

July 31, 2023

By E-Mail

Eric A. Gustafson, Regional Program Manager
David G. Balog, P.E., New Source Review Section Chief
Pennsylvania Department of Environmental Protection
230 Chestnut St.
Meadville, PA 16335

Re: Diversified Production LLC—Diversified Longhorn Well Pad A
Horton Township, Elk County
Application for Plan Approval 24-00197A

Dear Mr. Gustafson and Mr. Balog:

Clean Air Council, Natural Resources Defense Council, and Earthjustice hereby submit comments on the Draft Plan Approval to Diversified Production LLC (Diversified) for construction and initial operation of additional sources at the Diversified Longhorn A gas well pad in Horton Township, Elk County (Longhorn A), to generate electricity for the purpose of powering cryptocurrency mining operations. For the reasons described in these comments, the Department of Environmental Protection (DEP) must deny the Draft Plan Approval or condition its approval on noise mitigation measures.

Cryptocurrency mining is an energy-intensive process for creating virtual “currency.”¹ As DEP writes, “[d]ata mining involves intensive computer processing and subsequently requires large amounts of electricity.” Review of Plan Approval Application 24-00197A - Diversified Production LLC, Longhorn Pad A, Horton Township, Elk County (Review Memo) at 3. In fact, the cryptocurrency mining industry uses as much energy as is needed in many entire countries.² To meet these high energy demands, some miners place operations at locations with direct access to energy sources, such as power plants or gas well pads.

Fossil-based crypto mining operations pose the same environmental and public health threats as their underlying methods of energy generation—for gas, this includes emissions of nitrogen oxides, methane, hazardous air pollutants,³ and the other pollutants listed in Diversified’s Plan Approval Application (Application). By reviving and expanding fossil

¹ See, generally, Sierra Club and Earthjustice, The Energy Bomb: How Proof-of-Work Cryptocurrency Mining Worsens the Climate Crisis and Harms Communities Now (September 2022) (“Energy Bomb”), available at <https://earthjustice.org/documents/report/the-energy-bomb-how-proof-of-work-cryptocurrency-mining-worsens-the-climate-crisis-and-harms-communities-now> (last visited July 23, 2023).

² Cambridge Bitcoin Electricity Consumption Index, <https://ccaf.io/cbnsi/cbeci/comparisons> (last visited July 23, 2023).

³ Under its Plan Approval Permit Application, Diversified Production LLC--Longhorn Pad A, June 13, 2022 (“Application”), Diversified seeks authorization to emit 3.39 tons per year of hazardous air pollutants (at pdf 8).

generation, cryptocurrency threatens to undermine Pennsylvania's efforts to reduce emissions of greenhouse gases such as carbon dioxide and methane.⁴

Cryptocurrency operations generally have a variety of non-air quality impacts. Some use large amounts of water to cool their operations, either at the site of mining machines, the water use associated with fossil fuel generation, or both. The machines have a lifespan as short as two years, and then become e-waste. Also, cryptomining equipment can be heard at a distance. Pennsylvanians have already found this out, with Elk County neighbors suffering noise and livestock impacts from a mine.⁵ In addition to these impacts, cryptocurrency mining diverts electricity away from the homes and businesses where it is needed most. Instead, increased demand from mining operations can raise prices, leave ratepayers with costly bills for infrastructure improvements, and strain electric grid reliability.⁶

For these reasons, we urge DEP to review well pad plan approval applications carefully; to deny plan approval applications that, like Diversified, do not meet DEP regulatory criteria; to investigate and take action against unpermitted well pad facilities; and to require noise mitigation at well pad cryptocurrency sites.

1. DEP Must Deny the Plan Approval Due to Diversified's Ongoing Violations

The Application must be denied due to Diversified's admitted widespread failure to comply with air quality regulations. Under the Air Pollution Control Act (the Act):

(a) The department **shall not issue, reissue or modify any plan approval or permit** pursuant to this act or amend any plan approval or permit issued under this act and may suspend, terminate or revoke any permit or plan approval previously issued under this act if it finds that the applicant or permittee or a general partner, parent or subsidiary corporation of the **applicant or permittee is in violation of this act, or the rules and regulations promulgated under this act, any plan approval, permit or order of the department**, as indicated by the department's compliance docket, unless the violation is being corrected to the satisfaction of the department.

