

**FILED**

**BEFORE THE ENVIRONMENTAL QUALITY COUNCIL  
STATE OF WYOMING**

OCT 21 2013

Objections to Linc Energy's Proposed )  
Research & Development License for )  
Underground Coal Gasification and the )  
Proposed Reclassification & Exemption of )  
a Portion of the Fort Union Formation )

Jim Ruby, Executive Secretary  
Environmental Quality Council

Docket No. 13-4804

**OBJECTIONS AND REQUEST FOR HEARING**

Pursuant to W.S. § 35-11-406(k) and the Wyoming Department of Environmental Quality ("WDEQ") Rules of Practice and Procedure, Powder River Basin Resource Council ("PRBRC" or "Resource Council") hereby files these objections and request for hearing related to Linc Energy's ("Linc") proposed research and development license for underground coal gasification and proposed aquifer reclassification and exemption.

Specifically, and as discussed in detail below, the reclassification and exemption of the proposed aquifer would violate the Safe Drinking Water Act ("SDWA"), EPA's regulations implementing the SDWA, and corresponding state laws and regulations.

In support of this protest, the Resource Council advises WDEQ and the EQC as follows:

**Name and Address of Protestant and Protestant's Counsel**

The name of Protestant is Powder River Basin Resource Council. The Resource Council's address is: 934 N. Main St., Sheridan, WY 82801. Legal counsel for Protestant is Shannon Anderson, Staff Attorney, Powder River Basin Resource Council, 934 N. Main St., Sheridan, WY 82801.

**The Action, Decision, Order or Permit upon Which a Hearing  
Is Requested and Objection is Made**

This request involves the proposed research and development license for Linc to carryout underground coal gasification activities in Section 36, Township 44 North, Range 74 West in

Campbell County, Wyoming. Specifically, the objections involve the proposed reclassification and exemption of certain aquifers as part of the license application.

### **Basis for Objections and Request for Hearing**

The coal seams of the Fort Union Formation are regional aquifers, providing critical water resources to landowners and local governments in our arid state. The geology and relatively good water quality make the Fort Union Formation a preferred source of groundwater for domestic and livestock purposes in the Powder River Basin. As explained by Dr. John Bredehoeft, a retired USGS scientist:

The coal beds are not very porous; the porosity is thought to be 0.4 percent. However, the coal beds are reasonably permeable because of the fractures (cleats) within the coal. The coals often contain better quality water than the surrounding sand aquifers; in places the coal beds are the most permeable aquifers. For these reasons the coal beds are often the preferred aquifers for groundwater development.

John Bredehoeft, *Comments on Wyoming and Montana Final Environmental Impact Statement on the Development of Coal-Bed Methane*, available at

<http://www.powderriverbasin.org/assets/Uploads/files/final/expertfeisjohnbredehoeft.pdf>.

As explained below, Linc's proposed underground coal gasification project will irreversibly damage a portion of the Fort Union Formation and will contaminate this source of good quality water. The portion of the Fort Union Formation where Linc proposes its project has some of the best groundwater quality in the region. Equally important, approval of Linc's request to reclassify and exempt this portion of the Fort Union Formation will set a dangerous precedent for future contamination from underground coal gasification and other industrial projects in the Powder River Basin, threatening the viability of this regional aquifer as a continued source of water.

## **I. Overview of Linc's Proposed Project and Aquifer Exemption Request**

Linc proposes to carry out an experimental underground coal gasification project on a state section of land in Campbell County. Underground coal gasification (or "UCG") converts coal to a syngas through chemical reactions underground. The process oxidizes the coal, igniting it and converting it into a syngas that is transported to the surface through a production well. Linc plans to flare off all gas produced from the project.

