

D2D (SP08)

PHL
FCC
DMS
TJO

Robert J. Huston, *Chairman*
R. B. "Ralph" Marquez, *Commissioner*
John M. Baker, *Commissioner*
Jeffrey A. Saitas, *Executive Director*



TEXAS NATURAL RESOURCE CONSERVATION COMMISSION

Protecting Texas by Reducing and Preventing Pollution

November 10, 1999

99 NOV 18 PM 2:53

OSR

Mr. Tom O'Brien
Office of State Programs
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001

Re: Request for Technical Information (SP-99-074) by November 12, 1999

Dear Mr. O'Brien:

As you requested on November 2, 1999, the Texas Natural Resource Conservation Commission (TNRCC) is pleased to submit the attached answers to questions, numbers 1 through 6, related to current Agreement State program practices on the release of solid materials.

Should you have any comments, or need additional information, please contact me at (512) 239-6846 (arogers@tnrcc.state.tx.us) at your convenience.

Sincerely,

Alice Hamilton Rogers, PE, Manager
UIC and Radioactive Waste Section
Waste Permits Division

AHR/GF/jb

Attachment

cc: Mr. Richard Ratliff/TDH

I:\URW\FITZ\SP99-074.LT2

SP-A-4
SP-AG-27

PDR STPRG

SIX QUESTIONS
RELATED TO CURRENT AGREEMENT STATE PRACTICES
ON THE RELEASE OF SOLID MATERIALS

Information Request on Release of Solid Materials

Question #1 - How were your state's radiological criteria derived and to what type of materials (e.g., medical, pipe scale) do they apply? If Regulatory Guide 1.86 was used as a basis please indicate so, if another technical basis was used, please provide that basis.

1. Texas' radiological criteria were derived from NRC in Title 10 of the Code of Federal Regulations (25mrem/yr), Chapter 336 of the Texas Administrative Code, Regulatory Guide 1.86, Regulatory Guide DG-4006 "Demonstrating Compliance with the Radiological Criteria for License Termination", NUREG-1549 "Decision Methods for Dose Assessment to Comply with Radiological Criteria for License Termination", NUREG-1505 "A Nonparametric Statistical Methodology for the Design and Analysis of Final Status Decommissioning Surveys", the Texas Natural Resource Conservation Commission (TNRCC) technical guidance RG-150, "Guidelines for Conducting Close-out Surveys of Open Lands and Requesting Release for Unrestricted Use".

Currently for unrestricted release the state's radiological criteria apply to Dose Limits for Individual Members of the Public (§336.313), Soil and Vegetation Contamination Limits (§336.356) , and Surface Contamination Limits (§336.364 Appendix G).

Texas has also adopted 10 CFR Part 20 Appendix B, Table 2 relating to effluent concentrations.

Question #2 - How are your state's radiological criteria applied (e.g., through guidance, licensing actions, regulations)?

2. Texas' radiological criteria are applied through guidance, licensing actions, regulations, and Memoranda of Understanding (MOU) between the Texas Department of Health (TDH) and TNRCC and between the Texas Railroad Commission and the TNRCC relating to jurisdiction.

Question #3 - What surveying/monitoring methodologies are used? If NUREG/CR-5849 or MARSSIM are used, please indicate so. If a state developed or another method is used, please provide that method.

3. The surveying/monitoring methodologies used by the TNRCC include NUREG-1575 MARSSIM, NUREG-1549 "Decision Methods for Dose Assessment to Comply with Radiological Criteria for License Termination", Regulatory Guide DG-4006 "Demonstrating Compliance with the Radiological Criteria for License Termination", NUREG-1505 "A Nonparametric Statistical Methodology for the Design and Analysis of Final Status Decommissioning Surveys", TNRCC technical guidance RG-150, "Guidelines for Conducting Close-out Surveys of Open Lands and Requesting Release for Unrestricted Use", NUREG-1507 "Minimum Detectable Concentrations with Typical Radiation Survey Instruments for Various Contaminants and Field Conditions",

RESRAD modeling software, and Decontamination and Decommissioning (D & D) software for verification of unrestricted release.

Question #4 - What type of instruments (e.g., manual versus automated, hand-held versus stationary, barrel counters versus conveyor systems) and what sensitivity (i.e., lower limit of detection) values are used as selection criteria for instruments used in demonstrating compliance with the radiological criteria provided in response to question #1?

4. The type of instruments used by the TNRCC staff are hand held survey meters. The first, a Ludlum model 19 with an internal sodium iodide detector providing results in $\mu\text{R/hr}$. The model 19 has a sensitivity typically around 175 counts/minute/ $\mu\text{R/hr}$ and is calibrated to a cesium 137 source. The second is Ludlum model 14C with a sodium iodide detector that provides results in counts/minute. The model 14C which typically provides an energy response within $\pm 15\%$ of the true value and is dependent on the detector used. Compliance with radiological criteria will also include sampling and/or swipe tests. Samples taken by TNRCC are analyzed by a state laboratory using various analytical equipment, for example Multi-channel analyzer, gamma spectroscopy, liquid scintillation counter, scaler/ratemeter, etc.

Question #5 - If your release criterion is zero, how do you have your licensees determine that a solid to be released is not radioactive or meets the zero criterion?

5. Not Applicable because Texas' release criterion is not zero.

Question #6 - If any state licensees currently have volumetric release authorization, please identify the licensees and whether the quantities released are tracked, summarize the scope of these authorized activities, and provide the criteria used in granting the authorization.

6. Not Applicable because no state licensees have volumetric release authorization.