



U.S. Department  
of Transportation

**Pipeline and Hazardous  
Materials Safety  
Administration**

1200 New Jersey Avenue, SE  
Washington, D.C. 20590

DEC 19 2013

Mr. William Dawson  
MHF Services  
4500 Brooktree Road, Suite 200  
Wexford, PA 15090-9289

Ref. No. 13-0157

Dear Mr. Dawson:

This responds to your July 25, 2013 letter regarding the applicability of the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180) to the transportation of naturally-occurring radioactive material (NORM). In your letter, you indicate that drilling and extraction processes by the oil and gas exploration and development industry may generate NORM (and technically enhanced NORM). Specifically, you ask if the exception for natural material and ores containing NORM in § 173.401(b)(4) applies to the waste material generated in this industrial process that contains Radium-226 and -228 in the form of a solidified sludge from a fracking water collection pit; or a filter cake from treatment and recycling of fracking water.

The answer is no. The exception does not apply to the NORM-containing waste material generated from the industrial process you describe in your letter. Moreover, the waste material you describe is no longer considered "natural material" because of the industrial processing. The term "natural material" in § 173.401(b)(4) means material existing in a form as it would otherwise in nature, not in a form manipulated by human application. The fracking water is not a natural material nor is the radionuclide-containing solidified sludge from the fracking water collection pit or the radionuclide-containing filter cake from treatment and recycling of the fracking water. Thus, the exception in § 173.401(b)(4) does not apply and the waste material is subject to the HMR if the activity concentration of the radionuclides in the waste material and the total activity in the consignment exceed the values specified in § 173.436 or values derived according to the instructions in § 173.433 of the HMR. See the definition of radioactive material in § 173.403.

I hope this information is helpful. If you have further questions, please contact this office.

Sincerely,

Charles Betts

Director,

Standards and Rulemaking Division



**MHF** SERVICES

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§173.401(b)(4)  
RAM  
13-0157

July 25, 2013

Mr. Charles E. Betts  
Director, Standards and Rulemaking Division  
U.S. DOT/PHMSA (PHH-10)  
1200 New Jersey Avenue, SE East Building, 2nd Floor  
Washington, DC 20590

Mr. Betts:

I am requesting your clarification in regards to the shipment of waste materials generated in the Oil & Gas exploration and development industry. Naturally occurring radiological materials (NORM) and technically enhanced NORM (TENORM) can be generated from the drilling and extraction process with the principal radiological components Radium-226 and Radium-228. The materials to be transported are typically wastes generated as 1) solidified sludge that has settled in fracking water collection pits, or 2) filter cake from the treatment or recycling of fracking waters.

Does the 10-times exemption in 49 CFR 173.401(b)(4) apply to this material?

49 CFR 173.401(b)(4): *This subpart does not apply to: (4) "Naturally occurring radionuclides which are not intended to be processed for use of these radionuclides, provided the activity concentration of the material does not exceed 10 times the values specified in 173.436."*

Thank you.

Sincerely,  
**MHF Services**

William Dawson