

Attachment 2: Comment Index: Written Public Comments Received on Draft Proposed Order
 (August 15, 2024 – September 19, 2024)

Comment Number	Name of Commenter	Organization	Date
1	Sue Craig	Oregon UU Voices for Justice	8/15/2024
2	Audrey Leonard	Columbia Riverkeeper	8/28/2024
3	Samuel Semerjian	Public	9/16/2024
4a, 4b & 5	Maria Gibson	American Aquifers	9/19/2024
6	Dan Schatz	Public	9/19/2024
7	Liz Becker	Public	9/19/2024
8	Nickie Schatz	Public	9/19/2024
9a, 9b	Cole Souder & Others	Green Energy Institute, Columbia Riverkeeper, Sierra Club, Breach Collective, and Northwest Environmental Defense Center	9/19/2024
10	Chief Joe Kaczinski	Mist-Birkenfeld Rural Fire Protection District	9/19/2024

New Public Comment submitted for project : RFA13 and DPO for Mist Underground Natural Gas Storage Facility

ODOE ITService * ODOE <ODOE.ITService@oregon.gov>

Thu 8/15/2024 4:23 PM

To:SLOAN Kathleen * ODOE <Kathleen.SLOAN@energy.oregon.gov>

Organization: Oregon UU Voices for Justice

Submitted by: Sue Craig

Email: sueacraig@gmail.com

Zip Code: 97402

Siting Project Phase: DPO

Comment Summary:

We must STOP the use of this very unnatural gas. It is harming our atmosphere and our future. North West NG must go into another type of business, and stop harming us. My state, and it's agencies must help every way possible to stop the use of this gas.

Please Click on the following link to view the full [Comment Details](#)

Comment Summary

We must STOP the use of this very unnatural gas. It is harming our atmosphere and our future. North West NG must go into another type of business, and stop harming us. My state, and it's agencies must help every way possible to stop the use of this gas.

Comment Date

source

Select email portal manual

Siting Project Phase

Select EXEMPTION REQUEST NOI DPO CC FORMAL
RULEMAKING INFORMAL RULEMAKING AMD-A AMD-B

Comment Details

Application for Site Certificate (ASC) Exhibit

Select Exhibit A - Applicant and Participating Persons Exhibit B - Proposed Facility Description Exhibit C - Proposed Facility Location Exhibit D - Organizational Expertise Exhibit E - Permits Required Exhibit F - Adjacent Property Owners Exhibit G - Materials Analysis Exhibit H - Geological and Soil Stability Exhibit I - Soil Conditions Exhibit J - Wetlands and other Jurisdictional Waters Exhibit K - Land Use Exhibit L - Protected Areas Exhibit M - Financial Capability Exhibit N - Non-Generating Facility Need Exhibit O - Water Use Exhibit P - Fish and Wildlife Habitat Exhibit Q - Threatened and Endangered Plant and Animal Species Exhibit R - Scenic Resources Exhibit S - Historic Cultural and Archaeological Resources Exhibit T - Recreation Opportunities Exhibit U - Public Services Exhibit V - Waste Minimization Exhibit W - Site Restoration Exhibit X - Noise Exhibit Y - Carbon Dioxide Emissions Exhibit Z - Evaporative Cooling Tower Exhibit AA - Electric Transmission Line EMFs Exhibit BB - Other Requested Information Exhibit CC - Applicable Statutes, Rules, Ordinances Exhibit DD - Specific Requirements

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Comment

My Organization is a Religious organization. We believe in the interconnected web of all life. So this includes soil protection, Air quality, all land use, and the problem of the use of this gas in homes for heating and cooking. It causes many folks to experiance asthma.

So any refitting, building future collection/holding of this gas for potential use in homes will cause significant problems for our planet and our people.

If your agency is not involved with decreasing our carbon output, as worked on by our Gov. and Legislature, it should be.

Thank you, Sue Craig. President, Oregon UU Voices for Justice

Attachments


No files were attached.

Mist DPO: comment period extension request

Audrey Leonard <audrey@columbiariverkeeper.org>

Wed 8/28/2024 9:54 AM

To:Energy Siting * ODOE <energy.siting@oregon.gov>;SLOAN Kathleen * ODOE <kathleen.sloan@energy.oregon.gov>

 1 attachments (121 KB)

Mist Amendment, extension request.pdf;

You don't often get email from audrey@columbiariverkeeper.org. [Learn why this is important](#)

Kathleen,

Please find the attached request for a comment period extension on the Mist Amendment 13 draft proposed order, on behalf of Columbia Riverkeeper. Thank you for your consideration.

Best,
Audrey

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Audrey Leonard ([she/her](#)) | Staff Attorney | [Columbia Riverkeeper](#) | 1125 SE Madison St #102, Portland, OR 97214 | 541.399.4775

New Newsletter: [Read it now!](#) Get inspired and learn how Columbia Riverkeeper is rising to the challenge with the latest issue of "Currents"



COLUMBIA RIVERKEEPER
P.O. Box 950
Hood River, OR 97031
(541) 387-3030
columbiariverkeeper.org

August 28, 2024

Oregon Department of Energy
Attn: Energy Facility Siting
550 Capitol Street NE
Salem, OR 97301

Sent via email to: energy.siting@oregon.gov; kathleen.sloan@energy.oregon.gov

Re: Request for Comment Period Extension on NWN Mist Amendment

Dear Kathleen:

Thank you for holding a public comment period on the Draft Proposed Order for the Mist Underground Natural Gas Storage Facility Request for Amendment 13 (Amendment). Columbia Riverkeeper respectfully requests a 30-day extension of the public comment period.

Columbia Riverkeeper's mission is to protect and restore the water quality of the Columbia River and all life connected to it, from the headwaters to the Pacific Ocean. Riverkeeper has over 16,000 members and supporters in Oregon and Washington and regularly comments on decisions impacting water quality, climate, and salmon habitat in the Columbia River, including near Mist, Clatskanie, and Port Westward. Columbia Riverkeeper has many members and supporters that live and work in the region affected by the Amendment.

An extension is warranted due to the length and complex nature of the draft proposed order, the site's extensive history, and the number of other permits implicated by the Amendment. Because the projects involved in this Amendment require additional permits and have various conditions that must be met before construction, allowing more time for public comment will not be burdensome for the applicant. Additionally, the current timeline falls during a season where many individuals (including agency staff) are taking much needed vacation. It is in the public interest, as well as the agency's, to provide additional time for thoughtful comments on this Amendment.

Thank you for considering Columbia Riverkeeper's request for a 30-day extension of the public comment period for the Amendment.


Sincerely,

A handwritten signature in black ink that reads "Audrey Leonard".

Audrey Leonard
Staff Attorney, Columbia Riverkeeper

FW: Amendment 13 Public Comment

From Energy Siting * ODOE <Energy.SITING@energy.oregon.gov>
Date Tue 9/17/2024 8:08 AM
To SLOAN Kathleen * ODOE <Kathleen.SLOAN@energy.oregon.gov>

 1 attachments (42 KB)
ODOE Public Comment.pdf;

From: Eleonora Kostanian-Semerjian <semerjians@gmail.com>
Sent: Monday, September 16, 2024 5:40 PM
To: Energy Siting * ODOE <energy.siting@energy.oregon.gov>
Subject: Amendment 13 Public Comment

You don't often get email from semerjians@gmail.com. [Learn why this is important](#)
The attached document is our public comment submission for Amendment 13 in regards to the Mist Underground Natural Gas Storage Facility.

Samuel Semerjian

Hello, my name is Samuel Semerjian and I am a longtime resident of rural north-west Columbia County. As you know our area is the location of Oregon's one and only Mist Gas Field. For many years my family and neighbors have been increasingly concerned with the management of this gas field. Since the 1970s the gas field has been exploited by various companies, currently most active is NW Natural and Enerfin Resources.

In 2014 we were told by our neighbor that a gas well was to be drilled, by Enerfin, just upriver and adjacent to our home. The proximity of which we found to be unsettling and began extensive research on the subject. Throughout the years of attending county meetings, interactions with DOGAMI, and the EPA we are finding a disturbing volume of intimidation, irregularities, and illegal activity. When presenting our concerns during county meetings we were constantly reassured that all drilling activities were done by the book and met all environmental standards. Yet our reasonable skepticism lies in the simple fact that there is no unbiased physical oversight of these gas related projects. No less, had the drilling just been completed when we noticed that the chemically laden drilling sludge had been illegally dumped into an unlined hole in the middle of the field right next to us. Had we not reported this blatant violation we highly doubt anyone would have ever known and certainly not the agencies or local government that are required to keep said oversight. Even more disturbing was the post completion report by Columbia County which referred to the drilling as "exemplary".

The industrial operations in the Mist Gas Field are only increasing in size and volume. Again, from our research we can see that for decades not a single permit or exemption has ever been denied to any gas company by the county or the state. Which is of no surprise considering how many oil and gas professionals are tantamount working for both the agencies approving gas operations and providing so-called oversight. Most interactions with these individuals are met with passive threats where they will reiterate that those of us with mineral rights will be forced to comply. Essentially utilizing the government as leverage to get whatever they want. More and more wells are being drilled and injected and many more are on their way for approval. Yet too many questions are being actively avoided. What is the state of our soil and water, has our aquifer been compromised? A recent draft thesis by American Aquifers is asking these very questions

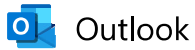
Currently the Amendment 13 application with DOE is using DOGAMI and Haley-Aldrich to present the environmental assessment of the application.

DOGAMI has a very biased record in this subject. Bob Houston, a previous manager of DOGAMI, now works for Knife River. He was heavily involved in getting Knife River to continue operations in Crook County despite the catastrophic water issues for the locals there. Current DOGAMI board member Tiffany Thomas is an employee of Haley-Aldrich. Previous board member Laura Maffei worked for Cable Huston law firm that also represents Enerfin Resources. Randy L. Jordan did work for DOGAMI and last year joined Haley-Aldrich. With so many DOGAMI employees essentially representing mining companies, is it even possible to get an unbiased and independent environmental assessment?

Last December, a Oregon Court of Appeals judge based on a technicality voided the state's regulation to cap emissions on gas companies. Because they have a federal permit to conduct operations (to pollute). DEQ has failed repeatedly to pursue gas company violations on existing rules. They claim to be understaffed. Why is the state allowing permits issued if DEQ is unable to monitor? The state and the county have an obligation and a requirement to protect its citizens from environmental disasters and the Mist Gas Field is long overdue for independent and fair environmental evaluation and supervision. Recently, we met with representatives of NW Natural on addressing our concerns and they said that they would get back to us — they have not done so. We and other local residents are pursuing such an evaluation on the cumulative effects of prolonged gas related activities on the environment. We simply want to know the truth and will seek it as such.

For these reasons gas related operations should not be expanded and specifically Amendment 13 should not be granted. Until there is an unbiased environmental evaluation and oversight which yields fair and proper stewardship of this land.

Sincerely,
Samuel Semerjian



New Public Comment submitted for project : RFA13 and DPO for Mist Underground Natural Gas Storage Facility

From ODOE ITService * ODOE <ODOE.ITService@oregon.gov>

Date Thu 9/19/2024 1:55 PM

To SLOAN Kathleen * ODOE <Kathleen.SLOAN@energy.oregon.gov>

Organization: American Aquifers

Submitted by: Maria Gibson

Email: m.daugherty@americanaquifers.org

Zip Code:

Siting Project Phase: DPO

Comment Summary:

Please Click on the following link to view the full [Comment Details](#)

Comment Summary

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Comment Date

source

Select email portal manual

Siting Project Phase

Select EXEMPTION REQUEST NOI DPO CC FORMAL
RULEMAKING INFORMAL RULEMAKING AMD-A AMD-B

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Council Standards

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Comment

Please submit the public comment in the attached document for pFRA13.

Attachments

4 days ago

Microsoft CRM Portals

[Public Comment Amendment 13_pFRA13_AmericanAquifers.docx \(10.19 MB\)](#)



American Aquifer's Public Comment Requesting Denial of Amendment 13 (pFRA13)

American Aquifers, a 501c3 non-profit located in Oregon designed to support communities reliant upon groundwater, requests the Oregon Department of Energy (DOE) deny amendment 13 (pRFA13). Residents in Columbia County suffer from disproportionately high rates of cancer compared to other counties in the state, yet represent less than 1.3% of the state's population. Residents in Columbia County maintain cancer rates that rank #1 in uterus, lung, bronchus, and melanoma cancers, #2 in female pancreas cancer and leukemia, #4 in brain and esophagus cancer, #5 in female kidney/renal pelvis cancer, #6 in Non-Hodgkin Lymphoma, #7 in oral cavity and pharynx cancer, and #10 in male kidney/renal pelvis cancer. Additionally, a recent study of multiple myeloma shows Columbia County has staggering incidences of this rare, non-curable cancer that accounts for only 10% of all blood cancers. Of the 133 counties that make up the entire west coast, only 12 counties have significantly high rates of myeloma cancer, with Columbia County listed as one of the three in Oregon¹.

Cancer rates in Columbia County cannot be directly attributed to logging operations, which include the spraying of herbicides and are known carcinogens. A total of 47% of land in Oregon is forested. Tillamook and Washington Counties, with a combined population of 14.83%, are home to the largest forested area in the state, but according to the National Cancer Institute, cancer rates are stable in Tillamook County and falling in Washington County, suggesting that forestry practices are not the predominate cause to high rates of cancers suffered among communities in Columbia County.

According to the Safe Drinking Water Act (SDWA), all water designated for drinking use, including underground sources, are protected by federal law. Furthermore, the Oregon Groundwater Quality Protection Act of 1989 was enacted to prevent contamination of groundwater and to conserve, restore, and maintain Oregon's groundwater resources for present and future uses. The DOE is mentioned as a state agency that coordinates energy facility activities with Oregon's Department of Environmental Quality's (DEQ) to protect groundwaters of the state.

Potential cancer-causing chemicals are likely leaching into local aquifers from operations occurring at the Mist Gas Underground Natural Storage Gas Field (Mist Gas Field). A request for denial of pFRA13 is requested until environmental exposure pathways and current operation practices are properly and thoroughly investigated using the best available science, which is supported by Oregon State University's Institute for Natural Resources in accordance with OAR 629-603-0400(4) and is defined by Cornell Law as "science that is reliable and unbiased."

We find operations governing the Mist Gas Field are not meeting OAR, ORS, or EFSC Siting Standards. Our findings also show partiality toward field operators (Northwest Natural and Enerfin) by state agencies, including but not limited to DOGAMI² and others responsible for the safety protocols designed to protect community exposure, which are in place to limit chemical constituents not suitable for human consumption.

The following describes the OAR, ORS, or Siting Standard (herein referred to as Guiding Policy) within the jurisdiction of the EFSC that supports our objection to amendment 13 based on the rules governing the Mist Gas Field, and includes evidence supporting our request for denial.

¹ Cheung, J.T.H., Zhang, W. and Chiu, B.C.H., 2023. Geospatial analysis of population-based incidence of multiple myeloma in the United States. *Cancer epidemiology*, 83, p.102343.

² Oregon Department of Geology and Mining Industries



Concern: Geologic Hazards Not Properly Assessed in Exhibit H: Geologic Hazard Evaluation (pFRA13)

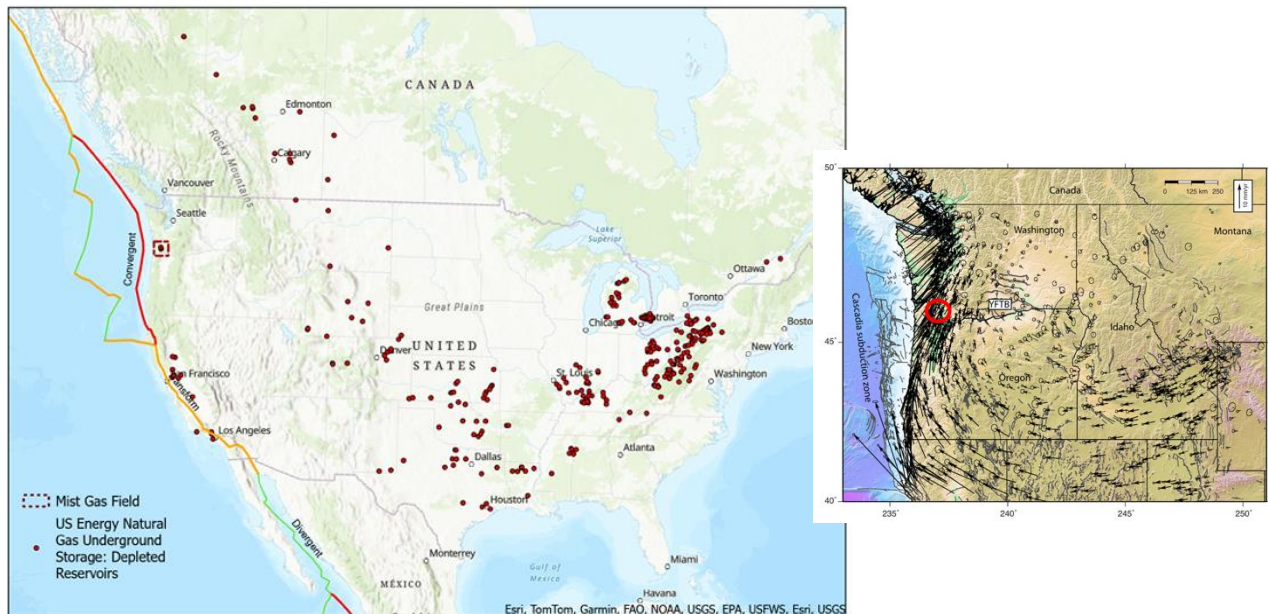
Guiding Policy: OAR 345-022-000 (2)(b)(A): (2) The Council shall weigh overall public benefits and any adverse effects on a resource or interest as follows: (b) The Council shall evaluate overall public benefits by considering factors including, but not limited to, the following: (A) The overall environmental effects of the facility, considering both beneficial and adverse environmental effect.

OAR 345-024-0030 (2): The applicant has developed a program using technology that is both practicable and reliable to monitor the facility to ensure the public health and safety.

OAR 345-022-0020(c): (c) The applicant, through appropriate site-specific study, has adequately characterized the potential geological and soils hazards of the site and its vicinity that could, in the absence of a seismic event, adversely affect, or be aggravated by, the construction and operation of the proposed facility; and (d) The applicant can design, engineer and construct the facility to avoid dangers to human safety and the environment presented by the hazards identified in subsection

Statement of Opposition: The best available science has not been applied to adequately evaluate geologic hazards and risk associated with operations at the Mist Gas Field.

Supporting Evidence: The Mist Gas Field is the only depleted natural gas reservoir in the USA and Canada located adjacent to a tectonically active convergence zone as shown in the figure below. Tectonic activity is due to the Cascadia Subduction Zone, which is the collision and subduction of the Juan de Fuca Plate beneath the North American plate. The consequence of subducting plates, as is evident in Oregon and Washington landscape, include micro, local, and regional fault zones, volcanism, earthquakes, and crustal rotation. The Mist Gas Field is in an extremely active location where velocity data, obtained through high-density geodetic GPS measurements (inset map: black arrows), show significant rotation occurring beneath the gas field.





Given the uniqueness of the Mist Gas Field's location (insert map: red circle), new methods and tools are now available to enhance our current understanding of Cascadia Subduction Zone in the Pacific Northwest. Yet no indication is provided that suggests best available science is currently used to protect waters of the state from groundwater contamination due to hydrocarbons and other constituents that could potentially migrate to local aquifers from storage operations, including fracked chemicals obtained from gas purchased in Canada.

Additional Comment: In addition to the above concerns, in amendment 13 (pRFA13) Exhibit H (Geologic Hazards Evaluation), Table H-8 on page 22, discusses fault hazards and claims only 13 quaternary faults are within 50 miles of the project. According to information obtained from the USGS citation listed as the source of the fault data, it states, "For the hazard maps, both the fault surface trace and the metadata are simplified representations of the geometry and behavior of the fault, based on geologic interpretation."

In 2020, the USGS created a new geologic map³ within the local vicinity. The map was created, "**to provide a uniform, modern geologic database for the greater Portland metro area to better understand its tectonic setting, active faults, volcanoes, landslide hazards, and distribution of geologic materials and resources. Information in this database will be used to improve seismic hazard and resource assessments in this economically important region.**"

Therefore, Exhibit H in the pRFA13 should be considered outdated information, since it does not capture the true geologic landscape of the area. It's worth noting that both datasets were available at the time Exhibit H was written for pRFA13, yet Exhibit H made no mention of the updated USGS map, even though it was created in collaboration with DOGAMI. Aside from a paper written by Wells and Bemis in 2020, which focused on migration of the Oregon forearc on the Gales Creek fault, and the standard NRCS soils database, accessed in 2023, all other sources used to present the local geologic and topographic conditions of the site in Exhibit H were mostly written in the 1970s and 1980s. Although the 2020 USGS map falls outside of the Project Area, it is within the boundary of the Site Certificate.

Furthermore, the earthquake map provided in Exhibit H (Figure H-8) does not adequately represent the number of earthquakes recorded in the region. The image on the left shows earthquakes in Exhibit H: Figure H-8, with the smallest circles representing < 2 in magnitude. The image on the right, obtained from the USGS Earthquake Catalog⁴, shows significantly more earthquakes than shown in Exhibit H.

³ Wells, R., Haugerud, R.A., Niem, A.R., Niem, W.A., Ma, L., Evarts, R.C., O'Connor, J.E., Madin, I.P., Sherrod, D.R., Beeson, M.H. and Tolan, T.L., 2020. Geologic map of the greater Portland metropolitan area and surrounding region, Oregon and Washington (No. 3443). US Geological Survey.

⁴ Schneider, M., Flury, H., Guttorp, P. and Wright, A., 2023. Earthquake catalog processing and swarm identification for the Pacific northwest. *Seismological Research Letters*, 94(5), pp.2500-2513.

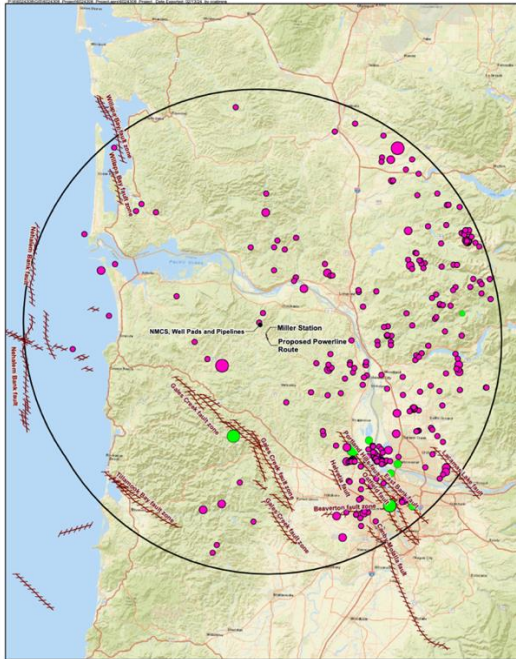
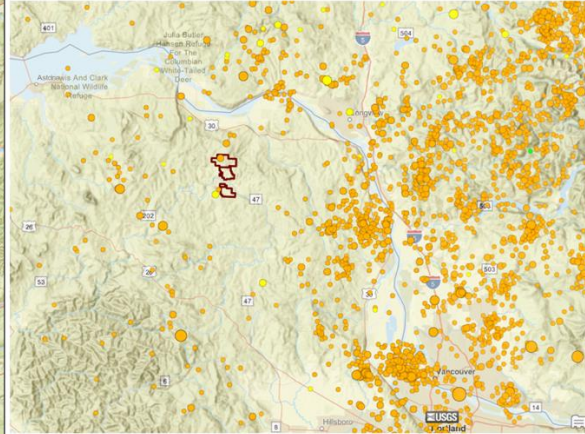
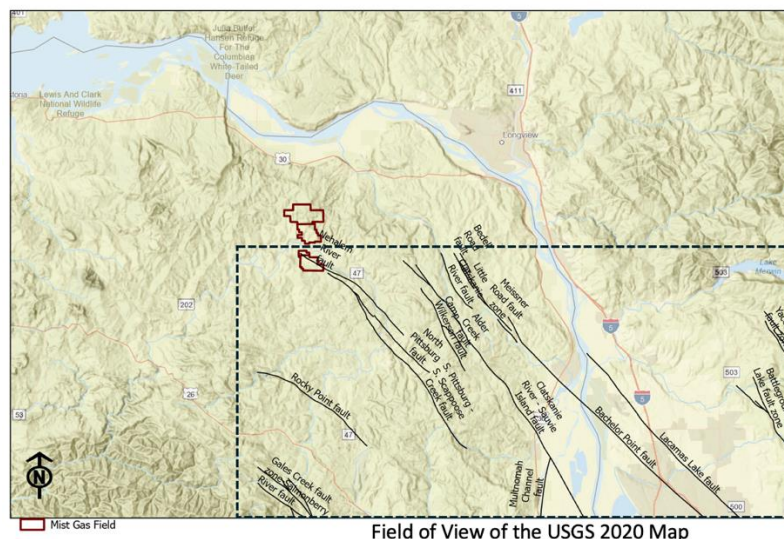


Exhibit H. Figure H-8

Data obtained from the USGS Earthquake Catalog



In addition to questionable material used in Exhibit H of the pRFA13, Table H-8 shows the nearest fault zone to the site is the Gales Creek Fault Zone located 17.6 miles away. However, only using the USGS 2020 map, 100 distinct faults were identified, representing up to 30 fault zones located approximately 50 miles from the Mist Gas Field (Figure Below. To reduce label overlap, not all fault zones are labeled in the figure). This includes new and extensive faulting within the southern boundary of the site certificate, not previously shown in any of DOGAMI's updated maps or in Exhibit H.



Field of View of the USGS 2020 Map



Concern: Surficial Geology Not Properly Assessed in Exhibit H of pFRA13

Guiding Policy: OAR 345-022-000 (2)(b)(A): (2) The Council shall weigh overall public benefits and any adverse effects on a resource or interest as follows: (b) The Council shall evaluate overall public benefits by considering factors including, but not limited to, the following: (A) The overall environmental effects of the facility, considering both beneficial and adverse environmental effect.

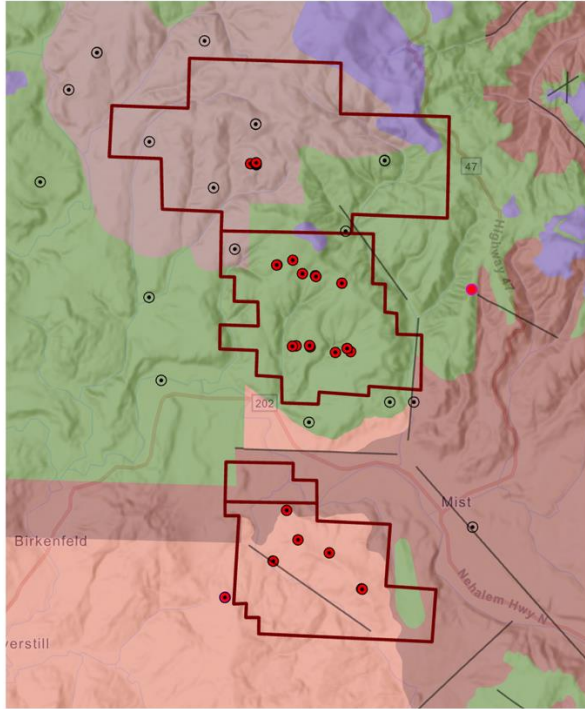
OAR 345-022-0020(c): (c) The applicant, through appropriate site-specific study, has adequately characterized the potential geological and soils hazards of the site and its vicinity that could, in the absence of a seismic event, adversely affect, or be aggravated by, the construction and operation of the proposed facility; and (d) The applicant can design, engineer and construct the facility to avoid dangers to human safety and the environment presented by the hazards identified in subsection (c).

Statement of Opposition: The Mist Gas Field is operated outside of conditions listed in OAR 345-022-0022(c). The potential geological hazards of the site are not properly identified. This is evident in the recent research released by the USGS in 2020. Although it was conducted in coordination with DOGAMI, no operational changes were implemented to reflect the complex geological conditions which show extensive faulting and cap rock exposure, which is now identified within the southernmost boundary of the gas field.

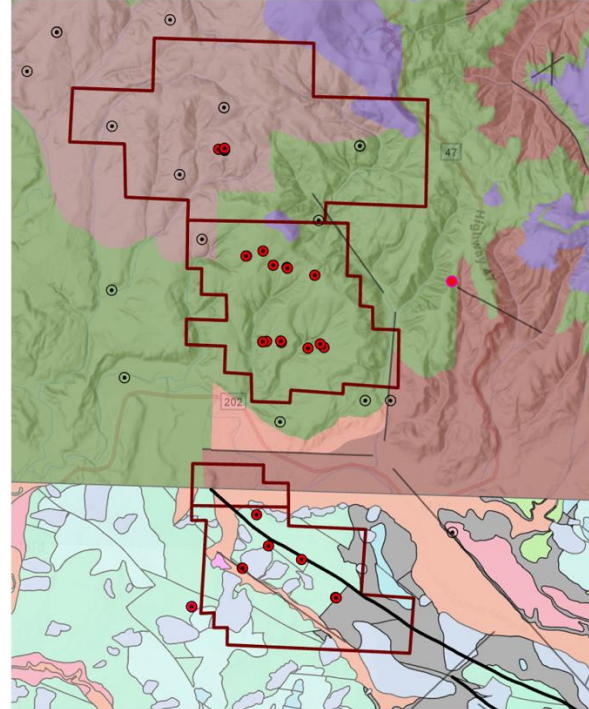
Supporting Evidence: According to DOGAMI, the best available geologic mapping for the state, combined into the Oregon Geologic Data Compilation, is provided under release 7⁵. Examination of this map shows simplified geology compared to the USGS map. This is apparent in the below figure, which shows an overlay of DOGAMI's compilation geologic map (OGDC-7) compared to the 2020 geologic map produced by the USGS.

Additional Comment: Surficial geology of the area has not been adequately assessed. This is apparent in the current DOGAMI map (left figure) compared to the updated 2020 map (right figure). The complexity of the geology and faulting is much more intricate than the OGDC-7 represents and needs throughout evaluation prior to approval of the amendment, as the surficial geology used in Exhibit B is likely extremely simplified (figure below).

⁵ <https://pubs.oregon.gov/dogami/dds/p-OGDC-7.htm>



DOGAMI (OGDC-7) Surficial Geology



DOGAMI (OGDC-7) Surficial Geology Underlying the 2020 USGS Map

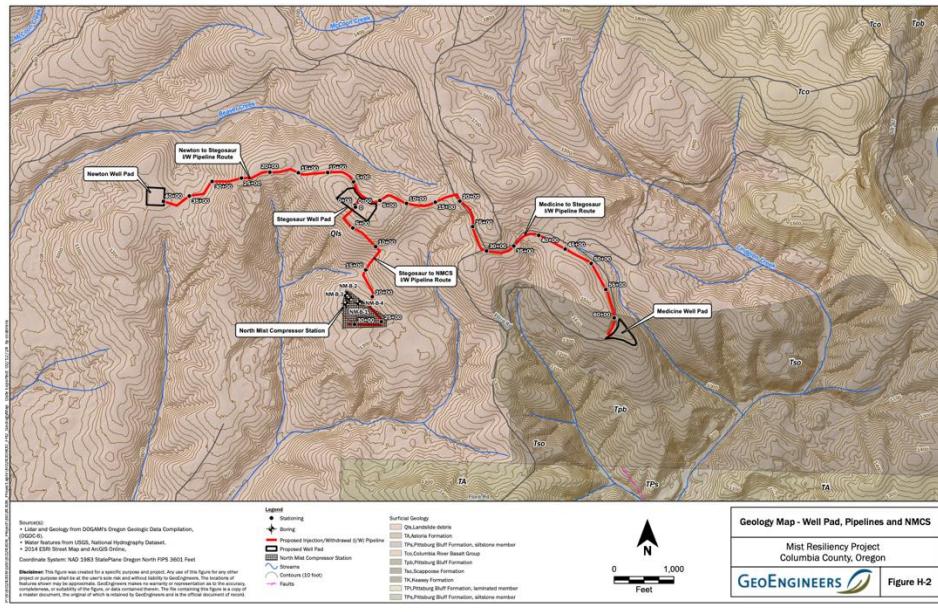


Figure H-2: Surficial Geology provided in Exhibit H



Concern: Groundwater Contamination Potential Due to Abandoned Wells

Guiding Policy: OAR 345-022-000 (2)(b)(A): (2) The Council shall weigh overall public benefits and any adverse effects on a resource or interest as follows: (b) The Council shall evaluate overall public benefits by considering factors including, but not limited to, the following: (A) The overall environmental effects of the facility, considering both beneficial and adverse environmental effect.

Statement of Opposition: Extensive exploration and operation of the Mist Gas Field has resulted in hundreds of injection, withdrawal, and abandoned wells. According to a report written by the National Energy Technology Laboratory in 2019⁶, utilizing depleted reservoirs is attractive due to pre-existing infrastructure. The report also states, **"Depleted oil and/or gas fields may pose the risk of abandoned, or orphaned, wells penetrating the storage reservoir, which can serve as a leakage conduit to neighboring formations or the atmosphere."** Additionally, in the *Underground Gas Storage Regulatory Considerations: A Guide for State & Federal Regulatory Agencies*, it states, **"Pre-existing or abandoned wellbores including previously pressurized or depleted areas, and previously generated hydraulic fractures should also be considered risk elements."** DOGAMI has not properly inventoried all wells within the gas field. This decreases DOGAMI's ability to properly assess potential groundwater contamination sources.

Supporting Evidence: Email from a public records request show DOGAMI's Bob Houston stated 395 wells have been permitted at the field, yet it appears most of the locations of these wells are not identified. Furthermore, Bob notes **"Additionally, [of the 395 wells permitted, it] does not include other "holes" (seismic holes, core holes and monitor)."** A copy of the email is provided below. This suggests an extensive number of "holes" have likely outlived their sealing lifespan, yet most locations are unknown, thereby increasing the potential of groundwater contamination, with DOGAMI unable to execute effective measures to address this issue.

HOUSTON Robert * DGMI
RE: Mist wells
To: MADIN Ian * DGMI, Cc: BUCHNER Ed * DGMI, LOFTON ReNeea * DGMI
January 18, 2018 at 3:23 PM [Details](#)

Ok,
There are currently 110 active permits in the Mist gas field

Based on the API number there has been a total of 395 "wells" permitted in Columbia since 1953. ReNeea, noted that there appears to be skips in the sequential API number. Additionally, does not include other "holes" (seismic holes, core holes and monitor).

Cheers,
Bob

Robert A. Houston, RG
Hydrocarbon & Metallic Ore Geologist
Oregon Department of Geology and Mineral Industries | Springfield Field Office |
Springfield Interagency Office/3106 Pierce Parkway Suite D 1 Springfield, Oregon 97477
Office: 541-225-5451; Cell: 541-619-4653
Email: robert.houston@oregon.gov | <http://www.oregongeology.org>

From: MADIN Ian * DGMI
Sent: Thursday, January 18, 2018 3:09 PM
To: BUCHNER Ed * DGMI <Ed.BUCHNER@oregon.gov>; HOUSTON Robert * DGMI <Robert.HOUSTON@oregon.gov>
Subject: RE: Mist wells

So it sounds like there is no easy way to get a definitive count of the number of wells drilled to develop the Mist field.

From: BUCHNER Ed * DGMI
Sent: Thursday, January 18, 2018 2:55 PM
To: MADIN Ian * DGMI <Ian.MADIN@oregon.gov>; HOUSTON Robert * DGMI <Robert.HOUSTON@oregon.gov>
Subject: RE: Mist wells

There are huge data gaps and inconsistencies in the well data and organization in the database in GIS, this was something we were actively working on in 2013 or so, but other priorities pulled us away. There may be 450 points in the Mist area, but do they fall within the geometry of the Mist Field? Additionally, for my previous query from the database, if the ResourceField did not specify "Mist" it would have not been returned.

Ed Buchner
GIS Technical Specialist
Office: (541) 967-2984
Mobile: (541) 619-3738
ed.buchner@oregon.gov

From: MADIN Ian * DGMI
Sent: Thursday, January 18, 2018 2:49 PM
To: HOUSTON Robert * DGMI <Robert.HOUSTON@oregon.gov>; BUCHNER Ed * DGMI <Ed.BUCHNER@oregon.gov>
Subject: RE: Mist wells

I am confused. The GIS files show almost 450 wells in the Mist field. There must be permits that include more than one well.

⁶ Vikara, D., Zymroz, T., Withum, J.A., Shih, C.Y., Lin, S., Hoffman, H., Guinan, A. and Carr, T., 2019. Underground natural gas storage-analog studies to geologic storage of co2 (No. NETL-PUB-22087). National Energy Technology Lab.(NETL), Morgantown, WV (United States).



Additionally, confusion now exist between the safest method to abandon a well. On 7/18/2017 Irani Engineering requested a waiver to the well abandonment rule. According to email communication between Bob Brinkmann of DOGAMI and the Department of Justice, Bob stated, "*Do we have the authority to approve this method that apparently is not allowed in rule even though it will provide a more secure abandonment of the well versus the method prescribed in rule?* To provide a wavier required updating the administrative order that prohibited Irani Engineering's proposed method of abandonment.

A Temporary Administrative Order was approved by 9/8/2017 (later permanently approved). Bob Brinkman stated that the proposed method is technically sound and not granting the temporary order will place financial burden on the permittee, if it is not granted. This poses an issue, considering the field has been explored since the 1980s, a large quantity of abandoned wells, are now assumed less secure, since this rule wasn't granted until 2017. It should also be noted that best available science was not used to access the safety of the updated administrative order.

IRANI ENGINEERING, INC.
PETROLEUM ENGINEER
P.O. Box 661328
SACRAMENTO, CA 95866

07/18/2017

Mr. Ian Madin, Deputy Director
Mineral Land Regulation & Reclamation/Oregon Department of Geology & Mineral Industries
229 Broadalbin St. SW
Albany, OR 97321
Phone: (541) 967-2039
Fax: (541) 967-2075

Subject: Request for Revision of Abandon Rule for Enerfin Resources NW , "Pelee 21-31-65"

Mr. Madin,

Enerfin intends to abandon a few of their wells in Mist Gas Field, Oregon. The production casing in these wells are set couple of hundred feet above the TD of the wells. I know the rule states that we have to drill out the shoe of the production casing and set 100' of cement plug across them. I respectfully request a waiver to this rule because of the following reasons;

1. The shoe joint has a float collar on top and a float shoe on bottom, both in closed position, and 40' of cement between. Usually, there is several feet of hard production cement above the float collar too. On Pelee 21-31-65, we have another 42' of cement above the float collar for a total of 82'.
2. Usually steel perforating gun debris is on top of cement and the float collar which makes is very hard to get through and get to the float collar.
3. It is difficult to drill out the float collar and shoe. The float collar falls on the cement and starts spinning and prevents us from drilling the cement and float shoe.
4. The closed float collar and shoe and the cement between and above float collar are very strong barriers against leakage from below the shoe. Drilling out shoe and setting a 100' of cement plug in mud actually weakens this barrier (Equalized cement plugs can easily get contaminated with mud and have channeling issues). We would like to abandon the bottom of the hole by placing a 100' of cement plug on top of cement above the float collar.
5. We have to drill out cement, float and shoe of 4-1/2" casing, with 3-1/2" bit or mill (because of the drift diameter of the casing and mechanical limitation on mill size due to gun debris and float equipment milled out remnants). The hole was drilled with a 7-7/8" bit, therefore the hole size below the shoe is 7-7/8" filled with drilling mud (in Pelee 21-31-65 mud weight was 12.4 ppg). Cleaning a 7-7/8" hole with a 3-1/2" bit would be almost impossible at that point. The cement plug quality will be very much in doubt since mud contaminations will be a big factor.
6. I have worked in 8 different states in the USA and non of the other states have such a rule.