The underground coal gasification process is not without risk and past projects, both commercial and experimental, have resulted in the long-term contamination of aquifers. As explained in a report to the Wyoming Business Council, "The major concerns with the UCG process are excessive subsidence, groundwater influx, mixing of aquifers (or water bearing strata), and groundwater contamination." Gas Tech, *Viability of Underground Coal Gasification in the "Deep Coals" of the Powder River Basin, Wyoming*, June 2007, at 3, excerpts attached. Of particular note, the Hoe Creek I, II, and III projects carried out by the Department of Energy in the Powder River Basin, were considered failures and led to the contamination of groundwater. *Id.* at 8, 18-19; *see also* Linc Application at 14-6 to 14-7. Linc's project is likewise experimental and not without risk. Linc admits that its process is not fully refined and that through the pilot project, Linc plans to "refine techniques and procedures to establish hydraulic control" of the gasifier with the goals of learning how to maintain groundwater flow and pressures. *Id.* at 14-29.

It is highly likely that Linc's project will irreversibly damage the aquifer used for underground coal gasification. Linc's permit application states that ungasified components such as "ash, char, fine grained sediment, and other mineralogy associated with coal deposits" will be present in the cavity after the gasifier is shut down. The presence of char indicates incomplete gasification or coal pyrolysis, which also implies the presence of condensable hydrocarbons (i.e.,

coal tars). A recent Independent Scientific Panel report commissioned by the Queensland government found that “[t]he UCG process involves pyrolysis, combustion and gasification that will inherently produce contaminants such as benzene, toluene, ethylbenzene, xylenes (commonly referred to together as BTEX), various phenols, polycyclic aromatic hydrocarbons (PAHs) and other toxic compounds.” Queensland Independent Scientific Panel for Underground Coal Gasification, *Report on Underground Coal Gasification Pilot Trials*, June 2013, available at <http://mines.industry.qld.gov.au/assets/legislation-pdf/isp-final-report-cs-review.pdf>, attached; *see also id.* at 34 (“During cooling there is an inherently high probability of formation of potentially contaminating chemicals.”). The lighter components are highly water soluble, with the heavier, higher-boiling-point components having lower solubility and higher viscosities. Multiple water flushes may not be enough to remove these heavier hydrocarbons and eliminate subsequent exposure of the cavity to groundwater contamination.

In Australia, Linc’s project is likewise still experimental in nature. The ISP report states

Both companies have demonstrated capability to commission and operate a gasifier. Neither company has yet demonstrated their proposed approach to decommissioning, i.e., the self-cleaning cavity, is effective. The ISP remains open to the possibility that the concept is feasible. However sufficient scientific/technical information, particularly relating to decommissioning, is not yet available to reach a final conclusion. Important work has been undertaken but more is yet to be done.

*Id.* at Executive Summary; *see also id.* at 23 (“Linc Energy manages a site that is clearly an experimental facility . . .”).

Here, Linc’s experimental project is particularly troubling because the company is proposing to carry out its underground coal gasification project in a major regional aquifer frequently used to supply water for homes, ranches, and municipalities. As part of its mining permit, Linc must receive an aquifer exemption under the Safe Drinking Water Act’s (“SDWA”) Underground Injection Control (“UIC”) Program. This aquifer exemption would permanently

exempt this portion of the Fort Union Formation from protection under the SDWA. According to the public notice published for this project:

The groundwater to be affected in the production zone will be reclassified by the Water Quality Division of the Department of Environmental Quality, as Class V (Mineral Commercial) upon issuance of this license. This classification includes specified production zones for wellfield(s) included in the application. This classification process serves as the State's process to identify aquifers to be exempted under the federal underground injection control program. The aquifer exemption is being requested under the following criteria:

- a) It does not currently serve as a source of drinking water; and
- b) It is mineral, hydrocarbon or geothermal energy producing, or can be demonstrated by a permit applicant as part of a permit application for a Class II or III operation to contain minerals or hydrocarbons that considering their quantity and location are expected to be commercially producible.

As explained below, Linc's request for aquifer reclassification and exemption should be denied because the proposed aquifer is an underground source of drinking water and cannot legally be exempted from protection under the SDWA. Additionally, Linc's proposal raises significant policy concerns about the possibility of future exemptions in the Fort Union Formation that must be resolved.

