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BEFORE THE BOARD OF ENVIRONMENTAL QUALITY
STATE OF IDAHO

IN THE MATTER OF AIR QUALITY PERMIT TO CONSTRUCT P-2019.0047	Agency Case No. 0101-22-01 OAH Case No. 23-245-01
NEZ PERCE TRIBE, IDAHO CONSERVATION LEAGUE, and SAVE THE SOUTH FORK SALMON Petitioners, v. IDAHO DEPARTMENT OF ENVIRONMENTAL QUALITY, Respondent, and PERPETUA RESOURCES IDAHO, INC. Intervenor-Respondent.	**PETITIONERS' PRE-HEARING STATEMENT**

Pursuant to the Second Amended Scheduling Order, REC 6045-47, Petitioners Nez Perce Tribe, Idaho Conservation League, and Save the South Fork Salmon submit this pre-hearing statement summarizing the testimony Petitioners will adduce at the hearing on the merits and how it relates to the three remaining issues (the "Remaining Issues") identified by the Board of Environmental Quality (the "Board"). Those issues all relate to the Idaho Department of Environmental Quality's ("DEQ") evaluation of arsenic dust emissions from the proposed Stibnite Gold Project, including DEQ's decision to create a never-before-used "Project-specific adjustment factor" for Perpetua, and whether that approach complies with the Rules for the Control of Air Pollution in Idaho, IDAPA 58.01.01 (the "Air Rules"), specifically, the provisions for controlling toxic air pollutants ("TAPs").

BACKGROUND

Petitioners originally filed the Petition to Initiate Contested Case on July 22, 2022, seeking review of DEQ's issuance on June 17, 2022, of Air Quality Permit to Construct P-2019.0047 ("PTC") to mining company Perpetua Resources Idaho, Inc. ("Perpetua") for its proposed Stibnite Gold Project. REC 0001-28. The Hearing Officer granted Perpetua's motion to intervene, denied Perpetua's motion to dismiss, and granted Petitioners' motion to file the Amended Petition to Initiate Contested Case. *See* REC 0044–45; REC 0160–86; REC 0255–57 (Am. Petition). After discovery, briefing, and a hearing, the Hearing Officer issued a Preliminary Order and then an Amended Preliminary Order granting summary judgment in favor DEQ and Perpetua (collectively "Respondents") and against Petitioners on all issues in the Amended Petition, including the arsenic issues that make up the Remaining Issues. *See* REC 3280–3328; REC 3372–3425 (Am. Prelim. Order).

Petitioners filed with the Board a Petition for Review and then an Amended Petition for Review of the Preliminary Orders, seeking review on five issues. *See* REC 3425–41 (Am. Petition for Review). After briefing and a hearing, the Board issued a preliminary oral decision on May 1, 2024. *See* TR 0156–174. The Board denied four of the issues Petitioners raised, but ruled in Petitioners' favor on the arsenic issue, remanding on that issue, and directing legal counsel to draft a written decision. TR 0158–59.

In the oral decision, Board Member MacMillan summarized the Board's concerns with the way DEQ assessed the Stibnite Gold Project arsenic emissions as follows:

> [M]ost germane in this contested case are carcinogen dose and duration. The greater the dose of carcinogen exposure, the greater is the chance of cancer initiation; the longer the duration of carcinogen exposure, the greater is the risk of developing cancer.
>
> Low dose exposure, as embodied in the AACC and applied daily for up to 70 years, would be expected to limit cancer to only a one in million chance.
>
> The higher dose, such as associated with this short-term project in a T-RACT acceptable concentrations, would be expected to limit cancer to one in 100,000 chances, even after 70 years.
>
> DEQ concluded that the Stibnite gold project cancer risk exceeds the AACC associated risk and exceeds the T-RACT associated risk.
>
> The Idaho rules are not ambiguous. There is an acceptable risk associated with the AACC standard. There is an acceptable risk associated with DEQ-approved T-RACT projects, and there is an acceptable risk associated with the short-term project that is five years or less. There are no other acceptable risks identified in Idaho's air quality rules.
>
> DEQ's project-specific adjustment factor creates a new, higher level of cancer risk for 16 years. DEQ assumes 70 years is required for cancer to develop. That is an incorrect assumption.
>
> The AACC, the T-RACT, and short-term AACC emission exposure limits are actually daily limits that apply over a person's entire lifetime, regardless of how long they live. The acceptable cancer risk remains one in one million or one in 100,000. Higher carcinogen doses increase the cancer risk every day of a person's life. A higher daily dose for 16 years elevates the cancer risk even more.