I have attached the abandoned programs and notice of abandonments for the two versions of the abandonment procedures. May I kindly ask for your office to review the rule and give us a relief from this rule in abandoning Enerfin wells in Mist Field.

Sincerely

Saeed Irani,
Registered Petroleum Engineer
President
Irani Engineering



RE: P&A of holes with rathole below casing



BRINKMANN Bob * DGMI
 To: ○ MADIN Ian * DGMI
 Cc: ○ LLOYD Diane; ○ LOFTON ReNeea * DGMI

Reply Reply All Forward
 Mon 8/14/2017 3:26 PM

PELEE PAREQ FOR REV.IRANI LTR.2017 (002).pdf
 .pdf File

Attached is a letter from Irani Engineering explaining the rationale for the proposed abandonment method for Pelee which as documented below has been approved on numerous occasions by this Department and I agree with the proposed method. This issue was also discussed w/ Diane while you were out and the question posed is: Do we have the authority to approve this method that apparently is not allowed in rule even though it will provide a more secure abandonment of the well versus the method prescribed in rule?

From: MADIN Ian * DGMI
Sent: Monday, August 14, 2017 10:30 AM
To: BRINKMANN Bob * DGMI <bob.brinkmann@oregon.gov>
Cc: LLOYD Diane <Diane.LLOYD@state.or.us>; LOFTON ReNeea * DGMI <Reneea.LOFTON@oregon.gov>
Subject: RE: P&A of holes with rathole below casing

Bob, can you summarize the issue for me in the form of a question I can put to Diane?

From: BRINKMANN Bob * DGMI
Sent: Thursday, August 10, 2017 2:16 PM
To: MADIN Ian * DGMI <Ian.MADIN@oregon.gov>
Cc: LLOYD Diane <Diane.LLOYD@state.or.us>; LOFTON ReNeea * DGMI <Reneea.LOFTON@oregon.gov>
Subject: FW: P&A of holes with rathole below casing

Ian, As you can see by the attached documentation the P&A method being proposed by Enerfin for the Pelee well has been approved numerous times in the past. Although it appears that rule does not afford flexibility for this it may be allowed by the overall authority granted DOGAMI in law. I agree w/ the method proposed which will properly seal the well versus an attempt to drill out the float collar and casing shoe and attempt to cement the rat hole below the shoe.

OFFICE OF THE SECRETARY OF STATE
 DENNIS RICHARDSON
 SECRETARY OF STATE
 LESLIE CUMMINGS
 DEPUTY SECRETARY OF STATE



ARCHIVES DIVISION
 MARY BETH HERKERT
 DIRECTOR
 800 SUMMER STREET NE
 SALEM, OR 97310
 503-373-0701

TEMPORARY ADMINISTRATIVE ORDER
 INCLUDING STATEMENT OF NEED & JUSTIFICATION
DGMI 1-2017
CHAPTER 632
 DEPARTMENT OF GEOLOGY AND MINERAL INDUSTRIES

FILED
 10/13/2017 2:55 PM
 ARCHIVES DIVISION
 SECRETARY OF STATE

FILING CAPTION: Makes minor adjustment to allow well plugging/decommissioning based on current, accepted best practices.

EFFECTIVE DATE: 10/13/2017 THROUGH 03/13/2018

AGENCY APPROVED DATE: 09/18/2017

CONTACT: Robert Houston 800 NE Oregon Street, Suite 965, 9232 Filed By:
 541-225-6451 3106 Pierce Parkway, Suite D, 97477 robert Houston
 robert.houston@oregon.gov Portland, OR 97232 Rules Coordinator

NEED FOR THE RULE(S):

It has been determined by department staff that a portion of the "Plugging Methods and Procedure" required by the chapter 632, division 10, administrative rules is technically incorrect in certain instances. An existing permittee has proposed a well plugging procedure that is more technically sound for the facility at issue, and prompt action by the department to approve this plan will allow the applicant to take advantage of drilling equipment that is now available in the location of the well(s) to be plugged and decommissioned. A delay in well closure would result in additional costs to the permittee. Delayed well closure also presents greater risk to public safety and the environment. This rule amendment is required to approve the plan. Absent plan approval the interests of both the public and the permittee will be prejudiced by a delay in well plugging and decommissioning.

JUSTIFICATION OF TEMPORARY FILING:

Based on the findings set out above, the Board finds that a failure to act promptly in this regard would result in prejudice to the public and permittee. The temporary rule will allow the necessary flexibility for the department to approve plans to ensure proper plugging that decommissioning of oil and gas wells based on current best practices.

DOCUMENTS RELIED UPON, AND WHERE THEY ARE AVAILABLE:

The documents relied upon include: (1) Request for Revision of Abandon Rule for Enerfin Resources 7/18/17 from Saeed Irani; (2) Plugging and Abandonment Evaluation from Bob Brinkmann 9/14/17. Both are available on the DOGAMI website.

AMEND: 632-010-0198

RULE TITLE: Abandonment, Unlawful Abandonment, Suspension, Well Plugging

RULE SUMMARY: OAR 632-010-0198 addresses how DOGAMI deals with abandonment, unlawful abandonment, suspension and well plugging. Subsection (8)(c) is modified to clarify that the plugging procedure required in that subsection only applies to any open casing



In Summary, due to uncertainty of our current geologic understanding on the northern area of the site, and covered under the site certificate, we ask the EFSC to deny Amendment 13 until additional geological investigations take place. Furthermore, since the number of wells at the Mist Gas Field were previously abandoned against the current standards, and well locations are unknown, we request DOGAMI's current administrative order for well abandonment be revised using the best available science. At the conclusion of this update, we then request all wells and "holes", as described by Bob Brinkmann, be examined for potential leakage. We believe it is the duty of the EFSC to deny the amendment request until the state has shown that the federally protected drinking water overlying the Mist Gas Field is free from contaminants and suitable for all those living within Columbia County.

New Public Comment submitted for project : RFA13 and DPO for Mist Underground Natural Gas Storage Facility

From ODOE ITService * ODOE <ODOE.ITService@oregon.gov>

Date Thu 9/19/2024 1:56 PM

To SLOAN Kathleen * ODOE <Kathleen.SLOAN@energy.oregon.gov>

Organization: American Aquifers

Submitted by: Maria Gibson

Email: m.daugherty@americanaquifers.org

Zip Code:

Siting Project Phase: DPO

Comment Summary:

Please Click on the following link to view the full [Comment Details](#)

MSTAMD13 DPO Public Comment 4b Maria Gibson 2024-09-19

Comment Summary

—

Comment Date

source

Select email portal manual

Siting Project Phase

Select EXEMPTION REQUEST NOI DPO CC FORMAL
RULEMAKING INFORMAL RULEMAKING AMD-A AMD-B

Comment Details

Application for Site Certificate (ASC) Exhibit

Select Exhibit A - Applicant and Participating Persons Exhibit B - Proposed Facility Description Exhibit C - Proposed Facility Location Exhibit D - Organizational Expertise Exhibit E - Permits Required Exhibit F - Adjacent Property Owners Exhibit G - Materials Analysis Exhibit H - Geological and Soil Stability Exhibit I - Soil Conditions Exhibit J - Wetlands and other Jurisdictional Waters Exhibit K - Land Use Exhibit L - Protected Areas Exhibit M - Financial Capability Exhibit N - Non-Generating Facility Need Exhibit O - Water Use Exhibit P - Fish and Wildlife Habitat Exhibit Q - Threatened and Endangered Plant and Animal Species Exhibit R - Scenic Resources Exhibit S - Historic Cultural and Archaeological Resources Exhibit T - Recreation Opportunities Exhibit U - Public Services Exhibit V - Waste Minimization Exhibit W - Site Restoration Exhibit X - Noise Exhibit Y - Carbon Dioxide Emissions Exhibit Z - Evaporative Cooling Tower Exhibit AA - Electric Transmission Line EMFs Exhibit BB - Other Requested Information Exhibit CC - Applicable Statutes, Rules, Ordinances Exhibit DD - Specific Requirements

—

Page Number(s)

—

Council Standards

—

Comment

Please submit the attached document for public comment of pFRA13

Attachments

4 days ago

Microsoft CRM Portals

[Public Comment Amendment 13_pFRA13_AmericanAquifers.pdf \(1.63 MB\)](#)



American Aquifer's Public Comment Requesting Denial of Amendment 13 (pFRA13)

American Aquifers, a 501c3 non-profit located in Oregon designed to support communities reliant upon groundwater, requests the Oregon Department of Energy (DOE) deny amendment 13 (pRFA13). Residents in Columbia County suffer from disproportionately high rates of cancer compared to other counties in the state, yet represent less than 1.3% of the state's population. Residents in Columbia County maintain cancer rates that rank #1 in uterus, lung, bronchus, and melanoma cancers, #2 in female pancreas cancer and leukemia, #4 in brain and esophagus cancer, #5 in female kidney/renal pelvis cancer, #6 in Non-Hodgkin Lymphoma, #7 in oral cavity and pharynx cancer, and #10 in male kidney/renal pelvis cancer. Additionally, a recent study of multiple myeloma shows Columbia County has staggering incidences of this rare, non-curable cancer that accounts for only 10% of all blood cancers. Of the 133 counties that make up the entire west coast, only 12 counties have significantly high rates of myeloma cancer, with Columbia County listed as one of the three in Oregon¹.

Cancer rates in Columbia County cannot be directly attributed to logging operations, which include the spraying of herbicides and are known carcinogens. A total of 47% of land in Oregon is forested. Tillamook and Washington Counties, with a combined population of 14.83%, are home to the largest forested area in the state, but according to the National Cancer Institute, cancer rates are stable in Tillamook County and falling in Washington County, suggesting that forestry practices are not the predominate cause to high rates of cancers suffered among communities in Columbia County.

According to the Safe Drinking Water Act (SDWA), all water designated for drinking use, including underground sources, are protected by federal law. Furthermore, the Oregon Groundwater Quality Protection Act of 1989 was enacted to prevent contamination of groundwater and to conserve, restore, and maintain Oregon's groundwater resources for present and future uses. The DOE is mentioned as a state agency that coordinates energy facility activities with Oregon's Department of Environmental Quality's (DEQ) to protect groundwaters of the state.

Potential cancer-causing chemicals are likely leaching into local aquifers from operations occurring at the Mist Gas Underground Natural Storage Gas Field (Mist Gas Field). A request for denial of pFRA13 is requested until environmental exposure pathways and current operation practices are properly and thoroughly investigated using the best available science, which is supported by Oregon State University's Institute for Natural Resources in accordance with OAR 629-603-0400(4) and is defined by Cornell Law as "science that is reliable and unbiased."

We find operations governing the Mist Gas Field are not meeting OAR, ORS, or EFSC Siting Standards. Our findings also show partiality toward field operators (Northwest Natural and Enerfin) by state agencies, including but not limited to DOGAMI² and others responsible for the safety protocols designed to protect community exposure, which are in place to limit chemical constituents not suitable for human consumption.

The following describes the OAR, ORS, or Siting Standard (herein referred to as Guiding Policy) within the jurisdiction of the EFSC that supports our objection to amendment 13 based on the rules governing the Mist Gas Field, and includes evidence supporting our request for denial.

¹ Cheung, J.T.H., Zhang, W. and Chiu, B.C.H., 2023. Geospatial analysis of population-based incidence of multiple myeloma in the United States. *Cancer epidemiology*, 83, p.102343.

² Oregon Department of Geology and Mining Industries



Concern: Geologic Hazards Not Properly Assessed in Exhibit H: Geologic Hazard Evaluation (pFRA13)

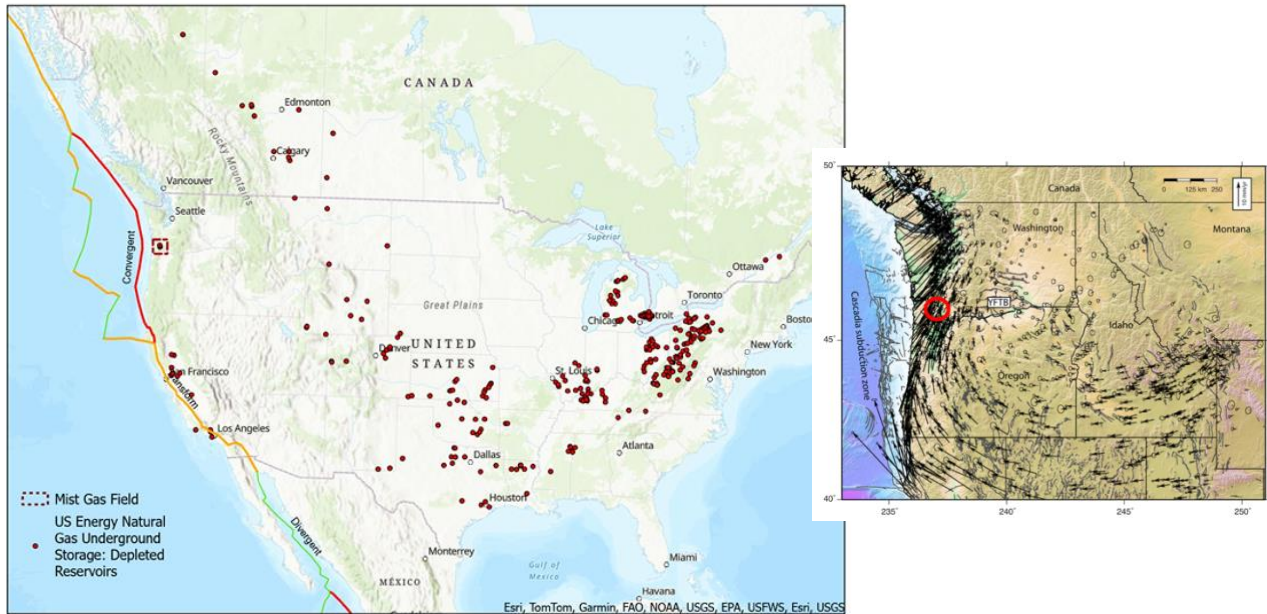
Guiding Policy: OAR 345-022-000 (2)(b)(A): (2) The Council shall weigh overall public benefits and any adverse effects on a resource or interest as follows: (b) The Council shall evaluate overall public benefits by considering factors including, but not limited to, the following: (A) The overall environmental effects of the facility, considering both beneficial and adverse environmental effect.

OAR 345-024-0030 (2): The applicant has developed a program using technology that is both practicable and reliable to monitor the facility to ensure the public health and safety.

OAR 345-022-0020(c): (c) The applicant, through appropriate site-specific study, has adequately characterized the potential geological and soils hazards of the site and its vicinity that could, in the absence of a seismic event, adversely affect, or be aggravated by, the construction and operation of the proposed facility; and (d) The applicant can design, engineer and construct the facility to avoid dangers to human safety and the environment presented by the hazards identified in subsection

Statement of Opposition: The best available science has not been applied to adequately evaluate geologic hazards and risk associated with operations at the Mist Gas Field.

Supporting Evidence: The Mist Gas Field is the only depleted natural gas reservoir in the USA and Canada located adjacent to a tectonically active convergence zone as shown in the figure below. Tectonic activity is due to the Cascadia Subduction Zone, which is the collision and subduction of the Juan de Fuca Plate beneath the North American plate. The consequence of subducting plates, as is evident in Oregon and Washington landscape, include micro, local, and regional fault zones, volcanism, earthquakes, and crustal rotation. The Mist Gas Field is in an extremely active location where velocity data, obtained through high-density geodetic GPS measurements (inset map: black arrows), show significant rotation occurring beneath the gas field.





Given the uniqueness of the Mist Gas Field's location (insert map: red circle), new methods and tools are now available to enhance our current understanding of Cascadia Subduction Zone in the Pacific Northwest. Yet no indication is provided that suggests best available science is currently used to protect waters of the state from groundwater contamination due to hydrocarbons and other constituents that could potentially migrate to local aquifers from storage operations, including fracked chemicals obtained from gas purchased in Canada.

Additional Comment: In addition to the above concerns, in amendment 13 (pRFA13) Exhibit H (Geologic Hazards Evaluation), Table H-8 on page 22, discusses fault hazards and claims only 13 quaternary faults are within 50 miles of the project. According to information obtained from the USGS citation listed as the source of the fault data, it states, "For the hazard maps, both the fault surface trace and the metadata are simplified representations of the geometry and behavior of the fault, based on geologic interpretation."

In 2020, the USGS created a new geologic map³ within the local vicinity. The map was created, "**to provide a uniform, modern geologic database for the greater Portland metro area to better understand its tectonic setting, active faults, volcanoes, landslide hazards, and distribution of geologic materials and resources. Information in this database will be used to improve seismic hazard and resource assessments in this economically important region.**"

Therefore, Exhibit H in the pRFA13 should be considered outdated information, since it does not capture the true geologic landscape of the area. It's worth noting that both datasets were available at the time Exhibit H was written for pRFA13, yet Exhibit H made no mention of the updated USGS map, even though it was created in collaboration with DOGAMI. Aside from a paper written by Wells and Bemis in 2020, which focused on migration of the Oregon forearc on the Gales Creek fault, and the standard NRCS soils database, accessed in 2023, all other sources used to present the local geologic and topographic conditions of the site in Exhibit H were mostly written in the 1970s and 1980s. Although the 2020 USGS map falls outside of the Project Area, it is within the boundary of the Site Certificate.

Furthermore, the earthquake map provided in Exhibit H (Figure H-8) does not adequately represent the number of earthquakes recorded in the region. The image on the left shows earthquakes in Exhibit H: Figure H-8, with the smallest circles representing < 2 in magnitude. The image on the right, obtained from the USGS Earthquake Catalog⁴, shows significantly more earthquakes than shown in Exhibit H.

³ Wells, R., Haugerud, R.A., Niem, A.R., Niem, W.A., Ma, L., Evarts, R.C., O'Connor, J.E., Madin, I.P., Sherrod, D.R., Beeson, M.H. and Tolan, T.L., 2020. Geologic map of the greater Portland metropolitan area and surrounding region, Oregon and Washington (No. 3443). US Geological Survey.

⁴ Schneider, M., Flury, H., Gutterop, P. and Wright, A., 2023. Earthquake catalog processing and swarm identification for the Pacific northwest. *Seismological Research Letters*, 94(5), pp.2500-2513.

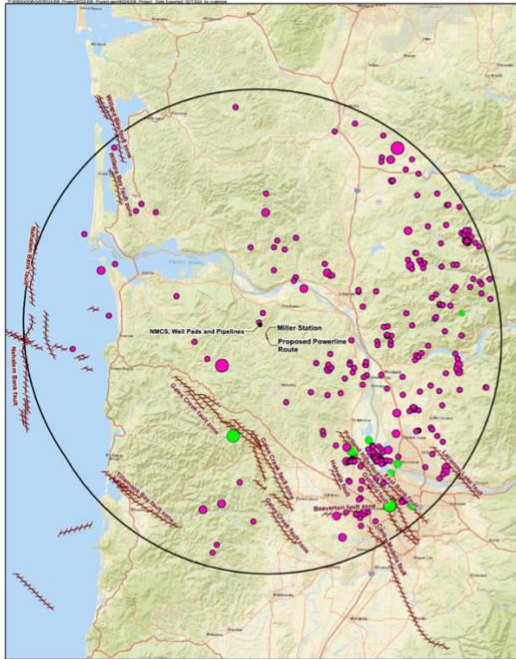
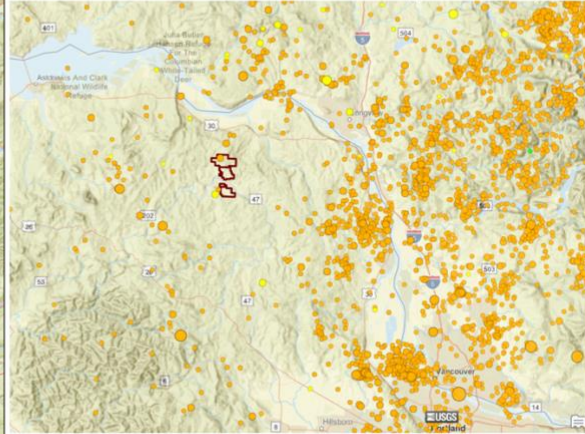
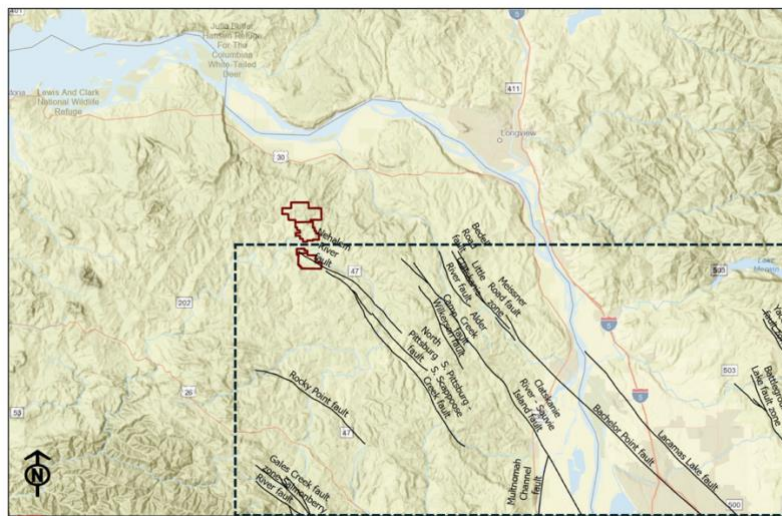


Exhibit H. Figure H-8

Data obtained from the USGS Earthquake Catalog



In addition to questionable material used in Exhibit H of the pRFA13, Table H-8 shows the nearest fault zone to the site is the Gales Creek Fault Zone located 17.6 miles away. However, only using the USGS 2020 map, 100 distinct faults were identified, representing up to 30 fault zones located approximately 50 miles from the Mist Gas Field (Figure Below. To reduce label overlap, not all fault zones are labeled in the figure). This includes new and extensive faulting within the southern boundary of the site certificate, not previously shown in any of DOGAMI's updated maps or in Exhibit H.



Field of View of the USGS 2020 Map



Concern: Surficial Geology Not Properly Assessed in Exhibit H of pFRA13

Guiding Policy: OAR 345-022-000 (2)(b)(A): (2) The Council shall weigh overall public benefits and any adverse effects on a resource or interest as follows: (b) The Council shall evaluate overall public benefits by considering factors including, but not limited to, the following: (A) The overall environmental effects of the facility, considering both beneficial and adverse environmental effect.

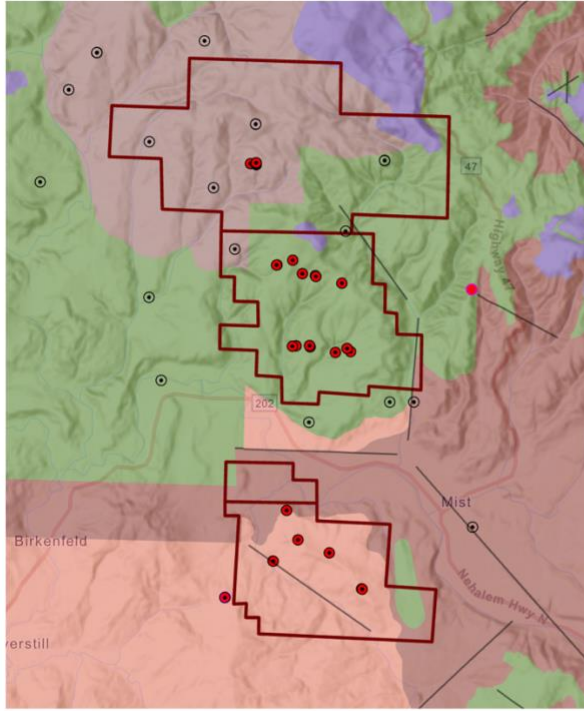
OAR 345-022-0020(c): (c) The applicant, through appropriate site-specific study, has adequately characterized the potential geological and soils hazards of the site and its vicinity that could, in the absence of a seismic event, adversely affect, or be aggravated by, the construction and operation of the proposed facility; and (d) The applicant can design, engineer and construct the facility to avoid dangers to human safety and the environment presented by the hazards identified in subsection (c).

Statement of Opposition: The Mist Gas Field is operated outside of conditions listed in OAR 345-022-0022(c). The potential geological hazards of the site are not properly identified. This is evident in the recent research released by the USGS in 2020. Although it was conducted in coordination with DOGAMI, no operational changes were implemented to reflect the complex geological conditions which show extensive faulting and cap rock exposure, which is now identified within the southernmost boundary of the gas field.

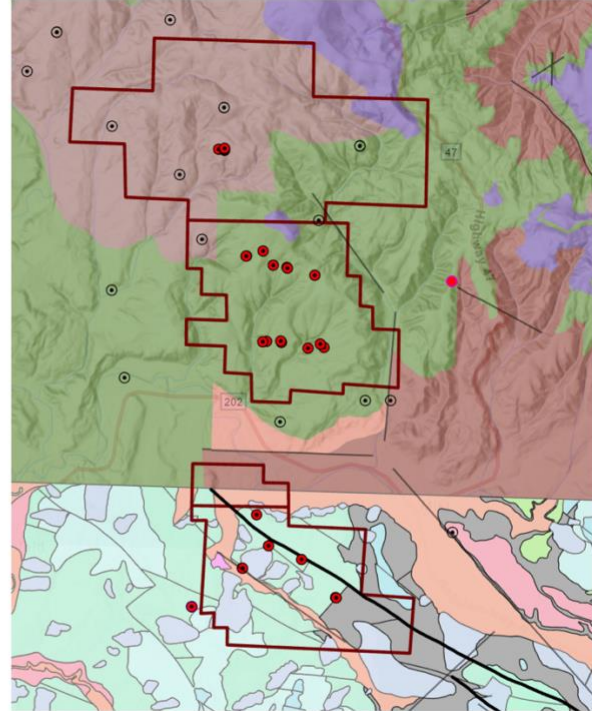
Supporting Evidence: According to DOGAMI, the best available geologic mapping for the state, combined into the Oregon Geologic Data Compilation, is provided under release 7⁵. Examination of this map shows simplified geology compared to the USGS map. This is apparent in the below figure, which shows an overlay of DOGAMI's compilation geologic map (OGDC-7) compared to the 2020 geologic map produced by the USGS.

Additional Comment: Surficial geology of the area has not been adequately assessed. This is apparent in the current DOGAMI map (left figure) compared to the updated 2020 map (right figure). The complexity of the geology and faulting is much more intricate than the OGDC-7 represents and needs throughout evaluation prior to approval of the amendment, as the surficial geology used in Exhibit B is likely extremely simplified (figure below).

⁵ <https://pubs.oregon.gov/dogami/dds/p-OGDC-7.htm>



DOGAMI (OGDC-7) Surficial Geology



DOGAMI (OGDC-7) Surficial Geology Underlying the 2020 USGS Map

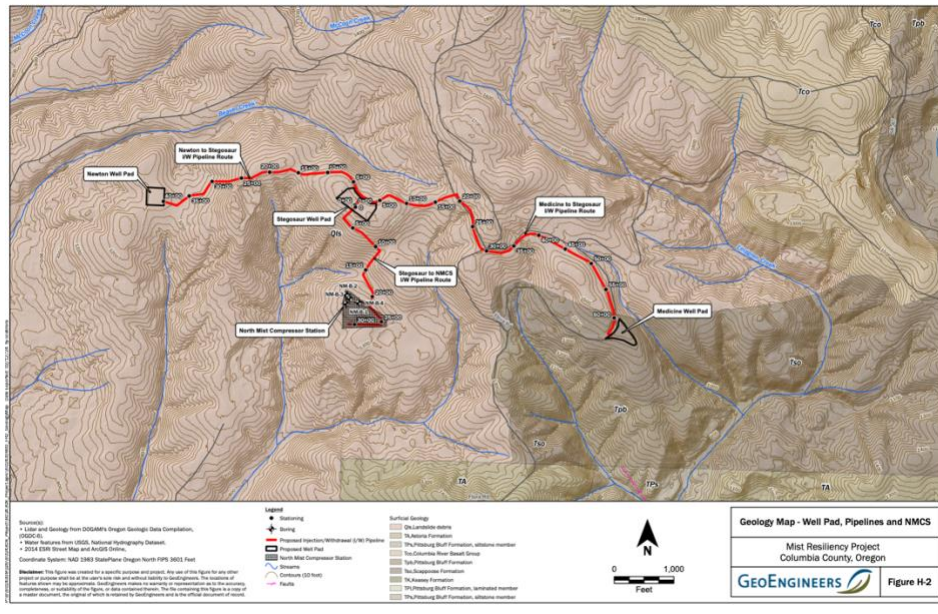


Figure H-2: Surficial Geology provided in Exhibit H



Concern: Groundwater Contamination Potential Due to Abandoned Wells

Guiding Policy: OAR 345-022-000 (2)(b)(A): (2) The Council shall weigh overall public benefits and any adverse effects on a resource or interest as follows: (b) The Council shall evaluate overall public benefits by considering factors including, but not limited to, the following: (A) The overall environmental effects of the facility, considering both beneficial and adverse environmental effect.

Statement of Opposition: Extensive exploration and operation of the Mist Gas Field has resulted in hundreds of injection, withdrawal, and abandoned wells. According to a report written by the National Energy Technology Laboratory in 2019⁶, utilizing depleted reservoirs is attractive due to pre-existing infrastructure. The report also states, **"Depleted oil and/or gas fields may pose the risk of abandoned, or orphaned, wells penetrating the storage reservoir, which can serve as a leakage conduit to neighboring formations or the atmosphere."** Additionally, in the *Underground Gas Storage Regulatory Considerations: A Guide for State & Federal Regulatory Agencies*, it states, **"Pre-existing or abandoned wellbores including previously pressurized or depleted areas, and previously generated hydraulic fractures should also be considered risk elements."** DOGAMI has not properly inventoried all wells within the gas field. This decreases DOGAMI's ability to properly assess potential groundwater contamination sources.

Supporting Evidence: Email from a public records request show DOGAMI's Bob Houston stated 395 wells have been permitted at the field, yet it appears most of the locations of these wells are not identified. Furthermore, Bob notes **"Additionally, [of the 395 wells permitted, it] does not include other "holes" (seismic holes, core holes and monitor)."** A copy of the email is provided below. This suggests an extensive number of "holes" have likely outlived their sealing lifespan, yet most locations are unknown, thereby increasing the potential of groundwater contamination, with DOGAMI unable to execute effective measures to address this issue.

HOUSTON Robert * DGMI
RE: Mist wells
To: MADIN Ian * DGMI, Cc: BUCHNER Ed * DGMI, LOFTON ReNeea * DGMI
January 18, 2018 at 3:23 PM
[Details](#)

Ok,
There are currently 110 active permits in the Mist gas field

Based on the API number there has been a total of 395 "wells" permitted in Columbia since 1953. ReNeea, noted that there appears to be skips in the sequential API number. Additionally, does not include other "holes" (seismic holes, core holes and monitor).

Cheers,
Bob

Robert A. Houston, RG
Hydrocarbon & Metallic Ore Geologist
Oregon Department of Geology and Mineral Industries | Springfield Field Office |
Springfield Interagency Office/3106 Pierce Parkway Suite D 1 Springfield, Oregon 97477
Office: 541-225-6451; Cell: 541-619-4653
Email: robert.houston@oregon.gov | <http://www.oregongeology.org>

From: MADIN Ian * DGMI
Sent: Thursday, January 18, 2018 3:09 PM
To: BUCHNER Ed * DGMI <Ed.BUCHNER@oregon.gov>; HOUSTON Robert * DGMI <Robert.HOUSTON@oregon.gov>
Subject: RE: Mist wells

So it sounds like there is no easy way to get a definitive count of the number of wells drilled to develop the Mist field.

From: BUCHNER Ed * DGMI
Sent: Thursday, January 18, 2018 2:55 PM
To: MADIN Ian * DGMI <Ian.MADIN@oregon.gov>; HOUSTON Robert * DGMI <Robert.HOUSTON@oregon.gov>
Subject: RE: Mist wells

There are huge data gaps and inconsistencies in the well data and organization in the database in GIS, this was something we were actively working on in 2013 or so, but other priorities pulled us away. There may be 450 points in the Mist area, but do they fall within the geometry of the Mist Field? Additionally, for my previous query from the database, if the ResourceField did not specify "Mist" it would have not been returned.

Ed Buchner
GIS Technical Specialist
Office: (541) 967-2084
Mobile: (541) 619-3738
ed.buchner@oregon.gov

From: MADIN Ian * DGMI
Sent: Thursday, January 18, 2018 2:49 PM
To: HOUSTON Robert * DGMI <Robert.HOUSTON@oregon.gov>; BUCHNER Ed * DGMI <Ed.BUCHNER@oregon.gov>
Subject: RE: Mist wells

I am confused. The GIS files show almost 450 wells in the Mist field. There must be permits that include more than one well.

⁶ Vikara, D., Zymroz, T., Withum, J.A., Shih, C.Y., Lin, S., Hoffman, H., Guinan, A. and Carr, T., 2019. Underground natural gas storage-analog studies to geologic storage of co2 (No. NETL-PUB-22087). National Energy Technology Lab.(NETL), Morgantown, WV (United States).



Additionally, confusion now exist between the safest method to abandon a well. On 7/18/2017 Irani Engineering requested a waiver to the well abandonment rule. According to email communication between Bob Brinkmann of DOGAMI and the Department of Justice, Bob stated, "*Do we have the authority to approve this method that apparently is not allowed in rule even though it will provide a more secure abandonment of the well versus the method prescribed in rule?* To provide a wavier required updating the administrative order that prohibited Irani Engineering's proposed method of abandonment.

A Temporary Administrative Order was approved by 9/8/2017 (later permanently approved). Bob Brinkman stated that the proposed method is technically sound and not granting the temporary order will place financial burden on the permittee, if it is not granted. This poses an issue, considering the field has been explored since the 1980s, a large quantity of abandoned wells, are now assumed less secure, since this rule wasn't granted until 2017. It should also be noted that best available science was not used to access the safety of the updated administrative order.

IRANI ENGINEERING, INC.
PETROLEUM ENGINEER
P.O. Box 661328
SACRAMENTO, CA 95866

07/18/2017

Mr. Ian Madin, Deputy Director
Mineral Land Regulation & Reclamation/Oregon Department of Geology & Mineral Industries
229 Broadalbin St. SW
Albany, OR 97321
Phone: (541) 967-2039
Fax: (541) 967-2075

Subject: Request for Revision of Abandon Rule for Enerfin Resources NW , "Pelee 21-31-65"

Mr. Madin,

Enerfin intends to abandon a few of their wells in Mist Gas Field, Oregon. The production casing in these wells are set couple of hundred feet above the TD of the wells. I know the rule states that we have to drill out the shoe of the production casing and set 100' of cement plug across them. I respectfully request a waiver to this rule because of the following reasons;

1. The shoe joint has a float collar on top and a float shoe on bottom, both in closed position, and 40' of cement between. Usually, there is several feet of hard production cement above the float collar too. On Pelee 21-31-65, we have another 42' of cement above the float collar for a total of 82'.
2. Usually steel perforating gun debris is on top of cement and the float collar which makes is very hard to get through and get to the float collar.
3. It is difficult to drill out the float collar and shoe. The float collar falls on the cement and starts spinning and prevents us from drilling the cement and float shoe.
4. The closed float collar and shoe and the cement between and above float collar are very strong barriers against leakage from below the shoe. Drilling out shoe and setting a 100' of cement plug in mud actually weakens this barrier (Equalized cement plugs can easily get contaminated with mud and have channeling issues). We would like to abandon the bottom of the hole by placing a 100' of cement plug on top of cement above the float collar.
5. We have to drill out cement, float and shoe of 4-1/2" casing, with 3-1/2" bit or mill (because of the drift diameter of the casing and mechanical limitation on mill size due to gun debris and float equipment milled out remnants). The hole was drilled with a 7-7/8" bit, therefore the hole size below the shoe is 7-7/8" filled with drilling mud (in Pelee 21-31-65 mud weight was 12.4 ppg). Cleaning a 7-7/8" hole with a 3-1/2" bit would be almost impossible at that point. The cement plug quality will be very much in doubt since mud contaminations will be a big factor.
6. I have worked in 8 different states in the USA and non of the other states have such a rule.

I have attached the abandoned programs and notice of abandonments for the two versions of the abandonment procedures. May I kindly ask for your office to review the rule and give us a relief from this rule in abandoning Enerfin wells in Mist Field.

Sincerely

Saeed Irani,
Registered Petroleum Engineer
President
Irani Engineering



RE: P&A of holes with rathole below casing



BRINKMANN Bob * DGMI
 To: ○ MADIN Ian * DGMI
 Cc: ○ LLOYD Diane; ○ LOFTON ReNeea * DGMI

← Reply ← Reply All → Forward ⋮
 Mon 8/14/2017 3:26 PM

PELEE PAREQ FOR REV.IRANI LTR.2017 (002).pdf
 .pdf File

Attached is a letter from Irani Engineering explaining the rationale for the proposed abandonment method for Pelee which as documented below has been approved on numerous occasions by this Department and I agree with the proposed method. This issue was also discussed w/ Diane while you were out and the question posed is: Do we have the authority to approve this method that apparently is not allowed in rule even though it will provide a more secure abandonment of the well versus the method prescribed in rule?

From: MADIN Ian * DGMI
Sent: Monday, August 14, 2017 10:30 AM
To: BRINKMANN Bob * DGMI <bob.brinkmann@oregon.gov>
Cc: LLOYD Diane <Diane.LLOYD@state.or.us>; LOFTON ReNeea * DGMI <Reneea.LOFTON@oregon.gov>
Subject: RE: P&A of holes with rathole below casing

Bob, can you summarize the issue for me in the form of a question I can put to Diane?

From: BRINKMANN Bob * DGMI
Sent: Thursday, August 10, 2017 2:16 PM
To: MADIN Ian * DGMI <ian.MADIN@oregon.gov>
Cc: LLOYD Diane <Diane.LLOYD@state.or.us>; LOFTON ReNeea * DGMI <Reneea.LOFTON@oregon.gov>
Subject: FW: P&A of holes with rathole below casing

Ian, As you can see by the attached documentation the P&A method being proposed by Enerfin for the Pelee well has been approved numerous times in the past. Although it appears that rule does not afford flexibility for this it may be allowed by the overall authority granted DOGAMI in law. I agree w/ the method proposed which will properly seal the well versus an attempt to drill out the float collar and casing shoe and attempt to cement the rat hole below the shoe.

