

Backgrounder on TENORM Disposal Rulemaking

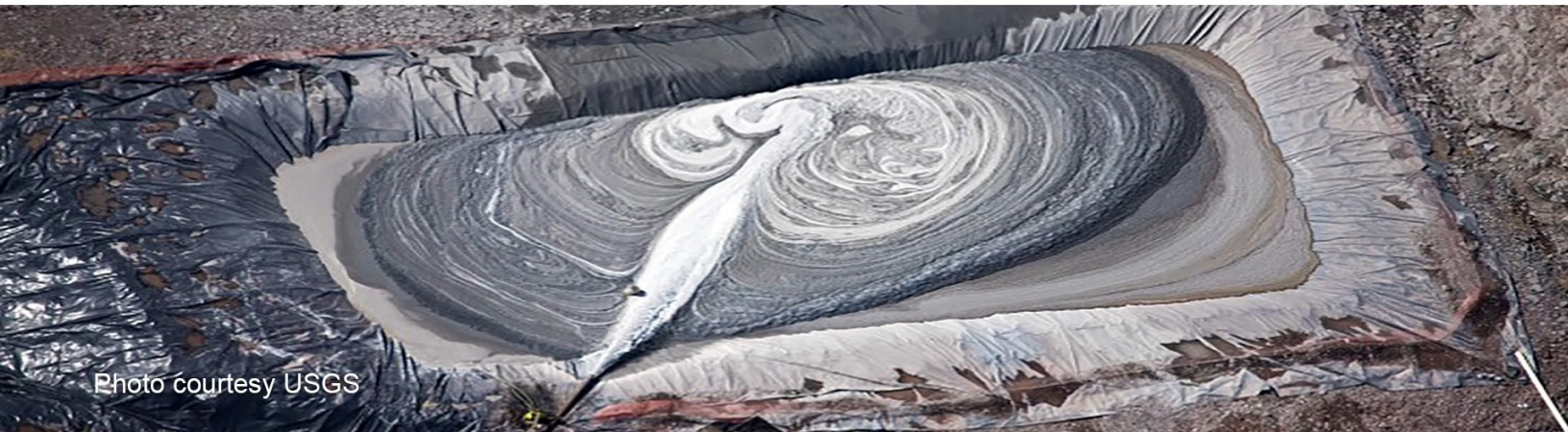


Photo courtesy USGS

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Upshot

If the Environmental Quality Council objection made on April 27, 2020 develops from sidetracking to derailing the Department of Environmental Quality's proposed rules, hot load radioactive waste disposal that no neighboring state allows could be coming to any county in Montana.

Montana already has six licensed TENORM disposal sites from Dawson County to Missoula County. Allowing 200 pCi/gm of radiation when, for example, North Dakota allows only 50 pCi/gm and has no licensed TENORM landfills would be magnet for radioactive waste and make Montana a radioactive dumping ground for other states.

Introduction

This document provides background in Montana of:

- TENORM problems
- regulation of TENORM disposal under guidance without administrative rules
- the administrative rulemaking process by DEQ through the April 27, 2020 meeting of the Environmental Quality Council

The path this document takes is more-or-less chronological. Waypoints along the path include:

- What TENORM is
- Bakken oilfield generates TENORM waste
- DEQ licenses Oaks Disposal
- Dawson County residents raise concerns
- DEQ licenses additional disposal units
- ND raises load limit from 5 pCi/gm to 50 pCi/gm
MT raises load limit from 30 pCi/gm to 50 pCi/gm
- ND's rational basis in science
- Load limits in 25 states
- DEQ initiates rulemaking
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- DEQ's first proposed rules, August 2017, 50 pCi/gm
- DEQ decides to rewrite
- DEQ's second proposed rules, August 2019, 200 pCi/gm
- No standardized calculation for safety net rolling average
- Rationales lacking

- “Vigorous” outcry
- Supplemental notice restores 50 pCi/gm, January 2020
- EQC launches review
- Motion for informal objection
- Deals, surprises, and public comment
- EQC votes 10-to-6 to sidetrack rulemaking

What TENORM is

Naturally occurring radioactive material (NORM) exists in the ground. The overburden of soil and rock shields us from its radiation. Oilfield operations raise the radioactive materials to the surface where we can be exposed. Exposure occurs by radiation, inhalation, and ingestion.

In filter cake, produced water, tank sludge, pipe scale, contaminated production and processing equipment, disposal filter socks, some synthetic proppants, contaminated soils, and other materials,¹ the operations concentrate radioactivity to elevated levels.² In the exposed and concentrated state, the materials are technologically enhanced NORM, hence TENORM.

Bakken oilfield generates TENORM waste

As fracking expanded in the Bakken oilfield, TENORM was shipped to Colorado, Idaho, and Texas,³ “states with nuclear weapons/research facilities and disposal sites.”⁴ Those sites had the experience, competence, and capacity to deal with it. Transportation from the Bakken oilfield was expensive.

Montana has no administrative rules regulating disposal of TENORM. The Department of Environmental Quality permits disposal sites under a mere guidance document titled, “Requirements for the Management of Special Waste Associated with the Development of Oil and Gas Resources.” The guidance as revised in May 2012 set disposal limits for NORM and TENORM at 30 picocuries per gram (pCi/gm). At that time, North Dakota’s limit was 5 Ci/gm.⁵

DEQ licenses Oaks Disposal

Under DEQ’s regulatory guidance, the Oaks Disposal site in Dawson County was permitted to accept TENORM. Buckhorn Waste Services commenced operations of the site in June 2013.⁶

Oaks Disposal was the one facility certified to accept the highest amount of radiation . . . and North Dakota wasted no time taking advantage of it. Now, almost 80% of the TENORM at Oaks Disposal . . . comes from North Dakota.⁷

Dawson County residents raise concerns

Dawson County residents quickly experienced problems. They raised concerns about many spills of radioactive waste on roads, uncovered loads, inhalation injury, radiation exposure, storm runoff, and groundwater contamination. They voiced concerns to the Department of Environmental Quality.

