I, Richard L. Miller, residing at 70 Trestletree Pl, The Woodlands, TX 77380, declares as follows:

I have been a Certified Safety Professional continuously since 1981 and a Certified Industrial Hygienist continuously since 1979. I was employed by the Occupational Safety and Health Administration from 1974 until 1982 and have performed over 500 on-site evaluations, many involving sampling for toxic substances.

I consider myself experienced regarding sampling and analysis procedures and protocols. I directed the field investigation of a cluster of glioblastoma multiforme in Texas for OSHA in 1979 and co-authored a paper published in the American Journal of Industrial Medicine in 1980. For my work, which involved air sampling, I received an award from the National Institute for Occupational Safety and Health. I am familiar with kriging analysis and have reviewed documents as part of phase I assessments for my client Met Life during the mid-1980s.

I have published six books on nuclear testing: one history (Under The Cloud: The Decades of Nuclear Testing) and five technical books (U.S. Atlas of Nuclear Fallout Volumes 1-5.) I have published two books on Industrial Hygiene, both of which include chapters on sampling and analysis. I have served as an expert witness in state (Texas and Louisiana) and federal cases involving exposure to toxic substances. At my own expense, I have appeared at a RECA hearing in Salt Lake City, UT in 2004, and with Dr. Leif Peterson of Baylor College of Medicine, have co-authored a paper on cancer-fallout correlations in Missouri, Iowa, Illinois, Kansas and Nebraska. I do not consider myself an anti-nuclear activist, and have performed sampling work for IBASCO and Bechtel during construction of the South Texas Nuclear Project.

It is my professional opinion, based upon over 30 years of experience as an Industrial Hygienist, Safety Professional, and fallout researcher, that it is impossible to properly characterize the radioisotopes of the soil merely by evaluating the surface of the soil using radiation detection devices. Here is why:

- 1. Alpha particles, though significant from a health perspective, may be stopped by a thin layer of dust.
- 2. Radioisotopes often produce beta and gamma radiation with a wide spectrum of energy, thus it is difficult or impossible to characterize the radioisotopes found beneath the surface based upon mere analysis of the radiation a meter above the surface.
- 3. Further, there is insufficient research regarding the health effects of many of the potential radioisotopes possibly buried in the soil that may be entrained into a dust cloud as a result of the Divine Strake event. One example: Eu155.
- 4. Should the dust cloud attain an altitude of 10,000 feet, then there is a great likelihood that the material will leave government-controlled territory. Prior examples of such events include the Jangle Sugar and Jangle Uncle shots in the fall of 1951.
- 5. Should the dust cloud leave the site, there is no monitoring system available that can track the cloud as it crosses the continent. If the dust cloud produced by Divine Strake include alpha emitters, the EPA monitoring system---currently staffed by volunteers at only 50 or 60 sites across the country--is ill-prepared to evaluate the debris. For example, none of the sites, to my knowledge, include either alpha detectors or scintillation counters to identify specific radioisotopes in the debris material.
- 6. As a result of both Divine Strake and an inefficient monitoring

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apparatus, entire communities may be exposed to radioisotopes including alpha emitters such as americium-241---an acknowledged carcinogen. 7. Should the Divine Strake dust cloud encounter a thunderstorm, and should that dust cloud include significant amounts of radioisotopes, then there is a strong possibility that communities downwind may be subjected to hot zones such as occurred during the nuclear testing of the 1950s.

It is for this reason that I strongly urge a sampling protocol that would 9 include core samples of Area 16 surface material that would be expected to be entrained in the Divine Strake dust cloud. These core samples should be of sufficient number---at least 100---that would return a p>0.95 probability that the 12 area does NOT include radioisotopes that would present a danger under rainout conditions. Crucial to this protocol is an analysis of the core samples to identify and quantify the amounts of any radioisotope present in the soil of Area 16.

Further, I believe that the criteria for exposure of downwind communities be based not on the background of Area 16---an area less than 6 miles from nuclear tests---but rather on the background of the potential exposure zones downwind.

I declare under penalty of perjury under the laws of the State of Texas, that the foregoing is true to my best knowledge and belief.

Dated this 22nd day of May, 2006.

Richard L. Miller CSP, CIH