BP'S PROCEDURAL SPILLS

Another thing that happened while I was tromping around one of the most beautiful places on earth (Yosemite) is that the BP drilling rig that had an explosion and fire last week sunk and oil has started to spill into the Gulf (as this dramatic NASA picture makes clear). In the last day, the Minerals Management Service (one of the federal agencies that regulate offshore drilling) has released documents showing that BP was cited in 2007 for training problems related to a similar problem in 2002.

> BP Exploration & Production, which owns the deep water rig that exploded last week in the Gulf of Mexico, was cited in 2007 for inadequately training employees in well control, according to the US Minerals Management Service.
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> The conditions of the training are the same as those suspected in the possible blowout aboard the TransOcean Deepwater Horizon, which left 11 workers missing and presumed dead.
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> MMS slapped BP with $41,000 in fines in October 2007 after a series of violations related to a near-blowout five years earlier. In November 2002, the Ocean King rig, operated by Diamond Offshore Drilling, in the Gulf had to evacuate all 65 of its workers for nearly two days after operators detected a dangerous rise in gas pressure. The rig, which had been drilling at a depth of more than 5,000 feet, didn't resume work for nearly a week, according to the MMS report.
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> Unlike last week's disaster, workers were able to keep the well from leaking by using cement and mud to plug the

> well. The same subcontractor, Diamond Offshore, was also used when BP was fined $25,000 in 2004 for bypassing a gas detection system while drilling. A BP spokesman in London says the company still uses Diamond Offshore as a contractor.
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> KEY SAFETY PROCEDURES
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> In the 2002 incident, the MMS said that BP and Diamond Offshore were unaware that some of the key safety procedures they used to initially stop the dangerous rise in pressure could have contributed to a blowout. The MMS cited BP for what it called “no formal procedures” and “no written guidelines” to follow in case of an emergency. MMS also cited BP and contract workers in the incident for what they said was a “lack of knowledge of the system, and lack of pre-event planning and procedures.”

Let me give some background on this. In the 1990s, I worked for a company that consulted on safety procedures for the oil industry (a writer who reported to me did some procedures for one Amoco refinery, which was subsequently purchased by BP; we bid on, but did not get, a job that included BP; and we did some procedures for a drilling entity that has since been purchased by Halliburton, which is involved here as well). The way in which the government forces oil companies to operate in ways which minimize the safety and environmental danger of inherently dangerous processes is to ask (either nicely or by mandating) a set of procedures to cover both normal and emergency procedures. It’s a way of setting up documented procedures which can be trained and audited; the procedures allow the government to check whether the operators are operating as safely as possible. Just as importantly, it’s a way of proactively making sure that in case something does go badly wrong, the operator in question—and more importantly,

the workers actually doing the work—will have a way of figuring out what to do quickly enough so as to minimize the safety and environmental damage.

MMS is saying that in 2002, BP not only had none of these procedures, but it hadn't trained the workers and contractors on the rig, and as a result, the workers did the wrong thing to contain the damage. BP got lucky in 2002, because doing the wrong thing did not exacerbate the problems.

As a reminder, subsequent to that 2002 drilling rig problem, BP had a huge disaster in its Texas City refinery in March 2005 in which 15 people were killed and 170 were injured. BP's own assessment of the accident found training and procedures to be one of four key factors in the accident. While it had appropriate procedures for the unit in question, it didn't make sure the guys on the line were trained on or used them.

> Despite the startup procedure not being fully updated, the procedure is generally of high quality, addressing all the safety warnings and key process control steps in detail. Many steps in the procedure were not followed, and the fact that the procedures were not updated indicates that they were not seen as important documents. Supervisors and Superintendents did not verify that the procedures were available and correct or being followed. Poor handover procedures meant that risks were not discussed and the correct procedures were not available to the board operator. In general, employees were unaware of the risks of operating without the procedures, considering this to be a routine operation needing little evaluation or thought. As a result of this, the Control of Work process broke down.
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> [snip]

> There was a lack of rigor and follow through in the area of training. Records showed incomplete training and there was little verification that all required training was occurring. The lack of gun drills to reinforce practical knowledge meant that operators' theoretical knowledge was not complete and rarely witnessed. The heavy reliance on computer based training (typically done by individuals on their own) appears to limit the overall effectiveness of the training program.

In other words, BP has a recent history of blowing off the procedures and training that are one key to emergency management in this industry (though FWIW, I believed BP was better than most of the industry when I was working in it in the early 1990s). And, as the HuffPo reports, some the same companies involved in last week's accident opposed MMS mandating this kind of procedure and training process just last year.

> BP and TransOcean have also aggressively opposed new safety regulations proposed last year by a federal agency that oversees offshore drilling — which were prompted by a study that found many accidents in the industry.
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> There were 41 deaths and 302 injuries out of 1,443 incidents from 2001 to 2007, according to the study conducted by the Minerals and Management Service of the Interior Department. In addition, the agency issued 150 reports over incidents of non-compliant production and drilling operations and determined there was "no discernible improvement by industry over the past 7 years."
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> As a result, the agency proposed taking a more proactive stance by requiring operators to have their safety program audited at least once every three years — previously, the industry's self-

> managed safety program was voluntary for operators. The agency estimated that the proposed rule, which has yet to take effect, would cost operators about $4.59 million in startup costs and $8 million in annual recurring costs.
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> The industry has launched a coordinated campaign to attack those regulations, with over 100 letters objecting to the regulations — in a September 14, 2009 letter to MMS, BP vice president for Gulf of Mexico production, Richard Morrison, wrote that "we are not supportive of the extensive, prescriptive regulations as proposed in this rule," arguing that the voluntary programs "have been and continue to be very successful," along with a list of very specific objections to the wording of the proposed regulations.

While some of the specific complaints in BP's letter make good sense (for example, making electronic documentation sufficient for procedures may lead to such documentation be better accessible in case of an emergency), it appears BP specifically wanted to limit its own responsibility for the procedures and hazard analysis of its contractors. In addition, BP resisted sharing audit information with MMS.

Now, we don't yet know what caused this explosion and—just as importantly—what has led to the failure to limit the damage from the explosion. But BP's recent history shows that it hasn't made sure that the operators on its facilities are prepared to deal with emergencies like last week's explosion.