OFFICE OF THE SECRETARY OF STATE
 DENNIS RICHARDSON
 SECRETARY OF STATE
 LESLIE CUMMINGS
 DEPUTY SECRETARY OF STATE



ARCHIVES DIVISION
 MARY BETH HERKERT
 DIRECTOR
 800 SUMMER STREET NE
 SALEM, OR 97310
 503-373-0701

TEMPORARY ADMINISTRATIVE ORDER
 INCLUDING STATEMENT OF NEED & JUSTIFICATION
DGMI 1-2017
CHAPTER 632
DEPARTMENT OF GEOLOGY AND MINERAL INDUSTRIES

FILED
 10/13/2017 2:55 PM
 ARCHIVES DIVISION
 SECRETARY OF STATE

FILING CAPTION: Makes minor adjustment to allow well plugging/decommissioning based on current, accepted best practices.

EFFECTIVE DATE: 10/13/2017 THROUGH 03/13/2018

AGENCY APPROVED DATE: 09/18/2017

CONTACT: Robert Houston 800 NE Oregon Street, Suite 965, 9232 Filed By:
 541-225-6451 3106 Pierce Parkway, Suite D, 97477 robert Houston
 robert.houston@oregon.gov Portland, OR 97232 Rules Coordinator

NEED FOR THE RULE(S):

It has been determined by department staff that a portion of the "Plugging Methods and Procedure" required by the chapter 632, division 10, administrative rules is technically incorrect in certain instances. **An existing permittee has proposed a well plugging procedure that is more technically sound for the facility at issue, and prompt action by the department to approve this plan will allow the applicant to take advantage of drilling equipment that is now available in the location of the well(s) to be plugged and decommissioned. A delay in well closure would result in additional costs to the permittee.** Delayed well closure also presents greater risk to public safety and the environment. This rule amendment is required to approve the plan. Absent plan approval the interests of both the public and the permittee will be prejudiced by a delay in well plugging and decommissioning.

JUSTIFICATION OF TEMPORARY FILING:

Based on the findings set out above, the Board finds that a failure to act promptly in this regard would result in prejudice to the public and permittee. The temporary rule will allow the necessary flexibility for the department to approve plans to ensure proper plugging that decommissioning of oil and gas wells based on current best practices.

DOCUMENTS RELIED UPON, AND WHERE THEY ARE AVAILABLE:

The documents relied upon include: (1) Request for Revision of Abandon Rule for Enerfin Resources 7/18/17 from Saeed Irani; (2) Plugging and Abandonment Evaluation from Bob Brinkmann 9/14/17. Both are available on the DOGAMI website.

AMEND: 632-010-0198

RULE TITLE: Abandonment, Unlawful Abandonment, Suspension, Well Plugging

RULE SUMMARY: OAR 632-010-0198 addresses how DOGAMI deals with abandonment, unlawful abandonment, suspension and well plugging. Subsection (8)(c) is modified to clarify that the plugging procedure required in that subsection only applies to any open casing



In Summary, due to uncertainty of our current geologic understanding on the northern area of the site, and covered under the site certificate, we ask the EFSC to deny Amendment 13 until additional geological investigations take place. Furthermore, since the number of wells at the Mist Gas Field were previously abandoned against the current standards, and well locations are unknown, we request DOGAMI's current administrative order for well abandonment be revised using the best available science. At the conclusion of this update, we then request all wells and "holes", as described by Bob Brinkmann, be examined for potential leakage. We believe it is the duty of the EFSC to deny the amendment request until the state has shown that the federally protected drinking water overlying the Mist Gas Field is free from contaminants and suitable for all those living within Columbia County.

New Public Comment submitted for project : RFA13 and DPO for Mist Underground Natural Gas Storage Facility

From ODOE ITService * ODOE <ODOE.ITService@oregon.gov>

Date Thu 9/19/2024 2:01 PM

To SLOAN Kathleen * ODOE <Kathleen.SLOAN@energy.oregon.gov>

Organization: American Aquifers

Submitted by: Maria Gibson

Email: m.daugherty@americanaquifers.org

Zip Code:

Siting Project Phase: DPO

Comment Summary:

Please Click on the following link to view the full [Comment Details](#)

Comment Summary

—

Comment Date

source

Select email portal manual

Siting Project Phase

Select EXEMPTION REQUEST NOI DPO CC FORMAL
RULEMAKING INFORMAL RULEMAKING AMD-A AMD-B

Comment Details

Application for Site Certificate (ASC) Exhibit

Select Exhibit A - Applicant and Participating Persons Exhibit B - Proposed Facility Description Exhibit C - Proposed Facility Location Exhibit D - Organizational Expertise Exhibit E - Permits Required Exhibit F - Adjacent Property Owners Exhibit G - Materials Analysis Exhibit H - Geological and Soil Stability Exhibit I - Soil Conditions Exhibit J - Wetlands and other Jurisdictional Waters Exhibit K - Land Use Exhibit L - Protected Areas Exhibit M - Financial Capability Exhibit N - Non-Generating Facility Need Exhibit O - Water Use Exhibit P - Fish and Wildlife Habitat Exhibit Q - Threatened and Endangered Plant and Animal Species Exhibit R - Scenic Resources Exhibit S - Historic Cultural and Archaeological Resources Exhibit T - Recreation Opportunities Exhibit U - Public Services Exhibit V - Waste Minimization Exhibit W - Site Restoration Exhibit X - Noise Exhibit Y - Carbon Dioxide Emissions Exhibit Z - Evaporative Cooling Tower Exhibit AA - Electric Transmission Line EMFs Exhibit BB - Other Requested Information Exhibit CC - Applicable Statutes, Rules, Ordinances Exhibit DD - Specific Requirements

—

Page Number(s)

—

Council Standards

—

Comment

Please submit the attached document for public comment of RFA13

Attachments

4 days ago

Microsoft CRM Portals

[Public Comment Amendment 13_pFRA13_AmericanAquifers.pdf \(1.63 MB\)](#)



American Aquifer's Public Comment Requesting Denial of Amendment 13 (pFRA13)

American Aquifers, a 501c3 non-profit located in Oregon designed to support communities reliant upon groundwater, requests the Oregon Department of Energy (DOE) deny amendment 13 (pRFA13). Residents in Columbia County suffer from disproportionately high rates of cancer compared to other counties in the state, yet represent less than 1.3% of the state's population. Residents in Columbia County maintain cancer rates that rank #1 in uterus, lung, bronchus, and melanoma cancers, #2 in female pancreas cancer and leukemia, #4 in brain and esophagus cancer, #5 in female kidney/renal pelvis cancer, #6 in Non-Hodgkin Lymphoma, #7 in oral cavity and pharynx cancer, and #10 in male kidney/renal pelvis cancer. Additionally, a recent study of multiple myeloma shows Columbia County has staggering incidences of this rare, non-curable cancer that accounts for only 10% of all blood cancers. Of the 133 counties that make up the entire west coast, only 12 counties have significantly high rates of myeloma cancer, with Columbia County listed as one of the three in Oregon¹.

Cancer rates in Columbia County cannot be directly attributed to logging operations, which include the spraying of herbicides and are known carcinogens. A total of 47% of land in Oregon is forested. Tillamook and Washington Counties, with a combined population of 14.83%, are home to the largest forested area in the state, but according to the National Cancer Institute, cancer rates are stable in Tillamook County and falling in Washington County, suggesting that forestry practices are not the predominate cause to high rates of cancers suffered among communities in Columbia County.

According to the Safe Drinking Water Act (SDWA), all water designated for drinking use, including underground sources, are protected by federal law. Furthermore, the Oregon Groundwater Quality Protection Act of 1989 was enacted to prevent contamination of groundwater and to conserve, restore, and maintain Oregon's groundwater resources for present and future uses. The DOE is mentioned as a state agency that coordinates energy facility activities with Oregon's Department of Environmental Quality's (DEQ) to protect groundwaters of the state.

Potential cancer-causing chemicals are likely leaching into local aquifers from operations occurring at the Mist Gas Underground Natural Storage Gas Field (Mist Gas Field). A request for denial of pFRA13 is requested until environmental exposure pathways and current operation practices are properly and thoroughly investigated using the best available science, which is supported by Oregon State University's Institute for Natural Resources in accordance with OAR 629-603-0400(4) and is defined by Cornell Law as "science that is reliable and unbiased."

We find operations governing the Mist Gas Field are not meeting OAR, ORS, or EFSC Siting Standards. Our findings also show partiality toward field operators (Northwest Natural and Enerfin) by state agencies, including but not limited to DOGAMI² and others responsible for the safety protocols designed to protect community exposure, which are in place to limit chemical constituents not suitable for human consumption.

The following describes the OAR, ORS, or Siting Standard (herein referred to as Guiding Policy) within the jurisdiction of the EFSC that supports our objection to amendment 13 based on the rules governing the Mist Gas Field, and includes evidence supporting our request for denial.

¹ Cheung, J.T.H., Zhang, W. and Chiu, B.C.H., 2023. Geospatial analysis of population-based incidence of multiple myeloma in the United States. *Cancer epidemiology*, 83, p.102343.

² Oregon Department of Geology and Mining Industries



Concern: Geologic Hazards Not Properly Assessed in Exhibit H: Geologic Hazard Evaluation (pFRA13)

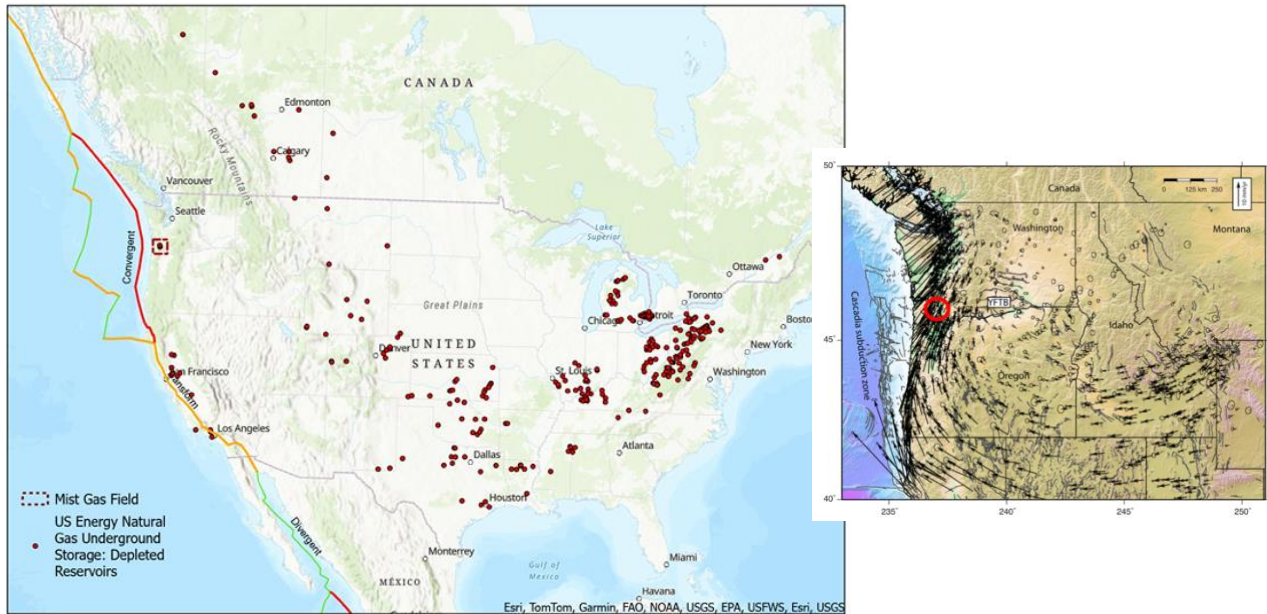
Guiding Policy: OAR 345-022-000 (2)(b)(A): (2) The Council shall weigh overall public benefits and any adverse effects on a resource or interest as follows: (b) The Council shall evaluate overall public benefits by considering factors including, but not limited to, the following: (A) The overall environmental effects of the facility, considering both beneficial and adverse environmental effect.

OAR 345-024-0030 (2): The applicant has developed a program using technology that is both practicable and reliable to monitor the facility to ensure the public health and safety.

OAR 345-022-0020(c): (c) The applicant, through appropriate site-specific study, has adequately characterized the potential geological and soils hazards of the site and its vicinity that could, in the absence of a seismic event, adversely affect, or be aggravated by, the construction and operation of the proposed facility; and (d) The applicant can design, engineer and construct the facility to avoid dangers to human safety and the environment presented by the hazards identified in subsection

Statement of Opposition: The best available science has not been applied to adequately evaluate geologic hazards and risk associated with operations at the Mist Gas Field.

Supporting Evidence: The Mist Gas Field is the only depleted natural gas reservoir in the USA and Canada located adjacent to a tectonically active convergence zone as shown in the figure below. Tectonic activity is due to the Cascadia Subduction Zone, which is the collision and subduction of the Juan de Fuca Plate beneath the North American plate. The consequence of subducting plates, as is evident in Oregon and Washington landscape, include micro, local, and regional fault zones, volcanism, earthquakes, and crustal rotation. The Mist Gas Field is in an extremely active location where velocity data, obtained through high-density geodetic GPS measurements (inset map: black arrows), show significant rotation occurring beneath the gas field.





Given the uniqueness of the Mist Gas Field's location (insert map: red circle), new methods and tools are now available to enhance our current understanding of Cascadia Subduction Zone in the Pacific Northwest. Yet no indication is provided that suggests best available science is currently used to protect waters of the state from groundwater contamination due to hydrocarbons and other constituents that could potentially migrate to local aquifers from storage operations, including fracked chemicals obtained from gas purchased in Canada.

Additional Comment: In addition to the above concerns, in amendment 13 (pRFA13) Exhibit H (Geologic Hazards Evaluation), Table H-8 on page 22, discusses fault hazards and claims only 13 quaternary faults are within 50 miles of the project. According to information obtained from the USGS citation listed as the source of the fault data, it states, "For the hazard maps, both the fault surface trace and the metadata are simplified representations of the geometry and behavior of the fault, based on geologic interpretation."

In 2020, the USGS created a new geologic map³ within the local vicinity. The map was created, "**to provide a uniform, modern geologic database for the greater Portland metro area to better understand its tectonic setting, active faults, volcanoes, landslide hazards, and distribution of geologic materials and resources. Information in this database will be used to improve seismic hazard and resource assessments in this economically important region.**"

Therefore, Exhibit H in the pRFA13 should be considered outdated information, since it does not capture the true geologic landscape of the area. It's worth noting that both datasets were available at the time Exhibit H was written for pRFA13, yet Exhibit H made no mention of the updated USGS map, even though it was created in collaboration with DOGAMI. Aside from a paper written by Wells and Bemis in 2020, which focused on migration of the Oregon forearc on the Gales Creek fault, and the standard NRCS soils database, accessed in 2023, all other sources used to present the local geologic and topographic conditions of the site in Exhibit H were mostly written in the 1970s and 1980s. Although the 2020 USGS map falls outside of the Project Area, it is within the boundary of the Site Certificate.

Furthermore, the earthquake map provided in Exhibit H (Figure H-8) does not adequately represent the number of earthquakes recorded in the region. The image on the left shows earthquakes in Exhibit H: Figure H-8, with the smallest circles representing < 2 in magnitude. The image on the right, obtained from the USGS Earthquake Catalog⁴, shows significantly more earthquakes than shown in Exhibit H.

³ Wells, R., Haugerud, R.A., Niem, A.R., Niem, W.A., Ma, L., Evarts, R.C., O'Connor, J.E., Madin, I.P., Sherrod, D.R., Beeson, M.H. and Tolan, T.L., 2020. Geologic map of the greater Portland metropolitan area and surrounding region, Oregon and Washington (No. 3443). US Geological Survey.

⁴ Schneider, M., Flury, H., Gutterop, P. and Wright, A., 2023. Earthquake catalog processing and swarm identification for the Pacific northwest. *Seismological Research Letters*, 94(5), pp.2500-2513.

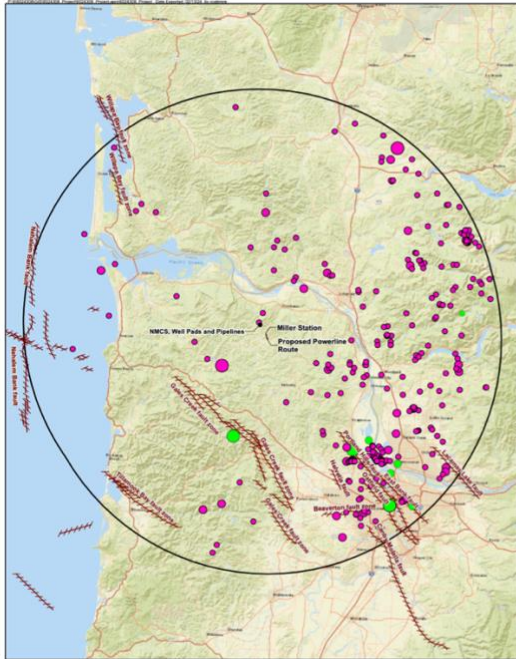
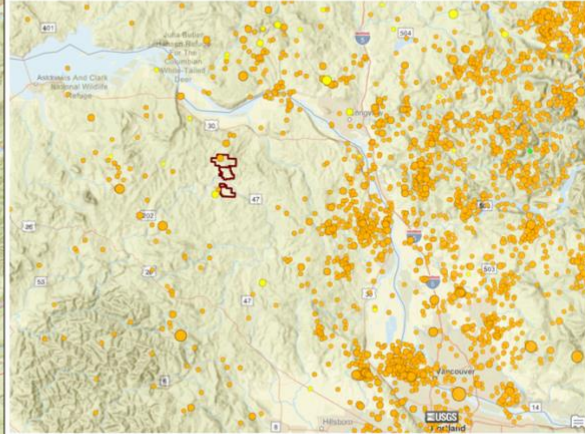
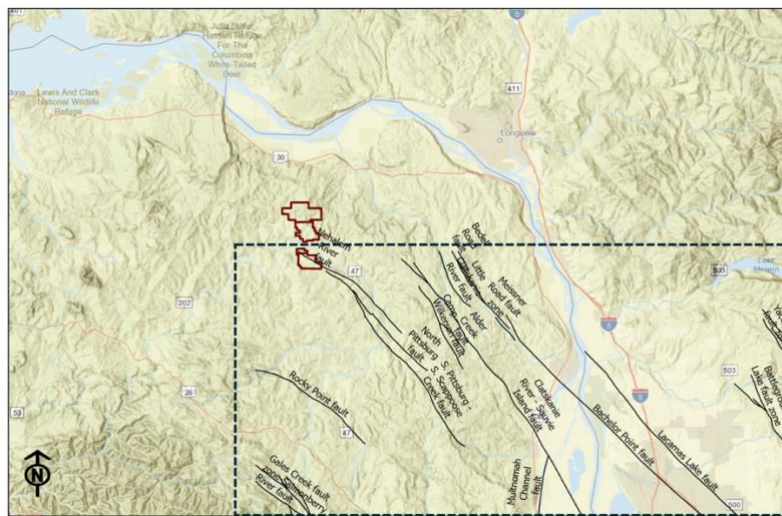


Exhibit H. Figure H-8

Data obtained from the USGS Earthquake Catalog



In addition to questionable material used in Exhibit H of the pRFA13, Table H-8 shows the nearest fault zone to the site is the Gales Creek Fault Zone located 17.6 miles away. However, only using the USGS 2020 map, 100 distinct faults were identified, representing up to 30 fault zones located approximately 50 miles from the Mist Gas Field (Figure Below. To reduce label overlap, not all fault zones are labeled in the figure). This includes new and extensive faulting within the southern boundary of the site certificate, not previously shown in any of DOGAMI's updated maps or in Exhibit H.



Field of View of the USGS 2020 Map



Concern: Surficial Geology Not Properly Assessed in Exhibit H of pFRA13

Guiding Policy: OAR 345-022-000 (2)(b)(A): (2) The Council shall weigh overall public benefits and any adverse effects on a resource or interest as follows: (b) The Council shall evaluate overall public benefits by considering factors including, but not limited to, the following: (A) The overall environmental effects of the facility, considering both beneficial and adverse environmental effect.

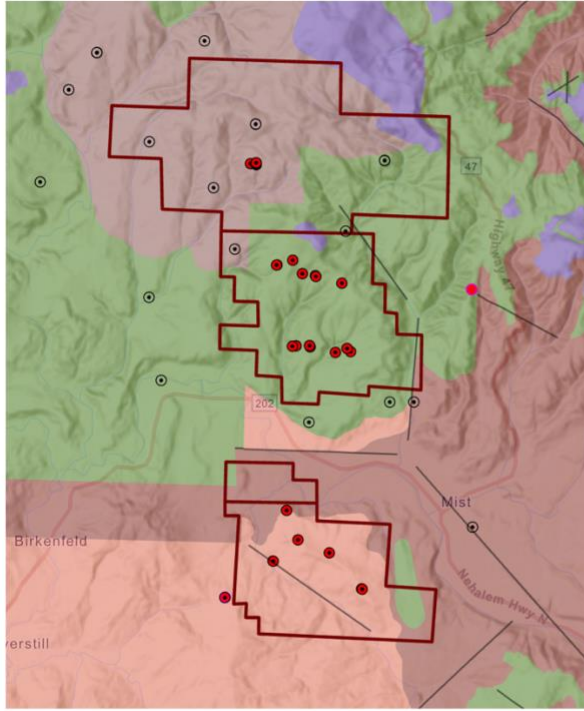
OAR 345-022-0020(c): (c) The applicant, through appropriate site-specific study, has adequately characterized the potential geological and soils hazards of the site and its vicinity that could, in the absence of a seismic event, adversely affect, or be aggravated by, the construction and operation of the proposed facility; and (d) The applicant can design, engineer and construct the facility to avoid dangers to human safety and the environment presented by the hazards identified in subsection (c).

Statement of Opposition: The Mist Gas Field is operated outside of conditions listed in OAR 345-022-0022(c). The potential geological hazards of the site are not properly identified. This is evident in the recent research released by the USGS in 2020. Although it was conducted in coordination with DOGAMI, no operational changes were implemented to reflect the complex geological conditions which show extensive faulting and cap rock exposure, which is now identified within the southernmost boundary of the gas field.

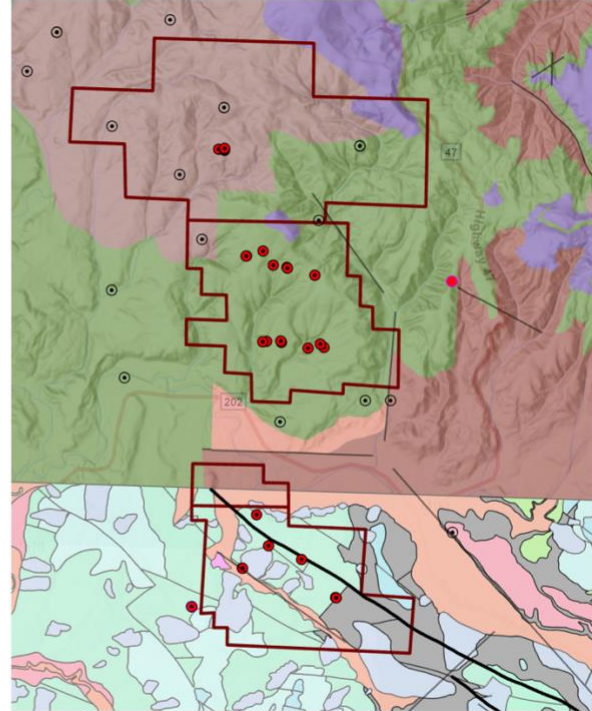
Supporting Evidence: According to DOGAMI, the best available geologic mapping for the state, combined into the Oregon Geologic Data Compilation, is provided under release 7⁵. Examination of this map shows simplified geology compared to the USGS map. This is apparent in the below figure, which shows an overlay of DOGAMI's compilation geologic map (OGDC-7) compared to the 2020 geologic map produced by the USGS.

Additional Comment: Surficial geology of the area has not been adequately assessed. This is apparent in the current DOGAMI map (left figure) compared to the updated 2020 map (right figure). The complexity of the geology and faulting is much more intricate than the OGDC-7 represents and needs throughout evaluation prior to approval of the amendment, as the surficial geology used in Exhibit B is likely extremely simplified (figure below).

⁵ <https://pubs.oregon.gov/dogami/dds/p-OGDC-7.htm>



DOGAMI (OGDC-7) Surficial Geology



DOGAMI (OGDC-7) Surficial Geology Underlying the 2020 USGS Map

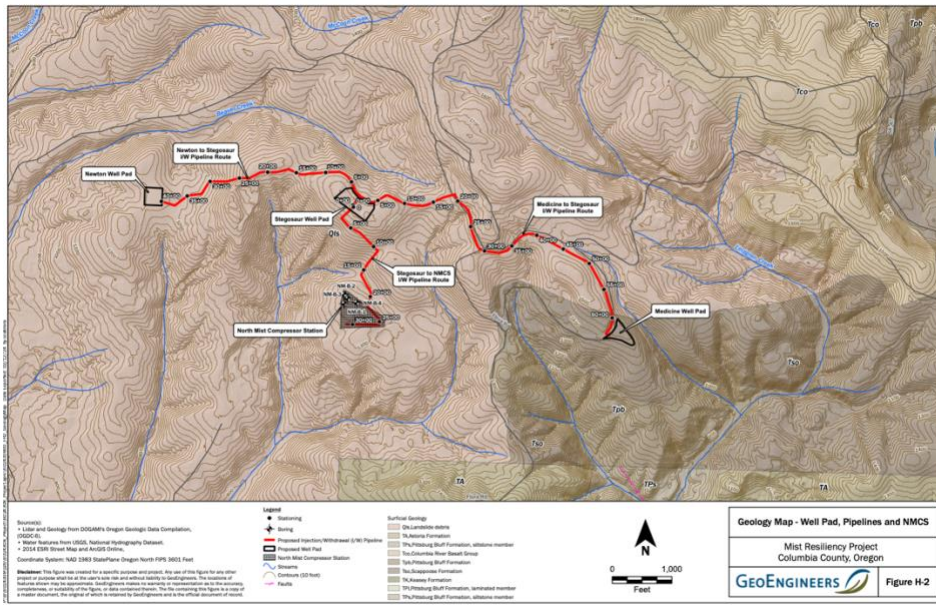


Figure H-2: Surficial Geology provided in Exhibit H



Concern: Groundwater Contamination Potential Due to Abandoned Wells

Guiding Policy: OAR 345-022-000 (2)(b)(A): (2) The Council shall weigh overall public benefits and any adverse effects on a resource or interest as follows: (b) The Council shall evaluate overall public benefits by considering factors including, but not limited to, the following: (A) The overall environmental effects of the facility, considering both beneficial and adverse environmental effect.

Statement of Opposition: Extensive exploration and operation of the Mist Gas Field has resulted in hundreds of injection, withdrawal, and abandoned wells. According to a report written by the National Energy Technology Laboratory in 2019⁶, utilizing depleted reservoirs is attractive due to pre-existing infrastructure. The report also states, **"Depleted oil and/or gas fields may pose the risk of abandoned, or orphaned, wells penetrating the storage reservoir, which can serve as a leakage conduit to neighboring formations or the atmosphere."** Additionally, in the *Underground Gas Storage Regulatory Considerations: A Guide for State & Federal Regulatory Agencies*, it states, **"Pre-existing or abandoned wellbores including previously pressurized or depleted areas, and previously generated hydraulic fractures should also be considered risk elements."** DOGAMI has not properly inventoried all wells within the gas field. This decreases DOGAMI's ability to properly assess potential groundwater contamination sources.

Supporting Evidence: Email from a public records request show DOGAMI's Bob Houston stated 395 wells have been permitted at the field, yet it appears most of the locations of these wells are not identified. Furthermore, Bob notes **"Additionally, [of the 395 wells permitted, it] does not include other "holes" (seismic holes, core holes and monitor)."** A copy of the email is provided below. This suggests an extensive number of "holes" have likely outlived their sealing lifespan, yet most locations are unknown, thereby increasing the potential of groundwater contamination, with DOGAMI unable to execute effective measures to address this issue.

HOUSTON Robert * DGMI
RE: Mist wells
To: MADIN Ian * DGMI, Cc: BUCHNER Ed * DGMI, LOFTON ReNeea * DGMI
January 18, 2018 at 3:23 PM
[Details](#)

Ok,
There are currently 110 active permits in the Mist gas field

Based on the API number there has been a total of 395 "wells" permitted in Columbia since 1953. ReNeea, noted that there appears to be skips in the sequential API number. Additionally, does not include other "holes" (seismic holes, core holes and monitor).

Cheers,
Bob

Robert A. Houston, RG
Hydrocarbon & Metallic Ore Geologist
Oregon Department of Geology and Mineral Industries | Springfield Field Office |
Springfield Interagency Office/3106 Pierce Parkway Suite D 1 Springfield, Oregon 97477
Office: 541-225-6451; Cell: 541-619-4653
Email: robert.houston@oregon.gov | <http://www.oregongeology.org>

From: MADIN Ian * DGMI
Sent: Thursday, January 18, 2018 3:09 PM
To: BUCHNER Ed * DGMI <Ed.BUCHNER@oregon.gov>; HOUSTON Robert * DGMI <Robert.HOUSTON@oregon.gov>
Subject: RE: Mist wells

So it sounds like there is no easy way to get a definitive count of the number of wells drilled to develop the Mist field.

From: BUCHNER Ed * DGMI
Sent: Thursday, January 18, 2018 2:55 PM
To: MADIN Ian * DGMI <Ian.MADIN@oregon.gov>; HOUSTON Robert * DGMI <Robert.HOUSTON@oregon.gov>
Subject: RE: Mist wells

There are huge data gaps and inconsistencies in the well data and organization in the database in GIS, this was something we were actively working on in 2013 or so, but other priorities pulled us away. There may be 450 points in the Mist area, but do they fall within the geometry of the Mist Field? Additionally, for my previous query from the database, if the ResourceField did not specify "Mist" it would have not been returned.

Ed Buchner
GIS Technical Specialist
Office: (541) 967-2084
Mobile: (541) 619-3738
ed.buchner@oregon.gov

From: MADIN Ian * DGMI
Sent: Thursday, January 18, 2018 2:49 PM
To: HOUSTON Robert * DGMI <Robert.HOUSTON@oregon.gov>; BUCHNER Ed * DGMI <Ed.BUCHNER@oregon.gov>
Subject: RE: Mist wells

I am confused. The GIS files show almost 450 wells in the Mist field. There must be permits that include more than one well.

⁶ Vikara, D., Zymroz, T., Withum, J.A., Shih, C.Y., Lin, S., Hoffman, H., Guinan, A. and Carr, T., 2019. Underground natural gas storage-analog studies to geologic storage of co2 (No. NETL-PUB-22087). National Energy Technology Lab.(NETL), Morgantown, WV (United States).



Additionally, confusion now exist between the safest method to abandon a well. On 7/18/2017 Irani Engineering requested a waiver to the well abandonment rule. According to email communication between Bob Brinkmann of DOGAMI and the Department of Justice, Bob stated, "*Do we have the authority to approve this method that apparently is not allowed in rule even though it will provide a more secure abandonment of the well versus the method prescribed in rule?* To provide a wavier required updating the administrative order that prohibited Irani Engineering's proposed method of abandonment.

A Temporary Administrative Order was approved by 9/8/2017 (later permanently approved). Bob Brinkman stated that the proposed method is technically sound and not granting the temporary order will place financial burden on the permittee, if it is not granted. This poses an issue, considering the field has been explored since the 1980s, a large quantity of abandoned wells, are now assumed less secure, since this rule wasn't granted until 2017. It should also be noted that best available science was not used to access the safety of the updated administrative order.

IRANI ENGINEERING, INC.
PETROLEUM ENGINEER
P.O. Box 661328
SACRAMENTO, CA 95866

07/18/2017

Mr. Ian Madin, Deputy Director
Mineral Land Regulation & Reclamation/Oregon Department of Geology & Mineral Industries
229 Broadalbin St. SW
Albany, OR 97321
Phone: (541) 967-2039
Fax: (541) 967-2075

Subject: Request for Revision of Abandon Rule for Enerfin Resources NW , "Pelee 21-31-65"

Mr. Madin,

Enerfin intends to abandon a few of their wells in Mist Gas Field, Oregon. The production casing in these wells are set couple of hundred feet above the TD of the wells. I know the rule states that we have to drill out the shoe of the production casing and set 100' of cement plug across them. I respectfully request a waiver to this rule because of the following reasons;

1. The shoe joint has a float collar on top and a float shoe on bottom, both in closed position, and 40' of cement between. Usually, there is several feet of hard production cement above the float collar too. On Pelee 21-31-65, we have another 42' of cement above the float collar for a total of 82'.
2. Usually steel perforating gun debris is on top of cement and the float collar which makes is very hard to get through and get to the float collar.
3. It is difficult to drill out the float collar and shoe. The float collar falls on the cement and starts spinning and prevents us from drilling the cement and float shoe.
4. The closed float collar and shoe and the cement between and above float collar are very strong barriers against leakage from below the shoe. Drilling out shoe and setting a 100' of cement plug in mud actually weakens this barrier (Equalized cement plugs can easily get contaminated with mud and have channeling issues). We would like to abandon the bottom of the hole by placing a 100' of cement plug on top of cement above the float collar.
5. We have to drill out cement, float and shoe of 4-1/2" casing, with 3-1/2" bit or mill (because of the drift diameter of the casing and mechanical limitation on mill size due to gun debris and float equipment milled out remnants). The hole was drilled with a 7-7/8" bit, therefore the hole size below the shoe is 7-7/8" filled with drilling mud (in Pelee 21-31-65 mud weight was 12.4 ppg). Cleaning a 7-7/8" hole with a 3-1/2" bit would be almost impossible at that point. The cement plug quality will be very much in doubt since mud contaminations will be a big factor.
6. I have worked in 8 different states in the USA and non of the other states have such a rule.

I have attached the abandoned programs and notice of abandonments for the two versions of the abandonment procedures. May I kindly ask for your office to review the rule and give us a relief from this rule in abandoning Enerfin wells in Mist Field.

Sincerely

Saeed Irani,
Registered Petroleum Engineer
President
Irani Engineering



RE: P&A of holes with rathole below casing

BB BRINKMANN Bob * DGMI
 To: [MADIN Ian * DGMI](#)
 Cc: [LLOYD Diane](#); [LOFTON ReNeea * DGMI](#)

PELEE PAREQ FOR REV.IRANI LTR.2017 (002).pdf
 .pdf File

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 Mon 8/14/2017 3:26 PM

Attached is a letter from Irani Engineering explaining the rationale for the proposed abandonment method for Pelee which as documented below has been approved on numerous occasions by this Department and I agree with the proposed method. This issue was also discussed w/ Diane while you were out and the question posed is: Do we have the authority to approve this method that apparently is not allowed in rule even though it will provide a more secure abandonment of the well versus the method prescribed in rule?

From: MADIN Ian * DGMI
Sent: Monday, August 14, 2017 10:30 AM
To: BRINKMANN Bob * DGMI <bob.brinkmann@oregon.gov>
Cc: LLOYD Diane <Diane.LLOYD@state.or.us>; LOFTON ReNeea * DGMI <Reneea.LOFTON@oregon.gov>
Subject: RE: P&A of holes with rathole below casing

Bob, can you summarize the issue for me in the form of a question I can put to Diane?

From: BRINKMANN Bob * DGMI
Sent: Thursday, August 10, 2017 2:16 PM
To: MADIN Ian * DGMI <Ian.MADIN@oregon.gov>
Cc: LLOYD Diane <Diane.LLOYD@state.or.us>; LOFTON ReNeea * DGMI <Reneea.LOFTON@oregon.gov>
Subject: FW: P&A of holes with rathole below casing

Ian, As you can see by the attached documentation the P&A method being proposed by Enerfin for the Pelee well has been approved numerous times in the past. Although it appears that rule does not afford flexibility for this it may be allowed by the overall authority granted DOGAMI in law. I agree w/ the method proposed which will properly seal the well versus an attempt to drill out the float collar and casing shoe and attempt to cement the rat hole below the shoe.

OFFICE OF THE SECRETARY OF STATE
 DENNIS RICHARDSON
 SECRETARY OF STATE
 LESLIE CUMMINGS
 DEPUTY SECRETARY OF STATE



ARCHIVES DIVISION
 MARY BETH HERKERT
 DIRECTOR
 800 SUMMER STREET NE
 SALEM, OR 97310
 503-373-0701

TEMPORARY ADMINISTRATIVE ORDER
 INCLUDING STATEMENT OF NEED & JUSTIFICATION
DGMI 1-2017
CHAPTER 632
 DEPARTMENT OF GEOLOGY AND MINERAL INDUSTRIES

FILED
 10/13/2017 2:55 PM
 ARCHIVES DIVISION
 SECRETARY OF STATE

FILING CAPTION: Makes minor adjustment to allow well plugging/decommissioning based on current, accepted best practices.

EFFECTIVE DATE: 10/13/2017 THROUGH 03/13/2018

AGENCY APPROVED DATE: 09/18/2017

CONTACT: Robert Houston 800 NE Oregon Street, Suite 965, 9232 Filed By:
 541-225-6451 3106 Pierce Parkway, Suite D, 97477 robert Houston
 robert.houston@oregon.gov Portland, OR 97232 Rules Coordinator

NEED FOR THE RULE(S):

It has been determined by department staff that a portion of the "Plugging Methods and Procedure" required by the chapter 632, division 10, administrative rules is technically incorrect in certain instances. **An existing permittee has proposed a well plugging procedure that is more technically sound for the facility at issue, and prompt action by the department to approve this plan will allow the applicant to take advantage of drilling equipment that is now available in the location of the well(s) to be plugged and decommissioned. A delay in well closure would result in additional costs to the permittee.** Delayed well closure also presents greater risk to public safety and the environment. This rule amendment is required to approve the plan. Absent plan approval the interests of both the public and the permittee will be prejudiced by a delay in well plugging and decommissioning.

JUSTIFICATION OF TEMPORARY FILING:

Based on the findings set out above, the Board finds that a failure to act promptly in this regard would result in prejudice to the public and permittee. The temporary rule will allow the necessary flexibility for the department to approve plans to ensure proper plugging that decommissioning of oil and gas wells based on current best practices.

DOCUMENTS RELIED UPON, AND WHERE THEY ARE AVAILABLE:

The documents relied upon include: (1) Request for Revision of Abandon Rule for Enerfin Resources 7/18/17 from Saeed Irani; (2) Plugging and Abandonment Evaluation from Bob Brinkmann 9/14/17. Both are available on the DOGAMI website.

AMEND: 632-010-0198

RULE TITLE: Abandonment, Unlawful Abandonment, Suspension, Well Plugging

RULE SUMMARY: OAR 632-010-0198 addresses how DOGAMI deals with abandonment, unlawful abandonment, suspension and well plugging. Subsection (8)(c) is modified to clarify that the plugging procedure required in that subsection only applies to any open casing



In Summary, due to uncertainty of our current geologic understanding on the northern area of the site, and covered under the site certificate, we ask the EFSC to deny Amendment 13 until additional geological investigations take place. Furthermore, since the number of wells at the Mist Gas Field were previously abandoned against the current standards, and well locations are unknown, we request DOGAMI's current administrative order for well abandonment be revised using the best available science. At the conclusion of this update, we then request all wells and "holes", as described by Bob Brinkmann, be examined for potential leakage. We believe it is the duty of the EFSC to deny the amendment request until the state has shown that the federally protected drinking water overlying the Mist Gas Field is free from contaminants and suitable for all those living within Columbia County.