> Application of the project-specific adjustment factor allows DEQ to ignore 16 years of higher cancer initiation risk. The PTC proposes to allow 16 years higher daily carcinogen doses, and disguises such doses using non-rules-based mathematics. Use of the project-specific adjustment factor ignores 16 years of cancer initiation due to higher carcinogenic arsenic dose that is otherwise allowed by rule. The AACC, the T-RACT and short-term project AACCs dictate an annual average compliance.
>
> DEQ further violates this compliance point by instituting a five-year rolling average compliance. Such a creative compliance point allows even further departure from our air quality goals, and specifically compliance with Section 161 of our air quality rules.
>
> * * *
>
> In my opinion, DEQ has misapplied the Idaho air quality rule, and they do not have authority to create new cancer risks.

TR 0159–60.

The Board's May 9, 2024 Final Order remanded this case, finding "DEQ did not act reasonably and in accordance with the law when it analyzed the ambient arsenic air concentrations for the [Stibnite Gold Project]." REC 3717. Specifically, the Board found that DEQ erred in three ways:

1. DEQ failed to show how the "five-year rolling average [for calculating the ambient arsenic concentrations resulting from the Stibnite Gold Project] comports with the annual AACC limits" set forth in Section 586 of the Air Rules. REC 3713;

2. DEQ failed to provide sufficient evidence to demonstrate whether non-West End Pit production was limited and enforceable under the PTC conditions. REC 3714; and

3. The Air Rules do not provide for adjusting a project's emissions "in proportion to the amount of time it will operate," and DEQ failed to demonstrate that the 16/70 Project-specific adjustment factor "was equally or more protective of human and animal life and vegetation as what is provided for by the Air Rules." REC 3716–17.

The Board remanded the case to the Hearing Officer "for the development of further evidence regarding the ambient air concentrations of arsenic . . . and whether those levels comply with the Air Rules." REC 3717.

On July 8, 2024, the Hearing Officer entered a pre-hearing order setting the hearing for this matter, which will address the issues identified by the Board regarding DEQ's analysis of the ambient arsenic air concentrations for the Stibnite Gold Project, for commencement on October 17, 2024. REC 3867.

TESTIMONY ON REMAINING ISSUES

I. THE 16/70 PROJECT-SPECIFIC ADJUSTMENT FACTOR IS CONTRARY TO THE IDAHO AIR RULES AND THREATENS PUBLIC HEALTH.

A. The Air Rules, Their Rulemaking History, and DEQ's Normal Practice Do Not Allow Use of the 16/70 Dose Averaging Approach.

As the Board found in the Final Order, the Air Rules require meeting the AACC, allow for T-RACT and short-term source adjustments to the AACC, and provide no other exceptions, such as the 16/70 project-specific adjustment used here. REC 3708–10.

Mr. William Tiedemann will testify to his experience working as an environmental engineer, including working as a Clean Air Act Permitting Engineer at DEQ. Tiedemann Decl. ¶¶ 3–5. In his experience, he never worked on a PTC or other air permit that utilized, or even considered, a project-specific adjustment factor or other dose averaging adjustment for sources lasting less than 70 years. *Id.* ¶¶ 15–16. He will testify that in his experience, he and his colleagues treated the AACCs as annual limits that a source must meet every year. *Id.*

Mr. Tiedemann will also testify to gathering and reviewing historical documents from the 1993 TAPs rulemaking. *Id.* ¶ 17. He will testify that those documents show that DEQ contemplated but rejected the use of exposure duration adjustments, like the 16/70

Project-specific adjustment factor used here. *Id.* ¶¶ 18–20. He will also testify that the use of EPA's superfund risk assessment guidelines developed for short-term sources were considered and rejected during the TAPs rulemaking. *Id.* ¶ 25–27. Furthermore, Mr. Tiedemann will testify that the records and the language of the TAPs rule itself demonstrate that DEQ developed the AACCs as annual limits an emissions source must show it will comply with each and every year of operation. *Id.* ¶¶ 22–23. Finally, Mr. Tiedemann will testify that the AACCs are enforceable limits under the Air Rules, and the fact that they are "increments" does not somehow make them unenforceable, as DEQ and Perpetua argue. *Id.* ¶ 37.

Dr. Ian H. von Lindern participated on the advisory committee involved with the TAPs rulemaking in the 1990s, and will testify that his recollection is that the TAPs were intended to be easy to apply while still being proscriptive and strict enough to protect public health. von Lindern Decl. ¶¶ 7, 20, He will testify that DEQ chose not to include the use of risk assessments to demonstrate compliance for individual sources in the Air Rules, in part because industry considered risk assessments an onerous burden. *Id.* ¶ 20. The result of the rulemaking process was a simple, yet protective rule found in Section 586 that simplifies the permitting process while providing a margin of safety for protecting human health. *Id.* ¶ 21. Dr. von Lindern will also testify that review of other states that use risk assessments as part of demonstrating compliance with toxic pollutant rules, like Washington, specifically call for risk assessments and provide direction for when and how to perform them in their rules, unlike the Idaho Air Rules, which do not call for risk assessments or provide direction for their use. *Id.* ¶¶ 35, 74–75.

