TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

June 27, 2013

Pamela Henderson, Deputy Director
Division Materials Safety and State Agreements
Office of Federal and State Materials and
Environmental Management Programs
U.S. Nuclear Regulatory Commission
T8-E24
Washington, D.C. 20555-0001

Dear Ms. Henderson:

Enclosed is a copy of the final revision to the Texas Commission on Environmental Quality (TCEQ) rules in Title 30 Texas Administrative Code (TAC) Chapter 336 (relating to Radioactive Substance Rules). The changes are designated in brackets for the omitted portions and underline for insertions.

The proposed rule change amends the existing contradictory limits between the natural uranium concentration in soil limit and the Radium Benchmark Dose Approach language. The proposed rule would remove the natural uranium concentration in soil limit in favor of using the Radium Benchmark Dose Approach and mirror equivalent federal standards used by the Nuclear Regulatory Commission in 10 Code of Federal Regulations Part 40, Appendix A, Criterion 6(6).

If you have any questions, please feel free to contact me at (512) 239-5308 or Tony Gonzalez of my staff at (512) 239-6471 or Tony.Gonzalez@tceq.texas.gov.

Sincerely,

Charles Maguire, Division Director
Radioactive Materials Division
Texas Commission on Environmental Quality

Enclosures:
Proposed Rule

§336.1115. Expiration and Termination of Licenses; Decommissioning of Sites, Separate Buildings or Outdoor Areas.

(a) The term of the specific license is for a fixed term not to exceed ten years.

(b) Expiration of the specific license does not relieve the licensee of the requirements of this chapter.

(c) All license provisions continue in effect beyond the expiration date with respect to possession of radioactive material until the agency notifies the former licensee in writing that the provisions of the license are no longer binding. During this time, the former licensee must:

(1) be limited to actions involving radioactive material that are related to decommissioning; and

(2) continue to control entry to restricted areas until the location(s) is suitable for release for unrestricted use in accordance with the requirements of subsection (e) of this section.

(d) Within 60 days of the occurrence of any of the following, each licensee must provide notification to the agency in writing and either begin decommissioning its site,

or any separate buildings or outdoor areas that contain residual radioactivity in accordance with the closure plan in §336.1111(1)(B) of this title (relating to Special Requirements for a License Application for Source Material Recovery and By-Product Material Disposal Facilities), so that the buildings or outdoor areas are suitable for release in accordance with subsection (e) of this section if:

(1) the license has expired in accordance with subsection (a) of this section; or

(2) the licensee has decided to permanently cease principal activities, as defined in §336.1105(24) of this title (relating to Definitions), at the entire site or in any separate building or outdoor area; or

(3) no principal activities have been conducted for a period of 24 months in any building or outdoor area that contains residual radioactivity such that the building or outdoor area is unsuitable for release in accordance with agency requirements.

(e) Outdoor areas are considered suitable for release for unrestricted use if the following limits are not exceeded.

(1) The concentration of radium-226 or radium-228 (in the case

(2) of thorium by-product material) in soil, averaged over any 100 square meters (m^2), may not exceed the background level by more than:

(A) 5 picocuries per gram (pCi/g) (0.185 becquerel per gram (Bq/g)), averaged over the first 15 centimeters (cm) [cm]of soil below the surface; and

(B) 15 pCi/g (0.555 Bq/g), averaged over 15 cm thick layers of soil more than 15 cm below the surface.

(2) The contamination of vegetation may not exceed 5 pCi/g (0.185 Bq/g), based on dry weight, for radium-226 or radium-228.

[(3) The concentration of natural uranium in soil, with no daughters present, averaged over any 100 m^2, may not exceed the background level by more than:]

[(A) 30 pCi/g (1.11 Bq/g), averaged over the top 15 cm of soil below the surface; and]

[(B) 150 pCi/g (5.55 Bq/g), average concentration at depths greater than 15 centimeters below the surface; and]

[(4)no individual member of the public will receive an effective dose equivalent in excess of 100 mrem (1 mSv) per year as calculated by the methodology provided in NUREG-1620, Appendix H - "Guidance to the U.S. Nuclear Regulatory Commission Staff on the Radium Dose Approach."]

