

Anatomic and Forensic Pathology Consultants
1400 South Main - Suite 508
Fort Worth, Texas 76104

1 March 2002

Mr. John M. Padilla
Solar & Associates
2800 Post Oak Boulevard
Suite 6300
Houston, Texas 77056

Re: Presas, et al v Driltech Mission, L.L.C.

At your request, I have reviewed the autopsy findings and microscopic slides of the autopsy of Felipe Presas, Sr. along with records of his emergent transport to and stay at Arlington Medical Center on 16 January 2000. Additionally I have reviewed journal articles including but not limited to those cited below as well as depositions of Javier Garcia, Pham Hua, Allen Holbert, Ron Pelton, Robert Rainwater, Wayne Viall and Faisal Yousef.

Mr. Presas, after experiencing flu like symptoms for some ten days to two weeks, was described as very ill on Friday, 14 January. He stated that, on Sunday 16 January, he was sick and later that day called for an ambulance shortly before 6:00 pm. His primary complaint was of hemoptysis and persistent cough. He was taken to Arlington Medical Center where an admission chest radiograph revealed pulmonary infiltrates consistent with pneumonia; an admission diagnosis was of pneumonia and sepsis. Despite aggressive pulmonary therapy and administration of multiple antibiotics, he deteriorated rapidly and was pronounced dead that same day at 11:24 pm.

I performed the autopsy examination on 17 January. There was a gross finding of massive pulmonary hemorrhage. Microscopic examination of lung tissue revealed necrotizing bronchitis and pneumonia. The profound inflammation and necrosis of lung tissue resulted in rupture of pulmonary and bronchial arteries with fatal pulmonary hemorrhage. Such necrotizing pneumonia has appeared in past autopsy cases performed by or reviewed by me primarily associated with bacterial lung infections, most often with cultures positive for mixtures of bacteria or predominately *Klebsiella*, *Pseudomonas*, or *Proteus* species. The most striking examples of such necrotizing infection have been, in my experience, by *Klebsiella*. In several articles in occupational medical literature, it is noted that many microorganisms have been isolated from metalworking fluids, including species of *Klebsiella*, *Pseudomonas*, *Aeromonas*, *Proteus* and other gram negative bacteria, some gram positive bacteria and several species of fungi, all of which are potential human pathogens. Although these organisms are ubiquitous in nature, particularly in soil and decomposing vegetation and animal remains, human exposure is most



frequently the result of fecal or other biologic contamination of water or foods or acquired as a nosocomial infection (then most often an immunocompromised or debilitated patient). Such infections are very rarely a primary pneumonia.

It is the opinion of this examiner that Mr. Presas died of necrotizing pneumonia and bronchitis, almost certainly due to a bacterial pathogen. It is further the opinion of this examiner that Mr. Presas' primary lung infection implicates an aerosol contaminated by such bacteria as the most likely vector for his infection and that, in his occupation as a machinist operating a metalworking device that used implicated coolant and/or lubricant, his exposure most likely occurred at his place of work.



Marc A. Krouse, MD

References:

- 1) Rossmore, HW, "Antimicrobial Agents for Water-Based Metalworking Fluids", *Journal of Occupational Medicine*, 23:4, 247-254, 1981.
- 2) Kreiss, K and Cox-Ganser, J, "Metalworking Fluid-Associated Hypersensitivity Pneumonitis", *American Journal of Industrial Medicine*, 32:423-432, 1997.
- 3) Zacharisen, MC, Kadambi, AR, Schlueter, DP et al, "The Spectrum of Respiratory Disease Associated with Exposure to Metal Working Fluids", *Journal of Occupational and Environmental Medicine*, 40:7, 640-647.
- 4) Chazal, PM, "Pollution of Modern Metalworking Fluids Containing Biocides by Pathogenic Bacteria in France" (abstract), *European Journal of Epidemiology*, 11:1, 1-7.