DEQ began studying the problem. DEQ began meeting with landowners. The summer 2013 issue of *Montana Solid Waste News* announced that DEQ was “joining up with the North Dakota Solid Waste and Recycling Association (NDSWRA) and the South Dakota Solid Waste Management Association (SDSWMA) for a Joint Solid Waste and Recycling Conference” with TENORM on the agenda. The conference was held September 10-12, 2013 in Mandan.⁸

The Solid Waste Advisory Committee of DEQ noted in October 2013 that DEQ continued to receive complaints about the Oaks landfill.⁹

DEQ provided a tour of the Dawson County disposal site in June 2014. The tour was meant to provide peace of mind. It had an opposite effect.

Clay, Laurene, and Seth Newton wrote to the Environmental Quality Council¹⁰ on July 9, 2014. They provided detailed concerns, a map, and photographs. They pleaded, “We ask the EQC to pressure the DEQ to create rules that will properly regulate these disposal sites.”¹¹

Note, that letter in 2014 was not to DEQ. It was to the EQC.

DEQ licenses additional disposal units

Additional Montana landfills were licensed to accept radioactive oil waste before creating rules to govern that disposal: BAC Disposal near Outlook, Clay Butte Disposal near Culbertson, Republic Services near Missoula, Corral Creek Landfill near Baker, and MT Waste Systems High Plains landfill near Great Falls.¹² DEQ issued the Environmental Assessment for BAC Disposal site on September 29, 2014.¹³

ND raises load limit from 5 pCi/gm to 50 pCi/gm MT raises load limit from 30 pCi/gm to 50 pCi/gm

On December 7, 2015 DEQ issued a policy change memorandum to explain its proposal to increase disposal limits for NORM and TENORM from 30 pCi/gm to 50 pCi/gm. North Dakota had just adopted a new rule increasing from 5 pCi/gm to 50 pCi/gm that would go into effect on January 1, 2016.¹⁴ DEQ said the rationale was “to be commensurate with regional States” and “stay conservative yet consistent with nearby states for landfill acceptance criteria while remaining protective of public health and the environment.”¹⁵

North Dakota's rational basis in science

The North Dakota standard has a *rational basis in science*.

To determine a safe landfill radioactive limit for workers and the public, the North Dakota Department of Health (NDDoH) engaged Argonne National Laboratory to conduct a study on TENORM waste in 2013.¹⁶ Argonne delivered a 140-page report. Argonne used the International Commission on Radiological Protection's maximum recommended exposure of 100 millirems per year (mrem/y) to calculate a safe disposal limit. Argonne's study found:

The maximum allowable total radium concentration that could be safely disposed of in a landfill without exceeding the 100-mrem/yr dose limit for any receptor, while also taking into account the additional activity from thorium that may be present, varied from 51.6 pCi/g to 66.6 pCi/g. The lower concentration could be used to establish a limit of 50 pCi/g total radium for TENORM wastes disposed of in landfills. This value corresponds to the assumption that the ratios of Th-232 to total radium and of Ra-226 to total radium are both average, plus 1 SD (i.e., Th-232/total radium at 49% and Ra-226/total radium at 80%).¹⁷

Note the complexity posed by the ratio of thorium to radium in a sample. Argonne reported:

Many previous TENORM risk assessment studies did not include thorium because of the lack of data. In addition, state regulations for TENORM and NORM disposal typically impose limits based upon total radium (Ra-226 plus Ra-228) activity concentrations. This study recommends similar limits, taking into consideration the presence of Th-232 and the relative concentrations of Th-232 and total radium in the waste samples measured.¹⁸

That complexity is only one reason why faith in a rolling average safety net on an analogy to blending protein content in hard red spring wheat is an unscientific *non sequitur*.

As a result of Argonne's findings, conclusions, and recommendations, NDDoH established a disposal limit of 50 pCi/gm and did not rely on a rolling average. This level, however, had to be part of a package of additional features of an administrative rule. In its recommendations, Argonne said:

North Dakota solid waste regulations may be safely modified so that the maximum exposure to any landfill worker does not exceed 100 mrem/yr, to allow TENORM wastes containing an average concentration of less than or equal to 50 pCi/g of total radium (independent of background radium levels) to be disposed of in either Special Waste or Industrial Waste Landfills, *based on the following conditions*:

- No more than 25,000 tons of TENORM wastes are disposed of in a single landfill per year.
- The average thorium activity concentration in the waste does not exceed 24 pCi/g. (This concentration assumes a thorium to radium ratio of 49% at 50 pCi/g total radium,

based on the conservative assumption that the ratios of Th-232 to total radium and of Ra-226 to total radium are both average, plus one SD greater than those in all samples observed for this report.)

– TENORM wastes must be covered by at least 2 m (6 ft) of a combination of the landfill cover materials and clean wastes that do not contain radionuclides.¹⁹

For a collection of information and documents about the North Dakota rulemaking process, see <https://deq.nd.gov/TENORM/>.

Load limits in 25 states

Wyoming, Colorado, and Michigan also limit TENORM to 50 pCi/g. Texas, Mississippi, and Louisiana limit it to 30 pCi/g. “Nineteen states limit waste to 5 picocuries/gram for radium-226 and/or radium-228.”²⁰ “If Montana ups its level to 200 pCi/g, it would allow the highest radiation levels of any state.”²¹

DEQ initiates rulemaking

DEQ’s December 2015 memorandum also announced:

DEQ will initiate the formal rulemaking process in 2016 and seek public involvement in vetting this or if another standard is appropriate to be promulgated as an Administrative Rule of Montana. The rulemaking process will follow the structure set by the Montana Administrative Procedures Act.

