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TEXAS RADIATION ADVISORY BOARD
WASTE AND INDUSTRIAL COMMITTEE MINUTES
March 10, 2000
Austin, Texas

The meeting was called to order at 9:00 a.m. by Jimmy L. Barker, P.E., Chair, with the following members present: Jack S. Krohmer, Ph.D.; Earl P. Erdmann; Dale E. Klein, Ph.D., P.E.; Troy Marceleno, P.E.; and Connie Rogers. Michael S. Ford, C.H.P. participated by conference call.

The following members were absent: David N. Henkes, M.D. and Odis R. Mack

Guests present: List attached

Bureau of Radiation Control (BRC) staff present: Richard A. Ratliff, P. E.; Doris McCormick; Marilyn Kelso; Ruth E. McBurney, C.H.P.; Cindy Cardwell; Art Tate; Thomas Cardwell; Pete Myers; Phil Shaver; Gary Smith, Ph.D.; Russ Meyer, C.H.P.; and Bill Silva

Texas Natural Resource Conservation Commission (TNRCC) staff present: Alice Rogers, P.E. and Susan Jablonski

Jimmy L. Barker, P.E., Committee Chair, stated that the committee will try to get as much information as possible on various issues regarding storage of low-level radioactive waste (LLRW) and asked for invited testimony.

Richard Ratliff, P.E., Chief of the Bureau of Radiation Control (BRC), Texas Department of Health (TDH) clarified that BRC staff has asked TRAB to recommend how long a company should be licensed to store radioactive waste.

Jack S. Krohmer, Ph.D., Chairman of TRAB, stated that the meeting was set up, first, to look into the storage time that we think is proper. Two other issues we may consider are whether assured isolation is a viable solution to the waste problem and whether any solution that we have still fits into the compact situation.

Annette Glass, House Clerk for Committee on Environmental Regulation Chaired by Representative Warren Chisum stated Rep. Chisum does not want to eliminate any of the options for handling and disposing of LLRW. Rep. Chisum does want to add assured isolation as another option. During the last legislative session, assured isolation was not one of the issues that was being debated. The debate was over the question, "Does the State of Texas want to open the door to allow for DOE waste to come in and be disposed of at a private facility?"

Ms. Glass stated that Rep. Chisum is always available, and if you need to speak with him, call the office and make an appointment.

Rep. Chisum supports the state holding the license for a LLRW disposal site and a private company running the facility.

A committee hearing will be held on the status of interim studies within the next two months. Anyone wishing to be notified, please contact Ms. Glass to be placed on the mailing list.

Tim Powell, South Texas Nuclear Project Electric Generating Station, presented testimony as a utility representative. Mr. Powell stated storage and disposal of LLRW are complicated issues in Texas and nationwide. LLRW is generated every day within Texas borders, and a disposal facility is needed for this waste. The South Texas Project (STP) nuclear plants primarily generate dry active waste, resins, filters, and irradiated components. STP will also have large components such as steam generators and coolant pumps which will need to be disposed of. STP is replacing four 500-ton steam generators from Unit 1 this Spring, generating approximately 30,000 cubic feet of LLRW this year. STP plans to replace four steam generators from Unit 2 in 2002. STP averages approximately 22,000 cubic feet of LLRW per year. STP utilizes a waste processor for volume reduction of dry active waste via incineration and super compaction. Class B and C waste are disposed of at Barnwell, South Carolina site, and Class A waste is disposed of at Envirocare of Utah. The very low-level waste is disposed of at an industrial landfill in Tennessee.

Mr. Powell stated the below ground disposal of waste is the optimal solution since it resolves the issue completely and also complies with federal legislation. Assured Isolation could be viable only if shown to meet compact requirements and if the state takes title to the waste. He believes privatization is also a viable option for licensing and operating a site if the state takes title to the waste.

Doug Kay of the Comanche Peak Steam Electric Station, operated by TXU Electric, presented testimony as a utility representative. Mr. Kay states a LLRW disposal facility is needed in Texas. After volume reduction, annual disposal volume is 400 to 500 cubic feet of resins and 300 to 400 cubic feet dry active waste per year. The anticipated amount of decommissioning waste expected from the two units of the Comanche Peak (CP) facility is 131,000 cubic feet. All LLRW generated on the CP site is currently shipped to Barnwell, South Carolina after processing. Future access to the Barnwell facility for Texas generators does not look promising.