(b) The department **may refuse to issue any plan approval or permit** pursuant to this act if it finds that the applicant or permittee or a partner, parent or subsidiary corporation of the applicant or permittee **has shown a lack of intention or ability to comply with this act or the regulations promulgated under this act or any plan approval, permit or order of the department, as indicated by past or present violations**, unless the lack of intention or ability to comply is being or has been corrected to the satisfaction of the department.

⁴ Pennsylvania Climate Action Plan 2021, available at <https://www.dep.pa.gov/Citizens/climate/Pages/PA-Climate-Action-Plan.aspx> (last visited July 23, 2023).

⁵ The Ridgway Record, Bitcoin Mine Brings Heated Residents to Ridgway Township Meeting, June 22, 2022, (available at https://www.ridgwayrecord.com/news/bitcoin-mine-brings-heated-residents-to-ridgway-township-meeting/article_00184b60-f27e-11ec-8220-134307a1c971.html) (last visited July 23, 2023).

⁶ Energy Bomb at 16-20.

Section 7.1(a, b) of the Act, 35 P.S. § 4007.1 (emphasis added).⁷ Under subsection (b), DEP may refuse to issue a plan approval or permit based on an applicant's lack of intention to comply as indicated by past or present violations. Subsection (a) prohibits DEP from issuing a plan approval where an applicant has shown a lack of intention or ability to comply as indicated by past or present violations in DEP's compliance docket.

Diversified's Application self-reports a brazen lack of intention or ability to comply, as follows:

Compliance Background. (Note: Copies of specific documents, if applicable, must be made available to the Department upon its request.) List all documented conduct of violations or enforcement actions identified by the Department pursuant to the APCA, regulations, terms and conditions of an operating permit or plan approval or order by applicant or any related party, using the following format grouped by source and location in reverse chronological order. Attach additional sheets as necessary. See the definition of "documented conduct" for further clarification. Unless specifically directed by the Department, deviations which have been previously reported to the Department in writing, relating to monitoring and reporting, need not be reported.						
Date	Location	Plan Approval/ Operating Permit#	Nature of Documented Conduct	Type of Department Action	Status: Litigation Existing/Continuing or Corrected/Date	Dollar Amount Penalty
08/13/2018	Eckhardt CS	GP5-56-00315B	Operating without valid authorization	NOV	Continuing	\$
08/28/2018	Malone CS	GP5-32-00386	Operating without valid authorization	NOV	Continuing	\$
08/28/2018	Maurer CS	GP5-32-00415	Operating without valid authorization	NOV	Continuing	\$
08/28/2018	Whitacre CS	GP5-32-00417	Operating without valid authorization	NOV	Continuing	\$
05/21/2018	State Gamelands CS	GP5-03-00235C	Operating without valid authorization	NOV	Continuing	\$
05/21/2018	Bessie 8 Station	GP5-11-00526B	Operating without valid authorization	NOV	Continuing	\$
05/21/2018	Homer City Station	GP5-32-00146C	Operating without valid authorization	NOV	Continuing	\$
05/21/2018	Onsberg Station	GP5-32-00366B	Operating without valid authorization	NOV	Continuing	\$
05/21/2018	Ernest Station	GP5-32-00407B	Operating without valid authorization	NOV	Continuing	\$
05/21/2018	Spurlin Station	GP5-32-00435A	Operating without valid authorization	NOV	Continuing	\$
05/21/2018	Pineton Station	GP5-32-00437B	Operating without valid authorization	NOV	Continuing	\$

⁷ See also 25 Pa. Code § 127.12a(h) ("Plan approval will not be issued to an applicant or related party if a violation or lack of intention or ability to comply at a source owned or operated by the applicant or a related party appears on the compliance docket") and 25 Pa. Code § 127.412 ("An operating permit will not be issued to an applicant or related party if a violation or lack of intention or ability to comply at a source owned or operated by the applicant or a related party appears on the compliance docket").