## **II. Linc's Proposed Aquifer Exemption Violates the SDWA**

Linc's proposed aquifer exemption does not meet the requirements of the SDWA and its implementing regulations because (1) the Fort Union Formation is a regional source of drinking water and Linc cannot demonstrate that contamination will not spread beyond the exemption area; and (2) the aquifer has good quality water and is therefore a future source of drinking water that should remain protected under the SDWA.

### **A. The Purpose and Basic Requirements of the SDWA**

The primary purpose of the SDWA and its implementing regulations is to protect underground sources of drinking water. 42 U.S.C. § 300h(b); H.R. Rep. No. 93-1185, 120 Cong. Rec. 6454, 6480 (1974); *Western Nebraska Resources Council v. EPA*, 793 F.2d 194, 195-196

(8th Cir. 1986). The Act's requirements for protecting underground sources of drinking water are found in 42 USC § 300h. Specifically, the Act provides that drinking water programs have requirements that, at a minimum, assure that no underground sources of drinking water will be endangered by any underground injection. *Id.* at 300h(b)(1), 3(C).

In passing the SDWA, Congress recognized the balance between aquifer protection and energy production but ultimately came down in favor of groundwater protection. *See, Phillips Petroleum Co. v. U.S. Environmental Protection Agency*, 803 F.2d at 560 (concluding that if a requirement on injecting activities is necessary to assure that underground sources of drinking water are not endangered, whether that requirement impedes mineral recovery is irrelevant because the "clear and overriding concern" of Congress in passing the Act was to assure the safety of "present and potential sources of drinking water").

#### **B. The Requirements for Aquifer Exemptions Under the SDWA**

An aquifer exemption removes that aquifer, or a portion of it, from protection as an underground source of drinking water under the SDWA. In order to receive an exemption, an applicant must demonstrate that the aquifer is not currently a drinking water source and is not likely to be used as a drinking water source in the future. Under the regulations implementing the SDWA, aquifer exemptions are available if the aquifer:

- a) Does not currently serve as a source of drinking water, and
- b) It cannot now and will not in the future serve as a source of drinking water *because*:
  - (1) It is mineral, hydrocarbon or geothermal energy producing, or can be demonstrated by a permit applicant as part of a permit application for a Class II or III operation to contain minerals or hydrocarbons that considering their quantity and location are expected to be commercially producible.
  - (2) It is situated at a depth or location which makes recovery of water for drinking water purposes economically or technologically impractical;
  - (3) it is so contaminated that it would be economically or technologically impractical to render that water fit for human consumption; or
  - (4) it is located over a Class III well mining area subject to subsidence or catastrophic collapse.

40 C.F.R. § 146.4 (emphasis added). Stated another way by David Murry, a Senior Geologist and Project Manager with the Texas Commission on Environmental Quality:

Until the quality of the ground water is restored and the exempt status is removed, water will not be used for drinking because of its mineral or geothermal character, its depth or location, or its pre-existing contamination renders it impractical for treatment to make it fit for drinking.

David Murry, *Class III In Situ Uranium Injection Wells and Aquifer Exemptions in Texas*:

*Multiple Levels of Permitting Protection for USDW Protection*, available at

[http://www.gwpc.org/sites/default/files/event-sessions/Murry\\_David.pdf](http://www.gwpc.org/sites/default/files/event-sessions/Murry_David.pdf).

In other words, EPA's regulations make it clear that the agency intended that aquifers or portions of aquifers only be exempted when they have "no real potential to be used as drinking water sources." 45 Fed. Reg. 33,290, 33,328 (May 19, 1980); *see also, Id.* at 33,330 (an exempted aquifer is an aquifer or portion of an aquifer that would otherwise qualify as a USDW, but has no actual potential for providing drinking water).