SLOAN Kathleen * ODOE

From: ODOE ITService * ODOE
Sent: Thursday, September 19, 2024 2:12 PM
To: SLOAN Kathleen * ODOE
Subject: New Public Comment submitted for project : RFA13 and DPO for Mist Underground Natural Gas Storage Facility

Organization:

Submitted by: Daniel Schatz

Email: Danschatz@live.com

Zip Code: 97048

Siting Project Phase: DPO

Comment Summary:

I am commenting and asking the EFSC for a contested case. I am asking for the denial of NW Natural's Amendment 13.

Please Click on the following link to view the full [Comment Details](#)

Comment Summary

I am submitting written comments and asking the EFSC for a contested case. I am asking for the denial of NW Natural's Amendment 13.

Comment Date

source

Select email portal manual

Siting Project Phase

Select EXEMPTION REQUEST NOI DPO CC FORMAL
RULEMAKING INFORMAL RULEMAKING AMD-A AMD-B

Comment Details

Application for Site Certificate (ASC) Exhibit

Select Exhibit A - Applicant and Participating Persons Exhibit B - Proposed Facility Description Exhibit C - Proposed Facility Location Exhibit D - Organizational Expertise Exhibit E - Permits Required Exhibit F - Adjacent Property Owners Exhibit G - Materials Analysis Exhibit H - Geological and Soil Stability Exhibit I - Soil Conditions Exhibit J - Wetlands and other Jurisdictional Waters Exhibit K - Land Use Exhibit L - Protected Areas Exhibit M - Financial Capability Exhibit N - Non-Generating Facility Need Exhibit O - Water Use Exhibit P - Fish and Wildlife Habitat Exhibit Q - Threatened and Endangered Plant and Animal Species Exhibit R - Scenic Resources Exhibit S - Historic Cultural and Archaeological Resources Exhibit T - Recreation Opportunities Exhibit U - Public Services Exhibit V - Waste Minimization Exhibit W - Site Restoration Exhibit X - Noise Exhibit Y - Carbon Dioxide Emissions Exhibit Z - Evaporative Cooling Tower Exhibit AA - Electric Transmission Line EMFs Exhibit BB - Other Requested Information Exhibit CC - Applicable Statutes, Rules, Ordinances Exhibit DD - Specific Requirements

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Page Number(s)

—

Council Standards

—

Comment

Attachments

4 days ago

Microsoft CRM Portals

[Public Comment Amendment 13_v2.pdf \(1.63 MB\)](#)



American Aquifer's Public Comment Requesting Denial of Amendment 13 (pFRA13)

American Aquifers, a 501c3 non-profit located in Oregon designed to support communities reliant upon groundwater, requests the Oregon Department of Energy (DOE) deny amendment 13 (pRFA13). Residents in Columbia County suffer from disproportionately high rates of cancer compared to other counties in the state, yet represent less than 1.3% of the state's population. Residents in Columbia County maintain cancer rates that rank #1 in uterus, lung, bronchus, and melanoma cancers, #2 in female pancreas cancer and leukemia, #4 in brain and esophagus cancer, #5 in female kidney/renal pelvis cancer, #6 in Non-Hodgkin Lymphoma, #7 in oral cavity and pharynx cancer, and #10 in male kidney/renal pelvis cancer. Additionally, a recent study of multiple myeloma shows Columbia County has staggering incidences of this rare, non-curable cancer that accounts for only 10% of all blood cancers. Of the 133 counties that make up the entire west coast, only 12 counties have significantly high rates of myeloma cancer, with Columbia County listed as one of the three in Oregon¹.

Cancer rates in Columbia County cannot be directly attributed to logging operations, which include the spraying of herbicides and are known carcinogens. A total of 47% of land in Oregon is forested. Tillamook and Washington Counties, with a combined population of 14.83%, are home to the largest forested area in the state, but according to the National Cancer Institute, cancer rates are stable in Tillamook County and falling in Washington County, suggesting that forestry practices are not the predominate cause to high rates of cancers suffered among communities in Columbia County.

According to the Safe Drinking Water Act (SDWA), all water designated for drinking use, including underground sources, are protected by federal law. Furthermore, the Oregon Groundwater Quality Protection Act of 1989 was enacted to prevent contamination of groundwater and to conserve, restore, and maintain Oregon's groundwater resources for present and future uses. The DOE is mentioned as a state agency that coordinates energy facility activities with Oregon's Department of Environmental Quality's (DEQ) to protect groundwaters of the state.

Potential cancer-causing chemicals are likely leaching into local aquifers from operations occurring at the Mist Gas Underground Natural Storage Gas Field (Mist Gas Field). A request for denial of pFRA13 is requested until environmental exposure pathways and current operation practices are properly and thoroughly investigated using the best available science, which is supported by Oregon State University's Institute for Natural Resources in accordance with OAR 629-603-0400(4) and is defined by Cornell Law as "science that is reliable and unbiased."

We find operations governing the Mist Gas Field are not meeting OAR, ORS, or EFSC Siting Standards. Our findings also show partiality toward field operators (Northwest Natural and Enerfin) by state agencies, including but not limited to DOGAMI² and others responsible for the safety protocols designed to protect community exposure, which are in place to limit chemical constituents not suitable for human consumption.

The following describes the OAR, ORS, or Siting Standard (herein referred to as Guiding Policy) within the jurisdiction of the EFSC that supports our objection to amendment 13 based on the rules governing the Mist Gas Field, and includes evidence supporting our request for denial.

¹ Cheung, J.T.H., Zhang, W. and Chiu, B.C.H., 2023. Geospatial analysis of population-based incidence of multiple myeloma in the United States. *Cancer epidemiology*, 83, p.102343.

² Oregon Department of Geology and Mining Industries



Concern: Geologic Hazards Not Properly Assessed in Exhibit H: Geologic Hazard Evaluation (pFRA13)

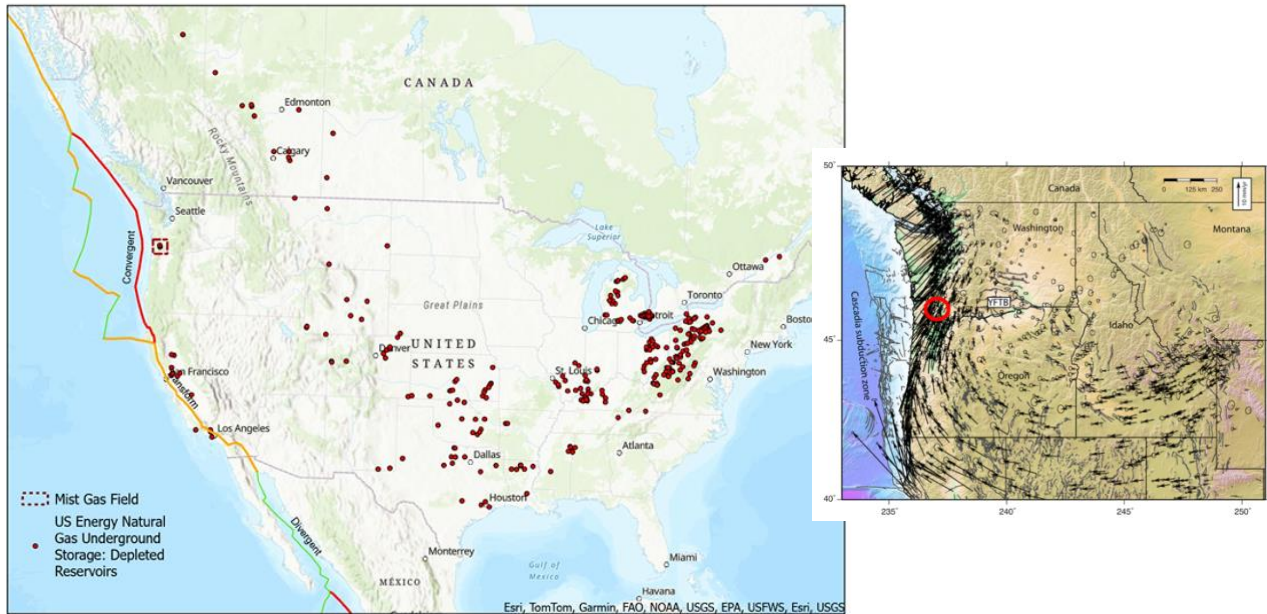
Guiding Policy: OAR 345-022-000 (2)(b)(A): (2) The Council shall weigh overall public benefits and any adverse effects on a resource or interest as follows: (b) The Council shall evaluate overall public benefits by considering factors including, but not limited to, the following: (A) The overall environmental effects of the facility, considering both beneficial and adverse environmental effect.

OAR 345-024-0030 (2): The applicant has developed a program using technology that is both practicable and reliable to monitor the facility to ensure the public health and safety.

OAR 345-022-0020(c): (c) The applicant, through appropriate site-specific study, has adequately characterized the potential geological and soils hazards of the site and its vicinity that could, in the absence of a seismic event, adversely affect, or be aggravated by, the construction and operation of the proposed facility; and (d) The applicant can design, engineer and construct the facility to avoid dangers to human safety and the environment presented by the hazards identified in subsection

Statement of Opposition: The best available science has not been applied to adequately evaluate geologic hazards and risk associated with operations at the Mist Gas Field.

Supporting Evidence: The Mist Gas Field is the only depleted natural gas reservoir in the USA and Canada located adjacent to a tectonically active convergence zone as shown in the figure below. Tectonic activity is due to the Cascadia Subduction Zone, which is the collision and subduction of the Juan de Fuca Plate beneath the North American plate. The consequence of subducting plates, as is evident in Oregon and Washington landscape, include micro, local, and regional fault zones, volcanism, earthquakes, and crustal rotation. The Mist Gas Field is in an extremely active location where velocity data, obtained through high-density geodetic GPS measurements (inset map: black arrows), show significant rotation occurring beneath the gas field.





Given the uniqueness of the Mist Gas Field's location (insert map: red circle), new methods and tools are now available to enhance our current understanding of Cascadia Subduction Zone in the Pacific Northwest. Yet no indication is provided that suggests best available science is currently used to protect waters of the state from groundwater contamination due to hydrocarbons and other constituents that could potentially migrate to local aquifers from storage operations, including fracked chemicals obtained from gas purchased in Canada.

Additional Comment: In addition to the above concerns, in amendment 13 (pRFA13) Exhibit H (Geologic Hazards Evaluation), Table H-8 on page 22, discusses fault hazards and claims only 13 quaternary faults are within 50 miles of the project. According to information obtained from the USGS citation listed as the source of the fault data, it states, "For the hazard maps, both the fault surface trace and the metadata are simplified representations of the geometry and behavior of the fault, based on geologic interpretation."

In 2020, the USGS created a new geologic map³ within the local vicinity. The map was created, "**to provide a uniform, modern geologic database for the greater Portland metro area to better understand its tectonic setting, active faults, volcanoes, landslide hazards, and distribution of geologic materials and resources. Information in this database will be used to improve seismic hazard and resource assessments in this economically important region.**"

Therefore, Exhibit H in the pRFA13 should be considered outdated information, since it does not capture the true geologic landscape of the area. It's worth noting that both datasets were available at the time Exhibit H was written for pRFA13, yet Exhibit H made no mention of the updated USGS map, even though it was created in collaboration with DOGAMI. Aside from a paper written by Wells and Bemis in 2020, which focused on migration of the Oregon forearc on the Gales Creek fault, and the standard NRCS soils database, accessed in 2023, all other sources used to present the local geologic and topographic conditions of the site in Exhibit H were mostly written in the 1970s and 1980s. Although the 2020 USGS map falls outside of the Project Area, it is within the boundary of the Site Certificate.

Furthermore, the earthquake map provided in Exhibit H (Figure H-8) does not adequately represent the number of earthquakes recorded in the region. The image on the left shows earthquakes in Exhibit H: Figure H-8, with the smallest circles representing < 2 in magnitude. The image on the right, obtained from the USGS Earthquake Catalog⁴, shows significantly more earthquakes than shown in Exhibit H.

³ Wells, R., Haugerud, R.A., Niem, A.R., Niem, W.A., Ma, L., Evarts, R.C., O'Connor, J.E., Madin, I.P., Sherrod, D.R., Beeson, M.H. and Tolan, T.L., 2020. Geologic map of the greater Portland metropolitan area and surrounding region, Oregon and Washington (No. 3443). US Geological Survey.

⁴ Schneider, M., Flury, H., Gutterop, P. and Wright, A., 2023. Earthquake catalog processing and swarm identification for the Pacific northwest. *Seismological Research Letters*, 94(5), pp.2500-2513.

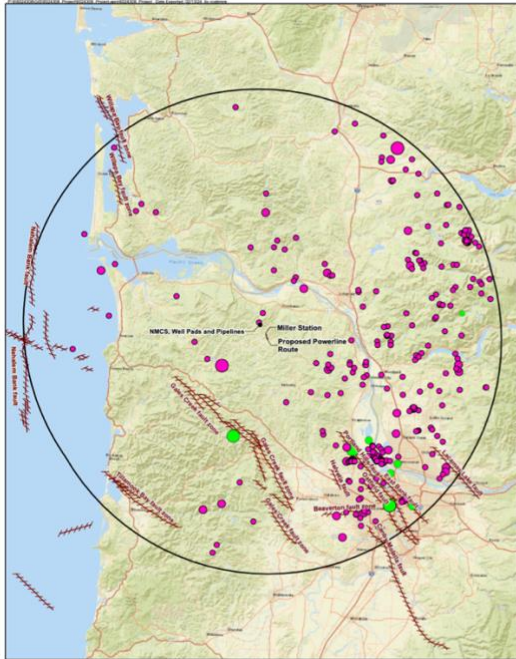
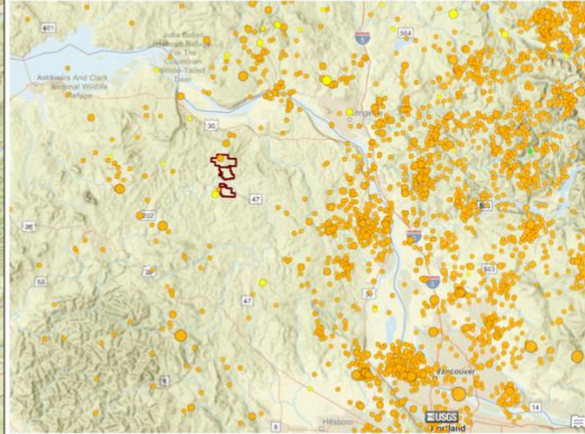
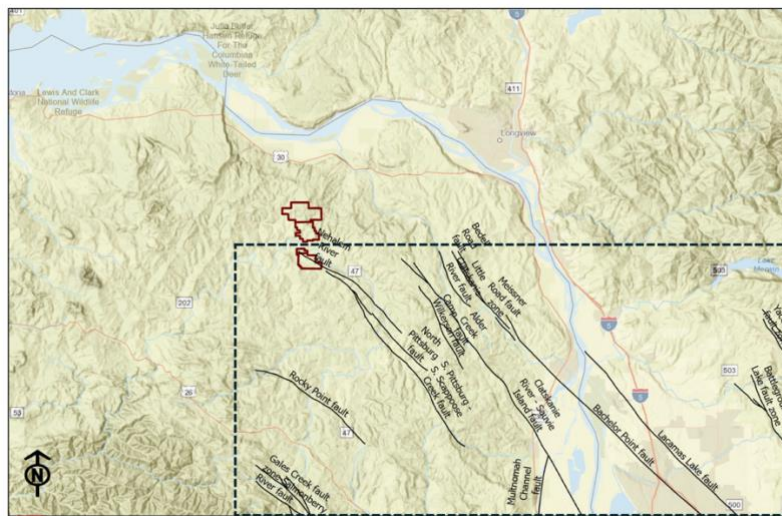


Exhibit H. Figure H-8

Data obtained from the USGS Earthquake Catalog



In addition to questionable material used in Exhibit H of the pRFA13, Table H-8 shows the nearest fault zone to the site is the Gales Creek Fault Zone located 17.6 miles away. However, only using the USGS 2020 map, 100 distinct faults were identified, representing up to 30 fault zones located approximately 50 miles from the Mist Gas Field (Figure Below. To reduce label overlap, not all fault zones are labeled in the figure). This includes new and extensive faulting within the southern boundary of the site certificate, not previously shown in any of DOGAMI's updated maps or in Exhibit H.



Field of View of the USGS 2020 Map



Concern: Surficial Geology Not Properly Assessed in Exhibit H of pFRA13

Guiding Policy: OAR 345-022-000 (2)(b)(A): (2) The Council shall weigh overall public benefits and any adverse effects on a resource or interest as follows: (b) The Council shall evaluate overall public benefits by considering factors including, but not limited to, the following: (A) The overall environmental effects of the facility, considering both beneficial and adverse environmental effect.

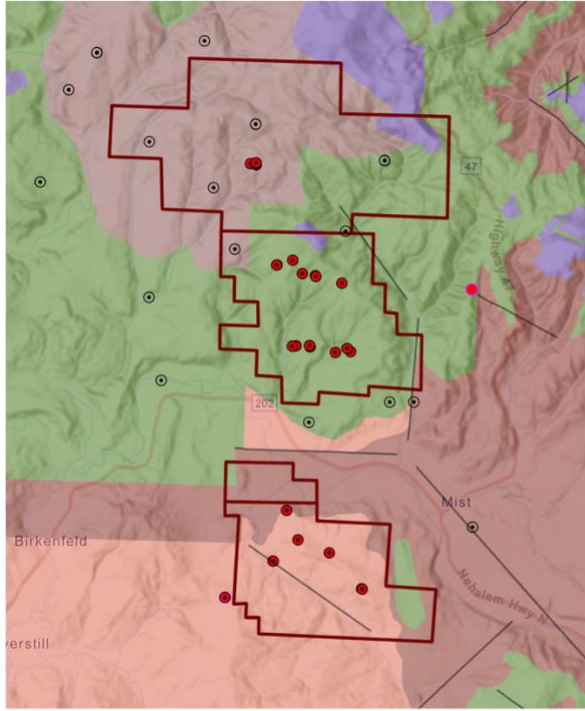
OAR 345-022-0020(c): (c) The applicant, through appropriate site-specific study, has adequately characterized the potential geological and soils hazards of the site and its vicinity that could, in the absence of a seismic event, adversely affect, or be aggravated by, the construction and operation of the proposed facility; and (d) The applicant can design, engineer and construct the facility to avoid dangers to human safety and the environment presented by the hazards identified in subsection (c).

Statement of Opposition: The Mist Gas Field is operated outside of conditions listed in OAR 345-022-0022(c). The potential geological hazards of the site are not properly identified. This is evident in the recent research released by the USGS in 2020. Although it was conducted in coordination with DOGAMI, no operational changes were implemented to reflect the complex geological conditions which show extensive faulting and cap rock exposure, which is now identified within the southernmost boundary of the gas field.

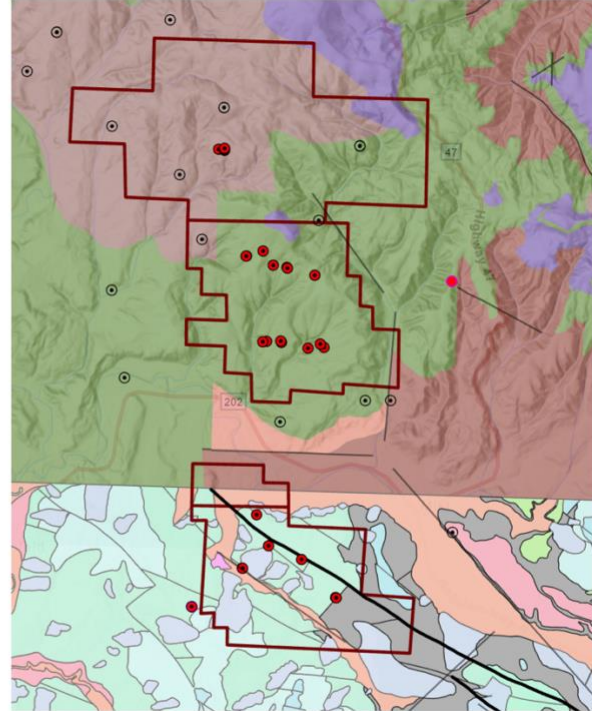
Supporting Evidence: According to DOGAMI, the best available geologic mapping for the state, combined into the Oregon Geologic Data Compilation, is provided under release 7⁵. Examination of this map shows simplified geology compared to the USGS map. This is apparent in the below figure, which shows an overlay of DOGAMI's compilation geologic map (OGDC-7) compared to the 2020 geologic map produced by the USGS.

Additional Comment: Surficial geology of the area has not been adequately assessed. This is apparent in the current DOGAMI map (left figure) compared to the updated 2020 map (right figure). The complexity of the geology and faulting is much more intricate than the OGDC-7 represents and needs throughout evaluation prior to approval of the amendment, as the surficial geology used in Exhibit B is likely extremely simplified (figure below).

⁵ <https://pubs.oregon.gov/dogami/dds/p-OGDC-7.htm>



DOGAMI (OGDC-7) Surficial Geology



DOGAMI (OGDC-7) Surficial Geology Underlying the 2020 USGS Map

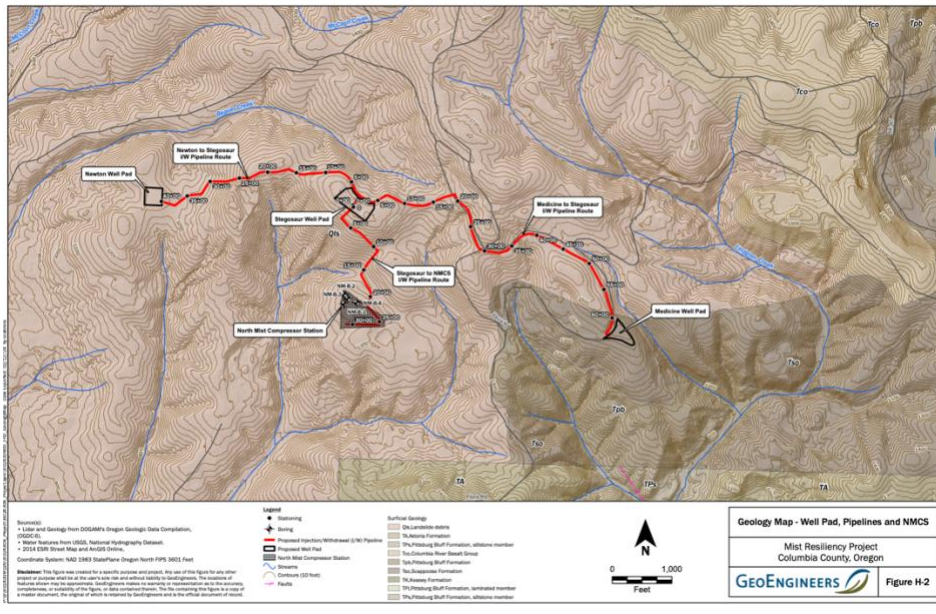


Figure H-2: Surficial Geology provided in Exhibit H



Concern: Groundwater Contamination Potential Due to Abandoned Wells

Guiding Policy: OAR 345-022-000 (2)(b)(A): (2) The Council shall weigh overall public benefits and any adverse effects on a resource or interest as follows: (b) The Council shall evaluate overall public benefits by considering factors including, but not limited to, the following: (A) The overall environmental effects of the facility, considering both beneficial and adverse environmental effect.

Statement of Opposition: Extensive exploration and operation of the Mist Gas Field has resulted in hundreds of injection, withdrawal, and abandoned wells. According to a report written by the National Energy Technology Laboratory in 2019⁶, utilizing depleted reservoirs is attractive due to pre-existing infrastructure. The report also states, **"Depleted oil and/or gas fields may pose the risk of abandoned, or orphaned, wells penetrating the storage reservoir, which can serve as a leakage conduit to neighboring formations or the atmosphere."** Additionally, in the *Underground Gas Storage Regulatory Considerations: A Guide for State & Federal Regulatory Agencies*, it states, **"Pre-existing or abandoned wellbores including previously pressurized or depleted areas, and previously generated hydraulic fractures should also be considered risk elements."** DOGAMI has not properly inventoried all wells within the gas field. This decreases DOGAMI's ability to properly assess potential groundwater contamination sources.

Supporting Evidence: Email from a public records request show DOGAMI's Bob Houston stated 395 wells have been permitted at the field, yet it appears most of the locations of these wells are not identified. Furthermore, Bob notes **"Additionally, [of the 395 wells permitted, it] does not include other "holes" (seismic holes, core holes and monitor)."** A copy of the email is provided below. This suggests an extensive number of "holes" have likely outlived their sealing lifespan, yet most locations are unknown, thereby increasing the potential of groundwater contamination, with DOGAMI unable to execute effective measures to address this issue.

HOUSTON Robert * DGMI
RE: Mist wells
To: MADIN Ian * DGMI, Cc: BUCHNER Ed * DGMI, LOFTON ReNeea * DGMI
January 18, 2018 at 3:23 PM
[Details](#)

Ok,
There are currently 110 active permits in the Mist gas field

Based on the API number there has been a total of 395 "wells" permitted in Columbia since 1953. ReNeea, noted that there appears to be skips in the sequential API number. Additionally, does not include other "holes" (seismic holes, core holes and monitor).

Cheers,
Bob

Robert A. Houston, RG
Hydrocarbon & Metallic Ore Geologist
Oregon Department of Geology and Mineral Industries | Springfield Field Office |
Springfield Interagency Office/3106 Pierce Parkway Suite D 1 Springfield, Oregon 97477
Office: 541-225-6451; Cell: 541-619-4653
Email: robert.houston@oregon.gov | <http://www.oregongeology.org>

From: MADIN Ian * DGMI
Sent: Thursday, January 18, 2018 3:09 PM
To: BUCHNER Ed * DGMI <Ed.BUCHNER@oregon.gov>; HOUSTON Robert * DGMI <Robert.HOUSTON@oregon.gov>
Subject: RE: Mist wells

So it sounds like there is no easy way to get a definitive count of the number of wells drilled to develop the Mist field.

From: BUCHNER Ed * DGMI
Sent: Thursday, January 18, 2018 2:55 PM
To: MADIN Ian * DGMI <Ian.MADIN@oregon.gov>; HOUSTON Robert * DGMI <Robert.HOUSTON@oregon.gov>
Subject: RE: Mist wells

There are huge data gaps and inconsistencies in the well data and organization in the database in GIS, this was something we were actively working on in 2013 or so, but other priorities pulled us away. There may be 450 points in the Mist area, but do they fall within the geometry of the Mist Field? Additionally, for my previous query from the database, if the ResourceField did not specify "Mist" it would have not been returned.

Ed Buchner
GIS Technical Specialist
Office: (541) 967-2084
Mobile: (541) 619-3738
ed.buchner@oregon.gov

From: MADIN Ian * DGMI
Sent: Thursday, January 18, 2018 2:49 PM
To: HOUSTON Robert * DGMI <Robert.HOUSTON@oregon.gov>; BUCHNER Ed * DGMI <Ed.BUCHNER@oregon.gov>
Subject: RE: Mist wells

I am confused. The GIS files show almost 450 wells in the Mist field. There must be permits that include more than one well.

⁶ Vikara, D., Zymroz, T., Withum, J.A., Shih, C.Y., Lin, S., Hoffman, H., Guinan, A. and Carr, T., 2019. Underground natural gas storage-analog studies to geologic storage of co2 (No. NETL-PUB-22087). National Energy Technology Lab.(NETL), Morgantown, WV (United States).



Additionally, confusion now exist between the safest method to abandon a well. On 7/18/2017 Irani Engineering requested a waiver to the well abandonment rule. According to email communication between Bob Brinkmann of DOGAMI and the Department of Justice, Bob stated, "*Do we have the authority to approve this method that apparently is not allowed in rule even though it will provide a more secure abandonment of the well versus the method prescribed in rule?* To provide a wavier required updating the administrative order that prohibited Irani Engineering's proposed method of abandonment.

A Temporary Administrative Order was approved by 9/8/2017 (later permanently approved). Bob Brinkman stated that the proposed method is technically sound and not granting the temporary order will place financial burden on the permittee, if it is not granted. This poses an issue, considering the field has been explored since the 1980s, a large quantity of abandoned wells, are now assumed less secure, since this rule wasn't granted until 2017. It should also be noted that best available science was not used to access the safety of the updated administrative order.

IRANI ENGINEERING, INC.
PETROLEUM ENGINEER
P.O. Box 661328
SACRAMENTO, CA 95866

07/18/2017

Mr. Ian Madin, Deputy Director
Mineral Land Regulation & Reclamation/Oregon Department of Geology & Mineral Industries
229 Broadalbin St. SW
Albany, OR 97321
Phone: (541) 967-2039
Fax: (541) 967-2075

Subject: Request for Revision of Abandon Rule for Enerfin Resources NW , "Pelee 21-31-65"

Mr. Madin,

Enerfin intends to abandon a few of their wells in Mist Gas Field, Oregon. The production casing in these wells are set couple of hundred feet above the TD of the wells. I know the rule states that we have to drill out the shoe of the production casing and set 100' of cement plug across them. I respectfully request a waiver to this rule because of the following reasons;

1. The shoe joint has a float collar on top and a float shoe on bottom, both in closed position, and 40' of cement between. Usually, there is several feet of hard production cement above the float collar too. On Pelee 21-31-65, we have another 42' of cement above the float collar for a total of 82'.
2. Usually steel perforating gun debris is on top of cement and the float collar which makes is very hard to get through and get to the float collar.
3. It is difficult to drill out the float collar and shoe. The float collar falls on the cement and starts spinning and prevents us from drilling the cement and float shoe.
4. The closed float collar and shoe and the cement between and above float collar are very strong barriers against leakage from below the shoe. Drilling out shoe and setting a 100' of cement plug in mud actually weakens this barrier (Equalized cement plugs can easily get contaminated with mud and have channeling issues). We would like to abandon the bottom of the hole by placing a 100' of cement plug on top of cement above the float collar.
5. We have to drill out cement, float and shoe of 4-1/2" casing, with 3-1/2" bit or mill (because of the drift diameter of the casing and mechanical limitation on mill size due to gun debris and float equipment milled out remnants). The hole was drilled with a 7-7/8" bit, therefore the hole size below the shoe is 7-7/8" filled with drilling mud (in Pelee 21-31-65 mud weight was 12.4 ppg). Cleaning a 7-7/8" hole with a 3-1/2" bit would be almost impossible at that point. The cement plug quality will be very much in doubt since mud contaminations will be a big factor.
6. I have worked in 8 different states in the USA and non of the other states have such a rule.

I have attached the abandoned programs and notice of abandonments for the two versions of the abandonment procedures. May I kindly ask for your office to review the rule and give us a relief from this rule in abandoning Enerfin wells in Mist Field.

Sincerely

Saeed Irani,
Registered Petroleum Engineer
President
Irani Engineering



RE: P&A of holes with rathole below casing



BRINKMANN Bob * DGMI
 To: ○ MADIN Ian * DGMI
 Cc: ○ LLOYD Diane; ○ LOFTON ReNeea * DGMI

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DGMI 1-2017
CHAPTER 632
DEPARTMENT OF GEOLOGY AND MINERAL INDUSTRIES

FILED
 10/13/2017 2:55 PM
 ARCHIVES DIVISION
 SECRETARY OF STATE

FILING CAPTION: Makes minor adjustment to allow well plugging/decommissioning based on current, accepted best practices.

EFFECTIVE DATE: 10/13/2017 THROUGH 03/13/2018

AGENCY APPROVED DATE: 09/18/2017

CONTACT: Robert Houston 800 NE Oregon Street, Suite 965, 9232 Filed By:
 541-225-6451 3106 Pierce Parkway, Suite D, 97477 robert Houston
 robert.houston@oregon.gov Portland, OR 97232 Rules Coordinator

NEED FOR THE RULE(S):

It has been determined by department staff that a portion of the "Plugging Methods and Procedure" required by the chapter 632, division 10, administrative rules is technically incorrect in certain instances. **An existing permittee has proposed a well plugging procedure that is more technically sound for the facility at issue, and prompt action by the department to approve this plan will allow the applicant to take advantage of drilling equipment that is now available in the location of the well(s) to be plugged and decommissioned. A delay in well closure would result in additional costs to the permittee.** Delayed well closure also presents greater risk to public safety and the environment. This rule amendment is required to approve the plan. Absent plan approval the interests of both the public and the permittee will be prejudiced by a delay in well plugging and decommissioning.

JUSTIFICATION OF TEMPORARY FILING:

Based on the findings set out above, the Board finds that a failure to act promptly in this regard would result in prejudice to the public and permittee. The temporary rule will allow the necessary flexibility for the department to approve plans to ensure proper plugging that decommissioning of oil and gas wells based on current best practices.

DOCUMENTS RELIED UPON, AND WHERE THEY ARE AVAILABLE:

The documents relied upon include: (1) Request for Revision of Abandon Rule for Enerfin Resources 7/18/17 from Saeed Irani; (2) Plugging and Abandonment Evaluation from Bob Brinkmann 9/14/17. Both are available on the DOGAMI website.

AMEND: 632-010-0198

RULE TITLE: Abandonment, Unlawful Abandonment, Suspension, Well Plugging

RULE SUMMARY: OAR 632-010-0198 addresses how DOGAMI deals with abandonment, unlawful abandonment, suspension and well plugging. Subsection (8)(c) is modified to clarify that the plugging procedure required in that subsection only applies to any open casing



In Summary, due to uncertainty of our current geologic understanding on the northern area of the site, and covered under the site certificate, we ask the EFSC to deny Amendment 13 until additional geological investigations take place. Furthermore, since the number of wells at the Mist Gas Field were previously abandoned against the current standards, and well locations are unknown, we request DOGAMI's current administrative order for well abandonment be revised using the best available science. At the conclusion of this update, we then request all wells and "holes", as described by Bob Brinkmann, be examined for potential leakage. We believe it is the duty of the EFSC to deny the amendment request until the state has shown that the federally protected drinking water overlying the Mist Gas Field is free from contaminants and suitable for all those living within Columbia County.

SLOAN Kathleen * ODOE

From: ODOE ITService * ODOE
Sent: Thursday, September 19, 2024 2:44 PM
To: SLOAN Kathleen * ODOE
Subject: New Public Comment submitted for project : RFA13 and DPO for Mist Underground Natural Gas Storage Facility

Organization:

Submitted by: Liz BECKER

Email: lizbecker503@gmail.com

Zip Code: 97206

Siting Project Phase: DPO

Comment Summary:

I want to contest the amendment

I appreciate your thoughtful review

Please Click on the following link to view the full [Comment Details](#)

Comment Summary

I want to contest the amendment

I appreciate your thoughtful review

Comment Date

source

Select email portal manual

Siting Project Phase

Select EXEMPTION REQUEST NOI DPO CC FORMAL
RULEMAKING INFORMAL RULEMAKING AMD-A AMD-B

Comment Details

Application for Site Certificate (ASC) Exhibit

Select Exhibit A - Applicant and Participating Persons Exhibit B - Proposed Facility Description Exhibit C - Proposed Facility Location Exhibit D - Organizational Expertise Exhibit E - Permits Required Exhibit F - Adjacent Property Owners Exhibit G - Materials Analysis Exhibit H - Geological and Soil Stability Exhibit I - Soil Conditions Exhibit J - Wetlands and other Jurisdictional Waters Exhibit K - Land Use Exhibit L - Protected Areas Exhibit M - Financial Capability Exhibit N - Non-Generating Facility Need Exhibit O - Water Use Exhibit P - Fish and Wildlife Habitat Exhibit Q - Threatened and Endangered Plant and Animal Species Exhibit R - Scenic Resources Exhibit S - Historic Cultural and Archaeological Resources Exhibit T - Recreation Opportunities Exhibit U - Public Services Exhibit V - Waste Minimization Exhibit W - Site Restoration Exhibit X - Noise Exhibit Y - Carbon Dioxide Emissions Exhibit Z - Evaporative Cooling Tower Exhibit AA - Electric Transmission Line EMFs Exhibit BB - Other Requested Information Exhibit CC - Applicable Statutes, Rules, Ordinances Exhibit DD - Specific Requirements

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Page Number(s)

—

Council Standards

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Comment

Attachments

4 days ago

Microsoft CRM Portals

[Public Comment Amendment 13_v2 \(1\).pdf \(1.63 MB\)](#)



American Aquifer's Public Comment Requesting Denial of Amendment 13 (pFRA13)

American Aquifers, a 501c3 non-profit located in Oregon designed to support communities reliant upon groundwater, requests the Oregon Department of Energy (DOE) deny amendment 13 (pRFA13). Residents in Columbia County suffer from disproportionately high rates of cancer compared to other counties in the state, yet represent less than 1.3% of the state's population. Residents in Columbia County maintain cancer rates that rank #1 in uterus, lung, bronchus, and melanoma cancers, #2 in female pancreas cancer and leukemia, #4 in brain and esophagus cancer, #5 in female kidney/renal pelvis cancer, #6 in Non-Hodgkin Lymphoma, #7 in oral cavity and pharynx cancer, and #10 in male kidney/renal pelvis cancer. Additionally, a recent study of multiple myeloma shows Columbia County has staggering incidences of this rare, non-curable cancer that accounts for only 10% of all blood cancers. Of the 133 counties that make up the entire west coast, only 12 counties have significantly high rates of myeloma cancer, with Columbia County listed as one of the three in Oregon¹.

Cancer rates in Columbia County cannot be directly attributed to logging operations, which include the spraying of herbicides and are known carcinogens. A total of 47% of land in Oregon is forested. Tillamook and Washington Counties, with a combined population of 14.83%, are home to the largest forested area in the state, but according to the National Cancer Institute, cancer rates are stable in Tillamook County and falling in Washington County, suggesting that forestry practices are not the predominate cause to high rates of cancers suffered among communities in Columbia County.

According to the Safe Drinking Water Act (SDWA), all water designated for drinking use, including underground sources, are protected by federal law. Furthermore, the Oregon Groundwater Quality Protection Act of 1989 was enacted to prevent contamination of groundwater and to conserve, restore, and maintain Oregon's groundwater resources for present and future uses. The DOE is mentioned as a state agency that coordinates energy facility activities with Oregon's Department of Environmental Quality's (DEQ) to protect groundwaters of the state.

Potential cancer-causing chemicals are likely leaching into local aquifers from operations occurring at the Mist Gas Underground Natural Storage Gas Field (Mist Gas Field). A request for denial of pFRA13 is requested until environmental exposure pathways and current operation practices are properly and thoroughly investigated using the best available science, which is supported by Oregon State University's Institute for Natural Resources in accordance with OAR 629-603-0400(4) and is defined by Cornell Law as "science that is reliable and unbiased."

We find operations governing the Mist Gas Field are not meeting OAR, ORS, or EFSC Siting Standards. Our findings also show partiality toward field operators (Northwest Natural and Enerfin) by state agencies, including but not limited to DOGAMI² and others responsible for the safety protocols designed to protect community exposure, which are in place to limit chemical constituents not suitable for human consumption.

