

Texas Commission on Environmental Quality

Interoffice Memorandum

To: Commissioners

Date: January 11, 2013

Thru: Bridget C. Bohac, Chief Clerk
Zak Covar, Executive Director

From: Brent Wade, Deputy Director
Office of Waste

Docket No.: 2012-2573-RUL

Subject: Commission Approval for Proposed Rulemaking
30 TAC Chapter 336, Radioactive Substances Rules
Disposal of Radioactive Tracer Material Used in Oil, Gas, and Geothermal
Exploration, Development, or Production Operations
Rule Project No. 2013-010-336-WS

Background and reason(s) for the rulemaking:

This rule is proposed to establish an exemption from the TCEQ low-level radioactive waste licensing requirements for the disposal of certain radioactive tracers used in the exploration, development or production of oil and gas resources. On October 8, 2012, the executive director received a Petition for Rulemaking request from Baker Botts L.L.P. on behalf of ProTechnics Division of Core Laboratories LP. ProTechnics provides oil and gas diagnostic services to well operators to optimize reservoir performance and maximize hydrocarbon recovery from producing fields. These services include the use of radioactive tracers that are introduced into hydraulic fracturing fluids that enable well operators to take well log measurements to identify the intervals where the fluids are placed. ProTechnic's petition requested that the commission establish an exemption in rule for the disposal of the radioactive tracers used in the hydraulic fracturing operations. After considering the petition at the December 5, 2012 agenda meeting, the commission directed the executive director to initiate this rulemaking.

Occasionally, the fracking fluids and tracer material can be released back out of the well during a "sandout" and is returned to the surface. The Texas Department of State Health Services (DSHS) and the Railroad Commission have authorized the disposal of the returned material in on-site earthen pits covered with at least two feet of clean soil or in Class II injection wells. Both the earthen pits and the Class II injection wells are required to be permitted by the Railroad Commission. The DSHS granted this exemption under Texas Health and Safety Code (THSC), §106.106(a) through the radioactive material license issued by DSHS for disposal in earthen pits and in Title 25 Texas Administrative Code (TAC) §289.253(u)(3) for disposal in a Class II injection well. Both of these exemptions have also been granted on the radioactive material licenses issued by the Nuclear Regulatory Commission (NRC). In 2007, Senate Bill 1604 of the 80th Legislature conferred TCEQ with the authority to exempt a source of radiation from the licensing requirements under the TCEQ's jurisdiction. Because the commission has jurisdiction over the disposal of radioactive substances in THSC, §401.011(b)(1), the authority to exempt radioactive substances from disposal requirements in THSC, §401.106(a) rests with the commission.

Re: Docket No. 2012-2573-RUL

An analysis by DSHS and the NRC determined that the disposal of the radioactive tracers would not result in a significant risk to public health and safety or to the environment. The radioactive tracers have a half-life less than 120 days and are in a form that will not leach into and migrate with the groundwater. The on-site disposal pits must be covered with at least two feet of clean soil. The executive director's staff reviewed various pit disposal dose models, including worst-case scenarios, which show that the total effective dose equivalent to individual members of the public from the closed pit is well below the 0.1 rem per year dose limit. Class II injection wells are permitted by the Railroad Commission after a determination that groundwater and surface water are protected from pollution. According to the petition, the disposal of radioactive tracers in earthen pits has occurred without any reported or known harm to public health and safety or the environment since May 12, 1992. The executive director's staff agrees with the determinations of both the DSHS and the NRC and finds that the proposed exemption for the on-site pit and Class II injection well disposal of the tracers will not constitute a significant risk to the public health and safety and the environment.

Scope of the rulemaking:

A.) Summary of what the rulemaking will do:

The proposed rule would exempt radioactive tracer material used in oil, gas, and geothermal exploration, development, and/or production operations from the radioactive waste licensing and disposal requirements in 30 TAC Chapter 336 and authorize the disposal of the radioactive tracer material in Railroad Commission permitted shallow earthen pits covered with at least two feet of clean soil or in Railroad Commission permitted Class II injection wells.

B.) Scope required by federal regulations or state statutes:

This rulemaking is not required by any federal regulations or state statutes.

C.) Additional staff recommendations that are not required by federal rule or state statute:

None.

Statutory authority:

THSC, §401.057, Records; §401.106, Exemption from Licensing or Registration Requirements or from Application of Rule; §401.011, Radiation Control Agency; §401.051, Adoption of Rules and Guidelines; §401.103, Rules and Guidelines for Licensing and Registration; §401.104, Licensing and Registration Rules; and §401.412, Commission Licensing Authority.

Effect on the:

A.) Regulated community:

Re: Docket No. 2012-2573-RUL

This rulemaking was initiated in response to a petition from ProTechnics, an oil and gas services company, and is consistent with their request for an exemption in rule from TCEQ licensing requirements for the disposal of certain radioactive tracers. The exemption in rule would continue the regulated community's practice for using on-site disposal pits or Class II injection wells for disposal of radioactive tracers. Since this rule does not change any currently approved activities or procedures, the regulated community should not be affected besides changing references from a DSHS rule or license condition to a TCEQ rule.

B.) Public:

Since this rule does not change any currently approved activities or procedures, the public will not be affected.

C.) Agency programs:

There will be a minimal effect on the Radioactive Material Division of TCEQ in the form of responding to any questions concerning the exemption from the public or regulated community. No new requirements for TCEQ-maintained records are in the new proposed rule. No additional full-time employees (FTEs) are required.

There will be a minimal effect on the Environmental Law Division for legal support for the Office of Waste, as necessary. No additional FTEs are required.

Stakeholder meetings:

This rulemaking is a response to a petition from Baker Botts L.L.P. on behalf of ProTechnics Division of Core Laboratories LP. No stakeholder meetings are currently scheduled for the proposed rule.

Potential controversial concerns and legislative interest:

The use of fracking in oil and gas production has some controversy and, even though the use of radioactive tracer material in this activity has been ongoing for decades, public concern may be increased with the notice that radioactive material is used.

Will this rulemaking affect any current policies or require development of new policies?

No.

What are the consequences if this rulemaking does not go forward? Are there alternatives to rulemaking?

If this rulemaking does not go forward, the radioactive tracer material will need to be shipped to a low-level radioactive waste repository for disposal, increasing the costs of oil and gas exploration, development, and production. The cost of using radioactive tracers, which the oil and gas industry relies on, may become cost prohibitive, and consequently may no longer be used, resulting in a decrease in the oil and gas that can be extracted from Texas.

Commissioners
Page 4
January 11, 2013

Re: Docket No. 2012-2573-RUL

Key points in the proposal rulemaking schedule:

Anticipated proposal date: January 30, 2013
Anticipated *Texas Register* publication date: February 15, 2013
Public hearing date (if any): March 5, 2013
Public comment period: February 15 - March 18, 2013
Anticipated adoption date: June 5, 2013

Agency contacts:

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Attachments

Petition for rulemaking from ProTechnics

cc: Chief Clerk, 2 copies
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