Aquifer exemptions must be approved by EPA because they are considered a formal revision to the state's program implementing the SDWA. *Western Nebraska Resources Council*, 793 F.2d at 197 (citing 40 C.F.R. §§ 144.7(b)(3), 145.32). The congressional directive to EPA is clear: the policy priority is to protect groundwater aquifers that are current sources of drinking water or aquifers that are capable of being future sources of drinking water.

### **C. Linc's Application Does Not Meet the Requirements for Aquifer Exemption**

As discussed above, Linc's proposed aquifer exemption is problematic because it is proposed in a widely used regional source of drinking water – the Fort Union Formation. Because of the experimental nature of its proposed project, Linc is not able to conclusively

demonstrate that contamination will not spread beyond the aquifer exemption area into portions of the Fort Union Formation that are currently used for drinking water purposes.

Second, the portion of the aquifer that Linc proposes to use for its project contains good quality water that could, with reasonable foreseeability, be used as a future source of drinking or livestock water in the near future.

Finally, even if just considering Linc's limited view of the requirements of aquifer exemptions, the company has not demonstrated it meets the requirements because it has not shown that this portion of the Fort Union Formation is capable of producing minerals in sufficient quantities and qualities to be commercial.

#### **1. Linc's Project Will Not Prevent Contamination of Current Sources of Drinking Water Supply**

In the arid Powder River Basin, ranches, homes, and local governments obtain water from the ground. There is no local surface water supply available in sufficient quantities and qualities for drinking and livestock water. *See* Wyoming State Engineer's Office, *Background: Time Limited Water Haul Permits from the Fort Union Formation in Campbell County*, April 9, 2008, available at <http://tinyurl.com/longpcb> ("The City of Gillette and all other water users in the vicinity of Gillette depend solely on ground water for their water needs."). As identified in numerous geological and hydrological reports, in the Powder River Basin "[g]roundwater for domestic consumption is derived predominantly from the Wasatch and Fort Union aquifers." GasTech Report at 46. Many of the Resource Council's landowner members across the Basin rely on the Fort Union Formation for drinking and livestock water.

In addition to wide use by private landowners for domestic and livestock watering purposes, the Fort Union Formation also provides significant water resources to municipalities and water districts. *See e.g.*, HKM Engineering, *Northeast Wyoming River Basins Water Plan*,



Appendix E, available at <http://waterplan.state.wy.us/plan/newy/techmemos/muniuse.html>

(showing that most municipalities and water districts in Campbell County use water from Fort Union wells); *see also* Wyoming State Engineer's Office, *Background: Time Limited Water Haul Permits from the Fort Union Formation in Campbell County*, April 9, 2008 (noting that the Fort Union Formation is "a drinking water resource for both the City of Gillette and numerous subdivisions in the Gillette area."). Some of these municipal wells are in relative close proximity to Linc's project.

The Fort Union Formation is also a water source with dwindling supply, making preservation of this source even more important. Because of population and industrial growth and ongoing drought, the Wyoming State Engineer's Office determined that "[u]se of a quality, declining ground water resource for use in construction, oil and gas activities, etc. is not in the public's water interest." *Id.* As a result, the agency limits the amounts and types of water permits that can be received from the formation. *Id.*

As discussed above, there are serious questions that remain regarding Linc's ability to contain contamination in the exempted area and therefore prevent contamination from spreading to other portions of the Fort Union Formation. As discussed by the Independent Scientific Panel commissioned by Queensland:

. . . as the UCG process continues, the uncertainties in the site geology ensures that there will be variations and deviations in temperature, pressure, groundwater flow and gas and vapour [sic] movement into and out of the UCG cavity. As a result there is a risk of contaminants leaving the cavity and entering the surrounding strata and aquifers. This has the potential to lead to underground water contamination or syngas egress towards the surface through the overburden via faults / fissures or high permeability regions.

*Report on Underground Coal Gasification Pilot Trials* at 21. Linc acknowledges this uncertainty inherent in its experimental project by saying that "[o]ne of the research and development objectives of the project is to refine techniques and procedures to establish hydraulic control of

not only the Gasifier 6 cavity but also of the pressures within the surrounding groundwater system.” Linc Application at 13.14-13.