The following describes the OAR, ORS, or Siting Standard (herein referred to as Guiding Policy) within the jurisdiction of the EFSC that supports our objection to amendment 13 based on the rules governing the Mist Gas Field, and includes evidence supporting our request for denial.

¹ Cheung, J.T.H., Zhang, W. and Chiu, B.C.H., 2023. Geospatial analysis of population-based incidence of multiple myeloma in the United States. *Cancer epidemiology*, 83, p.102343.

² Oregon Department of Geology and Mining Industries



Concern: Geologic Hazards Not Properly Assessed in Exhibit H: Geologic Hazard Evaluation (pFRA13)

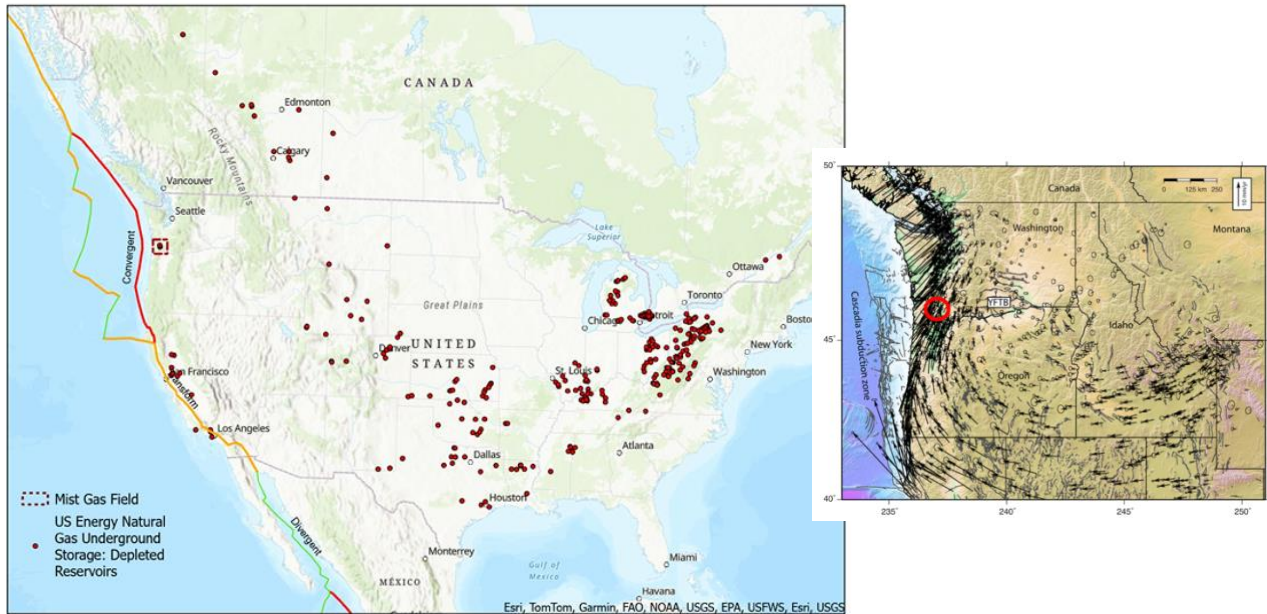
Guiding Policy: OAR 345-022-000 (2)(b)(A): (2) The Council shall weigh overall public benefits and any adverse effects on a resource or interest as follows: (b) The Council shall evaluate overall public benefits by considering factors including, but not limited to, the following: (A) The overall environmental effects of the facility, considering both beneficial and adverse environmental effect.

OAR 345-024-0030 (2): The applicant has developed a program using technology that is both practicable and reliable to monitor the facility to ensure the public health and safety.

OAR 345-022-0020(c): (c) The applicant, through appropriate site-specific study, has adequately characterized the potential geological and soils hazards of the site and its vicinity that could, in the absence of a seismic event, adversely affect, or be aggravated by, the construction and operation of the proposed facility; and (d) The applicant can design, engineer and construct the facility to avoid dangers to human safety and the environment presented by the hazards identified in subsection

Statement of Opposition: The best available science has not been applied to adequately evaluate geologic hazards and risk associated with operations at the Mist Gas Field.

Supporting Evidence: The Mist Gas Field is the only depleted natural gas reservoir in the USA and Canada located adjacent to a tectonically active convergence zone as shown in the figure below. Tectonic activity is due to the Cascadia Subduction Zone, which is the collision and subduction of the Juan de Fuca Plate beneath the North American plate. The consequence of subducting plates, as is evident in Oregon and Washington landscape, include micro, local, and regional fault zones, volcanism, earthquakes, and crustal rotation. The Mist Gas Field is in an extremely active location where velocity data, obtained through high-density geodetic GPS measurements (inset map: black arrows), show significant rotation occurring beneath the gas field.





Given the uniqueness of the Mist Gas Field's location (insert map: red circle), new methods and tools are now available to enhance our current understanding of Cascadia Subduction Zone in the Pacific Northwest. Yet no indication is provided that suggests best available science is currently used to protect waters of the state from groundwater contamination due to hydrocarbons and other constituents that could potentially migrate to local aquifers from storage operations, including fracked chemicals obtained from gas purchased in Canada.

Additional Comment: In addition to the above concerns, in amendment 13 (pRFA13) Exhibit H (Geologic Hazards Evaluation), Table H-8 on page 22, discusses fault hazards and claims only 13 quaternary faults are within 50 miles of the project. According to information obtained from the USGS citation listed as the source of the fault data, it states, "For the hazard maps, both the fault surface trace and the metadata are simplified representations of the geometry and behavior of the fault, based on geologic interpretation."

In 2020, the USGS created a new geologic map³ within the local vicinity. The map was created, "**to provide a uniform, modern geologic database for the greater Portland metro area to better understand its tectonic setting, active faults, volcanoes, landslide hazards, and distribution of geologic materials and resources. Information in this database will be used to improve seismic hazard and resource assessments in this economically important region.**"

Therefore, Exhibit H in the pRFA13 should be considered outdated information, since it does not capture the true geologic landscape of the area. It's worth noting that both datasets were available at the time Exhibit H was written for pRFA13, yet Exhibit H made no mention of the updated USGS map, even though it was created in collaboration with DOGAMI. Aside from a paper written by Wells and Bemis in 2020, which focused on migration of the Oregon forearc on the Gales Creek fault, and the standard NRCS soils database, accessed in 2023, all other sources used to present the local geologic and topographic conditions of the site in Exhibit H were mostly written in the 1970s and 1980s. Although the 2020 USGS map falls outside of the Project Area, it is within the boundary of the Site Certificate.

Furthermore, the earthquake map provided in Exhibit H (Figure H-8) does not adequately represent the number of earthquakes recorded in the region. The image on the left shows earthquakes in Exhibit H: Figure H-8, with the smallest circles representing < 2 in magnitude. The image on the right, obtained from the USGS Earthquake Catalog⁴, shows significantly more earthquakes than shown in Exhibit H.

³ Wells, R., Haugerud, R.A., Niem, A.R., Niem, W.A., Ma, L., Evarts, R.C., O'Connor, J.E., Madin, I.P., Sherrod, D.R., Beeson, M.H. and Tolan, T.L., 2020. Geologic map of the greater Portland metropolitan area and surrounding region, Oregon and Washington (No. 3443). US Geological Survey.

⁴ Schneider, M., Flury, H., Gutterop, P. and Wright, A., 2023. Earthquake catalog processing and swarm identification for the Pacific northwest. *Seismological Research Letters*, 94(5), pp.2500-2513.

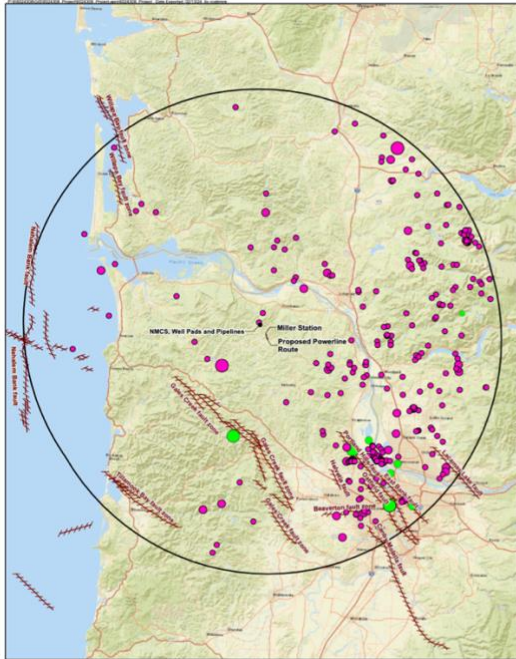
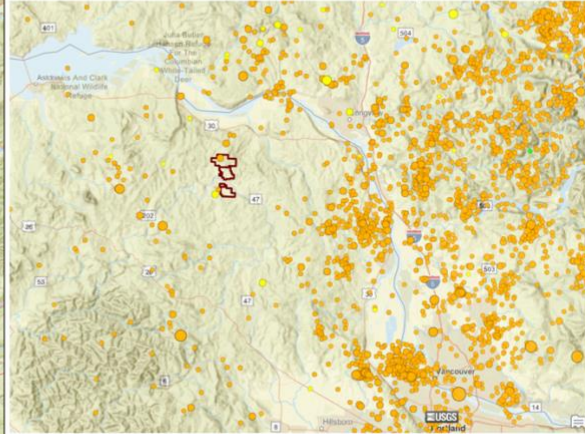
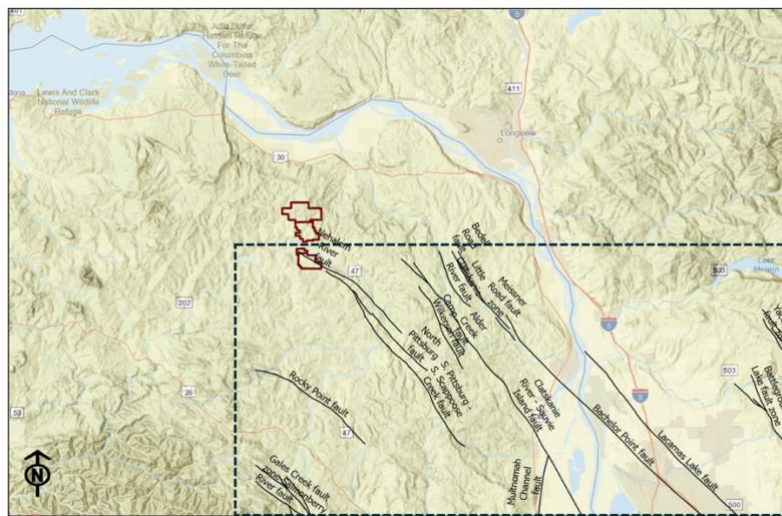


Exhibit H. Figure H-8

Data obtained from the USGS Earthquake Catalog



In addition to questionable material used in Exhibit H of the pRFA13, Table H-8 shows the nearest fault zone to the site is the Gales Creek Fault Zone located 17.6 miles away. However, only using the USGS 2020 map, 100 distinct faults were identified, representing up to 30 fault zones located approximately 50 miles from the Mist Gas Field (Figure Below. To reduce label overlap, not all fault zones are labeled in the figure). This includes new and extensive faulting within the southern boundary of the site certificate, not previously shown in any of DOGAMI's updated maps or in Exhibit H.



Field of View of the USGS 2020 Map



Concern: Surficial Geology Not Properly Assessed in Exhibit H of pFRA13

Guiding Policy: OAR 345-022-000 (2)(b)(A): (2) The Council shall weigh overall public benefits and any adverse effects on a resource or interest as follows: (b) The Council shall evaluate overall public benefits by considering factors including, but not limited to, the following: (A) The overall environmental effects of the facility, considering both beneficial and adverse environmental effect.

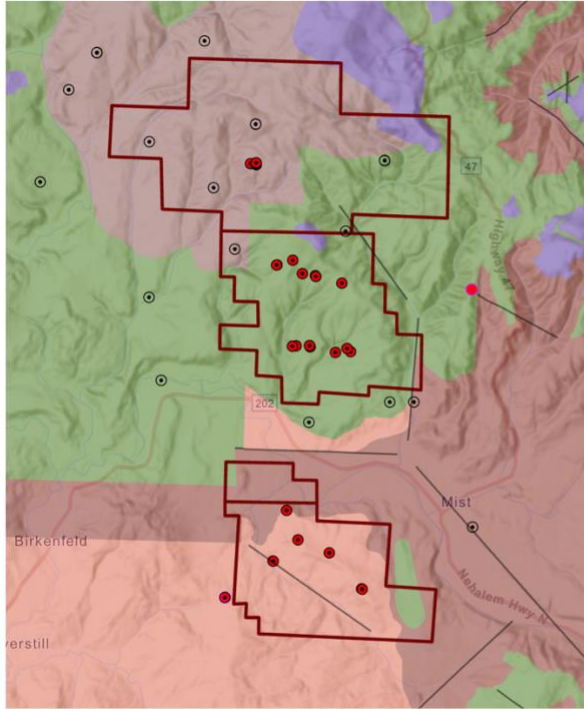
OAR 345-022-0020(c): (c) The applicant, through appropriate site-specific study, has adequately characterized the potential geological and soils hazards of the site and its vicinity that could, in the absence of a seismic event, adversely affect, or be aggravated by, the construction and operation of the proposed facility; and (d) The applicant can design, engineer and construct the facility to avoid dangers to human safety and the environment presented by the hazards identified in subsection (c).

Statement of Opposition: The Mist Gas Field is operated outside of conditions listed in OAR 345-022-0022(c). The potential geological hazards of the site are not properly identified. This is evident in the recent research released by the USGS in 2020. Although it was conducted in coordination with DOGAMI, no operational changes were implemented to reflect the complex geological conditions which show extensive faulting and cap rock exposure, which is now identified within the southernmost boundary of the gas field.

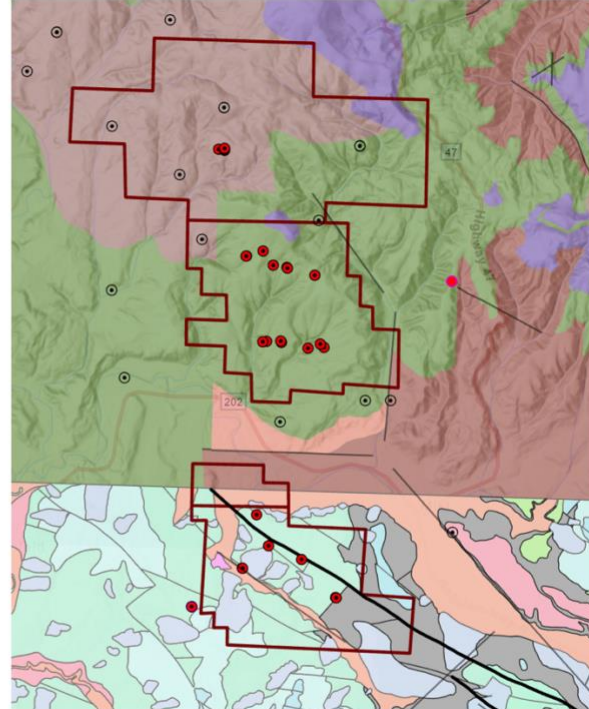
Supporting Evidence: According to DOGAMI, the best available geologic mapping for the state, combined into the Oregon Geologic Data Compilation, is provided under release 7⁵. Examination of this map shows simplified geology compared to the USGS map. This is apparent in the below figure, which shows an overlay of DOGAMI's compilation geologic map (OGDC-7) compared to the 2020 geologic map produced by the USGS.

Additional Comment: Surficial geology of the area has not been adequately assessed. This is apparent in the current DOGAMI map (left figure) compared to the updated 2020 map (right figure). The complexity of the geology and faulting is much more intricate than the OGDC-7 represents and needs throughout evaluation prior to approval of the amendment, as the surficial geology used in Exhibit B is likely extremely simplified (figure below).

⁵ <https://pubs.oregon.gov/dogami/dds/p-OGDC-7.htm>



DOGAMI (OGDC-7) Surficial Geology



DOGAMI (OGDC-7) Surficial Geology Underlying the
2020 USGS Map

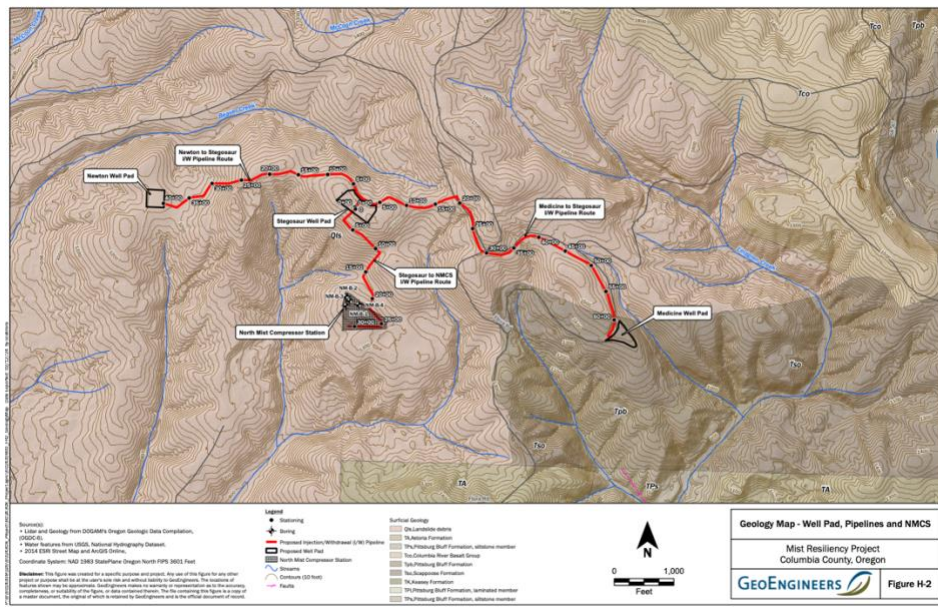


Figure H-2: Surficial Geology provided in Exhibit H



Concern: Groundwater Contamination Potential Due to Abandoned Wells

Guiding Policy: OAR 345-022-000 (2)(b)(A): (2) The Council shall weigh overall public benefits and any adverse effects on a resource or interest as follows: (b) The Council shall evaluate overall public benefits by considering factors including, but not limited to, the following: (A) The overall environmental effects of the facility, considering both beneficial and adverse environmental effect.

Statement of Opposition: Extensive exploration and operation of the Mist Gas Field has resulted in hundreds of injection, withdrawal, and abandoned wells. According to a report written by the National Energy Technology Laboratory in 2019⁶, utilizing depleted reservoirs is attractive due to pre-existing infrastructure. The report also states, **"Depleted oil and/or gas fields may pose the risk of abandoned, or orphaned, wells penetrating the storage reservoir, which can serve as a leakage conduit to neighboring formations or the atmosphere."** Additionally, in the *Underground Gas Storage Regulatory Considerations: A Guide for State & Federal Regulatory Agencies*, it states, **"Pre-existing or abandoned wellbores including previously pressurized or depleted areas, and previously generated hydraulic fractures should also be considered risk elements."** DOGAMI has not properly inventoried all wells within the gas field. This decreases DOGAMI's ability to properly assess potential groundwater contamination sources.

Supporting Evidence: Email from a public records request show DOGAMI's Bob Houston stated 395 wells have been permitted at the field, yet it appears most of the locations of these wells are not identified. Furthermore, Bob notes **"Additionally, [of the 395 wells permitted, it] does not include other "holes" (seismic holes, core holes and monitor)."** A copy of the email is provided below. This suggests an extensive number of "holes" have likely outlived their sealing lifespan, yet most locations are unknown, thereby increasing the potential of groundwater contamination, with DOGAMI unable to execute effective measures to address this issue.

HOUSTON Robert * DGMI
RE: Mist wells
To: MADIN Ian * DGMI, Cc: BUCHNER Ed * DGMI, LOFTON ReNeea * DGMI
January 18, 2018 at 3:23 PM
[Details](#)

Ok,
There are currently 110 active permits in the Mist gas field

Based on the API number there has been a total of 395 "wells" permitted in Columbia since 1953. ReNeea, noted that there appears to be skips in the sequential API number. Additionally, does not include other "holes" (seismic holes, core holes and monitor).

Cheers,
Bob

Robert A. Houston, RG
Hydrocarbon & Metallic Ore Geologist
Oregon Department of Geology and Mineral Industries | Springfield Field Office |
Springfield Interagency Office/3106 Pierce Parkway Suite D 1 Springfield, Oregon 97477
Office: 541-225-6451; Cell: 541-619-4653
Email: robert.houston@oregon.gov | <http://www.oregongeology.org>

From: MADIN Ian * DGMI
Sent: Thursday, January 18, 2018 3:09 PM
To: BUCHNER Ed * DGMI <Ed.BUCHNER@oregon.gov>; HOUSTON Robert * DGMI <Robert.HOUSTON@oregon.gov>
Subject: RE: Mist wells

So it sounds like there is no easy way to get a definitive count of the number of wells drilled to develop the Mist field.

From: BUCHNER Ed * DGMI
Sent: Thursday, January 18, 2018 2:55 PM
To: MADIN Ian * DGMI <Ian.MADIN@oregon.gov>; HOUSTON Robert * DGMI <Robert.HOUSTON@oregon.gov>
Subject: RE: Mist wells

There are huge data gaps and inconsistencies in the well data and organization in the database in GIS, this was something we were actively working on in 2013 or so, but other priorities pulled us away. There may be 450 points in the Mist area, but do they fall within the geometry of the Mist Field? Additionally, for my previous query from the database, if the ResourceField did not specify "Mist" it would have not been returned.

Ed Buchner
GIS Technical Specialist
Office: (541) 967-2084
Mobile: (541) 619-3738
ed.buchner@oregon.gov

From: MADIN Ian * DGMI
Sent: Thursday, January 18, 2018 2:49 PM
To: HOUSTON Robert * DGMI <Robert.HOUSTON@oregon.gov>; BUCHNER Ed * DGMI <Ed.BUCHNER@oregon.gov>
Subject: RE: Mist wells

I am confused. The GIS files show almost 450 wells in the Mist field. There must be permits that include more than one well.

⁶ Vikara, D., Zymroz, T., Withum, J.A., Shih, C.Y., Lin, S., Hoffman, H., Guinan, A. and Carr, T., 2019. Underground natural gas storage-analog studies to geologic storage of co2 (No. NETL-PUB-22087). National Energy Technology Lab.(NETL), Morgantown, WV (United States).



Additionally, confusion now exist between the safest method to abandon a well. On 7/18/2017 Irani Engineering requested a waiver to the well abandonment rule. According to email communication between Bob Brinkmann of DOGAMI and the Department of Justice, Bob stated, "*Do we have the authority to approve this method that apparently is not allowed in rule even though it will provide a more secure abandonment of the well versus the method prescribed in rule?* To provide a wavier required updating the administrative order that prohibited Irani Engineering's proposed method of abandonment.

A Temporary Administrative Order was approved by 9/8/2017 (later permanently approved). Bob Brinkman stated that the proposed method is technically sound and not granting the temporary order will place financial burden on the permittee, if it is not granted. This poses an issue, considering the field has been explored since the 1980s, a large quantity of abandoned wells, are now assumed less secure, since this rule wasn't granted until 2017. It should also be noted that best available science was not used to access the safety of the updated administrative order.

IRANI ENGINEERING, INC.
PETROLEUM ENGINEER
P.O. Box 661328
SACRAMENTO, CA 95866

07/18/2017

Mr. Ian Madin, Deputy Director
Mineral Land Regulation & Reclamation/Oregon Department of Geology & Mineral Industries
229 Broadalbin St. SW
Albany, OR 97321
Phone: (541) 967-2039
Fax: (541) 967-2075

Subject: Request for Revision of Abandon Rule for Enerfin Resources NW , "Pelee 21-31-65"

Mr. Madin,

Enerfin intends to abandon a few of their wells in Mist Gas Field, Oregon. The production casing in these wells are set couple of hundred feet above the TD of the wells. I know the rule states that we have to drill out the shoe of the production casing and set 100' of cement plug across them. I respectfully request a waiver to this rule because of the following reasons;

1. The shoe joint has a float collar on top and a float shoe on bottom, both in closed position, and 40' of cement between. Usually, there is several feet of hard production cement above the float collar too. On Pelee 21-31-65, we have another 42' of cement above the float collar for a total of 82'.
2. Usually steel perforating gun debris is on top of cement and the float collar which makes is very hard to get through and get to the float collar.
3. It is difficult to drill out the float collar and shoe. The float collar falls on the cement and starts spinning and prevents us from drilling the cement and float shoe.
4. The closed float collar and shoe and the cement between and above float collar are very strong barriers against leakage from below the shoe. Drilling out shoe and setting a 100' of cement plug in mud actually weakens this barrier (Equalized cement plugs can easily get contaminated with mud and have channeling issues). We would like to abandon the bottom of the hole by placing a 100' of cement plug on top of cement above the float collar.
5. We have to drill out cement, float and shoe of 4-1/2" casing, with 3-1/2" bit or mill (because of the drift diameter of the casing and mechanical limitation on mill size due to gun debris and float equipment milled out remnants). The hole was drilled with a 7-7/8" bit, therefore the hole size below the shoe is 7-7/8" filled with drilling mud (in Pelee 21-31-65 mud weight was 12.4 ppg). Cleaning a 7-7/8" hole with a 3-1/2" bit would be almost impossible at that point. The cement plug quality will be very much in doubt since mud contaminations will be a big factor.
6. I have worked in 8 different states in the USA and non of the other states have such a rule.

I have attached the abandoned programs and notice of abandonments for the two versions of the abandonment procedures. May I kindly ask for your office to review the rule and give us a relief from this rule in abandoning Enerfin wells in Mist Field.

Sincerely

Saeed Irani,
Registered Petroleum Engineer
President
Irani Engineering



RE: P&A of holes with rathole below casing

BB BRINKMANN Bob * DGMI
 To: [MADIN Ian * DGMI](#)
 Cc: [LLOYD Diane](#); [LOFTON ReNeea * DGMI](#)

PELEE PAREQ FOR REV.IRANI LTR.2017 (002).pdf
 .pdf File

[← Reply](#) [← Reply All](#) [→ Forward](#) [⋮](#)
 Mon 8/14/2017 3:26 PM

Attached is a letter from Irani Engineering explaining the rationale for the proposed abandonment method for Pelee which as documented below has been approved on numerous occasions by this Department and I agree with the proposed method. This issue was also discussed w/ Diane while you were out and the question posed is: Do we have the authority to approve this method that apparently is not allowed in rule even though it will provide a more secure abandonment of the well versus the method prescribed in rule?

From: MADIN Ian * DGMI
Sent: Monday, August 14, 2017 10:30 AM
To: BRINKMANN Bob * DGMI <bob.brinkmann@oregon.gov>
Cc: LLOYD Diane <Diane.LLOYD@state.or.us>; LOFTON ReNeea * DGMI <Reneea.LOFTON@oregon.gov>
Subject: RE: P&A of holes with rathole below casing

Bob, can you summarize the issue for me in the form of a question I can put to Diane?

From: BRINKMANN Bob * DGMI
Sent: Thursday, August 10, 2017 2:16 PM
To: MADIN Ian * DGMI <Ian.MADIN@oregon.gov>
Cc: LLOYD Diane <Diane.LLOYD@state.or.us>; LOFTON ReNeea * DGMI <Reneea.LOFTON@oregon.gov>
Subject: FW: P&A of holes with rathole below casing

Ian, As you can see by the attached documentation the P&A method being proposed by Enerfin for the Pelee well has been approved numerous times in the past. Although it appears that rule does not afford flexibility for this it may be allowed by the overall authority granted DOGAMI in law. I agree w/ the method proposed which will properly seal the well versus an attempt to drill out the float collar and casing shoe and attempt to cement the rat hole below the shoe.

OFFICE OF THE SECRETARY OF STATE
 DENNIS RICHARDSON
 SECRETARY OF STATE
 LESLIE CUMMINGS
 DEPUTY SECRETARY OF STATE



ARCHIVES DIVISION
 MARY BETH HERKERT
 DIRECTOR
 800 SUMMER STREET NE
 SALEM, OR 97310
 503-373-0701

TEMPORARY ADMINISTRATIVE ORDER
 INCLUDING STATEMENT OF NEED & JUSTIFICATION
DGMI 1-2017
CHAPTER 632
 DEPARTMENT OF GEOLOGY AND MINERAL INDUSTRIES

FILED
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CONTACT: Robert Houston 800 NE Oregon Street, Suite 965, 9232 Filed By:
 541-225-6451 3106 Pierce Parkway, Suite D, 97477 robert Houston
 robert.houston@oregon.gov Portland, OR 97232 Rules Coordinator

NEED FOR THE RULE(S):

It has been determined by department staff that a portion of the "Plugging Methods and Procedure" required by the chapter 632, division 10, administrative rules is technically incorrect in certain instances. **An existing permittee has proposed a well plugging procedure that is more technically sound for the facility at issue, and prompt action by the department to approve this plan will allow the applicant to take advantage of drilling equipment that is now available in the location of the well(s) to be plugged and decommissioned. A delay in well closure would result in additional costs to the permittee.** Delayed well closure also presents greater risk to public safety and the environment. This rule amendment is required to approve the plan. Absent plan approval the interests of both the public and the permittee will be prejudiced by a delay in well plugging and decommissioning.

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RULE TITLE: Abandonment, Unlawful Abandonment, Suspension, Well Plugging

RULE SUMMARY: OAR 632-010-0198 addresses how DOGAMI deals with abandonment, unlawful abandonment, suspension and well plugging. Subsection (8)(c) is modified to clarify that the plugging procedure required in that subsection only applies to any open casing



In Summary, due to uncertainty of our current geologic understanding on the northern area of the site, and covered under the site certificate, we ask the EFSC to deny Amendment 13 until additional geological investigations take place. Furthermore, since the number of wells at the Mist Gas Field were previously abandoned against the current standards, and well locations are unknown, we request DOGAMI's current administrative order for well abandonment be revised using the best available science. At the conclusion of this update, we then request all wells and "holes", as described by Bob Brinkmann, be examined for potential leakage. We believe it is the duty of the EFSC to deny the amendment request until the state has shown that the federally protected drinking water overlying the Mist Gas Field is free from contaminants and suitable for all those living within Columbia County.

SLOAN Kathleen * ODOE

From: ODOE ITService * ODOE
Sent: Thursday, September 19, 2024 2:44 PM
To: SLOAN Kathleen * ODOE
Subject: New Public Comment submitted for project : RFA13 and DPO for Mist Underground Natural Gas Storage Facility

Organization:

Submitted by: Nickie Schatz

Email: nickie-hart@hotmail.com

Zip Code: 97048

Siting Project Phase: DPO

Comment Summary:

I am submitting this document to contest Amendment 13.

Please Click on the following link to view the full [Comment Details](#)

Comment Summary

I am submitting this document to contest Amendment 13.

Comment Date

source

Select email portal manual

Siting Project Phase

Select EXEMPTION REQUEST NOI DPO CC FORMAL
RULEMAKING INFORMAL RULEMAKING AMD-A AMD-B

Comment Details

Application for Site Certificate (ASC) Exhibit

Select Exhibit A - Applicant and Participating Persons Exhibit B - Proposed Facility Description Exhibit C - Proposed Facility Location Exhibit D - Organizational Expertise Exhibit E - Permits Required Exhibit F - Adjacent Property Owners Exhibit G - Materials Analysis Exhibit H - Geological and Soil Stability Exhibit I - Soil Conditions Exhibit J - Wetlands and other Jurisdictional Waters Exhibit K - Land Use Exhibit L - Protected Areas Exhibit M - Financial Capability Exhibit N - Non-Generating Facility Need Exhibit O - Water Use Exhibit P - Fish and Wildlife Habitat Exhibit Q - Threatened and Endangered Plant and Animal Species Exhibit R - Scenic Resources Exhibit S - Historic Cultural and Archaeological Resources Exhibit T - Recreation Opportunities Exhibit U - Public Services Exhibit V - Waste Minimization Exhibit W - Site Restoration Exhibit X - Noise Exhibit Y - Carbon Dioxide Emissions Exhibit Z - Evaporative Cooling Tower Exhibit AA - Electric Transmission Line EMFs Exhibit BB - Other Requested Information Exhibit CC - Applicable Statutes, Rules, Ordinances Exhibit DD - Specific Requirements

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Page Number(s)

—

Council Standards

—

Comment

Attachments

4 days ago

Microsoft CRM Portals

[Public Comment Amendment 13 v2.pdf \(1.63 MB\)](#)



American Aquifer's Public Comment Requesting Denial of Amendment 13 (pFRA13)

American Aquifers, a 501c3 non-profit located in Oregon designed to support communities reliant upon groundwater, requests the Oregon Department of Energy (DOE) deny amendment 13 (pRFA13). Residents in Columbia County suffer from disproportionately high rates of cancer compared to other counties in the state, yet represent less than 1.3% of the state's population. Residents in Columbia County maintain cancer rates that rank #1 in uterus, lung, bronchus, and melanoma cancers, #2 in female pancreas cancer and leukemia, #4 in brain and esophagus cancer, #5 in female kidney/renal pelvis cancer, #6 in Non-Hodgkin Lymphoma, #7 in oral cavity and pharynx cancer, and #10 in male kidney/renal pelvis cancer. Additionally, a recent study of multiple myeloma shows Columbia County has staggering incidences of this rare, non-curable cancer that accounts for only 10% of all blood cancers. Of the 133 counties that make up the entire west coast, only 12 counties have significantly high rates of myeloma cancer, with Columbia County listed as one of the three in Oregon¹.

Cancer rates in Columbia County cannot be directly attributed to logging operations, which include the spraying of herbicides and are known carcinogens. A total of 47% of land in Oregon is forested. Tillamook and Washington Counties, with a combined population of 14.83%, are home to the largest forested area in the state, but according to the National Cancer Institute, cancer rates are stable in Tillamook County and falling in Washington County, suggesting that forestry practices are not the predominate cause to high rates of cancers suffered among communities in Columbia County.

According to the Safe Drinking Water Act (SDWA), all water designated for drinking use, including underground sources, are protected by federal law. Furthermore, the Oregon Groundwater Quality Protection Act of 1989 was enacted to prevent contamination of groundwater and to conserve, restore, and maintain Oregon's groundwater resources for present and future uses. The DOE is mentioned as a state agency that coordinates energy facility activities with Oregon's Department of Environmental Quality's (DEQ) to protect groundwaters of the state.

Potential cancer-causing chemicals are likely leaching into local aquifers from operations occurring at the Mist Gas Underground Natural Storage Gas Field (Mist Gas Field). A request for denial of pFRA13 is requested until environmental exposure pathways and current operation practices are properly and thoroughly investigated using the best available science, which is supported by Oregon State University's Institute for Natural Resources in accordance with OAR 629-603-0400(4) and is defined by Cornell Law as "science that is reliable and unbiased."

We find operations governing the Mist Gas Field are not meeting OAR, ORS, or EFSC Siting Standards. Our findings also show partiality toward field operators (Northwest Natural and Enerfin) by state agencies, including but not limited to DOGAMI² and others responsible for the safety protocols designed to protect community exposure, which are in place to limit chemical constituents not suitable for human consumption.

The following describes the OAR, ORS, or Siting Standard (herein referred to as Guiding Policy) within the jurisdiction of the EFSC that supports our objection to amendment 13 based on the rules governing the Mist Gas Field, and includes evidence supporting our request for denial.

¹ Cheung, J.T.H., Zhang, W. and Chiu, B.C.H., 2023. Geospatial analysis of population-based incidence of multiple myeloma in the United States. *Cancer epidemiology*, 83, p.102343.

² Oregon Department of Geology and Mining Industries



Concern: Geologic Hazards Not Properly Assessed in Exhibit H: Geologic Hazard Evaluation (pFRA13)

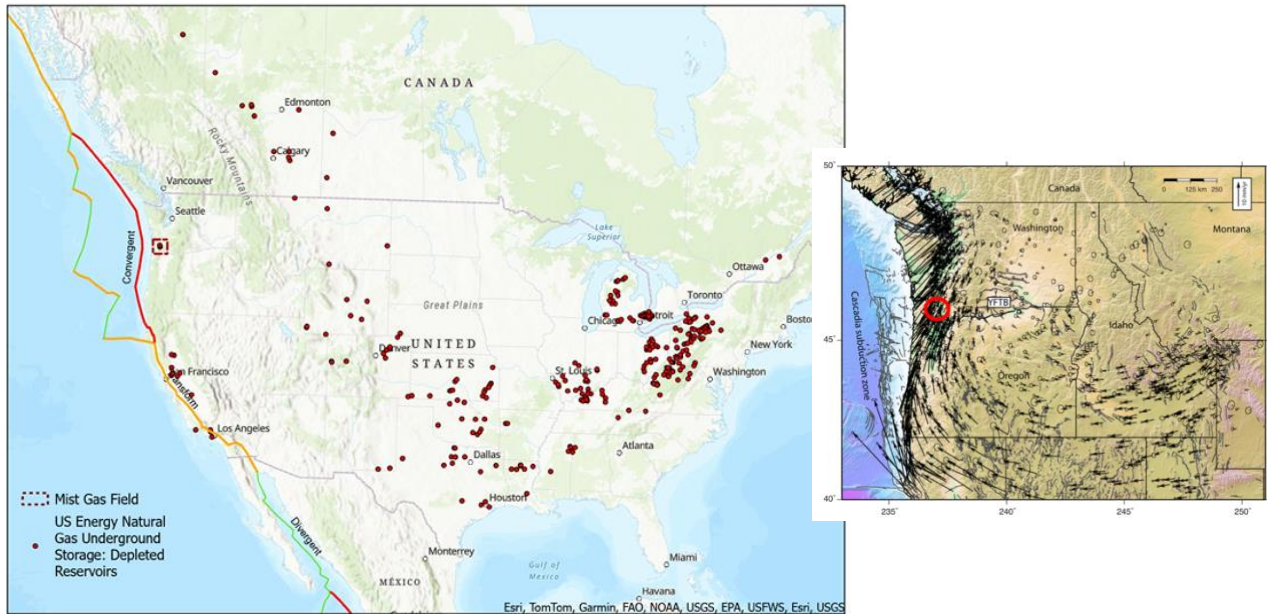
Guiding Policy: OAR 345-022-000 (2)(b)(A): (2) The Council shall weigh overall public benefits and any adverse effects on a resource or interest as follows: (b) The Council shall evaluate overall public benefits by considering factors including, but not limited to, the following: (A) The overall environmental effects of the facility, considering both beneficial and adverse environmental effect.

OAR 345-024-0030 (2): The applicant has developed a program using technology that is both practicable and reliable to monitor the facility to ensure the public health and safety.

OAR 345-022-0020(c): (c) The applicant, through appropriate site-specific study, has adequately characterized the potential geological and soils hazards of the site and its vicinity that could, in the absence of a seismic event, adversely affect, or be aggravated by, the construction and operation of the proposed facility; and (d) The applicant can design, engineer and construct the facility to avoid dangers to human safety and the environment presented by the hazards identified in subsection

Statement of Opposition: The best available science has not been applied to adequately evaluate geologic hazards and risk associated with operations at the Mist Gas Field.