DEQ issued a task order seeking technical expertise to assist and provide guidance in developing TENORM disposal rules.²² DEQ awarded a contract based on the task order to Tetra Tech Inc.²³ Tetra Tech delivered an 82-page report titled “Development of TENORM Rules for the State of Montana,” December 2016.

DEQ’s rational basis in science

Tracking what Argonne reported to North Dakota, Tetra Tech reported the following to Montana:

This approach requires knowledge of the activity concentration of each of the principal radionuclides present in the TENORM (228Ra, 226Ra, and 232Th) by either direct laboratory analysis of each type of waste to be accepted by the landfill or by source knowledge. A ***statistically robust method*** of tracking the cumulative activity concentrations of each of the three nuclides accepted by the landfill is essential to ensuring that the dose to the worker does not exceed 100 mrem/y. A generic threshold value can be calculated using a reasonably conservative assumption for the mix of radionuclides in the TENORM, as was done for the North Dakota study (ANL 2014). For example, a RESRAD analysis assuming 25 percent of the activity in the TENORM is attributable to 232Th, 25 percent to 228Ra, and 50 percent to 226Ra would give a generic total radium threshold of 67 pCi/g, assuming the landfill worker spends 50 percent of his or her time managing the waste or 33 pCi/g if the worker spends full time

managing the waste (see Appendix A). Direct gamma radiation accounts for 97 percent of the estimated dose, with incidental ingestion of soil accounting for 2 percent and inhalation of particulates and radon decay products contributing 1 percent.²⁴

Note the necessity of a “statistically robust method” of tracking the cumulative activity concentrations of each of the three nuclides accepted by a landfill. Query: Does a standardized statistically robust method of calculating the cumulative activity concentrations exist? If so, is the method one landfill operators actually can apply? Is the method one DEQ can apply in regulatory oversight of a landfill?

Lacking such a method, Tetra Tech accords with Argonne and NDDoH about relying not on a rolling average but on a “generic threshold value,” i.e., a gate acceptance load concentration of 50 pCi/g total radium.²⁵

In January 2017 DEQ’s rule writer was drafting TENORM rules.²⁶

Dozens upon dozens of news media stories publicized TENORM issues and administrative rulemaking in Montana and North Dakota.

DEQ’s first proposed rules, August 2017, 50 pCi/gm

On August 17, 2017 DEQ gave notice of proposed TENORM rules, a 60-day public comment period, and public hearings.²⁷ DEQ conducted public hearings in Helena on September 7, 2017 and Sidney on September 20, 2017. Before both meetings, DEQ conducted informal meetings to discuss the proposed rules and answer questions. The notice invited public comment through October 18, 2017.

The notice was a legal notice under the Montana Administrative Procedure Act certified to the Secretary of State. DEQ also announced the proposed rules, hearings, and public comment period in a press release. The press release said, “DEQ anticipates the rules will be finalized November 2017.”²⁸ DEQ announced a 30-day extension of the public comment period to November 18, 2017.²⁹

DEQ proposed

a dual-protective approach in setting acceptance criteria for TENORM that the annual average TENORM concentration does not exceed 50.0 pCi/gm of radium-226 plus radium-228 and that TENORM waste in a landfill does not result in the exceedance of the dose limit of 100 mrem/y at the boundary of the active disposal unit.³⁰

DEQ received over 1,000 comments on the proposed rules.³¹ As it would turn out, that was less than half of the total public comment DEQ would receive over the total course of the rulemaking process. One interesting comment was made by Robert Morris, a radiological control consultant for Oaks Disposal. At the September 20, 2017 hearing in Sidney, Morris said, “I work for Oaks Landfill and both Oaks and myself support the rules.”³²

DEQ decides to rewrite

Based on substantive input from stakeholders and the general public, DEQ decided to rewrite the proposed rules. The agency established a TENORM workgroup consisting of non-governmental organizations, industry representatives, local government officials, scientists, and informed citizens. DEQ also sought input from the State Review of Oil and Natural Gas Environmental Regulations (STRONGER).³³ STRONGER is a multi-stakeholder 501(c)3 nonprofit organization. Its board of directors “is comprised of equal representation from the oil and gas industry, state oil and gas environmental regulatory agencies, and the environmental public advocacy community.”³⁴ Some of the specific members were Montana Petroleum Association, Northeastern Montana Land and Mineral Owners, Richland County Concerned Citizens, Oaks Disposal, Republic Services, Tetra Tech, Northern Plains Resource Council, Montana Association of Counties, and an independent health physicist.

The work group met in Billings on October 16, 2018. Richland County Commissioner Duane Mitchell participated. He sought to protect Richland County residents by maintaining standards consistent with neighboring states.

DEQ’s second proposed rules, August 2019, 200 pCi/gm

On August 13, 2019 DEQ gave notice of revised proposed TENORM rules, a 60-day public comment period, and public hearings.³⁵ DEQ conducted public hearings in Glendive on September 24, 2019 and Helena on October 10, 2019. Before both meetings, DEQ conducted informal meetings to discuss the proposed rules and answer questions. The notice invited public comment through October 21, 2019.

The revised rules *quadrupled* the concentration level for waste entering a disposal site from 50 pCi/gm to 200 pCi/gm. They *doubled* the gate screening level from to 100 microrentgen per hour ($\mu\text{R/hr}$) to 200 $\mu\text{R/hr}$.

North Dakota’s concentration limit still was (and still is) 50 pCi/gm. North Dakota still had (and still has) no licensed disposal site. Doubling and quadrupling the levels abandoned DEQ’s 2015 guidance rationale “to be commensurate with regional States” and “stay conservative yet consistent with nearby states.”