Additionally, the presence of mineral exploration and production wells in the vicinity of Linc’s project area represents risks for contamination to spread beyond the exempted aquifer. Old coalbed methane wells are present in the permit area. These wells are currently shut-in but not yet abandoned. The interaction between these wells and Linc’s project must be fully explored. This is especially important given the findings of the Independent Scientific Panel in Queensland. The Panel recognized that “The government needs to determine whether approved CSG [coal seam gas] activities will jeopardise [sic] the ability of the UCG pilots to demonstrate effective decommissioning.” *Report on Underground Coal Gasification Pilot Trials* at 43. Since coalbed methane development reduces groundwater pressure, the Panel concluded that “any proposed UCG must include a risk strategy to control the groundwater pressure for safe operation.” *Id.* There are also deep oil wells in the area that present unknown risks. According to the report prepared for the Wyoming Business Council, “Deeper oil and gas well bores will need to be avoided by a safe distance” because of potential conflicts. Moreover, operating uranium wells and old uranium exploration wells, many of which were not properly abandoned, are also present in the local area. All of these wells present potential pathways for contamination from Linc’s project to spread beyond the exempted aquifer.

EPA’s guidance documents make it clear that in evaluating whether the aquifer “does not currently serve as a source of drinking water . . . [i]f the exemption pertains to only a portion of an aquifer, a demonstration must be made that the waste will remain in the exempted portion.”

EPA, *Guidance for Review and Approval of State Underground Injection Control (UIC) Programs and Revisions to Approved State Programs #34*, Attachment 3 at 3, available at

[http://www.epa.gov/ogwdw/uic/pdfs/guidance/guide-memo\\_guidance-](http://www.epa.gov/ogwdw/uic/pdfs/guidance/guide-memo_guidance-34_review_state_prog.pdf)

[34\\_review\\_state\\_prog.pdf](http://www.epa.gov/ogwdw/uic/pdfs/guidance/guide-memo_guidance-34_review_state_prog.pdf). Because of the experimental nature of its project and the inherent risks and unknowns, Linc has not definitively shown that contamination will remain in the exempted portion of the aquifer.

Furthermore, even if the contamination is contained within the exempted portion of the aquifer, the aquifer should not be exempted because of the presence of livestock watering wells in the area. As identified by Linc, there are wells permitted for livestock watering purposes within the quarter mile buffer required to be evaluated by EPA. *Id.* at 2 (“the applicant should survey the proposed exempted area to identify any water supply wells which tap the proposed exempted aquifer. The area to be surveyed should cover the exempted zone and a buffer zone outside the exempted area. The buffer zone should extend a minimum of a 1/4 mile from the boundary of the exempted area.”) While these wells may currently be shut-in, Linc Application at 13.14-5, they are nevertheless wells with valid permits that can be used for livestock water supply.

Both the presence of local water wells and the uncertainty of whether the contamination will remain in the exempted portion of the aquifer necessitate a denial of the aquifer exemption.

**2. Even if Not Currently Used for Drinking Water Purposes, the Aquifer Can in the Future Be Used as a Drinking Water Source**

The proposed aquifer exemption should also be denied because the aquifer can be used in the future as a source of drinking water.

Linc’s own water testing data shows that this portion of the Fort Union Formation has good quality water that could be used as a water supply source. While some minor constituents

(iron, manganese, and TDS)<sup>1</sup> slightly exceed drinking water standards, overall “WDEQ can classify the water as Class I based on the technical practicability and economic reasonableness of treating ambient water quality to meet use suitability standards.” Linc Application at 13.14-6.

Linc claims that because there are commercial deposits of minerals (in this case coal) in the groundwater, it is rendered unsuitable as a future source of drinking water. However, coal does not impact water quality. While other minerals or hydrocarbons, such as oil or uranium, may render the aquifer so contaminated that it cannot be used, that is not the case with coal. Coal is more akin to sandstone or other types of rock that actually are the aquifer (because it is a permeable layer of water-bearing rock).