Supporting Evidence: The Mist Gas Field is the only depleted natural gas reservoir in the USA and Canada located adjacent to a tectonically active convergence zone as shown in the figure below. Tectonic activity is due to the Cascadia Subduction Zone, which is the collision and subduction of the Juan de Fuca Plate beneath the North American plate. The consequence of subducting plates, as is evident in Oregon and Washington landscape, include micro, local, and regional fault zones, volcanism, earthquakes, and crustal rotation. The Mist Gas Field is in an extremely active location where velocity data, obtained through high-density geodetic GPS measurements (inset map: black arrows), show significant rotation occurring beneath the gas field.





Given the uniqueness of the Mist Gas Field's location (insert map: red circle), new methods and tools are now available to enhance our current understanding of Cascadia Subduction Zone in the Pacific Northwest. Yet no indication is provided that suggests best available science is currently used to protect waters of the state from groundwater contamination due to hydrocarbons and other constituents that could potentially migrate to local aquifers from storage operations, including fracked chemicals obtained from gas purchased in Canada.

Additional Comment: In addition to the above concerns, in amendment 13 (pRFA13) Exhibit H (Geologic Hazards Evaluation), Table H-8 on page 22, discusses fault hazards and claims only 13 quaternary faults are within 50 miles of the project. According to information obtained from the USGS citation listed as the source of the fault data, it states, "For the hazard maps, both the fault surface trace and the metadata are simplified representations of the geometry and behavior of the fault, based on geologic interpretation."

In 2020, the USGS created a new geologic map³ within the local vicinity. The map was created, "**to provide a uniform, modern geologic database for the greater Portland metro area to better understand its tectonic setting, active faults, volcanoes, landslide hazards, and distribution of geologic materials and resources. Information in this database will be used to improve seismic hazard and resource assessments in this economically important region.**"

Therefore, Exhibit H in the pRFA13 should be considered outdated information, since it does not capture the true geologic landscape of the area. It's worth noting that both datasets were available at the time Exhibit H was written for pRFA13, yet Exhibit H made no mention of the updated USGS map, even though it was created in collaboration with DOGAMI. Aside from a paper written by Wells and Bemis in 2020, which focused on migration of the Oregon forearc on the Gales Creek fault, and the standard NRCS soils database, accessed in 2023, all other sources used to present the local geologic and topographic conditions of the site in Exhibit H were mostly written in the 1970s and 1980s. Although the 2020 USGS map falls outside of the Project Area, it is within the boundary of the Site Certificate.

Furthermore, the earthquake map provided in Exhibit H (Figure H-8) does not adequately represent the number of earthquakes recorded in the region. The image on the left shows earthquakes in Exhibit H: Figure H-8, with the smallest circles representing < 2 in magnitude. The image on the right, obtained from the USGS Earthquake Catalog⁴, shows significantly more earthquakes than shown in Exhibit H.

³ Wells, R., Haugerud, R.A., Niem, A.R., Niem, W.A., Ma, L., Evarts, R.C., O'Connor, J.E., Madin, I.P., Sherrod, D.R., Beeson, M.H. and Tolan, T.L., 2020. Geologic map of the greater Portland metropolitan area and surrounding region, Oregon and Washington (No. 3443). US Geological Survey.

⁴ Schneider, M., Flury, H., Gutterop, P. and Wright, A., 2023. Earthquake catalog processing and swarm identification for the Pacific northwest. *Seismological Research Letters*, 94(5), pp.2500-2513.

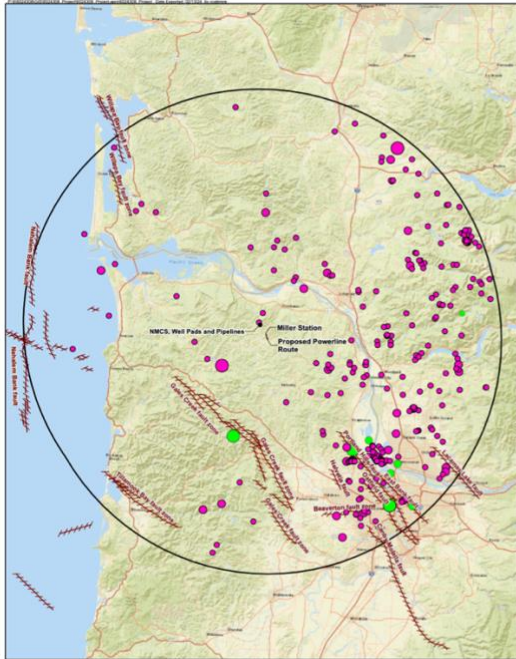
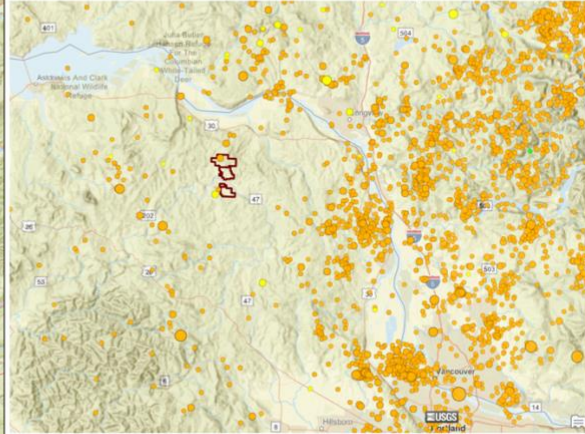
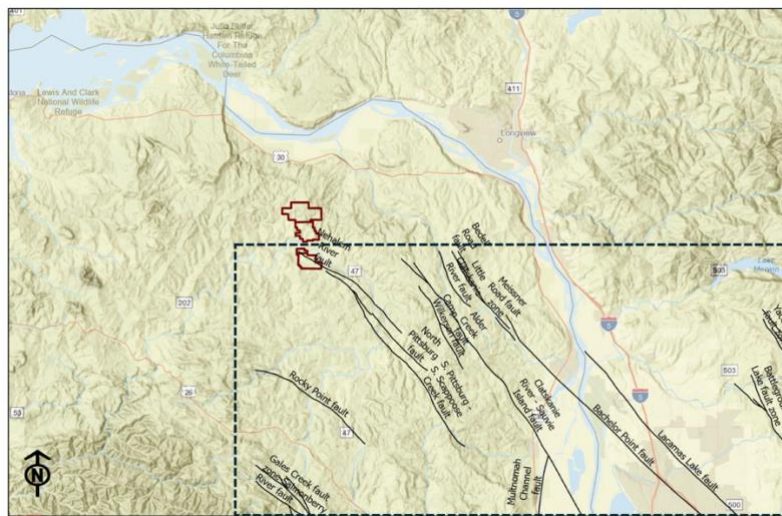


Exhibit H. Figure H-8

Data obtained from the USGS Earthquake Catalog



In addition to questionable material used in Exhibit H of the pRFA13, Table H-8 shows the nearest fault zone to the site is the Gales Creek Fault Zone located 17.6 miles away. However, only using the USGS 2020 map, 100 distinct faults were identified, representing up to 30 fault zones located approximately 50 miles from the Mist Gas Field (Figure Below. To reduce label overlap, not all fault zones are labeled in the figure). This includes new and extensive faulting within the southern boundary of the site certificate, not previously shown in any of DOGAMI's updated maps or in Exhibit H.



Field of View of the USGS 2020 Map



Concern: Surficial Geology Not Properly Assessed in Exhibit H of pFRA13

Guiding Policy: OAR 345-022-000 (2)(b)(A): (2) The Council shall weigh overall public benefits and any adverse effects on a resource or interest as follows: (b) The Council shall evaluate overall public benefits by considering factors including, but not limited to, the following: (A) The overall environmental effects of the facility, considering both beneficial and adverse environmental effect.

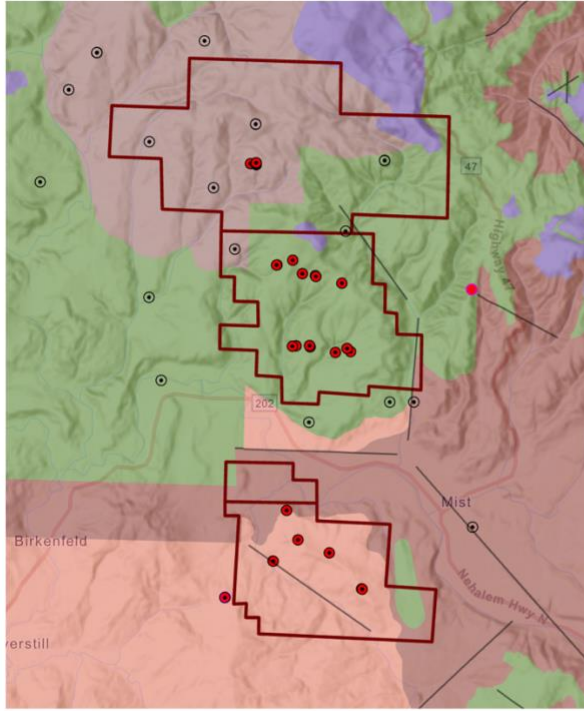
OAR 345-022-0020(c): (c) The applicant, through appropriate site-specific study, has adequately characterized the potential geological and soils hazards of the site and its vicinity that could, in the absence of a seismic event, adversely affect, or be aggravated by, the construction and operation of the proposed facility; and (d) The applicant can design, engineer and construct the facility to avoid dangers to human safety and the environment presented by the hazards identified in subsection (c).

Statement of Opposition: The Mist Gas Field is operated outside of conditions listed in OAR 345-022-0022(c). The potential geological hazards of the site are not properly identified. This is evident in the recent research released by the USGS in 2020. Although it was conducted in coordination with DOGAMI, no operational changes were implemented to reflect the complex geological conditions which show extensive faulting and cap rock exposure, which is now identified within the southernmost boundary of the gas field.

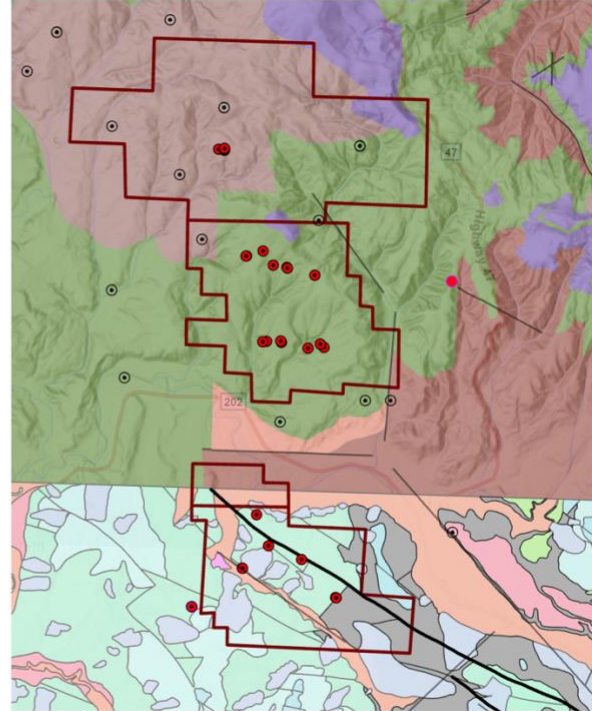
Supporting Evidence: According to DOGAMI, the best available geologic mapping for the state, combined into the Oregon Geologic Data Compilation, is provided under release 7⁵. Examination of this map shows simplified geology compared to the USGS map. This is apparent in the below figure, which shows an overlay of DOGAMI's compilation geologic map (OGDC-7) compared to the 2020 geologic map produced by the USGS.

Additional Comment: Surficial geology of the area has not been adequately assessed. This is apparent in the current DOGAMI map (left figure) compared to the updated 2020 map (right figure). The complexity of the geology and faulting is much more intricate than the OGDC-7 represents and needs throughout evaluation prior to approval of the amendment, as the surficial geology used in Exhibit B is likely extremely simplified (figure below).

⁵ <https://pubs.oregon.gov/dogami/dds/p-OGDC-7.htm>



DOGAMI (OGDC-7) Surficial Geology



DOGAMI (OGDC-7) Surficial Geology Underlying the 2020 USGS Map

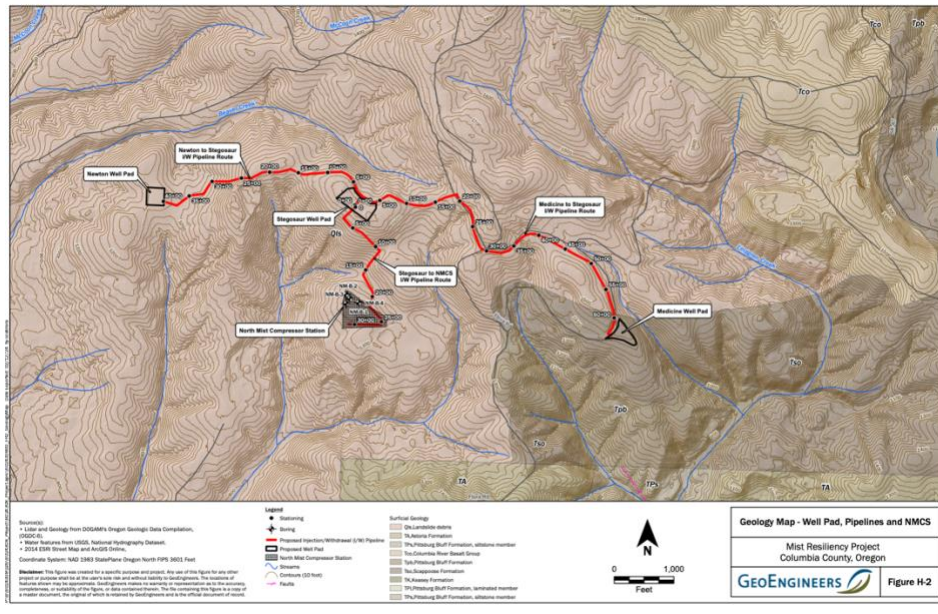


Figure H-2: Surficial Geology provided in Exhibit H



Concern: Groundwater Contamination Potential Due to Abandoned Wells

Guiding Policy: OAR 345-022-000 (2)(b)(A): (2) The Council shall weigh overall public benefits and any adverse effects on a resource or interest as follows: (b) The Council shall evaluate overall public benefits by considering factors including, but not limited to, the following: (A) The overall environmental effects of the facility, considering both beneficial and adverse environmental effect.

Statement of Opposition: Extensive exploration and operation of the Mist Gas Field has resulted in hundreds of injection, withdrawal, and abandoned wells. According to a report written by the National Energy Technology Laboratory in 2019⁶, utilizing depleted reservoirs is attractive due to pre-existing infrastructure. The report also states, **"Depleted oil and/or gas fields may pose the risk of abandoned, or orphaned, wells penetrating the storage reservoir, which can serve as a leakage conduit to neighboring formations or the atmosphere."** Additionally, in the *Underground Gas Storage Regulatory Considerations: A Guide for State & Federal Regulatory Agencies*, it states, **"Pre-existing or abandoned wellbores including previously pressurized or depleted areas, and previously generated hydraulic fractures should also be considered risk elements."** DOGAMI has not properly inventoried all wells within the gas field. This decreases DOGAMI's ability to properly assess potential groundwater contamination sources.

Supporting Evidence: Email from a public records request show DOGAMI's Bob Houston stated 395 wells have been permitted at the field, yet it appears most of the locations of these wells are not identified. Furthermore, Bob notes **"Additionally, [of the 395 wells permitted, it] does not include other "holes" (seismic holes, core holes and monitor)."** A copy of the email is provided below. This suggests an extensive number of "holes" have likely outlived their sealing lifespan, yet most locations are unknown, thereby increasing the potential of groundwater contamination, with DOGAMI unable to execute effective measures to address this issue.

HOUSTON Robert * DGMI
RE: Mist wells
To: MADIN Ian * DGMI, Cc: BUCHNER Ed * DGMI, LOFTON ReNeea * DGMI
January 18, 2018 at 3:23 PM
[Details](#)

Ok,
There are currently 110 active permits in the Mist gas field

Based on the API number there has been a total of 395 "wells" permitted in Columbia since 1953. ReNeea, noted that there appears to be skips in the sequential API number. Additionally, does not include other "holes" (seismic holes, core holes and monitor).

Cheers,
Bob

Robert A. Houston, RG
Hydrocarbon & Metallic Ore Geologist
Oregon Department of Geology and Mineral Industries | Springfield Field Office |
Springfield Interagency Office/3106 Pierce Parkway Suite D 1 Springfield, Oregon 97477
Office: 541-225-6451; Cell: 541-619-4653
Email: robert.houston@oregon.gov | <http://www.oregongeology.org>

From: MADIN Ian * DGMI
Sent: Thursday, January 18, 2018 3:09 PM
To: BUCHNER Ed * DGMI <Ed.BUCHNER@oregon.gov>; HOUSTON Robert * DGMI <Robert.HOUSTON@oregon.gov>
Subject: RE: Mist wells

So it sounds like there is no easy way to get a definitive count of the number of wells drilled to develop the Mist field.

From: BUCHNER Ed * DGMI
Sent: Thursday, January 18, 2018 2:55 PM
To: MADIN Ian * DGMI <Ian.MADIN@oregon.gov>; HOUSTON Robert * DGMI <Robert.HOUSTON@oregon.gov>
Subject: RE: Mist wells

There are huge data gaps and inconsistencies in the well data and organization in the database in GIS, this was something we were actively working on in 2013 or so, but other priorities pulled us away. There may be 450 points in the Mist area, but do they fall within the geometry of the Mist Field? Additionally, for my previous query from the database, if the ResourceField did not specify "Mist" it would have not been returned.

Ed Buchner
GIS Technical Specialist
Office: (541) 967-2084
Mobile: (541) 619-3738
ed.buchner@oregon.gov

From: MADIN Ian * DGMI
Sent: Thursday, January 18, 2018 2:49 PM
To: HOUSTON Robert * DGMI <Robert.HOUSTON@oregon.gov>; BUCHNER Ed * DGMI <Ed.BUCHNER@oregon.gov>
Subject: RE: Mist wells

I am confused. The GIS files show almost 450 wells in the Mist field. There must be permits that include more than one well.

⁶ Vikara, D., Zymroz, T., Withum, J.A., Shih, C.Y., Lin, S., Hoffman, H., Guinan, A. and Carr, T., 2019. Underground natural gas storage-analog studies to geologic storage of co2 (No. NETL-PUB-22087). National Energy Technology Lab.(NETL), Morgantown, WV (United States).



Additionally, confusion now exist between the safest method to abandon a well. On 7/18/2017 Irani Engineering requested a waiver to the well abandonment rule. According to email communication between Bob Brinkmann of DOGAMI and the Department of Justice, Bob stated, "*Do we have the authority to approve this method that apparently is not allowed in rule even though it will provide a more secure abandonment of the well versus the method prescribed in rule?* To provide a wavier required updating the administrative order that prohibited Irani Engineering's proposed method of abandonment.

A Temporary Administrative Order was approved by 9/8/2017 (later permanently approved). Bob Brinkman stated that the proposed method is technically sound and not granting the temporary order will place financial burden on the permittee, if it is not granted. This poses an issue, considering the field has been explored since the 1980s, a large quantity of abandoned wells, are now assumed less secure, since this rule wasn't granted until 2017. It should also be noted that best available science was not used to access the safety of the updated administrative order.

IRANI ENGINEERING, INC.
PETROLEUM ENGINEER
P.O. Box 661328
SACRAMENTO, CA 95866

07/18/2017

Mr. Ian Madin, Deputy Director
Mineral Land Regulation & Reclamation/Oregon Department of Geology & Mineral Industries
229 Broadalbin St. SW
Albany, OR 97321
Phone: (541) 967-2039
Fax: (541) 967-2075

Subject: Request for Revision of Abandon Rule for Enerfin Resources NW , "Pelee 21-31-65"

Mr. Madin,

Enerfin intends to abandon a few of their wells in Mist Gas Field, Oregon. The production casing in these wells are set couple of hundred feet above the TD of the wells. I know the rule states that we have to drill out the shoe of the production casing and set 100' of cement plug across them. I respectfully request a waiver to this rule because of the following reasons;

1. The shoe joint has a float collar on top and a float shoe on bottom, both in closed position, and 40' of cement between. Usually, there is several feet of hard production cement above the float collar too. On Pelee 21-31-65, we have another 42' of cement above the float collar for a total of 82'.
2. Usually steel perforating gun debris is on top of cement and the float collar which makes is very hard to get through and get to the float collar.
3. It is difficult to drill out the float collar and shoe. The float collar falls on the cement and starts spinning and prevents us from drilling the cement and float shoe.
4. The closed float collar and shoe and the cement between and above float collar are very strong barriers against leakage from below the shoe. Drilling out shoe and setting a 100' of cement plug in mud actually weakens this barrier (Equalized cement plugs can easily get contaminated with mud and have channeling issues). We would like to abandon the bottom of the hole by placing a 100' of cement plug on top of cement above the float collar.
5. We have to drill out cement, float and shoe of 4-1/2" casing, with 3-1/2" bit or mill (because of the drift diameter of the casing and mechanical limitation on mill size due to gun debris and float equipment milled out remnants). The hole was drilled with a 7-7/8" bit, therefore the hole size below the shoe is 7-7/8" filled with drilling mud (in Pelee 21-31-65 mud weight was 12.4 ppg). Cleaning a 7-7/8" hole with a 3-1/2" bit would be almost impossible at that point. The cement plug quality will be very much in doubt since mud contaminations will be a big factor.
6. I have worked in 8 different states in the USA and non of the other states have such a rule.

I have attached the abandoned programs and notice of abandonments for the two versions of the abandonment procedures. May I kindly ask for your office to review the rule and give us a relief from this rule in abandoning Enerfin wells in Mist Field.

Sincerely

Saeed Irani,
Registered Petroleum Engineer
President
Irani Engineering



RE: P&A of holes with rathole below casing



BRINKMANN Bob * DGMI
 To: ○ MADIN Ian * DGMI
 Cc: ○ LLOYD Diane; ○ LOFTON ReNeea * DGMI

← Reply ← Reply All → Forward ⋮
 Mon 8/14/2017 3:26 PM

PELEE PAREQ FOR REV.IRANI LTR.2017 (002).pdf
 .pdf File

Attached is a letter from Irani Engineering explaining the rationale for the proposed abandonment method for Pelee which as documented below has been approved on numerous occasions by this Department and I agree with the proposed method. This issue was also discussed w/ Diane while you were out and the question posed is: Do we have the authority to approve this method that apparently is not allowed in rule even though it will provide a more secure abandonment of the well versus the method prescribed in rule?

From: MADIN Ian * DGMI
Sent: Monday, August 14, 2017 10:30 AM
To: BRINKMANN Bob * DGMI <bob.brinkmann@oregon.gov>
Cc: LLOYD Diane <Diane.LLOYD@state.or.us>; LOFTON ReNeea * DGMI <Reneea.LOFTON@oregon.gov>
Subject: RE: P&A of holes with rathole below casing

Bob, can you summarize the issue for me in the form of a question I can put to Diane?

From: BRINKMANN Bob * DGMI
Sent: Thursday, August 10, 2017 2:16 PM
To: MADIN Ian * DGMI <Ian.MADIN@oregon.gov>
Cc: LLOYD Diane <Diane.LLOYD@state.or.us>; LOFTON ReNeea * DGMI <Reneea.LOFTON@oregon.gov>
Subject: FW: P&A of holes with rathole below casing

Ian, As you can see by the attached documentation the P&A method being proposed by Enerfin for the Pelee well has been approved numerous times in the past. Although it appears that rule does not afford flexibility for this it may be allowed by the overall authority granted DOGAMI in law. I agree w/ the method proposed which will properly seal the well versus an attempt to drill out the float collar and casing shoe and attempt to cement the rat hole below the shoe.

OFFICE OF THE SECRETARY OF STATE
 DENNIS RICHARDSON
 SECRETARY OF STATE
 LESLIE CUMMINGS
 DEPUTY SECRETARY OF STATE



ARCHIVES DIVISION
 MARY BETH HERKERT
 DIRECTOR
 800 SUMMER STREET NE
 SALEM, OR 97310
 503-373-0701

TEMPORARY ADMINISTRATIVE ORDER
 INCLUDING STATEMENT OF NEED & JUSTIFICATION
DGMI 1-2017
CHAPTER 632
DEPARTMENT OF GEOLOGY AND MINERAL INDUSTRIES

FILED
 10/13/2017 2:55 PM
 ARCHIVES DIVISION
 SECRETARY OF STATE

FILING CAPTION: Makes minor adjustment to allow well plugging/decommissioning based on current, accepted best practices.

EFFECTIVE DATE: 10/13/2017 THROUGH 03/13/2018

AGENCY APPROVED DATE: 09/18/2017

CONTACT: Robert Houston 800 NE Oregon Street, Suite 965, 9232 Filed By:
 541-225-6451 3106 Pierce Parkway, Suite D, 97477 robert Houston
 robert.houston@oregon.gov Portland, OR 97232 Rules Coordinator

NEED FOR THE RULE(S):

It has been determined by department staff that a portion of the "Plugging Methods and Procedure" required by the chapter 632, division 10, administrative rules is technically incorrect in certain instances. **An existing permittee has proposed a well plugging procedure that is more technically sound for the facility at issue, and prompt action by the department to approve this plan will allow the applicant to take advantage of drilling equipment that is now available in the location of the well(s) to be plugged and decommissioned. A delay in well closure would result in additional costs to the permittee.** Delayed well closure also presents greater risk to public safety and the environment. This rule amendment is required to approve the plan. Absent plan approval the interests of both the public and the permittee will be prejudiced by a delay in well plugging and decommissioning.

JUSTIFICATION OF TEMPORARY FILING:

Based on the findings set out above, the Board finds that a failure to act promptly in this regard would result in prejudice to the public and permittee. The temporary rule will allow the necessary flexibility for the department to approve plans to ensure proper plugging that decommissioning of oil and gas wells based on current best practices.

DOCUMENTS RELIED UPON, AND WHERE THEY ARE AVAILABLE:

The documents relied upon include: (1) Request for Revision of Abandon Rule for Enerfin Resources 7/18/17 from Saeed Irani; (2) Plugging and Abandonment Evaluation from Bob Brinkmann 9/14/17. Both are available on the DOGAMI website.

AMEND: 632-010-0198

RULE TITLE: Abandonment, Unlawful Abandonment, Suspension, Well Plugging

RULE SUMMARY: OAR 632-010-0198 addresses how DOGAMI deals with abandonment, unlawful abandonment, suspension and well plugging. Subsection (8)(c) is modified to clarify that the plugging procedure required in that subsection only applies to any open casing



In Summary, due to uncertainty of our current geologic understanding on the northern area of the site, and covered under the site certificate, we ask the EFSC to deny Amendment 13 until additional geological investigations take place. Furthermore, since the number of wells at the Mist Gas Field were previously abandoned against the current standards, and well locations are unknown, we request DOGAMI's current administrative order for well abandonment be revised using the best available science. At the conclusion of this update, we then request all wells and "holes", as described by Bob Brinkmann, be examined for potential leakage. We believe it is the duty of the EFSC to deny the amendment request until the state has shown that the federally protected drinking water overlying the Mist Gas Field is free from contaminants and suitable for all those living within Columbia County.



September 19, 2024

The Green Energy Institute at Lewis & Clark Law School is a non-profit energy and climate law and policy institute within Lewis & Clark Law School’s top-ranked environmental, natural resources, and energy law program. Northwest Environmental Defense Center is a non-profit environmental organization established by professors, law students, and attorneys in 1969 at Lewis & Clark Law School. NEDC’s mission is to protect and preserve the environment and natural resources of the Pacific Northwest by engaging in legal advocacy, education, and litigation independently and in conjunction with environmental groups on issues affecting climate change and resiliency, water quality, and air quality. Columbia Riverkeeper is a non-profit organization that works to protect the water quality of the Columbia River basin and all life connected to it. Breach Collective builds power within the climate and labor movements through organizing, legal advocacy, education, and storytelling. The Oregon Chapter of the Sierra Club is a non-profit member-supported, public interest organization that promotes conservation of the Oregon natural environment by influencing public policy decisions— legislative, administrative, legal, and electoral. We appreciate the opportunity to provide the following comments to the Energy Facility Siting Council (the “Council”) on the Draft Proposed Order on Request for Amendment 13 (“Draft Proposed Order”).

The Draft Proposed Order recommends that “the Council continue to find that the Division 23 Need Standard does not apply” to the Mist Underground Natural Gas Storage Facility (“Mist Facility”).¹ It does so for two reasons. First, it states that “the rule does not include a need standard for surface facilities related to an underground natural gas storage reservoir.”² Second, it notes that the regulation “does not apply to ‘nongenerating facilities that are related or supporting facilities.’”³ To this second point, the Draft Proposed Order points out that the Council evaluated the applicability of the “related or supporting facilities” exception in its Final Order for Amendment 11 and found that the changes in Amendment 11 fell under the exception. It then asserts that the changes in Amendment 13 also fall under the exception. For the reasons below, the Council should 1) establish a need standard for surface facilities related to underground gas reservoirs and apply that standard to NW Natural’s Request for Amendment 13 (“Amendment 13”), 2) clarify which aspects of Amendment 13 pertain to the “surface facility” and which aspects are “related or supporting facilities, and 3) begin to eliminate the exception from the need standard for facilities related to or supporting fossil fuel-based energy facilities.

¹ “Mist Underground Natural Gas Storage Facility - Draft Proposed Order on Request for Amendment 13,” Energy Facility Siting Council, 177 (Aug. 15, 2024), (hereinafter “Draft Proposed Order”) available at <https://www.oregon.gov/energy/facilities-safety/facilities/Facilities%20library/2024-08-15-MSTAMD13-DPO-w-Attachments-signed.pdf>.

² *Id.*

³ *Id.*

1. Background on Need Standards in the Council’s Review of Certificate Applications

ORS 469.501(1)(L) directs the Council, as a part of its review of applications for and amendments to site certificates, to establish need standards for nongenerating facilities “consistent with the state energy policy set forth in ORS 469.010 and 469.310.”

The state’s energy policy discourages the growth of facilities related to fossil fuels like the Mist Facility. ORS 469.010 states that “continued growth in demand for nonrenewable energy forms poses a serious and immediate, as well as future, problem.”⁴ The law continues that it is the policy of Oregon that “cost effectiveness be considered in all agency decision-making relating to energy facilities.”⁵ ORS 469.310 declares that the siting, construction, and operation of energy facilities “shall be accomplished in a manner consistent with the protection of public health and safety and in compliance with the energy policy and . . . other environmental protection policies of this state.”⁶

State energy and environmental policies highlight the urgency for EFSC to begin assessing the need, or lack thereof, for natural gas-related energy facilities under its jurisdiction. HB 2021 requires Portland General Electric (“PGE”) and Pacific Power to reduce the greenhouse gas emissions associated with serving Oregon load 80, 90, and 100 percent by 2030, 2035, and 2040, respectively.⁷ HB 2021 also has functionally stopped the expansion of natural gas generation, stating that the Council 1) cannot approve new generating facilities that will produce emissions and 2) cannot approve a site certificate amendment to an emitting generating facility if the proposed changes will significantly increase the gross carbon dioxide emissions that are reasonably likely to result from the operation of the facility.⁸ Executive Order 20-04 sets greenhouse gas emissions reduction goals of 45 percent and 80 percent below 1990 levels by 2035 and 2050, respectively.⁹ To be most consistent with achieving a science-based target for carbon reductions, the Oregon Department of Environmental Quality (“DEQ”) went further in its Climate Protection Program, requiring reductions in greenhouse gas emissions from covered fuel suppliers of 90 percent by 2050. Although invalidated in the Oregon Court of Appeals, DEQ has prepared draft rules, comparable to the original version of the rule, to comply with the Court’s order while retaining the same emissions reductions goals, further illustrating commitments to decarbonizing direct use fuels in Oregon.¹⁰ Importantly, the newest version of the Climate Protection Program applies to NW Natural.¹¹

⁴ ORS 469.010(1).

⁵ *Id.*

⁶ ORS 469.031.

⁷ ORS 469A.410(1).

⁸ ORS 469.413.

⁹ E.O. 20-04(2), Oregon, (Mar. 16, 2020), available at https://www.oregon.gov/gov/eo/eo_20-04.pdf.

¹⁰ “Climate Protection Program 2024: Fact Sheet,” Oregon Dept. of Environ. Quality, available at <https://www.oregon.gov/deq/ghgp/Documents/CPP2024ChangesFactSheet.pdf>; Monica Samayoa, “Oregon prepares to reboot an effort to cut greenhouse gas emissions,” Oregon Public Broadcasting, (Apr. 1, 2024), available at <https://www.opb.org/article/2024/04/01/oregon-greenhouse-gas-climate-change-legislation-protection-program/>.

¹¹ See e.g., Oregon Department of Environmental Quality, *Draft Rules—Division 273: Climate Protection Program 2024 Rulemaking*, OAR 340-0273-0010—340-027-0150.

Additionally, in only about one year—earlier than when NW Natural would even need to begin its construction related to Amendment 13¹²—the Oregon Department of Energy (“ODOE”) will release the Oregon Energy Strategy. House Bill 3630 directs ODOE to develop an “energy strategy” for the state that “identifies pathways to achieving the state’s energy policy objectives.”¹³ The Energy Strategy will be a comprehensive plan that analyzes a variety of approaches to meet the state’s greenhouse gas reduction targets on an economy-wide basis.¹⁴ ODOE’s most recent Biennial Report noted the importance of Executive Order 20-04, the DEQ’s Climate Protection Plan, and HB 2021 in its underlying assumptions about Oregon energy pathways.¹⁵ The assumptions going into ODOE’s modeling anticipate substantially reduced demand for natural gas substantially. These assumptions include: heat pumps making up 95% of residential and small commercial and 75% of large commercial space heating purchases by 2040; electrification of half of all household and commercial appliances by 2050; electrification of 95% of all household and small commercial water heaters; and no new gas pipeline infrastructure.¹⁶

Although the Biennial Report pointed to the Mist Facility as a location where renewable resources like clean hydrogen *could* be stored in the future, it also pointed out that “the development of renewable biofuels and hydrogen at-scale is not yet commercially viable.”¹⁷ The Oregon Global Warming Commission came to a similar conclusion in its “Roadmap to 2030” Report, which modeled strategies to achieve statewide greenhouse gas reductions by 2030 instead of 2035, stating that there was “insufficient renewable natural gas and renewable hydrogen” to meet the 2030 goal.¹⁸

Oregon energy and environmental policy is moving towards renewable and electrical energy and away from fossil fuels like natural gas. The Council should, therefore, only approve facilities related to natural gas that are *needed*. Otherwise, the Council risks approving expensive expansions to the gas system that are contrary to Oregon policy, saddling Oregon consumers with the associated costs for decades. The Council is the only agency positioned to thoroughly test whether the development at issue here is consistent with Oregon’s energy policy and is *needed*. The only other agencies which might have jurisdiction over NW Natural’s activities at the Mist Facility is the Oregon Public Utility Commission (“PUC”) and DOGAMI. As to the latter, DOGAMI’s regulations in OAR 632, Div. 10 never ask for an assessment of need. And to our knowledge NW Natural has not described its activities in an Integrated Resource Plan nor received acknowledgement for its planned investments here from PUC.

¹² Draft Proposed Order, at 26.

¹³ ORS 469.062(3).

¹⁴ *Id.*

¹⁵ Department of Energy, 2022 Biennial Energy Report, at 377–80, available at

<https://www.oregon.gov/energy/Data-and-Reports/Documents/2022-Biennial-Energy-Report.pdf>.

¹⁶ “Oregon Energy Strategy: Draft Reference Scenario – Key Data and Assumptions,” Oregon Dept. of Energy, (Aug. 27, 2024), available at <https://www.oregon.gov/energy/Data-and-Reports/Documents/2024-Draft-Reference-Scenario.pdf>.

¹⁷ *Id.* at 384.

¹⁸ “Oregon Climate Action Roadmap to 2030,” Oregon Global Warming Commission (Mar. 2023), available at <https://static1.squarespace.com/static/59c554e0f09ca40655ea6eb0/t/64275befc3f5d82a60b981b2/1680301043241/023-Climate-Action-Roadmap.pdf>.

2. The Council should establish a need standard for surface facilities related to an underground gas storage reservoir and apply that standard to Amendment 13.

The Council has adopted a Need Standard in OAR 345-023-0005, which states in full:

“This division applies to nongenerating facilities as defined in ORS 469.503(2)(e)¹⁹, except nongenerating facilities that are related or supporting facilities. To issue a site certificate for a facility described in sections (1) through (3), the Council must find that the applicant has demonstrated the need for the facility. The Council may adopt need standards for other nongenerating facilities. This division describes the methods the applicant shall use to demonstrate need. In accordance with ORS 469.501(1)(L), the Council has no standard requiring a showing of need or cost-effectiveness for generating facilities. The applicant shall demonstrate need:

(1) For electric transmission lines under the least-cost plan rule, OAR 345-023-0020(1), or the system reliability rule for transmission lines, OAR 345-023-0030, or by demonstrating that the transmission line is proposed to be located within a “National Interest Electric Transmission Corridor” designated by the U.S. Department of Energy under Section 216 of the Federal Power Act;

(2) For natural gas pipelines under the least-cost plan rule, OAR 345-023-0020(1), or the economically reasonable rule for natural gas pipelines, OAR 345-023-0040;

(3) For storage facilities for liquefied natural gas with storage capacity of three million gallons or greater under the least-cost plan rule, OAR 345-023-0020(1), or the economically reasonable rule for liquefied natural gas storage facilities, OAR 345-023-0040.”²⁰

The definition of “nongenerating facilities” in ORS 469.503 itself refers to a subset of the definition of “energy facilities” in ORS 469.300. To paraphrase, that subset includes 1) certain high voltage transmission lines, 2) certain pipelines, 3) synthetic fuel plants, 4) plants that convert biomass to gas, liquid or solid, 5) storage facilities for liquified natural gas (“LNG”) and 6) surface facilities of sufficient size related an underground gas storage reservoir.²¹

To pause for a moment, the significance of this string of definitions is to show that “nongenerating facilities” as used in OAR 345-023-0005 is essentially interchangeable with “energy facilities” as used in ORS 469.300. More specifically, nongenerating facilities are a subset of energy facilities, meaning, not all energy facilities are nongenerating facilities, but all nongenerating facilities *are* energy facilities.

In ORS 469.300, “energy facilities” are different from “relating or supporting facilities,” which include certain pipelines, transmission lines, and other structures but does not include

¹⁹ The citation to ORS 469.503(2)(e) should read ORS 469.503(2)(f), which houses the definitions for ORS 469.503.

²⁰ OAR 345-023-0005.

²¹ ORS 469.300(12).

underground gas storage reservoirs, production, injection or monitoring wells, or wellhead equipment or pumps, which fall under DOGAMI’s jurisdiction.²² A more thorough discussion on the two definitions is contained in Section 3 below.

Under OAR 345-023-0005, the Council currently requires a finding of need for three specific types of nongenerating facilities: high voltage transmission lines, natural gas pipelines, and storage facilities for LNG. And although the Council exempts “nongenerating facilities that are related or supporting facilities” from the regulation, it retains the right to “adopt needs standards for other nongenerating facilities.”²³

The Draft Proposed Order’s short discussion of the applicability of OAR 345-023-0005 stated:

“The rule does not include a need standard for surface facilities related to an underground natural gas storage reservoir. NW [Natural] was not required to demonstrate need for the surface facilities . . . proposed through the previous amendment requests; nor was the Council required to make a finding of need in order to grant the requested amended site certificate.”²⁴

In essence, the Draft Proposed Order asserts that because NW Natural has not previously been required to demonstrate need, it does not need to do so here. That line of reasoning is insufficient given the changes in Oregon’s energy and environmental policies—which the Council’s need standard must be consistent with—that have occurred in the last five years. The Council should not adopt a “business as usual” approach to Amendment 13, because the business of energy regulation in Oregon is no longer operating under usual conditions.