No standardized calculation for safety net rolling average

The rationale for quadrupling the load intake level to 200 pCi/gm was the new requirement of a rolling average safety net.³⁶ The proposed rule would require that each site compute a rolling average concentration and not exceed 50 pCi/gm. It would allow each facility

to establish its own procedure for ensuring the 50 pCi/gm average in-place concentration would not be exceeded because there is no standardized method for calculating the in-place average concentration of TENORM waste within a TENORM waste unit.³⁷

DEQ's conclusion that "there is no standardized method for calculating the in-place average concentration of TENORM waste within a TENORM waste unit" was based on its own competence and research, and it was supported by a goodly amount of input from qualified scientists outside the agency. It was supported by the Argonne and the Tetra Tech reports each of which explain the complexities.

Rationales lacking

The revised proposed rules provided no rationale for the following three matters.

1. How DEQ could perform regulatory oversight assuring that disposal units maintain 50 pCi/gm average in-place concentration when each unit would use its own procedure and there is no standardized method for calculating it.
2. Abandonment of DEQ's prior rationale of consistency with surrounding states.
3. What was wrong with continuing to dispose of hot loads up to 200 pCi/gm at disposal sites associated with nuclear weapons and research facilities that have the experience, competence, and capacity to deal with it while allowing TENORM up to 50 pCi/gm to be disposed in Montana.

Besides the lack of rationales for those matters, it was difficult to see how the input from non-governmental organizations, industry representatives, local government officials, scientists, informed citizens, and STRONGER had led to the quadrupling from 50 pCi/gm to 200 pCi/gm. Reportedly, "50 pCi/gm . . . was the limit supported by [the] stakeholder working group."³⁸

Claims would be made subsequently before the EQC that 200 pCi/gm was a negotiated deal,³⁹ without identifying who did the negotiating or who the parties to the deal were.

"Vigorous" outcry

DEQ received over 900 comments on the revised rules.⁴⁰

"According to Rebecca Harbage, the public policy director for the Montana Department of Environmental Quality, it was standing room only" at the Glendive hearing.⁴¹ The hearing was, shall we say, vigorous.⁴²

The hearing in Helena was very well attended with much testimony. Concerns were raised from all parts of Montana.

Richland County Commissioner Shane Gorder, Civil Attorney Tom Halvorson, and Public Works Director Adam Smith drove 521 miles one way to the hearing in Helena. Gorder testified in favor of protecting eastern Montana by making Montana's rule equal with North Dakota's,⁴³ in keeping with DEQ's 2015 guidance rationale.

Halvorson testified to request a requirement that when a transporter of TENORM has a spill, they must notify the local disaster and emergency services coordinator as soon as practically possible.⁴⁴ That would allow local DES to alert local government responders that they are responding to a TENORM area. Responders such as EMTs, fire fighters, deputy sheriffs, and DES personnel would have no other way of knowing since there is no requirement that TENORM be placarded in transportation. A story in the *Missoulian* reported:

A train-truck accident in August [2019] took the lives of a TENORM-hauling truck driver and his passenger. Contaminated materials were spread across the tracks and ground. First-responders had no warning as to the danger, and hazardous materials cleanup was the charge of state offices 500 miles away.⁴⁵

Supplemental notice restores 50 pCi/gm, January 2020

DEQ listened to public comment questioning acceptance of hot loads without a standardized method to calculate the rolling average and supporting DEQ's prior rationale of consistency with surrounding states. On January 21, 2020 DEQ gave supplemental notice of revised proposed rules and a comment period through March 2, 2020. DEQ expressly stated the revisions were "in response to comments received on the Notice of Public Hearing on Proposed Adoption, MAR Notice No. 17-406."⁴⁶

The revision:

- Eliminated the rolling average for which there is no standardized method of calculation.
- Restored the load concentration level of 50 pCi/gm that:
 - ✓ DEQ had established for consistency with surrounding states in 2015
 - ✓ had been in the prior draft of the proposed rules
 - ✓ was recommended by the Argonne and Tetra Tech reports
 - ✓ was supported by the stakeholder work group
- Restored the gate screening level of 100 micro roentgen per hour ($\mu\text{R/hr}$), excluding background, rather than 200 $\mu\text{R/hr}$.
- Required a TENORM waste management system to immediately stop accepting TENORM waste and notify DEQ within 24 hours if the total effective dose equivalent limit of 100 millirem/year is exceeded at the boundary.
- Added subsection (7) to New Rule X on TENORM Spill Reporting Requirements, requiring that: "(7) A person who spills TENORM waste and a person who transports TENORM waste for processing or disposal that is spilled for any reason during transport shall as soon as practically possible report the spill to the county coordinator

of disaster and emergency services for the county where the spill occurs.”

The notice was a legal notice under the Montana Administrative Procedure Act certified to the Secretary of State. DEQ also announced the proposed rules and public comment period in a press release.⁴⁷ The press release expressly says “The proposed amendments are in response to comments received on the Notice of Public Hearing on Proposed Adoption, which was published by the Secretary of State on Aug. 23, 2019.”

DEQ received over 500 comments on the revised rules.⁴⁸ This brought the total of public comments across three phases of rulemaking to over 2,400.

The supplemental notice provided rationales for these changes. The Board of County Commissioners of Richland County filed a written public comment dated March 2, 2020 supporting the proposals of the supplemental notice. It commended especially the rationale of consistency with neighboring states.

DEQ was ready to proceed in the ordinary course of the Montana Administrative Procedure Act toward the proposed rules becoming final.

EQC launches review

The draft agenda of the Environmental Quality Council for April 27, 2020 included an item listed as “Proposed radioactive waste rule.”

Yet again, the public responded. During the one week between issuance of the draft agenda and the meeting, Council members described themselves as having been deluged, flooded, inundated, and swamped with public comment. Insofar as can be deciphered from the EQC meeting, all of the comments were in favor of DEQ’s proposed rules. None supported sidetracking — let alone derailing — the ordinary administrative rulemaking process.

Montana law mandates that “the council shall consult with . . . local government.”⁴⁹ The Board of County Commissioners of Richland County filed a written comment with EQC dated April 21, 2020 supporting the proposed rules and opposing sidetracking the ordinary administrative rulemaking process.

