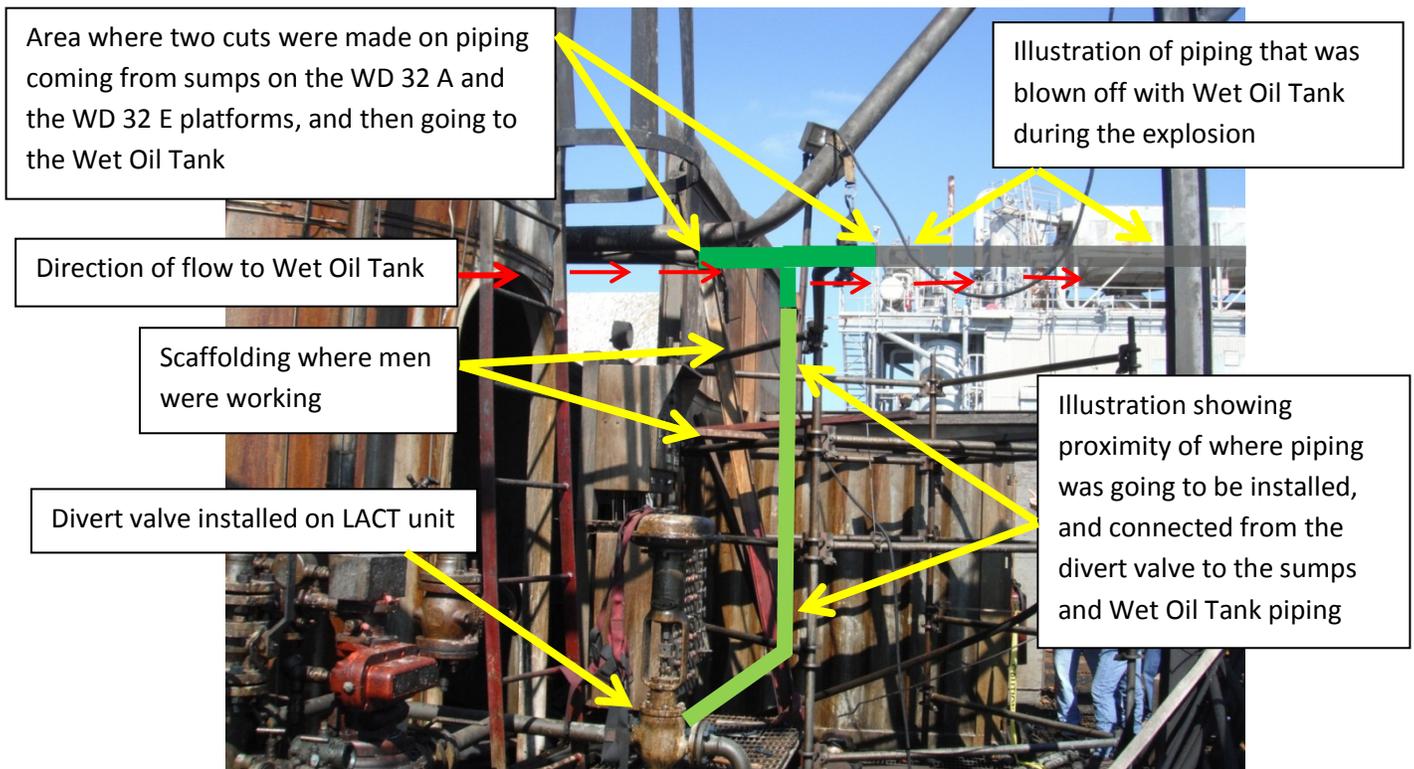
Explosion, Fire and Fatalities West Delta Block 32 Platform E

On November 16, 2012, Black Elk Energy Offshore Operations, LLC (BEE) had contracted Compass Engineering & Consultants, LLC (Compass) and Grand Isle Shipyard, Inc. (GIS) to conduct construction work on West Delta (WD) 32 E platform. GIS subcontracted some of their work to DNR Offshore Crewing Services Inc. (DNR). Wood Group Production Services Network (WGPSN) was contracted by Black Elk to ensure safety of the facility and manage production operations. The work included installing piping and a divert valve coming from the LACT Charge Pumps going to the discharge piping from the sump to the wet oil tank. The GIS/DNR workers made two cuts into the piping with a pneumatic saw. In the course of installing the piping, a welder on top of scaffolding began tack welding a flange onto the sump piping. When the welder struck his arc and began welding, hydrocarbon vapors from the wet oil tank ignited causing the first explosion. The wet oil tank and the two dry oil tanks all exploded one after the other within seconds between the explosions. These explosions and the resulting fires were the cause of the three fatalities and multiple injuries. The fire was extinguished by the WGPSN Operations crew and several work boats in the area.

Contributing Causes

BEE, Compass, GIS/DNR, and WGPSN did not follow BEE Hot Work Policy:

- The designated person-in-charge and the welders did not inspect the area in which the work was to be performed for potential fire and explosion hazards;
- The area was not checked to determine that it was safe to proceed with the welding or burning operation, and the designated person-in-charge did not issue written authorization for the work using the company's Welding and Burning Authorization Form;
- BEE, Compass, GIS/DNR and WGPSN allowed "hot work" to be performed on piping connected to vessels that contained a flammable substance, but did not isolate or render the vessels or piping inert, and determined to be safe for welding or burning by the designated person-in-charge;
- There was no one properly designated as a Fire Watch in all of the areas where welding and burning operations were in progress;
- The Fire Watch did not have a portable gas detector in use;
- There was a lack of supervision by BEE, Compass, GIS/DNR, and WGPSN. BEE needed more oversight to make sure Safe Work Practices were being followed;
- BEE, Compass, GIS/DNR, and WGPSN were not properly involved in the planning and execution of the "hot work" being performed. No one checked to make sure the Hot Work Permit was issued correctly, or the white copy returned at the end of each day;
- WGPSN did not properly engage in the proper management of the production facility. WGPSN PIC or the other WGPSN Operators did not take ownership of the facility to make sure construction workers were engaged in safe activities on the platform.



It is recommended that operators conduct a safety stand down for all of its operations that concisely describes the fatal accident, and informs its personnel to the following:

- Operators should be aware of the need to properly communicate all operations, especially modifications to its facilities to examine potential hazards that can negatively affect personnel, equipment or the environment;
- Operators should ensure a precise chain of command for any work involving contractors on its facilities;
- Operators should require all operations and contract personnel that are involved in “hot work” to attend and participate in a pre-work meeting. The meeting should involve the initiating of the Hot Work Permit and should insure that all hazards are identified, and policies, regulations, contingencies and communications are properly implemented;
- Operators should require all operations and contract personnel to attend and participate in a pre-job JSA meeting, and should ensure that the supervisors of all phases of the work know and understand the complete job scope;
- Operators, contractors including sub-contractors, and service companies should review their methods of initiating a “stop-work” event to ensure that the system adopted will actually be effective under job conditions;
- Operators and all service companies and contractors should consider emphasizing in their training that inadequate, incomplete communications remains one of the most common causes of major accidents, especially when performing “hot work”.

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A Safety Alert is a tool used by BSEE to inform the offshore oil and gas industry of the circumstances surrounding an accident or a near miss. It also contains recommendations that should help prevent the recurrence of such an incident on the Outer Continental Shelf.