As discussed above, EPA’s regulations provide that the aquifer can be exempted only if “it cannot now and will not in the future serve as a source of drinking water *because . . .* [it] contain[s] minerals or hydrocarbons that considering their quantity and location are expected to be commercially producible.” 40 C.F.R. § 146.4(b)(1) (emphasis added). In this case the minerals present in the aquifer do not prevent the aquifer from being a future source of drinking water. That is clear based on Linc’s own water sampling data which shows that the aquifer has good water quality, and in fact has a lower TDS concentration than many other portions of the Fort Union Formation that are currently used for drinking water purposes. Additionally, the water is relatively shallow (1,100 feet deep) and is both economically and technologically practicable to produce for drinking water purposes.

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<sup>1</sup> All three of these constituents have only secondary standards from EPA. Secondary standards apply to substances in water that can cause offensive taste, odor, color, corrosion, foaming, or staining but have no direct effect on health. As Linc acknowledges in its application, all three constituents are easily treated to come into compliance with the secondary drinking water standards.

As discussed above, the statutory intent of the SDWA is to protect sources of drinking water (both sources currently used and those that may be needed as future sources). The context and the purpose of the law inform the interpretation of EPA's regulations. In this case, words have meaning. EPA chose to use the conjunction "because" to provide that only aquifers that "cannot now and will not in the future serve as a source of drinking water" will qualify for exemption. Here, there is not the cause and effect needed to show that the presence of minerals renders the aquifer unsuitable for drinking water purposes. Instead, if anything, the presence of coal has helped to maintain the aquifer and hold drinking water quality water in reserve for future generations. While one could read the regulation the opposite way to conclude that an aquifer is not a future source of drinking water merely *because* minerals are present, that reading would frustrate the purpose of the SDWA and the implementing regulations. The purpose and intent of the SDWA is to protect aquifers that have the potential to be used for drinking water sources. It is clear that this portion of the Fort Union Formation (and the Fort Union Formation as a whole) can be used in the future for drinking water purposes. Therefore, the aquifer does not qualify for exemption under EPA's regulations.<sup>2</sup>

### **3. Linc Has Not Demonstrated Compliance with 40 C.F.R. § 146.4(b)(1) Criteria**

Irrespective of the water quality of the aquifer, Linc has even failed to demonstrate compliance with the aquifer exemption criteria the company claims justify the exemption. Linc claims that the aquifer should be exempted because "minerals or hydrocarbons...are expected to be commercially producible." However, through this project, Linc does not intend to

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<sup>2</sup> This finding would also be consistent with EPA and Wyoming's decision to regulate microbial coal projects (also known as "methane farming") pursuant to the Underground Injection Control Program's Class V permit scheme as opposed to the Class II permit scheme that would have required an aquifer exemption. At that time, EPA, WDEQ, and the Oil and Gas Commission concluded that aquifer exemptions could not be obtained for the Fort Union Formation because of the presence of drinking water wells in the formation.

commercially produce any minerals or hydrocarbons. While the company *estimates* that “approximately one million standard cubic feet per day (MMscfd) of synthesis gas or ‘syngas’” will be produced during the demonstration project, Linc Application at 13.14-3, all syngas will be flared and not commercially sold. As further evidence of the trial, non-commercial, nature of this project, Linc will not pay royalties on its state lease during the research and development project. See Wyoming Office of State Lands and Investments, *Consideration of Royalty Valuation of Coal Extracted During Underground Coal Gasification (UCG) Production and Other Lease Terms for Linc Energy*, Dec. 6, 2012, at 2, available at <http://slf-web.state.wy.us/osli/boardmatters/2012/1212/f-7.pdf>. (The Board “authorize[d] Royalty Free Disposition of the coal extracted during Linc Energy’s Wyoming Department of Environmental Quality (WDEQ) Research and Development (R&D) license demonstration project. Linc Energy estimates that approximately 1000 tons of coal will be extracted during the demonstration; no product will be sold.”).