Motion for informal objection

Sen. Mike Lang (R-Malta) moved to make an informal objection to DEQ’s proposed rules.⁵⁰ Joseph Carroll, EQC Staff Attorney, explained the effect of an informal objection, His explanation was consistent with a memorandum to the Council he authored on June 12, 2019, which reads as follows:

Informal Objection

If a majority of the Council members notify the chair that they object to a proposed rule, the Council must notify the agency of the objection and that the Council intends to address the

objection at the next meeting of the Council. Following notice of the objection, the agency may not adopt the rule until publication of the last issue of the MAR that is published before the 6-month period during which the adoption notice must be published UNLESS the Council withdraws its objection or meets during the 6-month period and does not sustain the objection. Under the informal objection, the Council is not required to set forth in writing its reasons for the objection.

The memo cites § 2-4-305(9), M.C.A., a provision of the Montana Administrative Procedure Act.

During discussion of the motion to side-track the proposed rules, Sen. Lang said, “We as a committee were not informed of this thing.”⁵¹

Strictly speaking, it might be true that DEQ did not mail a copy of the supplemental notice to EQC. It would not hurt to check on that. But the tone of complaint about being in the dark was more general and begged the question, why wouldn’t the Environmental Quality Council know about administrative rulemaking to regulate TENORM disposal? Given the information presented above in this backgrounder, that seems like a neglect of:

- Mission
- Mandate
- MAPA
- Mail
- Media
- Minutes and Agendas

Mission. The rulemaking agency is the Department of Environmental Quality. The council is the Environmental Quality Council. Their wheelhouse is one and the same. This kind of rulemaking is at the core of EQC’s mission. Mission means that on one’s own initiative, a person is on it.

Mandate. Statutes mandate the duties of EQC. The duties are affirmative. The mandate does not permit resting in repose until someone prods. The Council is required by law to be information-seeking, not information-passive.⁵²

MAPA. The Legislature itself prescribed how the agencies are to give notice of rulemaking. They did that in MAPA, the Montana Administrative Procedure Act.⁵³ DEQ has followed MAPA assiduously throughout three phases of TENROM rulemaking over the last 6 years, including the supplemental notice.

Mail. As early as July 9, 2014 people like the Newtons were sending mail to the Council itself providing detailed concerns, maps, photographs, and pleas saying “We ask the EQC to

pressure the DEQ to create rules that will properly regulate these disposal sites.”

Media. Newspapers, radio, television, and website media published dozens upon dozens of stories and articles about TENORM problems and administrative rulemaking. Many of these have been prominent, such as “Gazette opinion: DEQ should heed Glendive neighbors’ landfill concerns,” by The Editorial Board of the *Billings Gazette*, October 6, 2019, which was only one of many *Gazette* editorials on the topic,⁵⁴ to say nothing of news articles and letters to the editor,, and to say nothing of many other media outlets.

Minutes and Agendas. EQC’s own final agenda for September 25-26, 2019 and Minutes Log for September 26, 2019 show that Staff Attorney Joe Carroll brought before the Council for statutory administrative review MAR 17-406. Listed in the document brought before the Council were the DEQ’s two hearing dates, hearing locations, comment periods, and a summarization of the purpose of the proposed TENORM rules.⁵⁵

With mission, mandate, MAPA, mail, media, minutes and agendas, how did over 500 people make public comments on the supplemental notice that some members of the EQC complain was a surprise?

Deals, surprises, and public comment

EQC member Rep. Jim Keane (D-Butte) made the following remarks:

One of the things that concerns me about this issue is that, I’ve spent a good part of my life on negotiation. In fact some of the testimony we’ve heard today was people who were on the committee and testified and when you come to an agreement, you have an agreement. And that’s what the first proposal was, was an agreement. And then it has to go out for public comment while this is a different process, and then the agreement got changed. I have a real problem in changing agreements that are negotiated.⁵⁶

EQC member Rep. Kerry White (R-Bozeman) made the following remarks:

It’s completely changed from what was originally negotiated and collaborated with all of the people in the public meetings and the public comment. This was changed at the last minute. I think there are significant changes as Mr. [Alan] Olson [of the Montana Petroleum Association] had mentioned to the committee.⁵⁷

Those remarks cause two concerns, one factual and the other legal.

First, they claim some deal was negotiated. On the basis of the alleged deal, they claim surprise.

Factually, that is backwards of the chronology shown above. From December 2015 onward, the “deal” everyone had publicly with DEQ was 50 pCi/gm.

The “deal” everyone had publicly with DEQ continued to be 50 pCi/gm in the first set of proposed rules. What Rep. Keane called “the first proposal” of 200 pCi/gm was not the first

proposal. His argument and complaint proceeds upon a factually false premise.

After 1,900 public comments, working group meetings, hearings, miles traveled, time expended, work invested, and MAPA procedure followed, the *surprise* was the *quadrupling* from 50 pCi/gm to 200 pCi/gm.

50 piCu/gm . . . was the limit supported by a stakeholder working group . . . but when DEQ put the rule out again in August 2019, the truckload limit had jumped to 200 piCu/gm, four times the original concentration, at the request of the Montana Petroleum Association.⁵⁸

Reportedly, the Montana Petroleum Association requested 200 piCu/gm in a letter to DEQ dated May 6, 2019.⁵⁹

That (A) surprise of 200 pCi/gm, (B) the lack of rationale for it, and (C) the lack of basis for it in what participants contributed during the process are what generated such a strong public reaction.

The supplemental notice merely righted a capsized ship. It merely restored the true, long-standing deal. It merely followed the prior guidance, consistency with neighboring states, scientific knowledge about computing rolling averages, public comment, and the prior draft of the proposed rules.

Second, the quoted remarks elevate negotiated deals over public comment by the citizens of Montana. The remarks complain that citizens, through their right of public participation in their own government, changed somebody's negotiated deal! That complaint is contrary to the basic idea of America and Montana, legally speaking.