07/02/2019	Beaver Road Station	Pending	Operating without valid authorization	NOV	Continuing	\$
07/02/2019	Conemaugh Station	Pending	Operating without valid authorization	NOV	Continuing	\$
07/02/2019	Gordon Hill Station	Pending	Operating without valid authorization	NOV	Continuing	\$
07/02/2019	Clark Station	03-00270	Operating without valid authorization	NOV	Continuing	\$
07/02/2019	Stubrick Station	03-00271	Operating without valid authorization	NOV	Continuing	\$
07/02/2019	Johnsonburg Station	32-00443	Operating without valid authorization	NOV	Continuing	\$
07/02/2019	McCoy Station	32-00444	Operating without valid authorization	NOV	Continuing	\$
07/02/2019	Stuby Station	32-00442	Operating without valid authorization	NOV	Continuing	\$

Application at pdf 25. Thus, by Diversified’s own admission, it is operating without valid authorization at 19 locations. All of these operations have been the subject of enforcement action—notice of violation—by DEP. Yet, the violations, and apparently Diversified’s operations, are continuing, and Diversified reports paying no penalties for the violations.

DEP’s Review Memo offers no examination of compliance issues, including no findings about the widespread, unresolved violations admitted by Diversified. Under these circumstances and under the criteria set forth in Section 7.1(b) of the Act, DEP must exercise its discretion not to issue this plan approval to a company with such widespread violations, and whose conduct shows a lack of intention or ability to comply. Further, DEP’s review includes no findings regarding the compliance docket referenced at Section 7.1(a).

DEP previously responded to a comment regarding Diversified’s compliance history. Plan Approval Draft Comments and Response, 24-00195A - Diversified Production LLC Longhorn Pad C, Jay Township, Elk County, May 19, 2023 (“Longhorn Pad C Comment and Response”) at 4. First, DEP wrote:

The Department conducted a compliance review for the applicant and determined that there are currently no open violations which are not being resolved to the satisfaction of the Department.

Id. DEP provided no details to support any purported compliance review. Indeed, the fact that months later, DEP is now proposing approval of another Application that still shows 19 instances where Diversified is “operating without valid authorization”—continuing violations by the same company—undercuts any claim that DEP has undertaken to hold Diversified accountable for its compliance history.

In the Longhorn Pad C Comment and Response, DEP also found:

The issuance of this plan approval will end ongoing violations identified at the Longhorn Pad C location regarding the construction of air contamination sources without approval by the Department.

Id. There is no indication in the Application or anywhere in DEP’s permitting documents for Longhorn A that DEP has assessed a penalty, or has imposed any consequences at all for Diversified’s noncompliance. DEP’s apparent policy is that its statutory duty to consider compliance history for a company that repeatedly fails to meet permitting requirements is addressed by the issuance of a permit that absolves the company of any responsibility to comply in the first instance. This policy is arbitrary and unlawful for an agency tasked with enforcing environmental requirements.

The consequences of Diversified’s noncompliance for both air quality and the integrity of the Department’s program are too severe for DEP to ignore. In accordance with the requirements of Section 7.1 of the Act, DEP must deny the Application.

2. DEP Must Consider Noise Impacts on State Game Lands 44

Noise is a major impact from cryptocurrency. Cryptomining operations that utilize Application Specific Integrated Circuit mining devices are often a source of significant noise pollution that can cause stress in humans and wildlife. As one cryptocurrency mining company acknowledges, the “noise levels range between 50 DB and 75 DB, or a noise level similar to a food blender or a loud vacuum.”⁸ The noise has also been described as “like sitting on the tarmac with a jet engine in front of you. But the jet never leaves. The jet never takes off....It’s just constant annoyance.”⁹

Noise from cryptocurrency is a major concern in Elk County. According to a farmer in Ridgway: “My family, farm, and businesses have been severely impacted by the constant noise from the site, and it has led to death for some of my animals as well as health issues with my horses.”¹⁰ St. Marys has adopted an ordinance addressing cryptocurrency noise by requiring that digital currency mining be conducted within an enclosed building with decibel levels not to exceed 65 dbA at the property boundary.¹¹