(3) Byproduct material containing concentrations of radionuclides other than radium in soil (e.g., natural uranium, natural thorium, Pb-210), and surface activity on remaining structures, must not result in a total effective dose equivalent (TEDE) exceeding the dose from cleanup of radium contaminated soil to the standard in paragraph(1) of this subsection (radium benchmark dose), and must be at levels which are as low as reasonably achievable. If more than one residual radionuclide is present in the same 100-square-meter area, the sum of the ratios for each radionuclide of concentration present to the calculated radium benchmark dose equivalent concentration limits will not exceed "1" (unity). A calculation of the potential peak annual TEDE within 1,000 years to the average member of the critical group that would result from applying the radium standard (not including radon) must be submitted for approval, using the United States Nuclear Regulatory Commission staff guidance on the Radium Benchmark Dose Approach.

(f) Coincident with the notification required by subsection (c) of this section, the licensee shall maintain in effect all decommissioning financial security established by the licensee in accordance with §336.1125 of this title (relating to Financial Security Requirements) in conjunction with a license issuance or renewal or as required by this

section. The amount of the financial security must be increased, or may be decreased, as appropriate, with agency approval, to cover the detailed cost estimate for decommissioning established in accordance with subsection (l)(5) of this section.

(g) In addition to the provisions of subsection (h) of this section, each licensee must submit an updated closure plan to the agency within 12 months of the notification required by subsection (d) of this section. The updated closure plan must meet the requirements of §336.1111(1)(B) and §336.1125 of this title. The updated closure plan must describe the actual conditions of the facilities and site and the proposed closure activities and procedures.

(h) The agency may grant a request to delay or postpone initiation of the decommissioning process if the agency determines that such relief is not detrimental to the occupational and public health and safety and is otherwise in the public interest. The request must be submitted no later than 30 days before notification in accordance with subsection (d) of this section. The schedule for decommissioning in subsection (d) of this section may not begin until the agency has made a determination on the request.

(i) A decommissioning plan must be submitted if required by license condition or if the procedures and activities necessary to carry out decommissioning of the site or separate building or outdoor area have not been previously approved by the agency and these procedures could increase potential health and safety impacts to workers or to the public, such as in any of the following cases:

(1) procedures would involve techniques not applied routinely during cleanup or maintenance operations;

(2) workers would be entering areas not normally occupied where surface contamination and radiation levels are significantly higher than routinely encountered during operation;

(3) procedures could result in significantly greater airborne concentrations of radioactive materials than are present during operation; or

(4) procedures could result in significantly greater releases of radioactive material to the environment than those associated with operation.

(j) The agency may approve an alternate schedule for submittal of a decommissioning plan required in accordance with subsection (d) of this section if the agency determines that the alternative schedule is necessary to the effective conduct of decommissioning operations and presents no undue risk from radiation to the occupational and public health and safety and is otherwise in the public interest.

(k) The procedures listed in subsection (i) of this section may not be carried out prior to approval of the decommissioning plan.

(l) The proposed decommissioning plan for the site or separate building or outdoor area must include:

(1) a description of the conditions of the site, separate buildings, or outdoor area sufficient to evaluate the acceptability of the plan;

(2) a description of planned decommissioning activities;

(3) a description of methods used to ensure protection of workers and the environment against radiation hazards during decommissioning;

(4) a description of the planned final radiation survey;

(5) an updated detailed cost estimate for decommissioning, comparison of that estimate with present funds set aside for decommissioning, and a plan for assuring the availability of adequate decommissioning; and

(6) for decommissioning plans calling for completion of decommissioning later than 24 months after plan approval, a justification for the delay based on the criteria in subsection (p) of this section.

(m) The proposed decommissioning plan may be approved by the agency if the information in the plan demonstrates that the decommissioning will be completed as soon as practicable and that the occupational health and safety of workers and the public will be adequately protected.

