



integrity issues. And all the necessary tooling was not yet available. For example, the guide frame to safely install another BOP on top of the *Deepwater Horizon* BOP was not available in early May.<sup>41</sup> Additionally, efforts to understand and mitigate potential hydrate formation during installation was underway.<sup>42</sup> Some work that had been undertaken for the BOP-on-BOP option with the *Discoverer Enterprise* had to be revised for the *DDH*, but that progressed in parallel with the ongoing engineering efforts.<sup>43</sup>

level of oil discharge from the Well. A procedure for riser removal was not approved until May 17.<sup>47</sup> Another necessary step for the BOP-on-BOP procedure would have

the *Enterprise* choke and kill lines would be severed to be converted to using the well intervention. It is possible that the lines could have been severed, but there was no plan to do so and no modifications were undertaken. Severing the choke and kill lines would remove the ability to circulate through the *Enterprise* BOP. Furthermore, the planned procedure necessarily called for pumping glycol through the choke and kill lines to prevent hydrates.<sup>46</sup> This hydrate mitigation technique would not be possible under Mr. Perkin's suggested venting option. Mr. Perkin's option would have left open a risk of hydrate formation that could have caused the BOP-on-BOP procedure to fail.

In addition, as of "early May," the Unified Command was still working on a method of cutting the *Deepwater Horizon* riser, and assessing the impact of such a step on the level of oil discharge from the Well. A procedure for riser removal was not approved until May 17.<sup>47</sup> Another necessary step for the BOP-on-BOP procedure would have been removal of the LMRP. The procedure for LMRP removal was not finalized and approved by the Unified Command until May 25th.<sup>48</sup> In addition, Mr. Perkin's claim that the *Enterprise* BOP was ready for use overlooks the fact that as of "early May," there was no approved procedure for use of the *Enterprise* BOP-on-BOP. The

<sup>41</sup> WW-MDL-00004752.

<sup>42</sup> Deposition Exhibit 5370.

<sup>43</sup> J. Wellings Tr. at 446-447 (explaining that the majority of the work to be redone "would not have affected the critical path of actually installing the BOP").

<sup>44</sup> Perkin Report at 17.

<sup>45</sup> The valve systems on the *Deepwater Horizon* BOP stack were not able to be controlled until its control pod had been repaired and reinstalled on the *Deepwater Horizon* LMRP.

<sup>46</sup> BP-HZN-2179MDL02405680.

<sup>47</sup> HCG274-021966.

<sup>48</sup> BP-HZN-2179MDL06497081. The contingency procedure for cutting drill pipe sticking out of the *Deepwater Horizon* BOP after the removal was approved May 27. BP-HZN-2179MDL06482998.