To complain that the people by their public comments make a difference in how they themselves are governed is contrary to our most fundamental laws. It is contrary to the Enabling Act of Congress that enabled Montana to join the Union and requires that the government of Montana be republican in form.⁶⁰ It is contrary to Montana's Compact with the United States in which Montana covenants to comply with the Enabling Act and uphold republican government.⁶¹ It is contrary to the rights of popular sovereignty,⁶² self-government,⁶³ participation,⁶⁴ and petition for redress⁶⁵ — what Abraham Lincoln called “government of the people, by the people, and for the people.”

Special to Montana are the inalienable right to a clean and healthful environment and the inalienable right of seeking safety and health by all lawful means.

Section 3. **Inalienable rights.** All persons are born free and have certain inalienable rights. They include the right to a clean and healthful environment and the rights of . . . seeking their safety, health . . . in all lawful ways.⁶⁶

Making public comment is a constitutionally protected necessity of republican government by which Montanans — as a matter of inalienable right — seek their safety and health before DEQ and ECQ.

To say, I have a real problem with public comment changing agreements is to say, I have a real problem with American self-government. Reducing or eliminating the effect of public comment would transform our constitutional republic into an aristocracy.

The identity of the privileged deal party might be disclosed in the remark, “there are significant changes as Mr. [Alan] Olson [of the Montana Petroleum Association] had mentioned to the committee.”

- When did Mr. Olson mention that?
- To whom did he say it?
- By what medium did he communicate that?
- What were the substance and content of what he said?
- What sunshine is on that communication?
- What opportunity has the rest of Montana — including 2,400 public commenters, local governments, and the working group — had to reply to whatever Mr. Olson said?

EQC member Rex Rogers (PM-Colstrip) made the following remarks:

We have run through the process of MAPA. We’ve had a lot of community members from especially eastern Montana that have put years into this process moving forward in an informed way and we’re about to put an end to that. This is not very motivating to the public to participate in the process and then just have the rug pulled out at the last moment because everybody hasn’t been playing along and knew what was going on. ... I am really concerned about all the public input that has gone into this process, that it would be just thrown out with a step like this.⁶⁷

EQC member Sen. Pat Flowers (D-Belrade) made the following remarks:

What we have heard today and prior to today with information that has been distributed, there has been extensive public involvement that has gone on for years on this topic. This isn’t a surprise. We applied a working group. They put in hundreds of hours. We’ve heard from the staff that there was just practical considerations and limitations on their ability to apply effectively the rolling average. The proposal was to adopt a standard that is the same as the adjacent state. I haven’t heard any argument from anybody on why we would want to adopt a standard less rigorous than an adjacent state. Why would we want to become the dumping ground for North Dakota or any other state? Out of respect for the work that not only the staff but especially the public has put into this effort and the comments that we have heard from those that would be most directly affected, those nearby landowners, ranchers, farmers, residents – I think it would be extremely disrespectful at this point, and really without rationale to delay the adoption of these rules.⁶⁸

EQC member Sen. JP Pommichowski (D- Bozeman) made the following remarks:

I urge us to honor the work of hundreds of citizens on the work group and over five or six years of this process. One of the speakers mentioned 1,000 or more public comments. This has been a well vetted process. There are radiation health physicists who have contributed to the work group and to rule as it is proposed. We are talking about parity with a neighboring state. We've heard in public comment that North Dakota does not have any sites for TENORM disposal. The thing that's strange now is that this has been elevated – one rule out of one hundred some pages – to come to EQC. What we are not doing is pouring over every other proposed rule that will take effect according to the Administrative Procedures Act.⁶⁹

In its written public comment to EQC for the April 27, 2020 hearing, the Board of County Commissioners of Richland County said:

We wish to respond to a couple of points we have heard in connection with this matter being placed on your draft agenda. One point is that the Department gave too much weight to public comment. That is a strange criticism of an agency in a free republic of popular sovereignty and self-government. On the contrary, as patriotic people we should count ourselves fortunate when any state agency, instead of lording it over the people, listens to us.

EQC votes 10-to-6 to sidetrack rulemaking

Following is the vote result on the motion to informally object to DEQ's proposed rules:

Yes (to sidetrack the process)	No (to allow ordinary process to proceed)
Scott Aspenlieder	Willis Curdy
John C. Brenden	Pat Flowers
Steve Gunderson	Bradley Maxon Hamlett
Jim Keane	Steve Heinebauch
Mike Lang	JP Pomnichowski
Theresa Manzella	Rex Rogers
Cary Smith	
Matt Vincent	
Gene Vuckovich	
Kerry White	

The day after the EQC vote, Plentywood-area rancher Laurel Clawson stated in an email:

It's a slap in the face to have a handful of legislators who have never thought about this issue for more than the length of an afternoon jump in at the last minute and block the protections we've worked for. This is about our livelihoods, the futures of our ranches, and our ability to protect ourselves as property owners and Montanans. What an insult to all the work we've done, and to the thousands of Montanans who've weighed in on this issue.⁷⁰

We can expect this matter to be on EQC's agenda for its May 2020 meeting.

Endnotes

¹ C.B. Harto, K.P. Smith, S. Kamboj, and J.J. Quinn, Argonne National Laboratories, “Assessment of TENORM Disposal in North Dakota Industrial Waste and Special Waste Landfills,” Presentation for North Dakota public meetings in rulemaking process of North Dakota Department of Health, January 20, 21, and 22, 2015, Williston, Bismarck, and Fargo, Power Point slide 12.

² Christopher B. Harto, Karen P. Smith, Sunita Kamboj, and John J. Quinn. Radiological Dose and Risk Assessment of Landfill Disposal of Technologically Enhanced Naturally Occurring Radioactive Materials (TENORM) in North Dakota, No. ANL/EVS-14/13. Argonne National Laboratory (ANL), 2014.