Furthermore, Linc has not demonstrated that an amount of one MMscfd is production in commercial quantities. In fact, one of the main purposes of the research and development scale project is to evaluate the economic viability of the process in the Powder River Basin.

The economic viability of underground coal gasification – by and of itself – has not been proven with any test projects, including Linc’s own projects in Australia. While the produced syngas may become commercially economic when it is used in a downstream application, such as converting it to liquids or using it for power generation, merely producing the syngas does not

appear to be economic. After over a decade of work in Australia, Linc has still not demonstrated that the technology is economically viable at a commercial scale.<sup>3</sup>

**D. An Aquifer Exemption in the Fort Union Formation Would Set a Dangerous Precedent**

Reclassification and exemption of this portion of the Fort Union Formation would set a dangerous precedent. In response to an inquiry from the Resource Council, Don Fischer, the DEQ North District Geologic Supervisor, stated “To the best of my knowledge, there are no aquifer exemptions for UIC Class I or III facilities in the Ft. Union Formation in Johnson or Campbell counties.” Electronic correspondence from Don Fischer to Shannon Anderson, Oct. 11, 2013, attached. Therefore, Linc’s aquifer exemption would be the first of its kind in the Fort Union Formation.

If Linc is able to obtain an aquifer exemption in this case merely because of the presence of coal, the decision opens the door for future exemptions in other portions of the Fort Union Formation, which is a coal-bearing formation across the Powder River Basin. As identified by the report prepared for the Wyoming Business Council “307 billion tons of coal, or 74% of the coals deeper than 500 feet” in the Powder River Basin are viable sources of coal for UCG projects. GasTech report at 3. If Linc is successful, the entire portion of the Fort Union Formation bearing those coals could be exempt from SDWA protection.

Additionally, the proposed reclassification of the aquifer is even more problematic, as the reclassification is not dependent on a company meeting the requirements for an aquifer exemption. Reclassifying an aquifer that has drinking water quality water (Class I water) to “Mineral Commercial” quality water (Class V water) merely because the aquifer is “closely

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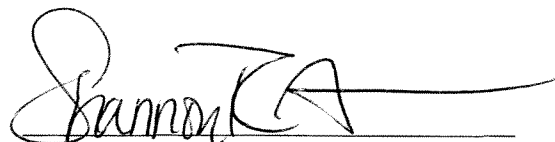
<sup>3</sup> Even the gas-to-liquids plant at the Chinchilla site is still operating at a pilot scale. See [http://www.lincenergy.com/underground\\_coal\\_gasification.php](http://www.lincenergy.com/underground_coal_gasification.php).

associated with commercial deposits of minerals,” Linc Application at 13.14-6, sets a particularly troubling precedent. Most aquifer formations in the Powder River Basin, and in fact across the state, have some “commercial deposits of minerals.” The reclassification would set a bad precedent that other industries could use to their advantage to limit the protection and restoration of aquifers. For instance, under Linc’s rationale, WDEQ could reclassify all of the shallow coal seams of the Fort Union Formation that are surface mined or the deeper coal seams that produce coalbed methane. That would amount to almost the entire Fort Union Formation. The Fort Union Formation would be reclassified from an aquifer that is the major source of drinking water in the Powder River Basin to an aquifer that is merely used for mineral production.

### **Request for Hearing**

The Council hereby requests that these objections be heard before the Environmental Quality Council. To the extent that these matters are beyond WDEQ or Environmental Quality Council authority (such as the granting of the aquifer exemption), the Council requests that WDEQ and the Environmental Quality Council forward these objections to the U.S. Environmental Protection Agency’s Region 8 Office for their consideration.

Dated this 18<sup>th</sup> day of October, 2013.



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## CERTIFICATE OF SERVICE


The undersigned hereby certifies that on this 18<sup>th</sup> day of October, 2013, the foregoing OBJECTIONS AND REQUEST FOR HEARING was served on the following parties via U.S. Mail:

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