DEP has already acted to respond to noise from cryptocurrency in Elk County in the Plan Approval for Diversified Longhorn C in Jay Township. As described in the Longhorn Pad C Comment Response (at 1-2), DEP requested additional information about noise at Longhorn C from Diversified, citing Jay Township’s noise ordinance at Section 104 which, in part, defines “unreasonable noise” as “[n]oise that is plainly audible across a property line that unreasonabl[y] disturbs the quiet enjoyment of another property owner in the Township”. Diversified described

⁸ Compass Mining, The Basics of Mining Bitcoin at Home (Aug. 20, 2021) (available at <https://compassmining.io/education/how-to-mine-bitcoin-at-home-basics/>) (last checked July 23, 2023).

⁹ Kevin Williams, “A Neighborhood’s Cryptocurrency Mine: ‘Like a Jet That Never Leaves’”, Washington Post (Aug 31, 2022) (available at: <https://www.washingtonpost.com/business/interactive/2022/cryptocurrency-mine-noise-homes-nc/>) (last visited July 23, 2023).

¹⁰ The Ridgway Record, *supra* n. 5.

¹¹ City of St. Marys, Ordinance 334 (amending City Code Section 5, Chapter 27, Part 4, Section 460) (adopted Jan. 16, 2023) (Attachment A).

measures to reduce noise at the site, including inertia blocks, exhaust piping, and the installation of exhaust silencers, to be followed by a noise survey and possible additional mitigation measures once the generators were operational. *Id.* at 1.

At Diversified Longhorn Pad C, DEP imposed the following permit condition regarding noise:

The owner or operator shall complete a noise survey within 30 days of any equipment start up. The survey shall demonstrate compliance with Jay Township ordinances regarding limitations on noise, and shall be completed while the maximum number of sources are in operation at the highest achievable throughput. The survey shall be submitted to both the Department and Jay Township. If the survey indicates noise levels contrary to the Township's ordinances, the permittee shall not operate the equipment until noise mitigation measures have been implemented which result in compliance with the Jay Township ordinances, as determined by Jay Township.

Plan Approval 24-00195A, Section C, Condition 005(g) at 15-16. This provision requires a survey coupled with a substantive requirement to meet Jay Township's ordinance, that is, not allowing unreasonable noise that is plainly audible across a property line that unreasonably disturbs the quiet enjoyment of another property owner in the Township.

Diversified Longhorn A is located on State Game Land (SGL) 44. See Application at pdf 72; State Game Land 44 map at https://www.pgc.pa.gov/HuntTrap/StateGameLands/Documents/SGL%20Maps/SGL_044.pdf ; <https://www.google.com/maps> (collectively, showing tower next to well pad site on SGL 44). Given the likely impacts on game and non-game wildlife of noise and vibration from Diversified Longhorn A in SGL 44 and Horton Township, DEP should, at a minimum, require the mitigation measures already applied at Diversified Longhorn C, together with a survey and additional mitigation measures as applied in Jay Township.

3. DEP Must Withdraw the Draft Plan Approval to Add Carbon Dioxide and Methane Limits

Among the most serious impacts from energy use supporting cryptocurrency mining are greenhouse gas emissions, including carbon dioxide and methane. DEP proposes to issue the Plan Approval under the Air Pollution Control Act, which provides DEP ample authority to address these pollutants. 35 P.S. § 4003 ("definition of air pollution"); see also 25 Pa. Code 121.1.

Despite these impacts and authority, the draft permit sets no limit for carbon dioxide or methane emissions. See, e.g., Draft Plan Approval, Section G, Emission Restriction Summary, at pdf 83-84; Review Memo, Table 1 at 3-4. The Draft Plan Approval (at 13) does provide for reporting of carbon dioxide and methane. DEP must go further, and withdraw the Draft Plan Approval to add emission limits for carbon dioxide and methane to the plan approval.

Conclusion

For these reasons, DEP must deny the Draft Plan Approval, or condition it on noise mitigation measures.

Thank you for the opportunity to comment on this proposal. If you have any questions, please contact us.

Sincerely,

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