³ “Radioactive waste comes to the surface in western N.D.,” *Grand Forks Herald*, November 25, 2013 (noted online as having been written by news@grandforksherald.com).

⁴ Hal Schmid, “Radioactive waste could be coming to western Montana,” *Missoulian*, December 5, 2019.

⁵ North Dakota Department of Health, “TENORM Information Sheet,” December 2014; and Mike Nowatzki, “In heated do-over meeting, N.D. Health Council ratifies rules for radioactive oilfield waste,” *Grand Forks Herald*, August 9, 2016.

⁶ “Buckhorn Energy Oaks Disposal Services,” <https://www.buckhornws.com/locations/montana/>, accessed May 7, 2020.

⁷ Laura Lundquist, “Radioactive fracking waste could end up in Missoula landfill,” *Missoula Current*, October 25, 2019.

⁸ Department of Environmental Quality, “Joint SD, ND, and MT Solid Waste and Recycling Conference,” *Montana Solid Waste News*, Summer 2013, 4.

⁹ Solid Waste Advisory Committee, Department of Environmental Quality, Minutes, October 10, 2013, 2.

¹⁰ Membership on the Council is specified in § 5-16-101 MCA

5-16-101. Appointment and composition. The environmental quality council consists of 17 members as follows:

(1) the governor or the governor's designated representative is an ex officio member of the council and shall participate in council meetings as a nonvoting member;

(2) six members of the senate and six members of the house of representatives appointed before the 50th legislative day in the same manner as standing committees of the respective houses are appointed. Subject to 5-5-234, three of the appointees of each house must be members of the majority party and three appointees of each house must be members of the minority party.

(3) four members of the general public. Two public members must be appointed by the speaker of the house with the consent of the house minority leader, and two must be appointed by the president of the senate with the consent of the senate minority leader.

¹¹ Clay Newton, Laurene Newton, and Seth Newton, Letter to Environmental Quality Council, July 9, 2014.

¹² Rick Thompson, “Oil & Gas (TENORM) Waste management in Montana,” Association of State and Territorial Solid Waste Management Officials, 2017 Joint Hazardous Waste and Materials Management Training, August 15-17, 2017, presentation August 16, 2017, Power Point presentation slide 8; and David Murray, “State bends to public pressure, amends proposal to accept radioactive oil waste,” *Great Falls Tribune*, February 28, 2020.

¹³ Department of Environmental Quality, Letter to Sheridan County Commissioners et al. with enclosed Environmental Assessment, September 29, 2014.

¹⁴ Mike Nowatzki, “In heated do-over meeting, N.D. Health Council ratifies rules for radioactive oilfield waste,” *Grand Forks Herald*, August 9, 2016.

¹⁵ Ed Thamke, Waste and Underground Tank Management Bureau Chief, Department of Environmental Quality, Memo to Interested Persons, December 7, 2015.

¹⁶ Work for Others Agreement No. 85G19 between UChicago Argonne, LLC as Operator of Argonne National Laboratory Operating under Prime Contract No. DE-AC02-06CH11357 for the U. S. Department of Energy and North Dakota Department of Health, November 12, 2013.

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- ¹⁷ Christopher B. Harto, Karen P. Smith, Sunita Kamboj, and John J. Quinn. Radiological Dose and Risk Assessment of Landfill Disposal of Technologically Enhanced Naturally Occurring Radioactive Materials (TENORM) in North Dakota, No. ANL/EVS-14/13. Argonne National Laboratory (ANL), 2014, 68.
- ¹⁸ Christopher B. Harto, Karen P. Smith, Sunita Kamboj, and John J. Quinn. Radiological Dose and Risk Assessment of Landfill Disposal of Technologically Enhanced Naturally Occurring Radioactive Materials (TENORM) in North Dakota, No. ANL/EVS-14/13. Argonne National Laboratory (ANL), 2014, 2.
- ¹⁹ Christopher B. Harto, Karen P. Smith, Sunita Kamboj, and John J. Quinn. Radiological Dose and Risk Assessment of Landfill Disposal of Technologically Enhanced Naturally Occurring Radioactive Materials (TENORM) in North Dakota, No. ANL/EVS-14/13. Argonne National Laboratory (ANL), 2014, 73.
- ²⁰ Hal Schmid, “Radioactive waste and Missoula’s aquifer,” *Missoulian*, October 16, 2019.
- ²¹ Laura Lundquist, “Radioactive fracking waste could end up in Missoula landfill,” *Missoula Current*, October 25, 2019.
- ²² DEQ Task Order No. 50.
- ²³ DEQ Contract No. 414038-T050.
- ²⁴ Tetra Tech Inc., *Development of TENORM Rules for the State of Montana*, December 2016, 20. See also at 22 and 27.
- ²⁵ Tetra Tech Inc., *Development of TENORM Rules for the State of Montana*, December 2016, 26.
- ²⁶ Department of Environmental Quality, “SWAC Minutes,” *Montana Solid Waste News*, Winter 2017, 4
- ²⁷ MAR Notice No. 17-391.
- ²⁸ Karen Ogden, Department of Environmental Quality, Press Release, August 25, 2017.
- ²⁹ Paul Driscoll, Department of Environmental Quality, Press Release, October 18, 2017.
- ³⁰ MAR Notice No. 17-391, New Rule IV, Acceptance Criteria for TENORM Waste Management Systems, Reason, 1337.
- ³¹ Rick Thompson, Solid Waste Section Supervisor, Montana Department of Environmental Quality, email responding to public information request, May 7, 2020.
- ³² “DEQ holds TENORM forum,” *The Roundup*, September 27, 2017.
- ³³ Paul Driscoll, Department of Environmental Quality, Press Release, August 23, 2019.
- ³⁴ State Review of Oil and Natural Gas Environmental Regulations, “About Us,” <https://www.strongerinc.org/about-us/who-we-are/>, accessed May 8, 2020.
- ³⁵ MAR Notice No. 17-406.
- ³⁶ An additional rationale stated orally, “to ensure that the occasional higher load actually gets disposed of in a licensed facility versus being disposed of illegally.” Rick Thompson, Solid Waste Section Supervisor, Montana Department of Environmental Quality, as quoted in Amy Efta, “DEQ’s TENORM hearing draws criticism from eastern Montana residents,” *Sidney Herald*, September 25, 2019. Patty Whitford called that rationale “b.s.” “‘It doesn’t matter if it’s 50 picocuries or 200 picocuries. There’s always going to be somebody dumping something somewhere illegally,’ she said.” *Ibid*.
- ³⁷ Supplemental MAR Notice 17-406, New Rule III, TENORM Waste Management System Limits and Restrictions, Reasons, 161.
- ³⁸ Laura Lundquist, “Legislative committee puts landfill limit on radioactive waste from oil and gas on hold,” *Missoula Current*, April 28, 2020.
- ³⁹ Rep. Jim Keane (D-Butte), EQC 04-27-2020 Hearing Video 2:07:32; and Rep. Kerry White (R-Bozeman), EQC 04-27-2020 Hearing Video 2:04:22.
- ⁴⁰ Rick Thompson, Solid Waste Section Supervisor, Montana Department of Environmental Quality, email responding to public information request, May 7, 2020.
- ⁴¹ Briana Monte, “Montana DEQ holds radioactive oil waste hearing, concerns raised,” *KURL-8*, September 25, 2019.