Mr. Kay stated below ground disposal or assured isolation could provide a technically safe and suitable method of waste management in Texas. Assured isolation would only be supported by TXU if it was determined to meet the Texas Compact legal and political requirements, and the state takes title to the waste. TXU believes compact funds should be used to shield Texas taxpayers from liability; private entities should participate in cost of licensing, design, and construction of the facility. Either the state or a private company could hold the license.

Mr. Ratliff clarified taking title to the waste is a federal law and an item of compatibility with NRC.

Jose Lopez of the University of Texas (UT) Southwestern Medical Center presented testimony as a medical research representative and on behalf of the UT System. Dr. Lopez reported UT Southwestern utilizes two specific exemptions to help reduce the amount of LLRW needing to be disposed of at a facility: (1) the less than 300-day half-life rule, and (2) the less than 0.05 microcuries per gram exemption for hydrogen-3 and carbon-14. Dr. Lopez stated that although 80% of UT Medical Center's waste (from diagnostic uses) has a short radioactive half-life, the short half-life material used in research has to be generated by an off-site reactor or accelerator with long half-life material. UT System generates about 200 cubic feet of compacted LLRW per year that requires disposal at a LLRW facility. They have and continue to store the LLRW that they generate. The UT System, including UT Southwestern, is using a facility in Fort Stockton, Texas, as a place for temporary (interim) storage of consolidated LLRW until a Texas facility is available. Approximately 75 cubic feet of animals have been handled on site at UT Southwestern.

Chris Meyer of Texas A & M University (TAMU) presented testimony as an academic facility representative. TAMU previously buried waste on site but currently uses Envirocare and Barnwell. TAMU also utilizes the two specific exemptions as UT Southwestern to reduce the amount of LLRW needing to be disposed of at a waste facility. Approximately ten drums of compacted waste was shipped to Barnwell last year. Very little waste is stored at TAMU in a 2,400 sq. ft. building. If Barnwell were to close, as much waste as possible would be shipped to Utah. Sealed sources are difficult to dispose of, as is special nuclear material waste and activated metals from the cyclotron facility. Research using C-14, H-3 and some short half-life material is expected to continue as a growing trend nationwide. At an average cost per barrel (\$2,500), TAMU spends approximately \$25,000 per year on disposal at Barnwell.

Ralph Heyer of TN Technologies (TN) presented testimony as an industry representative. Mr. Heyer explained their last shipment of waste was in 1992, and now TN stores double encapsulated sealed sources that are licensed by both TDH-BRC and the Nuclear Regulatory Commission. TN utilizes "down-hole" storage on-site. Shielded containers hold the sealed sources they possess awaiting a viable disposal option. TN uses area monitoring, and TDH-BRC performs quarterly inspections. Mr. Heyer stated his belief that there is an immediate and growing need for a single licensed facility in Texas, either disposal or assured isolation, that will be a final solution for Texas waste generators.

Tom Kerr of the Department of Energy National Low-Level Radioactive Waste Program presented his views on the issue. The National Low-Level Radioactive Waste Program (NLLRWP) has produced several documents addressing different aspects of assured isolation. Storage of LLRW relies upon positive and active controls while disposal of LLRW relies upon geology, site characterization, and performance predicted by computer modeling. The relative passive nature of assured isolation (i.e. no active processing or industrial operations) could allow for an extended license term, from 30 to 50 years or possibly longer, in Mr. Kerr's opinion. DOE's report does not specify a time period or term of license. Assured isolation's objective is to protect and isolate radioactive waste for the term of the license. Mr. Kerr stated his belief that the assured isolation facility should be viewed as a material license facility comparable to those licensed in the past

under 10 CFR Parts 30, 40, and 70, and the appropriate radiation protection guidance of Part 20. NRC initially directed that Part 61 be used; there is no official response from NRC to DOE's position that Part 61 not be followed. Mr. Kerr noted the license review should include: safeguards for special nuclear material; type and form of material; packaging; design and institutional control; and financial assurance.

Mr. Kerr discussed the design of the facility which would determine the length of time it would be licensed. It is important that the design life exceed the time period without active maintenance.

Ruth McBurney, BRC Division Director of Licensing, Registration, and Standards, reported that if TDH-BRC had legislative backing for licensing an assured isolation facility, there would need to be a rule change in the regulations to define assured isolation.

Mr. Ratliff stated this would be a separate part in the regulations on assured isolation facilities since it would be very different from a storage and processing facility.

Mr. Kerr stated that a NRC order could clarify requirements for assured isolation.