The Council must adapt its Need Standard to be consistent with Oregon’s current energy and environmental policy. The reservation in OAR 345-023-0005(1) that “the Council may adopt needs standards for other nongenerating facilities” provides the Council the ability to adopt a standard for surface facilities related to underground gas reservoirs and apply that new standard to Amendment 13.²⁵ The “may adopt” language should be interpreted as putting applicants on notice that additional standards beyond the three specific standards articulated in the regulation could be applied at any time. To interpret it otherwise would render the sentence meaningless; certainly the Council has the authority to amend the regulation and add standards for other nongenerating facilities in the future. The regulation is best understood to state that, while the Council *must* apply the articulated standards for high voltage transmission, natural gas pipelines, and LNG storage facilities, it *may*, at its discretion, apply a standard to other nongenerating facilities. The Council should apply a need standard to Amendment 13 because the failure to do so conflicts with Oregon’s energy and environmental policy.

Oregon’s energy policy makes suspect the need for NW Natural to spend millions of dollars updating and expanding the Mist Facility. Often, the Mist Facility provides storage space for natural gas destined for use at gas-powered generating facilities. But, as pointed out above, HB

²² ORS 469.300(25).

²³ OAR 345-023-0005.

²⁴ Draft Proposed Approval, at 177.

²⁵ OAR 345-023-0005(1).

2021 has frozen the growth of gas-powered generating facilities: the Council cannot approve new emitting generating facilities, nor can it approve amendments to existing facilities that will significantly increase a facility's emissions, i.e. that will increase the use of natural gas at the facility. By 2040 PGE and Pacific Power will need to have reduced the emissions associated with delivering load to their customers by 100%, which will require the transition away from even existing natural gas plants. Reducing emissions to zero will necessity removing most, if not all, natural gas generation, functionally eliminating a main customer base for the Mist Facility.

Moreover, electrification of buildings, both residential and commercial, in NW Natural's service area will lessen its own need to store larger quantities of natural gas. Finally, although ODOE believes that renewable natural gas or green hydrogen will play some role in the decarbonization of Oregon's economy, the extent of that role is uncertain given that those alternative fuels are not currently commercially viable. Thus, it is unclear if, let alone when, the Mist Facility will be needed to store quantities of renewable natural gas that exceed the facility's current storage capacity.

We understand that the Council's jurisdiction over the Mist Facility is limited. But that does not mean that the Council should not align its standards with Oregon policy to the fullest extent of that limited jurisdictional sphere. Currently, the scope of the Council's need standard is not consistent with either Oregon's general energy policy of discouraging the "continued growth in demand for nonrenewable energy" or its specific policies mandating emissions reductions and electrification because it allows for emitting energy facilities to expand without any determination of need. Contrary to the language of the Draft Proposed Order, the Council is required to make a finding of need to grant the requested amended site certificate so that its Need Standard remains consistent with Oregon energy and environmental policy. Accordingly, this action is premature and should be curtailed until, at a minimum, the Council has established a need standard for surface facilities related to underground gas storage reservoirs. That standard may need to take into account the aforementioned DEQ rulemakings and ODOE's Energy Strategy. Therefore, to ensure that the Council's decision is not contrary to Oregon law and policy, it should deny Amendment 13 until a need standard for surface facilities related to an underground gas storage reservoir is created. The Council should then apply that standard to Amendment 13.

3. The "related or supporting facilities" exception does not apply to Amendment 13.

The Draft Proposed Order continues:

"OAR 345-023-0005 further states that the division does not apply to
"nongenerating facilities that are related or supporting facilities.

Council previously evaluated the applicability of this standard on the facility in the Final Order on [Amendment 11] and found that this requirement does not apply to any related or supporting facilities. This fact would not change as a result

of [Amendment 13] requested changes, which continue to be nongenerating facilities that are related or supporting facilities.”²⁶

We have multiple concerns with this language. First, the language mischaracterizes the discussion from the Final Order on Amendment 11. Second, the language wrongly implies that the entirety of the facilities at issue in Amendment 13 are “related or supporting facilities”. Finally, the blanket exception for all related or supporting facilities is in need of reevaluation.

a. The Council should clarify the Draft Proposed Order’s language regarding the “related or supporting facilities” discussion in Amendment 11 and its applicability to Amendment 13.

“Related or supporting facilities” can only be understood in the context of the definition of “energy facilities” in ORS 469.300.²⁷ Without reproducing the full definition here energy facilities cover ten types of facilities. Each type of facility has certain requirements to qualify it as an “energy facility,” and then often has certain exemptions from that definition. For example, a “pipeline” is an “energy facility” if it is 1) at least six inches in diameter, five or more miles in length, and used to transport crude petroleum, LNG, or liquid geothermal energy, 2) at least 16 inches in diameter, five or more miles in length, and used to transport natural gas, or 3) at least 16 inches in diameter, five or more miles in length, and used to transport gaseous geothermal energy.²⁸ An otherwise qualifying natural gas pipeline is not an energy facility, though, if less than five miles of its length are more than 50 feet from a public road, or if it is a certain type of upgrade to an existing natural gas pipeline.²⁹ A similar structure exists for the definition of high voltage transmission lines as energy facilities, which must be more than 10 miles and have a capacity of at least 230,000 volts, but excludes lines within existing corridors, certain line upgrades, and “associated transmission lines.”³⁰ The definition of “surface facility related to an underground gas storage reservoir” requires the facility to be designed to receive or deliver more than 50 million cubic feet of gas per day or require more than 4000 horsepower of compression to operate, but excludes underground storage gas reservoirs and injection, withdrawal, or monitoring wells.³¹ The list goes on.

ORS 469.300’s definition of “related or supporting facilities” is worth quoting in full:

“‘Related or supporting facilities’ means any structure, proposed by the applicant, to be constructed or substantially modified in connection with the construction of an energy facility, including associated transmission lines, reservoirs, storage facilities, intake structures, road and rail access, pipelines, barge basins, office or public buildings, and commercial and industrial structures. ‘Related or supporting

²⁶ Draft Proposed Order, at 177.

²⁷ It is crucial to reiterate that ORS 469.300 is relevant as a tertiary reference point from OAR 345-023-0005. The Need Standard defines nongenerating facility by reference to ORS 469.503. ORS 469.503 defines nongenerating facility by reference to the definition of “energy facility” in ORS 469.300. Therefore, the term “nongenerating facility” is functionally interchangeable with the term “energy facility.”

²⁸ ORS 469.300(12)(a)(E).

²⁹ ORS 469.300(12)(a)(E)(ii)(I)–(II).

³⁰ ORS 469.300(12)(a)(C).

³¹ ORS 469.300(12)(a)(I).

facilities’ does not include geothermal or underground gas storage reservoirs, production, injection or monitoring wells or wellhead equipment or pumps.”³²

The term “related or supporting facilities” only applies to certain types of facilities that don’t themselves qualify as an “energy facility.” For example, “pipeline” should only mean pipelines that don’t meet the criteria for a pipeline to qualify as an energy facility.³³ “Associated transmission lines,” having been excepted from the definition of “energy facility,” is then defined as a “related or supporting facility.”³⁴ For each of the listed items under the definition of “related or supporting facility,” there is a corresponding specific or general exception to the definition of an energy facility. Indeed, the definition goes so far as to note that the listed exceptions in the definition of “surface facility to an underground gas storage reservoir” are *not* “related or supporting facilities,” presumably to avoid any ambiguity over whether they are covered as well, given that they are not under Council jurisdiction.

Put simply, “related or supporting facilities” has a narrow, limited scope. Rather than being broadly applicable to large swaths of facilities, it merely offers a unifying term for a series of specific exceptions to the definition of “energy facility.” The Council applied this narrow understanding of “related or supporting facilities” in its review of Amendment 11. In the Final Order on Amendment 11, the Council did not state that the entirety of the Mist surface facilities were “related or supporting” but rather that one specific aspect of Amendment 11, a transmission pipeline,³⁵ fell under the exception.³⁶ The Draft Proposed Order, however, extends the reasoning in the Final Order of Amendment 11, which was limited to the one component of Amendment 11, to the entire Mist Facility for Amendment 13 without a basis for doing so.³⁷

The Council has had too broad an approach to “related or supporting facilities” in the past and now seeks to broaden the definition even further, apparently to the point where it entirely subsumes the definition of a surface facility. The Council should, at a minimum, clarify in its Final Order that “related or supporting facilities” are only those facilities not encompassed by the

³² ORS 469.300(25).

³³ The main takeaway from this example is that not all pipelines are “related or supporting facilities,” but rather some are “energy facilities.” For example, a new natural gas pipeline that is 24 inches in diameter, 12 miles long, and 5 or more of those miles are more than 50 feet from a public road, is an “energy facility” because it meets the criteria of ORS 469.300(12)(a)(E)(ii). Therefore, it is not a “pipeline” but an “energy facility,” and, accordingly, it would not be captured by the use of the term “pipeline” in the definition of “related or supporting facilities.”

³⁴ Compare ORS 469.300(12)(a)(C)(iii) *with* ORS 469.300(25).

³⁵ We do note, however, that the Council wrongly interpreted the definition of “related or supporting facility” in Amendment 11. The transmission pipeline in Amendment 11 should have fallen under the definition of “energy facility” because it was more 16 inches, more than 5 miles long, and did not qualify for one of the exceptions to the definition of “pipeline” as an energy facility. The transmission line in question was a new natural gas pipeline, 24 inches in diameter and 12 miles long. Final Order on Amendment 11, at 5. The Council conflated the definition of a pipeline that is an energy facility with the use of the term “pipeline” in the definition for related or supporting facilities.

³⁶ Final Order on Request for Contested Case and Mist Facility Amendment No. 11, Energy Facility Siting Council, 150 (Apr. 2016), (hereinafter “Final Order on Amendment 11”), available at https://www.oregon.gov/energy/facilities-safety/facilities/Facilities%20library/FINAL%20ORDER%20MIST%20FACILITY%20RFA%2011_2016-4-21.pdf.

³⁷ Draft Proposed Order, at 177 (stating that the Council previously found the need standard does not apply to any “related or supporting facilities” and that “this fact would not change as a result of [Amendment 13] requested changes, *which continued to be nongenerating facilities that are related or supporting facilities.*”)

definition of energy facility and therefore do not apply to facilities that qualify as surface facilities related to underground gas storage reservoirs.

This distinction is important because Amendment 13 makes changes to the surface facility that are not related or supporting facilities. For example, Amendment 13 calls for a series of upgrades to several compressor stations at both the North Mist Compression Station and the Miller Station locations.³⁸ Those are modifications to the surface facility, which is an energy facility and therefore a “nongenerating facility,” not to a “related or supporting facility.” The Council should perform a similar analysis for each proposed action to determine which actions are a part of the nongenerating facility, i.e., a surface facility, and which are “related or supporting facilities.” The Council should not, however, adopt the language from the Draft Proposed Order that implies the entire Mist Facility is a related or supporting facility.

b. There is no exception for “related or supporting facilities” in OAR 345-023-0005, and if there is, the exception is not consistent with Oregon policy.

We would also like to point out two issues related to the exception for “related or supporting facilities.” For clarity, the first sentence of OAR 345-023-0005 states “This division applies to nongenerating facilities as defined in ORS 469.503(2)(e), *except nongenerating facilities that are related or supporting facilities.*”³⁹

The exception as written covers nothing because there is no such thing as “nongenerating facilities that are related or supporting facilities.” The regulatory and statutory definitions of the terms necessitate this interpretation.

The Need Standard defines “nongenerating facilities” by reference to ORS 469.503, which itself defines “nongenerating facilities” as “those *energy facilities* that are defined in ORS 469.300(12)(a)(C) and (E) to (I).”⁴⁰ Therefore, “nongenerating facilities,” as used in OAR 345-023-0005 are simply six of the ten types of “energy facilities” as defined in 469.300(12)(a). For the purposes of this comment, the two terms—nongenerating facility and energy facility—are essentially interchangeable.

The Council’s regulations also define “related or supporting facilities” by reference to ORS 469.300.⁴¹ Because both “nongenerating facilities” and “related or supporting facilities” receive their definition from ORS 469.300, the terms should be read together in the context of that statute’s scheme. To reiterate the point made earlier in this comment, ORS 469.300 completely separates energy facilities (which, again, are the same as “nongenerating facilities”) from related or supporting facilities. Each type of potential energy facility has certain qualifications that must be met. Transmission lines must have a particular length and voltage, stand-alone pipelines must be a particular width and length, etc. If the given type of facility meets those qualifications, it stops being a “transmission line” or a “pipeline” or a “synthetic fuel plant” or a “surface facility related to an underground storage reservoir” and becomes an “energy

³⁸ Draft Proposed Order, at 1.

³⁹ OAR 345-023-0005 (emphasis added).

⁴⁰ *Id.*; ORS 469.503(2)(f) (emphasis added).

⁴¹ OAR 345-001-0010(27).

facility.” The statute differentiates these “energy facilities” from “related or supporting facilities,” which are made of up structures that, definitionally, are not energy facilities. For example, the only type of transmission line that is a “related or supporting facility” is an “associated transmission line,”⁴² which are specifically exempted from being an energy facility.⁴³

To summarize, OAR 345-023-0005 defines “nongenerating facilities” by reference to ORS 469.503. ORS 469.503 defines “nongenerating facilities” as a subset of “energy facilities” defined in ORS 469.300; therefore, nongenerating facilities are energy facilities.⁴⁴ According to the language of ORS. 469.300, energy facilities cannot be “related or supporting facilities;” they are two distinct types of facilities with no overlap. Because nongenerating facilities are energy facilities, by the transitive property, nongenerating facilities *cannot be* “related or supporting facilities.” Therefore, excepting “nongenerating facilities that are related or supporting facilities” excepts nothing, because there is no such thing as a nongenerating facility that is a related or supporting facility.⁴⁵

Second, assuming the language of the regulation validly excepts related or supporting facilities, that exception is contrary to the language of ORS 469.501(2), which states: “The council may adopt exemptions from any need standard . . . if the exemption is consistent with the state’s energy policy set forth in ORS 469.010 and 469.310.”⁴⁶ Here, the Council has adopted an exception to its need standard: the categorical exception for related or supporting facilities. Because the Council has adopted an exception, that exception must be consistent with the same policies described in Part 1 of this comment. To summarize that section, ORS 469.010 states that the “continued growth in demand for nonrenewable energy forms poses a serious *and immediate*, as well as future, problem.”⁴⁷ ORS 469.310 states that siting, construction, and operation of energy facilities should be done in a manner consistent with, among other things, the state’s energy and environmental protection policies.⁴⁸ Those policies call for the rapid and wide-scale decarbonization of the Oregon economy writ large, and in particular the full decarbonization of Oregon’s two largest investor-owned utilities, who, notably, are users of the storage capacity at the Mist Facility. And while ODOE has noted that renewable natural gas may help reduce emissions in sectors that are hard to electrify, it also repeatedly states that renewable fuels are not a viable option under current market conditions.

If approved, NW Natural will have seven years to complete the construction proposed in Amendment 13. By that time, PGE and Pacific Power will need to have reduced their emissions by 80 percent, and will have to eliminate the remaining emission less than a decade later Oregon will likely have reduced its greenhouse gas emissions from a 1990 baseline by 45 percent, with the goal to reduce them by anywhere from 80 to 95 percent by 2050. Allowing facilities related to or supporting fossil fuel-based energy facilities to be approved without first determining need

⁴² ORS 469.300(25).

⁴³ ORS 469.300(12)(a)(C)(iii)

⁴⁴ ORS 469.503(2)(f) (“‘Nongenerating facility’ means those energy facilities that are defined in ORS 469.300(12)(a)(C) and (E) to (I).”)

⁴⁵ Imagine a city ordinance regulating pet ownership in city limits. The ordinance says: “This ordinance applies to all four-legged mammals, except cats that are dogs.” The exception would

⁴⁶ ORS 469.501(2).

⁴⁷ ORS 469.010(1).

⁴⁸ ORS 469.310.

guarantees that NW Natural and others will get approval to construct pipelines and other structures that will be rendered useless before they are even complete. Sooner or later, the Council will need to bring its need standards in line with Oregon policy—it should choose to do so now.

4. Conclusion

We urge the Council not to accept the Draft Proposal approving Amendment 13. We ask that the Council: 1) assess which components of Amendment 13 are a part of the surface facility related to an underground gas storage reservoir under the definitions found in ORS 469.300 and OAR 345-001-0010; 2) use its authority under OAR 345-023-0005 to establish a need standard for surface facilities; 3) apply that need standard to Amendment 13. We also ask that the Council interpret OAR 345-023-0005 in the manner suggested in Section 3 of this comment so that it brings its interpretation in line with the text of the Council's governing statutes.

Respectfully submitted,

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New Public Comment submitted for project : RFA13 and DPO for Mist Underground Natural Gas Storage Facility

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Siting Project Phase: DPO

Comment Summary:

see attachment

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Select EXEMPTION REQUEST NOI DPO CC FORMAL
RULEMAKING INFORMAL RULEMAKING AMD-A AMD-B

Comment Details

Application for Site Certificate (ASC) Exhibit

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(315.70 KB)



September 19, 2024

The Green Energy Institute at Lewis & Clark Law School is a non-profit energy and climate law and policy institute within Lewis & Clark Law School’s top-ranked environmental, natural resources, and energy law program. Northwest Environmental Defense Center is a non-profit environmental organization established by professors, law students, and attorneys in 1969 at Lewis & Clark Law School. NEDC’s mission is to protect and preserve the environment and natural resources of the Pacific Northwest by engaging in legal advocacy, education, and litigation independently and in conjunction with environmental groups on issues affecting climate change and resiliency, water quality, and air quality. Columbia Riverkeeper is a non-profit organization that works to protect the water quality of the Columbia River basin and all life connected to it. Breach Collective builds power within the climate and labor movements through organizing, legal advocacy, education, and storytelling. The Oregon Chapter of the Sierra Club is a non-profit member-supported, public interest organization that promotes conservation of the Oregon natural environment by influencing public policy decisions— legislative, administrative, legal, and electoral. We appreciate the opportunity to provide the following comments to the Energy Facility Siting Council (the “Council”) on the Draft Proposed Order on Request for Amendment 13 (“Draft Proposed Order”).

The Draft Proposed Order recommends that “the Council continue to find that the Division 23 Need Standard does not apply” to the Mist Underground Natural Gas Storage Facility (“Mist Facility”).¹ It does so for two reasons. First, it states that “the rule does not include a need standard for surface facilities related to an underground natural gas storage reservoir.”² Second, it notes that the regulation “does not apply to ‘nongenerating facilities that are related or supporting facilities.’”³ To this second point, the Draft Proposed Order points out that the Council evaluated the applicability of the “related or supporting facilities” exception in its Final Order for Amendment 11 and found that the changes in Amendment 11 fell under the exception. It then asserts that the changes in Amendment 13 also fall under the exception. For the reasons below, the Council should 1) establish a need standard for surface facilities related to underground gas reservoirs and apply that standard to NW Natural’s Request for Amendment 13 (“Amendment 13”), 2) clarify which aspects of Amendment 13 pertain to the “surface facility” and which aspects are “related or supporting facilities, and 3) begin to eliminate the exception from the need standard for facilities related to or supporting fossil fuel-based energy facilities.

¹ “Mist Underground Natural Gas Storage Facility - Draft Proposed Order on Request for Amendment 13,” Energy Facility Siting Council, 177 (Aug. 15, 2024), (hereinafter “Draft Proposed Order”) available at <https://www.oregon.gov/energy/facilities-safety/facilities/Facilities%20library/2024-08-15-MSTAMD13-DPO-w-Attachments-signed.pdf>.

² *Id.*

³ *Id.*

1. Background on Need Standards in the Council’s Review of Certificate Applications

ORS 469.501(1)(L) directs the Council, as a part of its review of applications for and amendments to site certificates, to establish need standards for nongenerating facilities “consistent with the state energy policy set forth in ORS 469.010 and 469.310.”

The state’s energy policy discourages the growth of facilities related to fossil fuels like the Mist Facility. ORS 469.010 states that “continued growth in demand for nonrenewable energy forms poses a serious and immediate, as well as future, problem.”⁴ The law continues that it is the policy of Oregon that “cost effectiveness be considered in all agency decision-making relating to energy facilities.”⁵ ORS 469.310 declares that the siting, construction, and operation of energy facilities “shall be accomplished in a manner consistent with the protection of public health and safety and in compliance with the energy policy and . . . other environmental protection policies of this state.”⁶

State energy and environmental policies highlight the urgency for EFSC to begin assessing the need, or lack thereof, for natural gas-related energy facilities under its jurisdiction. HB 2021 requires Portland General Electric (“PGE”) and Pacific Power to reduce the greenhouse gas emissions associated with serving Oregon load 80, 90, and 100 percent by 2030, 2035, and 2040, respectively.⁷ HB 2021 also has functionally stopped the expansion of natural gas generation, stating that the Council 1) cannot approve new generating facilities that will produce emissions and 2) cannot approve a site certificate amendment to an emitting generating facility if the proposed changes will significantly increase the gross carbon dioxide emissions that are reasonably likely to result from the operation of the facility.⁸ Executive Order 20-04 sets greenhouse gas emissions reduction goals of 45 percent and 80 percent below 1990 levels by 2035 and 2050, respectively.⁹ To be most consistent with achieving a science-based target for carbon reductions, the Oregon Department of Environmental Quality (“DEQ”) went further in its Climate Protection Program, requiring reductions in greenhouse gas emissions from covered fuel suppliers of 90 percent by 2050. Although invalidated in the Oregon Court of Appeals, DEQ has prepared draft rules, comparable to the original version of the rule, to comply with the Court’s order while retaining the same emissions reductions goals, further illustrating commitments to decarbonizing direct use fuels in Oregon.¹⁰ Importantly, the newest version of the Climate Protection Program applies to NW Natural.¹¹

⁴ ORS 469.010(1).

⁵ *Id.*

⁶ ORS 469.031.

⁷ ORS 469A.410(1).

⁸ ORS 469.413.

⁹ E.O. 20-04(2), Oregon, (Mar. 16, 2020), available at https://www.oregon.gov/gov/eo/eo_20-04.pdf.

¹⁰ “Climate Protection Program 2024: Fact Sheet,” Oregon Dept. of Environ. Quality, available at <https://www.oregon.gov/deq/ghgp/Documents/CPP2024ChangesFactSheet.pdf>; Monica Samayoa, “Oregon prepares to reboot an effort to cut greenhouse gas emissions,” Oregon Public Broadcasting, (Apr. 1, 2024), available at <https://www.opb.org/article/2024/04/01/oregon-greenhouse-gas-climate-change-legislation-protection-program/>.

¹¹ See e.g., Oregon Department of Environmental Quality, *Draft Rules—Division 273: Climate Protection Program 2024 Rulemaking*, OAR 340-0273-0010—340-027-0150.

Additionally, in only about one year—earlier than when NW Natural would even need to begin its construction related to Amendment 13¹²—the Oregon Department of Energy (“ODOE”) will release the Oregon Energy Strategy. House Bill 3630 directs ODOE to develop an “energy strategy” for the state that “identifies pathways to achieving the state’s energy policy objectives.”¹³ The Energy Strategy will be a comprehensive plan that analyzes a variety of approaches to meet the state’s greenhouse gas reduction targets on an economy-wide basis.¹⁴ ODOE’s most recent Biennial Report noted the importance of Executive Order 20-04, the DEQ’s Climate Protection Plan, and HB 2021 in its underlying assumptions about Oregon energy pathways.¹⁵ The assumptions going into ODOE’s modeling anticipate substantially reduced demand for natural gas substantially. These assumptions include: heat pumps making up 95% of residential and small commercial and 75% of large commercial space heating purchases by 2040; electrification of half of all household and commercial appliances by 2050; electrification of 95% of all household and small commercial water heaters; and no new gas pipeline infrastructure.¹⁶

Although the Biennial Report pointed to the Mist Facility as a location where renewable resources like clean hydrogen *could* be stored in the future, it also pointed out that “the development of renewable biofuels and hydrogen at-scale is not yet commercially viable.”¹⁷ The Oregon Global Warming Commission came to a similar conclusion in its “Roadmap to 2030” Report, which modeled strategies to achieve statewide greenhouse gas reductions by 2030 instead of 2035, stating that there was “insufficient renewable natural gas and renewable hydrogen” to meet the 2030 goal.¹⁸

Oregon energy and environmental policy is moving towards renewable and electrical energy and away from fossil fuels like natural gas. The Council should, therefore, only approve facilities related to natural gas that are *needed*. Otherwise, the Council risks approving expensive expansions to the gas system that are contrary to Oregon policy, saddling Oregon consumers with the associated costs for decades. The Council is the only agency positioned to thoroughly test whether the development at issue here is consistent with Oregon’s energy policy and is *needed*. The only other agencies which might have jurisdiction over NW Natural’s activities at the Mist Facility is the Oregon Public Utility Commission (“PUC”) and DOGAMI. As to the latter, DOGAMI’s regulations in OAR 632, Div. 10 never ask for an assessment of need. And to our knowledge NW Natural has not described its activities in an Integrated Resource Plan nor received acknowledgement for its planned investments here from PUC.

¹² Draft Proposed Order, at 26.

¹³ ORS 469.062(3).

¹⁴ *Id.*

¹⁵ Department of Energy, 2022 Biennial Energy Report, at 377–80, available at

<https://www.oregon.gov/energy/Data-and-Reports/Documents/2022-Biennial-Energy-Report.pdf>.

¹⁶ “Oregon Energy Strategy: Draft Reference Scenario – Key Data and Assumptions,” Oregon Dept. of Energy, (Aug. 27, 2024), available at <https://www.oregon.gov/energy/Data-and-Reports/Documents/2024-Draft-Reference-Scenario.pdf>.

¹⁷ *Id.* at 384.

¹⁸ “Oregon Climate Action Roadmap to 2030,” Oregon Global Warming Commission (Mar. 2023), available at <https://static1.squarespace.com/static/59c554e0f09ca40655ea6eb0/t/64275befc3f5d82a60b981b2/1680301043241/023-Climate-Action-Roadmap.pdf>.

2. The Council should establish a need standard for surface facilities related to an underground gas storage reservoir and apply that standard to Amendment 13.

The Council has adopted a Need Standard in OAR 345-023-0005, which states in full:

“This division applies to nongenerating facilities as defined in ORS 469.503(2)(e)¹⁹, except nongenerating facilities that are related or supporting facilities. To issue a site certificate for a facility described in sections (1) through (3), the Council must find that the applicant has demonstrated the need for the facility. The Council may adopt need standards for other nongenerating facilities. This division describes the methods the applicant shall use to demonstrate need. In accordance with ORS 469.501(1)(L), the Council has no standard requiring a showing of need or cost-effectiveness for generating facilities. The applicant shall demonstrate need:

(1) For electric transmission lines under the least-cost plan rule, OAR 345-023-0020(1), or the system reliability rule for transmission lines, OAR 345-023-0030, or by demonstrating that the transmission line is proposed to be located within a “National Interest Electric Transmission Corridor” designated by the U.S. Department of Energy under Section 216 of the Federal Power Act;

(2) For natural gas pipelines under the least-cost plan rule, OAR 345-023-0020(1), or the economically reasonable rule for natural gas pipelines, OAR 345-023-0040;

(3) For storage facilities for liquefied natural gas with storage capacity of three million gallons or greater under the least-cost plan rule, OAR 345-023-0020(1), or the economically reasonable rule for liquefied natural gas storage facilities, OAR 345-023-0040.”²⁰

The definition of “nongenerating facilities” in ORS 469.503 itself refers to a subset of the definition of “energy facilities” in ORS 469.300. To paraphrase, that subset includes 1) certain high voltage transmission lines, 2) certain pipelines, 3) synthetic fuel plants, 4) plants that convert biomass to gas, liquid or solid, 5) storage facilities for liquified natural gas (“LNG”) and 6) surface facilities of sufficient size related an underground gas storage reservoir.²¹

To pause for a moment, the significance of this string of definitions is to show that “nongenerating facilities” as used in OAR 345-023-0005 is essentially interchangeable with “energy facilities” as used in ORS 469.300. More specifically, nongenerating facilities are a subset of energy facilities, meaning, not all energy facilities are nongenerating facilities, but all nongenerating facilities *are* energy facilities.

In ORS 469.300, “energy facilities” are different from “relating or supporting facilities,” which include certain pipelines, transmission lines, and other structures but does not include

¹⁹ The citation to ORS 469.503(2)(e) should read ORS 469.503(2)(f), which houses the definitions for ORS 469.503.

²⁰ OAR 345-023-0005.

²¹ ORS 469.300(12).

underground gas storage reservoirs, production, injection or monitoring wells, or wellhead equipment or pumps, which fall under DOGAMI’s jurisdiction.²² A more thorough discussion on the two definitions is contained in Section 3 below.

Under OAR 345-023-0005, the Council currently requires a finding of need for three specific types of nongenerating facilities: high voltage transmission lines, natural gas pipelines, and storage facilities for LNG. And although the Council exempts “nongenerating facilities that are related or supporting facilities” from the regulation, it retains the right to “adopt needs standards for other nongenerating facilities.”²³

The Draft Proposed Order’s short discussion of the applicability of OAR 345-023-0005 stated:

“The rule does not include a need standard for surface facilities related to an underground natural gas storage reservoir. NW [Natural] was not required to demonstrate need for the surface facilities . . . proposed through the previous amendment requests; nor was the Council required to make a finding of need in order to grant the requested amended site certificate.”²⁴

In essence, the Draft Proposed Order asserts that because NW Natural has not previously been required to demonstrate need, it does not need to do so here. That line of reasoning is insufficient given the changes in Oregon’s energy and environmental policies—which the Council’s need standard must be consistent with—that have occurred in the last five years. The Council should not adopt a “business as usual” approach to Amendment 13, because the business of energy regulation in Oregon is no longer operating under usual conditions.

The Council must adapt its Need Standard to be consistent with Oregon’s current energy and environmental policy. The reservation in OAR 345-023-0005(1) that “the Council may adopt needs standards for other nongenerating facilities” provides the Council the ability to adopt a standard for surface facilities related to underground gas reservoirs and apply that new standard to Amendment 13.²⁵ The “may adopt” language should be interpreted as putting applicants on notice that additional standards beyond the three specific standards articulated in the regulation could be applied at any time. To interpret it otherwise would render the sentence meaningless; certainly the Council has the authority to amend the regulation and add standards for other nongenerating facilities in the future. The regulation is best understood to state that, while the Council *must* apply the articulated standards for high voltage transmission, natural gas pipelines, and LNG storage facilities, it *may*, at its discretion, apply a standard to other nongenerating facilities. The Council should apply a need standard to Amendment 13 because the failure to do so conflicts with Oregon’s energy and environmental policy.

Oregon’s energy policy makes suspect the need for NW Natural to spend millions of dollars updating and expanding the Mist Facility. Often, the Mist Facility provides storage space for natural gas destined for use at gas-powered generating facilities. But, as pointed out above, HB

²² ORS 469.300(25).

²³ OAR 345-023-0005.

²⁴ Draft Proposed Approval, at 177.

²⁵ OAR 345-023-0005(1).

2021 has frozen the growth of gas-powered generating facilities: the Council cannot approve new emitting generating facilities, nor can it approve amendments to existing facilities that will significantly increase a facility's emissions, i.e. that will increase the use of natural gas at the facility. By 2040 PGE and Pacific Power will need to have reduced the emissions associated with delivering load to their customers by 100%, which will require the transition away from even existing natural gas plants. Reducing emissions to zero will necessarily removing most, if not all, natural gas generation, functionally eliminating a main customer base for the Mist Facility.

Moreover, electrification of buildings, both residential and commercial, in NW Natural's service area will lessen its own need to store larger quantities of natural gas. Finally, although ODOE believes that renewable natural gas or green hydrogen will play some role in the decarbonization of Oregon's economy, the extent of that role is uncertain given that those alternative fuels are not currently commercially viable. Thus, it is unclear if, let alone when, the Mist Facility will be needed to store quantities of renewable natural gas that exceed the facility's current storage capacity.

We understand that the Council's jurisdiction over the Mist Facility is limited. But that does not mean that the Council should not align its standards with Oregon policy to the fullest extent of that limited jurisdictional sphere. Currently, the scope of the Council's need standard is not consistent with either Oregon's general energy policy of discouraging the "continued growth in demand for nonrenewable energy" or its specific policies mandating emissions reductions and electrification because it allows for emitting energy facilities to expand without any determination of need. Contrary to the language of the Draft Proposed Order, the Council is required to make a finding of need to grant the requested amended site certificate so that its Need Standard remains consistent with Oregon energy and environmental policy. Accordingly, this action is premature and should be curtailed until, at a minimum, the Council has established a need standard for surface facilities related to underground gas storage reservoirs. That standard may need to take into account the aforementioned DEQ rulemakings and ODOE's Energy Strategy. Therefore, to ensure that the Council's decision is not contrary to Oregon law and policy, it should deny Amendment 13 until a need standard for surface facilities related to an underground gas storage reservoir is created. The Council should then apply that standard to Amendment 13.

3. The "related or supporting facilities" exception does not apply to Amendment 13.

The Draft Proposed Order continues:

"OAR 345-023-0005 further states that the division does not apply to
"nongenerating facilities that are related or supporting facilities.

Council previously evaluated the applicability of this standard on the facility in the Final Order on [Amendment 11] and found that this requirement does not apply to any related or supporting facilities. This fact would not change as a result

of [Amendment 13] requested changes, which continue to be nongenerating facilities that are related or supporting facilities.”²⁶

We have multiple concerns with this language. First, the language mischaracterizes the discussion from the Final Order on Amendment 11. Second, the language wrongly implies that the entirety of the facilities at issue in Amendment 13 are “related or supporting facilities”. Finally, the blanket exception for all related or supporting facilities is in need of reevaluation.

a. The Council should clarify the Draft Proposed Order’s language regarding the “related or supporting facilities” discussion in Amendment 11 and its applicability to Amendment 13.

“Related or supporting facilities” can only be understood in the context of the definition of “energy facilities” in ORS 469.300.²⁷ Without reproducing the full definition here energy facilities cover ten types of facilities. Each type of facility has certain requirements to qualify it as an “energy facility,” and then often has certain exemptions from that definition. For example, a “pipeline” is an “energy facility” if it is 1) at least six inches in diameter, five or more miles in length, and used to transport crude petroleum, LNG, or liquid geothermal energy, 2) at least 16 inches in diameter, five or more miles in length, and used to transport natural gas, or 3) at least 16 inches in diameter, five or more miles in length, and used to transport gaseous geothermal energy.²⁸ An otherwise qualifying natural gas pipeline is not an energy facility, though, if less than five miles of its length are more than 50 feet from a public road, or if it is a certain type of upgrade to an existing natural gas pipeline.²⁹ A similar structure exists for the definition of high voltage transmission lines as energy facilities, which must be more than 10 miles and have a capacity of at least 230,000 volts, but excludes lines within existing corridors, certain line upgrades, and “associated transmission lines.”³⁰ The definition of “surface facility related to an underground gas storage reservoir” requires the facility to be designed to receive or deliver more than 50 million cubic feet of gas per day or require more than 4000 horsepower of compression to operate, but excludes underground storage gas reservoirs and injection, withdrawal, or monitoring wells.³¹ The list goes on.

ORS 469.300’s definition of “related or supporting facilities” is worth quoting in full:

“‘Related or supporting facilities’ means any structure, proposed by the applicant, to be constructed or substantially modified in connection with the construction of an energy facility, including associated transmission lines, reservoirs, storage facilities, intake structures, road and rail access, pipelines, barge basins, office or public buildings, and commercial and industrial structures. ‘Related or supporting

²⁶ Draft Proposed Order, at 177.

²⁷ It is crucial to reiterate that ORS 469.300 is relevant as a tertiary reference point from OAR 345-023-0005. The Need Standard defines nongenerating facility by reference to ORS 469.503. ORS 469.503 defines nongenerating facility by reference to the definition of “energy facility” in ORS 469.300. Therefore, the term “nongenerating facility” is functionally interchangeable with the term “energy facility.”

²⁸ ORS 469.300(12)(a)(E).

²⁹ ORS 469.300(12)(a)(E)(ii)(I)–(II).

³⁰ ORS 469.300(12)(a)(C).

³¹ ORS 469.300(12)(a)(I).

facilities’ does not include geothermal or underground gas storage reservoirs, production, injection or monitoring wells or wellhead equipment or pumps.”³²

The term “related or supporting facilities” only applies to certain types of facilities that don’t themselves qualify as an “energy facility.” For example, “pipeline” should only mean pipelines that don’t meet the criteria for a pipeline to qualify as an energy facility.³³ “Associated transmission lines,” having been excepted from the definition of “energy facility,” is then defined as a “related or supporting facility.”³⁴ For each of the listed items under the definition of “related or supporting facility,” there is a corresponding specific or general exception to the definition of an energy facility. Indeed, the definition goes so far as to note that the listed exceptions in the definition of “surface facility to an underground gas storage reservoir” are *not* “related or supporting facilities,” presumably to avoid any ambiguity over whether they are covered as well, given that they are not under Council jurisdiction.

Put simply, “related or supporting facilities” has a narrow, limited scope. Rather than being broadly applicable to large swaths of facilities, it merely offers a unifying term for a series of specific exceptions to the definition of “energy facility.” The Council applied this narrow understanding of “related or supporting facilities” in its review of Amendment 11. In the Final Order on Amendment 11, the Council did not state that the entirety of the Mist surface facilities were “related or supporting” but rather that one specific aspect of Amendment 11, a transmission pipeline,³⁵ fell under the exception.³⁶ The Draft Proposed Order, however, extends the reasoning in the Final Order of Amendment 11, which was limited to the one component of Amendment 11, to the entire Mist Facility for Amendment 13 without a basis for doing so.³⁷

The Council has had too broad an approach to “related or supporting facilities” in the past and now seeks to broaden the definition even further, apparently to the point where it entirely subsumes the definition of a surface facility. The Council should, at a minimum, clarify in its Final Order that “related or supporting facilities” are only those facilities not encompassed by the

³² ORS 469.300(25).

³³ The main takeaway from this example is that not all pipelines are “related or supporting facilities,” but rather some are “energy facilities.” For example, a new natural gas pipeline that is 24 inches in diameter, 12 miles long, and 5 or more of those miles are more than 50 feet from a public road, is an “energy facility” because it meets the criteria of ORS 469.300(12)(a)(E)(ii). Therefore, it is not a “pipeline” but an “energy facility,” and, accordingly, it would not be captured by the use of the term “pipeline” in the definition of “related or supporting facilities.”

³⁴ Compare ORS 469.300(12)(a)(C)(iii) *with* ORS 469.300(25).