(n) Except as provided subsection (p) of this section, licensees shall complete decommissioning of the site or separate building or outdoor area as soon as practicable but no later than 24 months following the initiation of decommissioning.

(o) Except as provided in subsection (p) of this section, when decommissioning involves the entire site, the licensee must request license termination as soon as practicable but no later than 24 months following the initiation of decommissioning.

(p) The agency may approve a request for an alternate schedule for completion of decommissioning of the site or separate buildings or outdoor areas and the license termination if appropriate, if the agency determines that the alternative is warranted by the consideration of the following:

(1) whether it is technically feasible to complete decommissioning within the allotted 24-month period;

(2) whether sufficient waste disposal capacity is available to allow completion of decommissioning within the allotted 24-month period; and

(3) other site-specific factors that the agency may consider appropriate on a case-by-case basis, such as the regulatory requirements of other government agencies, lawsuits, groundwater treatment activities, monitored natural groundwater restoration, actions that could result in more environmental harm than deferred cleanup, and other factors beyond the control of the licensee.

(q) As the final step in decommissioning, the licensee must:

(1) certify the disposition of all radioactive material, including accumulated by-product material;

(2) conduct a radiation survey of the premises where the licensed activities were carried out and submit a report of the results of this survey unless the licensee demonstrates that the premises are suitable for release in accordance with subsection (e) of this section. The licensee shall, as appropriate:

(A) report the following levels:

(i) gamma radiation in units of microroentgen per hour (μR/hr) (millisieverts per hour (mSv/hr)) at 1 meter (m) from surfaces;

(ii) radioactivity, including alpha and beta, in units of disintegrations per minute (dpm) or microcuries (μCi) (megabecquerels (MBq)) per 100 [square centimeters (]cm^2[)] for surfaces;

(iii) μCi (MBq) per milliliter for water; and

(iv) picocuries (pCi) (becquerels (Bq)) per gram (g) for solids such as soils or concrete; and

(B) specify the manufacturer's name, and model and serial number of survey instrument(s) used and certify that each instrument is properly calibrated and tested.

(r) The executive director will provide written notification to specific licensees, including former licensees with license provisions continued in effect beyond the expiration date in accordance with subsection (d) of this section, that the provisions of the license are no longer binding. The executive director will provide such notification when the executive director determines that:

(1) radioactive material has been properly disposed;

(2) reasonable effort has been made to eliminate residual radioactive contamination, if present;

(3) a radiation survey has been performed that demonstrates that the premises are suitable for release in accordance with agency requirements;

(4) other information submitted by the licensee is sufficient to demonstrate that the premises are suitable for release in accordance with the requirements of subsection (e) of this section;

(5) all records required by §336.343 of this title (relating to Records of Surveys) have been submitted to the agency;

(6) the licensee has paid any outstanding fees required by this chapter and has resolved any outstanding notice(s) of violation issued to the licensee;

(7) the licensee has met the applicable technical and other requirements for closure and reclamation of a by-product material disposal site; and

(8) the [United States Nuclear Regulatory Commission (]NRC[)] has made a determination that all applicable standards and requirements have been met.

(s) Licenses for source material recovery or by-product material disposal are exempt from subsections (d)(3), (g), and (h) of this section with respect to reclamation of by-product material impoundments or disposal areas. Timely reclamation plans for by-product material disposal areas must be submitted and approved in accordance with §336.1129(p) - (aa) of this title (relating to Technical Requirements).

(t) A licensee may request that a subsite or a portion of a licensed site be released for unrestricted use before full license termination as long as release of the area of concern will not adversely impact the remaining unaffected areas and will not be recontaminated by ongoing authorized activities. When the licensee is confident that the area of concern will be acceptable to the agency for release for unrestricted use, a written request for release for unrestricted use and agency confirmation of closeout work performed shall be submitted to the agency. The request should include a comprehensive report, accompanied by survey and sample results that show contamination is less than the limits specified in subsection (e) of this section and an explanation of how ongoing authorized activities will not adversely affect the area proposed to be released. Upon confirmation by the agency that the area of concern is releasable for unrestricted use, the licensee may apply for a license amendment, if required.