

Beneficial Use and Recycling Oilfield Waste

For a recycled material to be approved it should take place of a commonly used product and have similar characteristics and limited or similar environmental impact as the commonly used product.

HB 1390

- Solicit beneficial use pilot projects by June 1, 2015.
- Evaluation period/decisions to be completed by June 2017 with the outcome of:
 - Approval of proposed use under existing authority.
 - Develop approval process policy under existing authority.
 - Propose new rules.
- Request for proposals resulted in 6 proposals:
 - Compliant Resources, Inc.
 - National Oilwell Varco.
 - Nuverra Environmental Solutions.
 - R360 Environmental Solutions.
 - Renewable Resources, LLC.
 - Symmetry Oilfield Solutions.
- Proposals relate to beneficial use of drill cuttings after processing (i.e. removal of oil, other elements) to be used in road base, fill, landfill cover, with some recovered material also proposed to be used for road ice/dust control.
- Elements to be evaluated:
 - Laboratory testing results.
 - Field testing results.
 - Durability.
 - Leaching potential.
 - Long term impacts.
- Issues to be resolved:
 - Liability (i.e. who has it now and at the end of the useful life of the material).
 - Is it disposal or actual beneficial use?
 - Is there a market for the beneficially used material?
 - Bonding requirement?
- Projects are in the beginning stages of development and testing.

TENORM

(Technologically Enhanced Naturally Occurring Radioactive Material)

Background:

- Estimated oilfield development generates 2.5 million tons/year (2014) of oilfield waste; no record of TENORM waste generated.
- TENORM concentrations can range from 5 piCu/gram to over 1,000 piCu/gram.
- State limit is 5 piCu/gram. Other state standards vary from 0 to over 1,000 piCu/gram.
- Detailed assessment of risk due to the generation, storage, handling, transportation and disposal of waste conducted by Argonne National Laboratories (ANL) utilizing North Dakota specific information.
 - Findings of ANL were that, conservatively erring on the protection of public health and environmental quality, a level of 50 piCu/gram of TENORM with disposal quantities of 25,000 tons/year in a special waste landfill is protective.
- Proposed Rules:
 - Solid Waste Landfill Operation and Closure
NDCC Chapter 23-29
NDAC Article 33-20
 - Radiation Rules
Recordkeeping, reporting, licensing and closure standards for companies that generate, transport and manage TENORM.
NDAC Article 33-20

Copies of background information, ANL report, proposed rules and transcripts of the three hearings found at www.ndhealth.gov/EHS/Tenorm/.

- Review Process:
 - 3 public hearings held in January (Williston, Bismarck, Fargo).
 - Public comment period (January – March).
 - Oral and written comments received.
 - Response to comments nearing completion.
 - Health Council Review.
 - Attorney General Review.
 - Administrative Rules Committee Review.
 - Completion of public input/comment and regulatory review by year's end.

Clean Power Plan (111 (d))

Environmental Protection Agency rules proposed to reduce carbon emissions by 30% below 2005 levels by 2030.

Proposal:

Each state, based upon their current energy generation portfolio, have unique and specific goals to meet. (North Dakota: current emission rate: 2406 lbs/MWH – power plants; interim goal: 1817 lb/MWH (average 2020-2024); goal by 2030: 1783 lbs/MWH)

Compliance can be achieved through the implementation of a combination of

Or all of 4 Goals:

1. Energy generation efficiencies – i.e. “Inside the fence line.”
2. Redispatch to natural gas or increased dependence on natural gas.
3. Renewable energy generation – i.e. wind, solar, hydro.
4. Demand side efficiencies.

Concerns:

- Federal and state may lack authority to require.
- Multiple state agency jurisdictions/impacts.
- Impact on grid reliability and electrical cost.
- Grids are regional – goals are state specific.

Moving Forward:

- Meeting and discussions with various stakeholders – i.e. energy generation utilities in state agencies and neighboring states.
- Rules anticipated to be released 1st week of August.
- Legal challenge?
- Plan development? Proposed:
 - 1 year to develop single state plan – (+ up to 1 year extension).
 - Up to 3 years to develop multi-state plan.

Looking Forward:

- Long legal challenge.
- Push technology development – i.e. carbon capture with oilfield implications?
- Push renewable use – (concerns about limitations).