⁴² Amy Efta, “DEQ’s TENORM hearing draws criticism from eastern Montana residents,” *Sidney Herald*, September 25, 2019.

⁴³ Mike Dennison, “Montana proposes doubling allowable radioactive oilfield waste,” *Missoula Current*, October 11, 2019.

⁴⁴ Mike Dennison, “Montana proposes doubling allowable radioactive oilfield waste,” *Missoula Current*, October 11, 2019.

⁴⁵ Hal Schmid, “Radioactive waste and Missoula’s aquifer,” *Missoulian*, October 16, 2019.

⁴⁶ MAR Notice No. 17-406, Supplemental Notice of Proposed Rule, certified to the Secretary of State January 21, 2020.

⁴⁷ Paul Driscoll, Department of Environmental Quality, Press Release, January 31, 2020.

⁴⁸ Rick Thompson, Solid Waste Section Supervisor, Montana Department of Environmental Quality, email responding to public information request, May 7, 2020.

⁴⁹ § 75-1-313(1), MCA.

⁵⁰ EQC 04-27-2020 Hearing Video 33:30.

⁵¹ EQC 04-27-2020 Hearing Video 2:06:37.

⁵² § 75-1-324, MCA.

⁵³ Title 2, Chapter 4, MCA.

⁵⁴ See also “Gazette opinion: Montana needs responsible radioactive waste rules,” August 25, 2019; “Gazette opinion: Montana needs radioactive rule,” January 11, 2018; “Guest opinion: No rule at Montana’s radioactive dump,” April 30, 2017; Gazette opinion: Montana needs radioactive waste rules,” September 1, 2017.

⁵⁵ EQC’s final agenda for September 25-26, 2019 contains the following item for 8:00 a.m., Thursday, September 26, 2019.

8:00 a.m. Statutory administrative rule review (Tab 8)

- Mr. Carroll
- Public comment
- Questions/discussion -- EQC
- Committee action, if any

In that agenda item, “Tab 8” is a live hyperlink to:

<https://leg.mt.gov/content/Committees/Interim/2019-2020/EQC/Meetings/Sept-2019/rule-review-aug2019.pdf>

The document at that link is an EQC document dated September 5, 2019, which describes itself as, “This is the Environmental Quality Council’s administrative rule review for proposals by the Department of Environmental Quality/Board of Environmental Review.” Page 3 details MAR 17-406, the two hearing dates, hearing locations, comment periods, and a summarization of the purpose of the proposed TENORM rules.

The Minutes Log for the EQC meeting on September 26, 2019 held in the Ponderosa Room of the City Hall in Libby shows the following at 08:00:05, “Joe Carroll, staff attorney, Legislative Services Division (LSD), provided information on the administrative rule review. (Exhibit 1).” The “Exhibit 1” in the Minutes Log is a live hyperlink, the same link as for “Tab 8” on the agenda. In other words, the September 5, 2019 EQC administrative review memorandum containing information for review of DEQ’s TENORM rulemaking actually was brought before the meeting.

⁵⁶ EQC 04-27-2020 Hearing Video 2:07:32.

⁵⁷ EQC 04-27-2020 Hearing Video 2:04:22.

⁵⁸ Laura Lundquist, “Legislative committee puts landfill limit on radioactive waste from oil and gas on hold,” *Missoula Current*, April 28, 2020.

⁵⁹ Laura Lundquist, “Missoula County backs DEQ change to landfill limits on radioactive waste,” *Missoula Current*, February 19, 2020

⁶⁰ Act of February 22, 1889, Ch. 180, 25 Statutes at Large 676, § 4.

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- ⁶¹ Constitution of Montana (1972), Art. I.
- ⁶² Constitution of Montana (1972), Art II., § 1.
- ⁶³ Constitution of Montana (1972), Art II., § 2.
- ⁶⁴ Constitution of Montana (1972), Art II., § 8; and §§ 2-3-103(1)(a) and 2-3-111(a), M.C.A.
- ⁶⁵ Constitution of Montana (1972), Art II., § 6.
- ⁶⁶ Constitution of Montana (1972), Art II., § 3.
- ⁶⁷ EQC 04-27-2020 Hearing Video 1:43:30.
- ⁶⁸ EQC 04-27-2020 Hearing Video 1:57:58.
- ⁶⁹ EQC 04-27-2020 Hearing Video 2:09:42.
- ⁷⁰ Brett French, “Environmental Quality Council delays rule on landfill radioactive waste,” *Billings Gazette*, April 28, 2020.