5. CONTRIBUTORY FACTORS

Contributory Factor #1

The accident site slope ranged from 42 percent to an extreme of 94 percent with adjacent side slopes between 80-90 percent. (Findings #16 and #18)

Contributory Factor #2

Coarse textured sands and loamy sands, similar to the disturbed soil and decomposed granite parent material at the roll over site, has an angle of repose (naturally slough) of about 65 percent and are held on steeper slopes by roots and other physical binding agents. (Findings #2, #17, and #18)

Contributory Factor #3

The accident site slopes were at or near the operating limits (100 percent) of a Caterpillar D6N-XL hydraulic system for “Extreme Slope Operation”. (Findings #2, #16, #17, and #18)

Contributory Factor #4

The firefighting community’s expectation and toleration of firefighters to accept higher risks while maintaining a “can do” attitude, regardless of the circumstances and urgency of the situation coupled with the relationship between HFEO #1 and HFEO #2, contributed to their decision to extract the stuck bulldozer without waiting for additional resources.. (Finding #5, #6, and #7)

Contributory Factor #5

Unclear chain and unity of command allowed HFEO #1 and #2 to independently make the decision regarding the attempted extraction of D4645. (Findings #19, #20, #21, #22, and #23)