³⁵ We do note, however, that the Council wrongly interpreted the definition of “related or supporting facility” in Amendment 11. The transmission pipeline in Amendment 11 should have fallen under the definition of “energy facility” because it was more 16 inches, more than 5 miles long, and did not qualify for one of the exceptions to the definition of “pipeline” as an energy facility. The transmission line in question was a new natural gas pipeline, 24 inches in diameter and 12 miles long. Final Order on Amendment 11, at 5. The Council conflated the definition of a pipeline that is an energy facility with the use of the term “pipeline” in the definition for related or supporting facilities.

³⁶ Final Order on Request for Contested Case and Mist Facility Amendment No. 11, Energy Facility Siting Council, 150 (Apr. 2016), (hereinafter “Final Order on Amendment 11”), available at https://www.oregon.gov/energy/facilities-safety/facilities/Facilities%20library/FINAL%20ORDER%20MIST%20FACILITY%20RFA%2011_2016-4-21.pdf.

³⁷ Draft Proposed Order, at 177 (stating that the Council previously found the need standard does not apply to any “related or supporting facilities” and that “this fact would not change as a result of [Amendment 13] requested changes, *which continued to be nongenerating facilities that are related or supporting facilities.*”)

definition of energy facility and therefore do not apply to facilities that qualify as surface facilities related to underground gas storage reservoirs.

This distinction is important because Amendment 13 makes changes to the surface facility that are not related or supporting facilities. For example, Amendment 13 calls for a series of upgrades to several compressor stations at both the North Mist Compression Station and the Miller Station locations.³⁸ Those are modifications to the surface facility, which is an energy facility and therefore a “nongenerating facility,” not to a “related or supporting facility.” The Council should perform a similar analysis for each proposed action to determine which actions are a part of the nongenerating facility, i.e., a surface facility, and which are “related or supporting facilities.” The Council should not, however, adopt the language from the Draft Proposed Order that implies the entire Mist Facility is a related or supporting facility.

b. There is no exception for “related or supporting facilities” in OAR 345-023-0005, and if there is, the exception is not consistent with Oregon policy.

We would also like to point out two issues related to the exception for “related or supporting facilities.” For clarity, the first sentence of OAR 345-023-0005 states “This division applies to nongenerating facilities as defined in ORS 469.503(2)(e), *except nongenerating facilities that are related or supporting facilities.*”³⁹

The exception as written covers nothing because there is no such thing as “nongenerating facilities that are related or supporting facilities.” The regulatory and statutory definitions of the terms necessitate this interpretation.

The Need Standard defines “nongenerating facilities” by reference to ORS 469.503, which itself defines “nongenerating facilities” as “those *energy facilities* that are defined in ORS 469.300(12)(a)(C) and (E) to (I).”⁴⁰ Therefore, “nongenerating facilities,” as used in OAR 345-023-0005 are simply six of the ten types of “energy facilities” as defined in 469.300(12)(a). For the purposes of this comment, the two terms—nongenerating facility and energy facility—are essentially interchangeable.

The Council’s regulations also define “related or supporting facilities” by reference to ORS 469.300.⁴¹ Because both “nongenerating facilities” and “related or supporting facilities” receive their definition from ORS 469.300, the terms should be read together in the context of that statute’s scheme. To reiterate the point made earlier in this comment, ORS 469.300 completely separates energy facilities (which, again, are the same as “nongenerating facilities”) from related or supporting facilities. Each type of potential energy facility has certain qualifications that must be met. Transmission lines must have a particular length and voltage, stand-alone pipelines must be a particular width and length, etc. If the given type of facility meets those qualifications, it stops being a “transmission line” or a “pipeline” or a “synthetic fuel plant” or a “surface facility related to an underground storage reservoir” and becomes an “energy

³⁸ Draft Proposed Order, at 1.

³⁹ OAR 345-023-0005 (emphasis added).

⁴⁰ *Id.*; ORS 469.503(2)(f) (emphasis added).

⁴¹ OAR 345-001-0010(27).

facility.” The statute differentiates these “energy facilities” from “related or supporting facilities,” which are made of up structures that, definitionally, are not energy facilities. For example, the only type of transmission line that is a “related or supporting facility” is an “associated transmission line,”⁴² which are specifically exempted from being an energy facility.⁴³

To summarize, OAR 345-023-0005 defines “nongenerating facilities” by reference to ORS 469.503. ORS 469.503 defines “nongenerating facilities” as a subset of “energy facilities” defined in ORS 469.300; therefore, nongenerating facilities are energy facilities.⁴⁴ According to the language of ORS. 469.300, energy facilities cannot be “related or supporting facilities;” they are two distinct types of facilities with no overlap. Because nongenerating facilities are energy facilities, by the transitive property, nongenerating facilities *cannot be* “related or supporting facilities.” Therefore, excepting “nongenerating facilities that are related or supporting facilities” excepts nothing, because there is no such thing as a nongenerating facility that is a related or supporting facility.⁴⁵

Second, assuming the language of the regulation validly excepts related or supporting facilities, that exception is contrary to the language of ORS 469.501(2), which states: “The council may adopt exemptions from any need standard . . . if the exemption is consistent with the state’s energy policy set forth in ORS 469.010 and 469.310.”⁴⁶ Here, the Council has adopted an exception to its need standard: the categorical exception for related or supporting facilities. Because the Council has adopted an exception, that exception must be consistent with the same policies described in Part 1 of this comment. To summarize that section, ORS 469.010 states that the “continued growth in demand for nonrenewable energy forms poses a serious *and immediate*, as well as future, problem.”⁴⁷ ORS 469.310 states that siting, construction, and operation of energy facilities should be done in a manner consistent with, among other things, the state’s energy and environmental protection policies.⁴⁸ Those policies call for the rapid and wide-scale decarbonization of the Oregon economy writ large, and in particular the full decarbonization of Oregon’s two largest investor-owned utilities, who, notably, are users of the storage capacity at the Mist Facility. And while ODOE has noted that renewable natural gas may help reduce emissions in sectors that are hard to electrify, it also repeatedly states that renewable fuels are not a viable option under current market conditions.

If approved, NW Natural will have seven years to complete the construction proposed in Amendment 13. By that time, PGE and Pacific Power will need to have reduced their emissions by 80 percent, and will have to eliminate the remaining emission less than a decade later Oregon will likely have reduced its greenhouse gas emissions from a 1990 baseline by 45 percent, with the goal to reduce them by anywhere from 80 to 95 percent by 2050. Allowing facilities related to or supporting fossil fuel-based energy facilities to be approved without first determining need

⁴² ORS 469.300(25).

⁴³ ORS 469.300(12)(a)(C)(iii)

⁴⁴ ORS 469.503(2)(f) (“‘Nongenerating facility’ means those energy facilities that are defined in ORS 469.300(12)(a)(C) and (E) to (I).”)

⁴⁵ Imagine a city ordinance regulating pet ownership in city limits. The ordinance says: “This ordinance applies to all four-legged mammals, except cats that are dogs.” The exception would

⁴⁶ ORS 469.501(2).

⁴⁷ ORS 469.010(1).

⁴⁸ ORS 469.310.

guarantees that NW Natural and others will get approval to construct pipelines and other structures that will be rendered useless before they are even complete. Sooner or later, the Council will need to bring its need standards in line with Oregon policy—it should choose to do so now.

4. Conclusion

We urge the Council not to accept the Draft Proposal approving Amendment 13. We ask that the Council: 1) assess which components of Amendment 13 are a part of the surface facility related to an underground gas storage reservoir under the definitions found in ORS 469.300 and OAR 345-001-0010; 2) use its authority under OAR 345-023-0005 to establish a need standard for surface facilities; 3) apply that need standard to Amendment 13. We also ask that the Council interpret OAR 345-023-0005 in the manner suggested in Section 3 of this comment so that it brings its interpretation in line with the text of the Council's governing statutes.

Respectfully submitted,

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Breach Collective

/s/ Dylan Plummer

Dylan Plummer, Campaign Advisor
Oregon Chapter of the Sierra Club

Comments on Amendment 13 for Mist facility

From Cole T. Souder <csouder@lclark.edu>

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To SLOAN Kathleen * ODOE <kathleen.sloan@energy.oregon.gov>

 1 attachments (316 KB)

GEI-NEDC-CRK-Breach-Sierra Comments on Draft Proposal for Amendment 13 to Mist Facility.pdf;

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Hello Ms Sloan,

I submitted these comments on the online portal, but just wanted to send them to you as well to be sure they were submitted.

Best,

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He/Him/His

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The Green Energy Institute at Lewis & Clark Law School is a non-profit energy and climate law and policy institute within Lewis & Clark Law School’s top-ranked environmental, natural resources, and energy law program. Northwest Environmental Defense Center is a non-profit environmental organization established by professors, law students, and attorneys in 1969 at Lewis & Clark Law School. NEDC’s mission is to protect and preserve the environment and natural resources of the Pacific Northwest by engaging in legal advocacy, education, and litigation independently and in conjunction with environmental groups on issues affecting climate change and resiliency, water quality, and air quality. Columbia Riverkeeper is a non-profit organization that works to protect the water quality of the Columbia River basin and all life connected to it. Breach Collective builds power within the climate and labor movements through organizing, legal advocacy, education, and storytelling. The Oregon Chapter of the Sierra Club is a non-profit member-supported, public interest organization that promotes conservation of the Oregon natural environment by influencing public policy decisions— legislative, administrative, legal, and electoral. We appreciate the opportunity to provide the following comments to the Energy Facility Siting Council (the “Council”) on the Draft Proposed Order on Request for Amendment 13 (“Draft Proposed Order”).

The Draft Proposed Order recommends that “the Council continue to find that the Division 23 Need Standard does not apply” to the Mist Underground Natural Gas Storage Facility (“Mist Facility”).¹ It does so for two reasons. First, it states that “the rule does not include a need standard for surface facilities related to an underground natural gas storage reservoir.”² Second, it notes that the regulation “does not apply to ‘nongenerating facilities that are related or supporting facilities.’”³ To this second point, the Draft Proposed Order points out that the Council evaluated the applicability of the “related or supporting facilities” exception in its Final Order for Amendment 11 and found that the changes in Amendment 11 fell under the exception. It then asserts that the changes in Amendment 13 also fall under the exception. For the reasons below, the Council should 1) establish a need standard for surface facilities related to underground gas reservoirs and apply that standard to NW Natural’s Request for Amendment 13 (“Amendment 13”), 2) clarify which aspects of Amendment 13 pertain to the “surface facility” and which aspects are “related or supporting facilities, and 3) begin to eliminate the exception from the need standard for facilities related to or supporting fossil fuel-based energy facilities.

¹ “Mist Underground Natural Gas Storage Facility - Draft Proposed Order on Request for Amendment 13,” Energy Facility Siting Council, 177 (Aug. 15, 2024), (hereinafter “Draft Proposed Order”) available at <https://www.oregon.gov/energy/facilities-safety/facilities/Facilities%20library/2024-08-15-MSTAMD13-DPO-w-Attachments-signed.pdf>.

² *Id.*

³ *Id.*

1. Background on Need Standards in the Council’s Review of Certificate Applications

ORS 469.501(1)(L) directs the Council, as a part of its review of applications for and amendments to site certificates, to establish need standards for nongenerating facilities “consistent with the state energy policy set forth in ORS 469.010 and 469.310.”

The state’s energy policy discourages the growth of facilities related to fossil fuels like the Mist Facility. ORS 469.010 states that “continued growth in demand for nonrenewable energy forms poses a serious and immediate, as well as future, problem.”⁴ The law continues that it is the policy of Oregon that “cost effectiveness be considered in all agency decision-making relating to energy facilities.”⁵ ORS 469.310 declares that the siting, construction, and operation of energy facilities “shall be accomplished in a manner consistent with the protection of public health and safety and in compliance with the energy policy and . . . other environmental protection policies of this state.”⁶

State energy and environmental policies highlight the urgency for EFSC to begin assessing the need, or lack thereof, for natural gas-related energy facilities under its jurisdiction. HB 2021 requires Portland General Electric (“PGE”) and Pacific Power to reduce the greenhouse gas emissions associated with serving Oregon load 80, 90, and 100 percent by 2030, 2035, and 2040, respectively.⁷ HB 2021 also has functionally stopped the expansion of natural gas generation, stating that the Council 1) cannot approve new generating facilities that will produce emissions and 2) cannot approve a site certificate amendment to an emitting generating facility if the proposed changes will significantly increase the gross carbon dioxide emissions that are reasonably likely to result from the operation of the facility.⁸ Executive Order 20-04 sets greenhouse gas emissions reduction goals of 45 percent and 80 percent below 1990 levels by 2035 and 2050, respectively.⁹ To be most consistent with achieving a science-based target for carbon reductions, the Oregon Department of Environmental Quality (“DEQ”) went further in its Climate Protection Program, requiring reductions in greenhouse gas emissions from covered fuel suppliers of 90 percent by 2050. Although invalidated in the Oregon Court of Appeals, DEQ has prepared draft rules, comparable to the original version of the rule, to comply with the Court’s order while retaining the same emissions reductions goals, further illustrating commitments to decarbonizing direct use fuels in Oregon.¹⁰ Importantly, the newest version of the Climate Protection Program applies to NW Natural.¹¹

⁴ ORS 469.010(1).

⁵ *Id.*

⁶ ORS 469.031.

⁷ ORS 469A.410(1).

⁸ ORS 469.413.

⁹ E.O. 20-04(2), Oregon, (Mar. 16, 2020), available at https://www.oregon.gov/gov/eo/eo_20-04.pdf.

¹⁰ “Climate Protection Program 2024: Fact Sheet,” Oregon Dept. of Environ. Quality, available at <https://www.oregon.gov/deq/ghgp/Documents/CPP2024ChangesFactSheet.pdf>; Monica Samayoa, “Oregon prepares to reboot an effort to cut greenhouse gas emissions,” Oregon Public Broadcasting, (Apr. 1, 2024), available at <https://www.opb.org/article/2024/04/01/oregon-greenhouse-gas-climate-change-legislation-protection-program/>.

¹¹ See e.g., Oregon Department of Environmental Quality, *Draft Rules—Division 273: Climate Protection Program 2024 Rulemaking*, OAR 340-0273-0010—340-027-0150.

Additionally, in only about one year—earlier than when NW Natural would even need to begin its construction related to Amendment 13¹²—the Oregon Department of Energy (“ODOE”) will release the Oregon Energy Strategy. House Bill 3630 directs ODOE to develop an “energy strategy” for the state that “identifies pathways to achieving the state’s energy policy objectives.”¹³ The Energy Strategy will be a comprehensive plan that analyzes a variety of approaches to meet the state’s greenhouse gas reduction targets on an economy-wide basis.¹⁴ ODOE’s most recent Biennial Report noted the importance of Executive Order 20-04, the DEQ’s Climate Protection Plan, and HB 2021 in its underlying assumptions about Oregon energy pathways.¹⁵ The assumptions going into ODOE’s modeling anticipate substantially reduced demand for natural gas substantially. These assumptions include: heat pumps making up 95% of residential and small commercial and 75% of large commercial space heating purchases by 2040; electrification of half of all household and commercial appliances by 2050; electrification of 95% of all household and small commercial water heaters; and no new gas pipeline infrastructure.¹⁶

Although the Biennial Report pointed to the Mist Facility as a location where renewable resources like clean hydrogen *could* be stored in the future, it also pointed out that “the development of renewable biofuels and hydrogen at-scale is not yet commercially viable.”¹⁷ The Oregon Global Warming Commission came to a similar conclusion in its “Roadmap to 2030” Report, which modeled strategies to achieve statewide greenhouse gas reductions by 2030 instead of 2035, stating that there was “insufficient renewable natural gas and renewable hydrogen” to meet the 2030 goal.¹⁸

Oregon energy and environmental policy is moving towards renewable and electrical energy and away from fossil fuels like natural gas. The Council should, therefore, only approve facilities related to natural gas that are *needed*. Otherwise, the Council risks approving expensive expansions to the gas system that are contrary to Oregon policy, saddling Oregon consumers with the associated costs for decades. The Council is the only agency positioned to thoroughly test whether the development at issue here is consistent with Oregon’s energy policy and is *needed*. The only other agencies which might have jurisdiction over NW Natural’s activities at the Mist Facility is the Oregon Public Utility Commission (“PUC”) and DOGAMI. As to the latter, DOGAMI’s regulations in OAR 632, Div. 10 never ask for an assessment of need. And to our knowledge NW Natural has not described its activities in an Integrated Resource Plan nor received acknowledgement for its planned investments here from PUC.

¹² Draft Proposed Order, at 26.

¹³ ORS 469.062(3).

¹⁴ *Id.*

¹⁵ Department of Energy, 2022 Biennial Energy Report, at 377–80, available at

<https://www.oregon.gov/energy/Data-and-Reports/Documents/2022-Biennial-Energy-Report.pdf>.

¹⁶ “Oregon Energy Strategy: Draft Reference Scenario – Key Data and Assumptions,” Oregon Dept. of Energy, (Aug. 27, 2024), available at <https://www.oregon.gov/energy/Data-and-Reports/Documents/2024-Draft-Reference-Scenario.pdf>.

¹⁷ *Id.* at 384.

¹⁸ “Oregon Climate Action Roadmap to 2030,” Oregon Global Warming Commission (Mar. 2023), available at <https://static1.squarespace.com/static/59c554e0f09ca40655ea6eb0/t/64275befc3f5d82a60b981b2/1680301043241/023-Climate-Action-Roadmap.pdf>.

2. The Council should establish a need standard for surface facilities related to an underground gas storage reservoir and apply that standard to Amendment 13.

The Council has adopted a Need Standard in OAR 345-023-0005, which states in full:

“This division applies to nongenerating facilities as defined in ORS 469.503(2)(e)¹⁹, except nongenerating facilities that are related or supporting facilities. To issue a site certificate for a facility described in sections (1) through (3), the Council must find that the applicant has demonstrated the need for the facility. The Council may adopt need standards for other nongenerating facilities. This division describes the methods the applicant shall use to demonstrate need. In accordance with ORS 469.501(1)(L), the Council has no standard requiring a showing of need or cost-effectiveness for generating facilities. The applicant shall demonstrate need:

(1) For electric transmission lines under the least-cost plan rule, OAR 345-023-0020(1), or the system reliability rule for transmission lines, OAR 345-023-0030, or by demonstrating that the transmission line is proposed to be located within a “National Interest Electric Transmission Corridor” designated by the U.S. Department of Energy under Section 216 of the Federal Power Act;

(2) For natural gas pipelines under the least-cost plan rule, OAR 345-023-0020(1), or the economically reasonable rule for natural gas pipelines, OAR 345-023-0040;

(3) For storage facilities for liquefied natural gas with storage capacity of three million gallons or greater under the least-cost plan rule, OAR 345-023-0020(1), or the economically reasonable rule for liquefied natural gas storage facilities, OAR 345-023-0040.”²⁰

The definition of “nongenerating facilities” in ORS 469.503 itself refers to a subset of the definition of “energy facilities” in ORS 469.300. To paraphrase, that subset includes 1) certain high voltage transmission lines, 2) certain pipelines, 3) synthetic fuel plants, 4) plants that convert biomass to gas, liquid or solid, 5) storage facilities for liquified natural gas (“LNG”) and 6) surface facilities of sufficient size related an underground gas storage reservoir.²¹

To pause for a moment, the significance of this string of definitions is to show that “nongenerating facilities” as used in OAR 345-023-0005 is essentially interchangeable with “energy facilities” as used in ORS 469.300. More specifically, nongenerating facilities are a subset of energy facilities, meaning, not all energy facilities are nongenerating facilities, but all nongenerating facilities *are* energy facilities.

In ORS 469.300, “energy facilities” are different from “relating or supporting facilities,” which include certain pipelines, transmission lines, and other structures but does not include

¹⁹ The citation to ORS 469.503(2)(e) should read ORS 469.503(2)(f), which houses the definitions for ORS 469.503.

²⁰ OAR 345-023-0005.

²¹ ORS 469.300(12).

underground gas storage reservoirs, production, injection or monitoring wells, or wellhead equipment or pumps, which fall under DOGAMI’s jurisdiction.²² A more thorough discussion on the two definitions is contained in Section 3 below.

Under OAR 345-023-0005, the Council currently requires a finding of need for three specific types of nongenerating facilities: high voltage transmission lines, natural gas pipelines, and storage facilities for LNG. And although the Council exempts “nongenerating facilities that are related or supporting facilities” from the regulation, it retains the right to “adopt needs standards for other nongenerating facilities.”²³

The Draft Proposed Order’s short discussion of the applicability of OAR 345-023-0005 stated:

“The rule does not include a need standard for surface facilities related to an underground natural gas storage reservoir. NW [Natural] was not required to demonstrate need for the surface facilities . . . proposed through the previous amendment requests; nor was the Council required to make a finding of need in order to grant the requested amended site certificate.”²⁴

In essence, the Draft Proposed Order asserts that because NW Natural has not previously been required to demonstrate need, it does not need to do so here. That line of reasoning is insufficient given the changes in Oregon’s energy and environmental policies—which the Council’s need standard must be consistent with—that have occurred in the last five years. The Council should not adopt a “business as usual” approach to Amendment 13, because the business of energy regulation in Oregon is no longer operating under usual conditions.

The Council must adapt its Need Standard to be consistent with Oregon’s current energy and environmental policy. The reservation in OAR 345-023-0005(1) that “the Council may adopt needs standards for other nongenerating facilities” provides the Council the ability to adopt a standard for surface facilities related to underground gas reservoirs and apply that new standard to Amendment 13.²⁵ The “may adopt” language should be interpreted as putting applicants on notice that additional standards beyond the three specific standards articulated in the regulation could be applied at any time. To interpret it otherwise would render the sentence meaningless; certainly the Council has the authority to amend the regulation and add standards for other nongenerating facilities in the future. The regulation is best understood to state that, while the Council *must* apply the articulated standards for high voltage transmission, natural gas pipelines, and LNG storage facilities, it *may*, at its discretion, apply a standard to other nongenerating facilities. The Council should apply a need standard to Amendment 13 because the failure to do so conflicts with Oregon’s energy and environmental policy.

Oregon’s energy policy makes suspect the need for NW Natural to spend millions of dollars updating and expanding the Mist Facility. Often, the Mist Facility provides storage space for natural gas destined for use at gas-powered generating facilities. But, as pointed out above, HB

²² ORS 469.300(25).

²³ OAR 345-023-0005.

²⁴ Draft Proposed Approval, at 177.

²⁵ OAR 345-023-0005(1).

2021 has frozen the growth of gas-powered generating facilities: the Council cannot approve new emitting generating facilities, nor can it approve amendments to existing facilities that will significantly increase a facility's emissions, i.e. that will increase the use of natural gas at the facility. By 2040 PGE and Pacific Power will need to have reduced the emissions associated with delivering load to their customers by 100%, which will require the transition away from even existing natural gas plants. Reducing emissions to zero will necessarily removing most, if not all, natural gas generation, functionally eliminating a main customer base for the Mist Facility.

Moreover, electrification of buildings, both residential and commercial, in NW Natural's service area will lessen its own need to store larger quantities of natural gas. Finally, although ODOE believes that renewable natural gas or green hydrogen will play some role in the decarbonization of Oregon's economy, the extent of that role is uncertain given that those alternative fuels are not currently commercially viable. Thus, it is unclear if, let alone when, the Mist Facility will be needed to store quantities of renewable natural gas that exceed the facility's current storage capacity.

We understand that the Council's jurisdiction over the Mist Facility is limited. But that does not mean that the Council should not align its standards with Oregon policy to the fullest extent of that limited jurisdictional sphere. Currently, the scope of the Council's need standard is not consistent with either Oregon's general energy policy of discouraging the "continued growth in demand for nonrenewable energy" or its specific policies mandating emissions reductions and electrification because it allows for emitting energy facilities to expand without any determination of need. Contrary to the language of the Draft Proposed Order, the Council is required to make a finding of need to grant the requested amended site certificate so that its Need Standard remains consistent with Oregon energy and environmental policy. Accordingly, this action is premature and should be curtailed until, at a minimum, the Council has established a need standard for surface facilities related to underground gas storage reservoirs. That standard may need to take into account the aforementioned DEQ rulemakings and ODOE's Energy Strategy. Therefore, to ensure that the Council's decision is not contrary to Oregon law and policy, it should deny Amendment 13 until a need standard for surface facilities related to an underground gas storage reservoir is created. The Council should then apply that standard to Amendment 13.

3. The "related or supporting facilities" exception does not apply to Amendment 13.

The Draft Proposed Order continues:

"OAR 345-023-0005 further states that the division does not apply to
"nongenerating facilities that are related or supporting facilities.

Council previously evaluated the applicability of this standard on the facility in the Final Order on [Amendment 11] and found that this requirement does not apply to any related or supporting facilities. This fact would not change as a result

of [Amendment 13] requested changes, which continue to be nongenerating facilities that are related or supporting facilities.”²⁶

We have multiple concerns with this language. First, the language mischaracterizes the discussion from the Final Order on Amendment 11. Second, the language wrongly implies that the entirety of the facilities at issue in Amendment 13 are “related or supporting facilities”. Finally, the blanket exception for all related or supporting facilities is in need of reevaluation.

a. The Council should clarify the Draft Proposed Order’s language regarding the “related or supporting facilities” discussion in Amendment 11 and its applicability to Amendment 13.

“Related or supporting facilities” can only be understood in the context of the definition of “energy facilities” in ORS 469.300.²⁷ Without reproducing the full definition here energy facilities cover ten types of facilities. Each type of facility has certain requirements to qualify it as an “energy facility,” and then often has certain exemptions from that definition. For example, a “pipeline” is an “energy facility” if it is 1) at least six inches in diameter, five or more miles in length, and used to transport crude petroleum, LNG, or liquid geothermal energy, 2) at least 16 inches in diameter, five or more miles in length, and used to transport natural gas, or 3) at least 16 inches in diameter, five or more miles in length, and used to transport gaseous geothermal energy.²⁸ An otherwise qualifying natural gas pipeline is not an energy facility, though, if less than five miles of its length are more than 50 feet from a public road, or if it is a certain type of upgrade to an existing natural gas pipeline.²⁹ A similar structure exists for the definition of high voltage transmission lines as energy facilities, which must be more than 10 miles and have a capacity of at least 230,000 volts, but excludes lines within existing corridors, certain line upgrades, and “associated transmission lines.”³⁰ The definition of “surface facility related to an underground gas storage reservoir” requires the facility to be designed to receive or deliver more than 50 million cubic feet of gas per day or require more than 4000 horsepower of compression to operate, but excludes underground storage gas reservoirs and injection, withdrawal, or monitoring wells.³¹ The list goes on.

ORS 469.300’s definition of “related or supporting facilities” is worth quoting in full:

“‘Related or supporting facilities’ means any structure, proposed by the applicant, to be constructed or substantially modified in connection with the construction of an energy facility, including associated transmission lines, reservoirs, storage facilities, intake structures, road and rail access, pipelines, barge basins, office or public buildings, and commercial and industrial structures. ‘Related or supporting

²⁶ Draft Proposed Order, at 177.

²⁷ It is crucial to reiterate that ORS 469.300 is relevant as a tertiary reference point from OAR 345-023-0005. The Need Standard defines nongenerating facility by reference to ORS 469.503. ORS 469.503 defines nongenerating facility by reference to the definition of “energy facility” in ORS 469.300. Therefore, the term “nongenerating facility” is functionally interchangeable with the term “energy facility.”

²⁸ ORS 469.300(12)(a)(E).

²⁹ ORS 469.300(12)(a)(E)(ii)(I)–(II).

³⁰ ORS 469.300(12)(a)(C).

³¹ ORS 469.300(12)(a)(I).

facilities’ does not include geothermal or underground gas storage reservoirs, production, injection or monitoring wells or wellhead equipment or pumps.”³²

The term “related or supporting facilities” only applies to certain types of facilities that don’t themselves qualify as an “energy facility.” For example, “pipeline” should only mean pipelines that don’t meet the criteria for a pipeline to qualify as an energy facility.³³ “Associated transmission lines,” having been excepted from the definition of “energy facility,” is then defined as a “related or supporting facility.”³⁴ For each of the listed items under the definition of “related or supporting facility,” there is a corresponding specific or general exception to the definition of an energy facility. Indeed, the definition goes so far as to note that the listed exceptions in the definition of “surface facility to an underground gas storage reservoir” are *not* “related or supporting facilities,” presumably to avoid any ambiguity over whether they are covered as well, given that they are not under Council jurisdiction.

Put simply, “related or supporting facilities” has a narrow, limited scope. Rather than being broadly applicable to large swaths of facilities, it merely offers a unifying term for a series of specific exceptions to the definition of “energy facility.” The Council applied this narrow understanding of “related or supporting facilities” in its review of Amendment 11. In the Final Order on Amendment 11, the Council did not state that the entirety of the Mist surface facilities were “related or supporting” but rather that one specific aspect of Amendment 11, a transmission pipeline,³⁵ fell under the exception.³⁶ The Draft Proposed Order, however, extends the reasoning in the Final Order of Amendment 11, which was limited to the one component of Amendment 11, to the entire Mist Facility for Amendment 13 without a basis for doing so.³⁷

The Council has had too broad an approach to “related or supporting facilities” in the past and now seeks to broaden the definition even further, apparently to the point where it entirely subsumes the definition of a surface facility. The Council should, at a minimum, clarify in its Final Order that “related or supporting facilities” are only those facilities not encompassed by the

³² ORS 469.300(25).

³³ The main takeaway from this example is that not all pipelines are “related or supporting facilities,” but rather some are “energy facilities.” For example, a new natural gas pipeline that is 24 inches in diameter, 12 miles long, and 5 or more of those miles are more than 50 feet from a public road, is an “energy facility” because it meets the criteria of ORS 469.300(12)(a)(E)(ii). Therefore, it is not a “pipeline” but an “energy facility,” and, accordingly, it would not be captured by the use of the term “pipeline” in the definition of “related or supporting facilities.”

³⁴ Compare ORS 469.300(12)(a)(C)(iii) *with* ORS 469.300(25).

³⁵ We do note, however, that the Council wrongly interpreted the definition of “related or supporting facility” in Amendment 11. The transmission pipeline in Amendment 11 should have fallen under the definition of “energy facility” because it was more 16 inches, more than 5 miles long, and did not qualify for one of the exceptions to the definition of “pipeline” as an energy facility. The transmission line in question was a new natural gas pipeline, 24 inches in diameter and 12 miles long. Final Order on Amendment 11, at 5. The Council conflated the definition of a pipeline that is an energy facility with the use of the term “pipeline” in the definition for related or supporting facilities.

³⁶ Final Order on Request for Contested Case and Mist Facility Amendment No. 11, Energy Facility Siting Council, 150 (Apr. 2016), (hereinafter “Final Order on Amendment 11”), available at https://www.oregon.gov/energy/facilities-safety/facilities/Facilities%20library/FINAL%20ORDER%20MIST%20FACILITY%20RFA%2011_2016-4-21.pdf.

³⁷ Draft Proposed Order, at 177 (stating that the Council previously found the need standard does not apply to any “related or supporting facilities” and that “this fact would not change as a result of [Amendment 13] requested changes, *which continued to be nongenerating facilities that are related or supporting facilities.*”)

definition of energy facility and therefore do not apply to facilities that qualify as surface facilities related to underground gas storage reservoirs.

This distinction is important because Amendment 13 makes changes to the surface facility that are not related or supporting facilities. For example, Amendment 13 calls for a series of upgrades to several compressor stations at both the North Mist Compression Station and the Miller Station locations.³⁸ Those are modifications to the surface facility, which is an energy facility and therefore a “nongenerating facility,” not to a “related or supporting facility.” The Council should perform a similar analysis for each proposed action to determine which actions are a part of the nongenerating facility, i.e., a surface facility, and which are “related or supporting facilities.” The Council should not, however, adopt the language from the Draft Proposed Order that implies the entire Mist Facility is a related or supporting facility.

b. There is no exception for “related or supporting facilities” in OAR 345-023-0005, and if there is, the exception is not consistent with Oregon policy.

We would also like to point out two issues related to the exception for “related or supporting facilities.” For clarity, the first sentence of OAR 345-023-0005 states “This division applies to nongenerating facilities as defined in ORS 469.503(2)(e), *except nongenerating facilities that are related or supporting facilities.*”³⁹

The exception as written covers nothing because there is no such thing as “nongenerating facilities that are related or supporting facilities.” The regulatory and statutory definitions of the terms necessitate this interpretation.

The Need Standard defines “nongenerating facilities” by reference to ORS 469.503, which itself defines “nongenerating facilities” as “those *energy facilities* that are defined in ORS 469.300(12)(a)(C) and (E) to (I).”⁴⁰ Therefore, “nongenerating facilities,” as used in OAR 345-023-0005 are simply six of the ten types of “energy facilities” as defined in 469.300(12)(a). For the purposes of this comment, the two terms—nongenerating facility and energy facility—are essentially interchangeable.

The Council’s regulations also define “related or supporting facilities” by reference to ORS 469.300.⁴¹ Because both “nongenerating facilities” and “related or supporting facilities” receive their definition from ORS 469.300, the terms should be read together in the context of that statute’s scheme. To reiterate the point made earlier in this comment, ORS 469.300 completely separates energy facilities (which, again, are the same as “nongenerating facilities”) from related or supporting facilities. Each type of potential energy facility has certain qualifications that must be met. Transmission lines must have a particular length and voltage, stand-alone pipelines must be a particular width and length, etc. If the given type of facility meets those qualifications, it stops being a “transmission line” or a “pipeline” or a “synthetic fuel plant” or a “surface facility related to an underground storage reservoir” and becomes an “energy

³⁸ Draft Proposed Order, at 1.

³⁹ OAR 345-023-0005 (emphasis added).

⁴⁰ *Id.*; ORS 469.503(2)(f) (emphasis added).

⁴¹ OAR 345-001-0010(27).

facility.” The statute differentiates these “energy facilities” from “related or supporting facilities,” which are made of up structures that, definitionally, are not energy facilities. For example, the only type of transmission line that is a “related or supporting facility” is an “associated transmission line,”⁴² which are specifically exempted from being an energy facility.⁴³

To summarize, OAR 345-023-0005 defines “nongenerating facilities” by reference to ORS 469.503. ORS 469.503 defines “nongenerating facilities” as a subset of “energy facilities” defined in ORS 469.300; therefore, nongenerating facilities are energy facilities.⁴⁴ According to the language of ORS. 469.300, energy facilities cannot be “related or supporting facilities;” they are two distinct types of facilities with no overlap. Because nongenerating facilities are energy facilities, by the transitive property, nongenerating facilities *cannot be* “related or supporting facilities.” Therefore, excepting “nongenerating facilities that are related or supporting facilities” excepts nothing, because there is no such thing as a nongenerating facility that is a related or supporting facility.⁴⁵

Second, assuming the language of the regulation validly excepts related or supporting facilities, that exception is contrary to the language of ORS 469.501(2), which states: “The council may adopt exemptions from any need standard . . . if the exemption is consistent with the state’s energy policy set forth in ORS 469.010 and 469.310.”⁴⁶ Here, the Council has adopted an exception to its need standard: the categorical exception for related or supporting facilities. Because the Council has adopted an exception, that exception must be consistent with the same policies described in Part 1 of this comment. To summarize that section, ORS 469.010 states that the “continued growth in demand for nonrenewable energy forms poses a serious *and immediate*, as well as future, problem.”⁴⁷ ORS 469.310 states that siting, construction, and operation of energy facilities should be done in a manner consistent with, among other things, the state’s energy and environmental protection policies.⁴⁸ Those policies call for the rapid and wide-scale decarbonization of the Oregon economy writ large, and in particular the full decarbonization of Oregon’s two largest investor-owned utilities, who, notably, are users of the storage capacity at the Mist Facility. And while ODOE has noted that renewable natural gas may help reduce emissions in sectors that are hard to electrify, it also repeatedly states that renewable fuels are not a viable option under current market conditions.

If approved, NW Natural will have seven years to complete the construction proposed in Amendment 13. By that time, PGE and Pacific Power will need to have reduced their emissions by 80 percent, and will have to eliminate the remaining emission less than a decade later Oregon will likely have reduced its greenhouse gas emissions from a 1990 baseline by 45 percent, with the goal to reduce them by anywhere from 80 to 95 percent by 2050. Allowing facilities related to or supporting fossil fuel-based energy facilities to be approved without first determining need

⁴² ORS 469.300(25).

⁴³ ORS 469.300(12)(a)(C)(iii)

⁴⁴ ORS 469.503(2)(f) (“‘Nongenerating facility’ means those energy facilities that are defined in ORS 469.300(12)(a)(C) and (E) to (I).”)

⁴⁵ Imagine a city ordinance regulating pet ownership in city limits. The ordinance says: “This ordinance applies to all four-legged mammals, except cats that are dogs.” The exception would

⁴⁶ ORS 469.501(2).

⁴⁷ ORS 469.010(1).

⁴⁸ ORS 469.310.

guarantees that NW Natural and others will get approval to construct pipelines and other structures that will be rendered useless before they are even complete. Sooner or later, the Council will need to bring its need standards in line with Oregon policy—it should choose to do so now.

4. Conclusion

We urge the Council not to accept the Draft Proposal approving Amendment 13. We ask that the Council: 1) assess which components of Amendment 13 are a part of the surface facility related to an underground gas storage reservoir under the definitions found in ORS 469.300 and OAR 345-001-0010; 2) use its authority under OAR 345-023-0005 to establish a need standard for surface facilities; 3) apply that need standard to Amendment 13. We also ask that the Council interpret OAR 345-023-0005 in the manner suggested in Section 3 of this comment so that it brings its interpretation in line with the text of the Council's governing statutes.

Respectfully submitted,

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Mist-Birkenfeld Rural Fire Protection District

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Office- 503-755-2710 Fax- 503-755-2556

September 19, 2024

To: Kathleen Sloan, Senior Siting Analyst
Oregon Department of Energy
550 Capitol St. NE, 1st Floor
Salem, OR 97301

Re: **Public Comment, NW Natural Mist Resiliency Project (RFA-13)**

Dear Ms. Sloan,

On behalf of Mist-Birkenfeld Rural Fire Protection District (RFPD), I am writing to comment on NW Natural's proposed Request for Amendment 13 (RFA-13) to the Site Certificate for the Mist Underground Natural Gas Storage Facility.

Mist-Birkenfeld RFPD serves as the primary fire protection agency responsible for the Mist Storage Facility sites. Throughout NW Natural's operations at their sites, we have maintained close communication and collaboration with the company. They have demonstrated a clear commitment to the safe operation of their facilities and have a long history of providing support for the Mist-Birkenfeld RFPD.

We appreciate the opportunity NW Natural provided to review and consult on RFA-13. The proposed construction and new operations outlined in the RFA-13 would not result in substantial impacts to Mist-Birkenfeld RFPD's ability to provide fire protection and emergency services. Our agency is prepared to respond appropriately and as necessary to any issue that could arise with respect to construction and operation of the proposed project.

Mist-Birkenfeld RFPD looks forward to continued cooperation with NW Natural to ensure the safety of the Mist Storage Facility site and our Fire District.

Sincerely,

A handwritten signature in black ink, appearing to read "Joe Kaczinski", is written over a light blue horizontal line.

Joe Kaczinski
Fire Chief
Mist-Birkenfeld RFPD
503-755-2710
joek@mistbirkenfeldrfd.org