TEXAS RADIATION ADVISORY BOARD

OIL & GAS INDUSTRY ADVISORY

Research conducted at the University of Texas School of Public Health at Houston, in cooperation with the Texas Department of State Health Services, has revealed an historical correlation between radiation overexposure events in Texas and domestic oil and gas exploration and production in the state.

Although the current number of radiation overexposure events in the state is very low, the Texas Radiation Advisory Boards (TRAB's) goal is to maintain a high level of radiation safety program performance, even as oil and gas activities continue to increase and potentials for overexposures may increase.

The regulatory requirements and activities implemented by the Radiation Control Program in the mid to late 1980's is credited with lowering the number of overexposures associated with the industrial radiography industry. Radiographer training and certification, improved equipment standards, requiring two radiographic personnel at job sites and a more aggressive inspection program were all components of that regulatory package. Among other changes, a calendar quarter dose limit was eliminated, so that all dose limits were maintained on a yearly basis. This change was considered significant because many of the overexposure events (70-75%) were known to have exceeded the *quarterly* dose limit, but were not above the *annual* limit.

The historical relationship between radiation overexposure events and oil and gas exploration indicated that this work environment warrants special attention from radiation safety professionals and those working in the oil and gas industry. The intent of this advisory is to make the regulated community aware of this historical relationship and encourage licensees in these areas to ensure that adequate controls are in place to prevent future overexposure events as oil and gas production continues to increase in Texas.

Please Be Aware

- Research identifies a historical link between oil & gas exploration and production activities and radiation overexposure events in Texas
- Licensees in these industrial sectors are urged to review safety programs as oil and gas production increases in state. Time pressures have led to increase incidents.
- Reviews should include an assessment of operating procedures and worker training, especially involving the safe handling and use of well logging and radiography sources, as well as the availability and operability of monitoring equipment.
- Emergency response procedures should also be verified, to include ensuring the presence of up-to-date emergency contact information.

References

Maness K, Emery RJ, Casserly D. An analysis of 45 years of reported overexposure incidents in Texas, 1956 to 2001. *Health Phys* 86: 197-202, 2004.

Emery RJ, Valizadeh F, Kennedy V, Shelton A. An analysis of variables influencing the number of radiation overexposure events in Texas 1970 to 2000. *Health Phys* in press 2005.