Mr. Ratliff provided staff summary information on radioactive waste. TDH regulates all different types of uses of radioactive material; i.e. by-product material and naturally occurring radioactive material, and accelerator produced; in addition to x-ray, laser, and nonionizing radiation. There are 50 to 60 sites around the state where licensees are storing radioactive waste because of the unavailability of a waste site or the expense. There are two facilities licensed for storage and processing in Texas; Nuclear Sources and Services, Inc., in Houston, and Waste Control Specialists in Andrews County. There are two Envirocare of Texas applications pending - one in Andrews County and one in Ward County. One of the most limiting factors on storage and processing applications is financial security for the actual material that is stored. There are radioactive sources stored at TDH campus which were impounded to protect public health and safety.

TRAB initially helped develop the waste and storage processing rules with TDH-BRC staff; now TDH has asked TRAB to look at the storage issue, and if a license application reaches the point of issuance, give guidance on the time frame for storage. (Previously TDH issued licenses with limits on number of drums and length of storage.) Mr. Ratliff noted a January 21, 2000 letter in which NRC indicates they expect Part 61 rules to be applied, and the letter states NRC wants to be advised of the time for storage which is licensed. Mr. Ratliff and Mrs. McBurney explained rules on financial assurance, license application, and hearing process.

The State of Pennsylvania passed statutes for aboveground disposal facilities that were reviewed and approved by NRC. Pennsylvania statutes and rules could serve as a guide with the benefit of prior NRC approval.

Mr. Barker briefed the committee on a meeting he and Dr. Klein had with John Howard of the Governor's Office. Indication from the Governor's Office included the following points on assured isolation: (1) the state should hold the license and may subcontract a company to operate the facility; (2) the legislature should make the assured isolation concept a matter of law, and it should meet the Texas Compact requirements.

Mr. Barker suggested a license period of 40 years with provisions for renewal and adequate financial assurance.

Dale E. Klein stated that the time length for licensing should be driven by a legislative policy decision, although performance standards could be set by technical evaluation.

Dr. Krohmer stated that a period of 100 years seemed reasonable if the state held the license.

Dr. Klein stated the committee should look at the issues that should be addressed on assured isolation and try to come up with some technical performance standards. Based on the standards, the committee could then provide an evaluation criteria. The final decision would be a legislative policy one.

John White, UT Systems, reported on the different isotopes used at UT and the segregation of short half-live and long half-life waste.

No action was taken by the committee.

Clarice Gough, Mayor Pro Tem of Monahans, spoke as a concerned citizen. Ms. Gough feels LLRW should be stored at the point of generation. The area she represents does need economic diversification, but the majority of the citizens of Ward County do not want a radioactive waste site located in Ward County that could endanger the general public and water.

Clark Lindley, Pecos, Texas, spoke as a concerned citizen. Mr. Lindley feels that the citizens of Monahans tend to agree with the Governor's Office that a private company should not hold the license for a LLRW facility. An agency of the state government is probably going to be more responsive to the requirements of protecting the public. There is some concern in West Texas about the possibility of development of multiple permanent disposal sites. One single site is preferable. The concept of separating long half-life and short half-life waste is a possible solution to maintain control of much smaller volumes. Part of the concern is about the government's and private companies' failure to control radiation risk, and citizens want to be sure there is adequate oversight.

The meeting adjourned at 1:30 p.m.

Respectfully submitted,

Jimmy L. Barker, P.E., Secretary
Texas Radiation Advisory Board

John MacCrepeneu
Tip Chesney
Annette Glass
Susan Jablonski
Roger Mulder
David Sieaun
Justin Erdmann
Alice Rogers
Russ Meyer
John C. White
Joe Thiel
C. D. Rao
Phil Shaver
Rick Jacobi
Arnoldo Melina
Patti Hershey
Jay Stewart
Clark Lindley
Ralph Heyer
Tom Kerr
Tim Powell
Eddie Selig
Erin Rogers
Karen Hadden
Chris Meyer
Dawn Lobbes
Clarese Gough
Vanessa Gonzalez
Douglas Kay

Friends of Ward County
Self
House Committee on Environmental Regulations
TNRCC
State Comptroller's Office

TNRCC
BRC
Univ. Of Texas
Self
GSG, Inc.
BRC
Envirocare
TNRCC
TNRCC
Hance, Scarborough
Friends of Ward County
TN Technologies
DOE Nat'l. LLW Mgt. Program
STP Nuclear Operating Co.
A.R.D.T.

Texas A & M
International Isotopes
Mayor Pro Tem of Monahans
Sunset
TXU Electric