Both Mr. Tiedemann's and Dr. von Lindern's testimony will support the Board's conclusion that the Air Rules do not provide for adjusting a project's emissions or risk "in proportion to the amount of time it will operate." REC 3715.

B. The 16/70 Dose Averaging Adjustment Threatens Public Health And Exceeds Allowable Cancer Risk Under the Air Rules.

The Board found that DEQ failed to demonstrate that the 16/70 Project-specific adjustment factor "was equally or more protective of human and animal life and vegetation as what is provided for by the Air Rules." REC 3716–17.

Dr. von Lindern and Mr. Tiedemann will testify that treating the AACC as an annual average that must be complied with by all sources year-after-year protects public health. von Lindern Decl. ¶¶ 19–29; Tiedemann Decl. ¶¶ 14, 17–21. They will testify that no matter where someone lives in Idaho, no matter how many sources operate, and no matter whether someone is in a sensitive life-stage, if the AACC is an annual average that must be complied with every year by all sources, then that person should not experience a risk greater than that intended by the Air Rules from industrial permitted sources; or stated differently, cancer risk will accumulate over their expected 70-year lifetime without exceeding the Air Rule's maximum allowable lifetime risk under all circumstances.

Dr. von Lindern and Mr. Tiedemann will testify that dose averaging for one source, like the Stibnite Gold Project, ignores the additive cancer risk from additional sources that someone has already been exposed to in the past and additional sources they are be exposed to in the future. von Lindern Decl. ¶¶ 46–50; Tiedemann Decl. ¶¶ 28–29. They will also testify that DEQ's and Perpetua's experts did not address this problem.

Dr. von Lindern will testify that dose averaging over a 70-year lifetime, as was done for the Stibnite Gold Project, does not account for variable carcinogenic potency and cancer risk accumulation for different stages of life, including pregnant women, fetuses, and pre-school children, who accumulate dose and risk at the highest rates and are particularly vulnerable. *Id.* ¶¶ 37–45.

Dr. von Lindern will testify that the dose averaging used for the Stibnite Gold Project fails to account for carcinogens exhibiting mutagenic mode of action (MOA). *Id.* at 43–45. He will testify that using DEQ's dose averaging approach can increase a six-year-old child's cancer risk by 12 times over the risk allowed by treating the TAPs as a maximum one-year average. *Id.* at 46-50.

In sum, this testimony will show that strict yearly compliance with the AACCs achieves the Air Rules public health protections. By contrast, using dose averaging and relying on overly simple risk assessments that fail to consider the spectre of multiple sources, fail to consider sensitive life stages, and fail to consider mutagenic MOAs is not "equally or more protective of human and animal life and vegetation as what is provided for by the Air Rules," as the Board asked. DEQ's approach allows for greater cancer risk and sets a dangerous new precedent.

II. THE 5-YEAR ROLLING AVERAGE DILUTES THE ANNUAL ARSENIC EMISSIONS AND IS NOT AN ANNUAL AVERAGE.

The Board found that DEQ failed to show how the "five-year rolling average [for calculating the ambient arsenic concentrations] comports with the annual AACC limits" set forth in Section 586 of the Air Rules. REC 3713.

Mr. Tiedemann and Dr. von Lindern will testify that DEQ and Perpetua's use of a 5-year rolling average to calculate the ambient arsenic concentrations to apply the TAPs rule is inconsistent with the rulemaking history and intent of the rule, which plainly states that AACC's are annual, year-over-year limits. Tiedemann Decl. ¶ 40; von Lindern Decl. ¶ 58. This is consistent with the Board's determination that the Section 586 AACC limits are based on annual averages and that the rule specifies compliance on an annual basis. REC 3713. Mr. Tiedemann will further testify that applying a 5-year rolling average could allow some years of considerably higher arsenic emissions, potentially above that of the AACC, which would allow the source to

emit emissions that create an excess cancer risk level above the T-RACT adjusted risk level of 1:100,000. Tiedemann Decl. ¶¶ 41–44.

Mr. Tiedmann's testimony will be confirmed by Dr. von Lindern, who found no evidence in the record that DEQ ever calculated the *maximum* annual average arsenic concentration from the Stibnite Gold Project. Dr. von Linder will testify that he used available information in the record to estimate that the maximum annual average arsenic concentration was approximately 1.8 times larger than the 5-year rolling average DEQ used. von Lindern Decl. ¶ 61. He will also testify that because use of the 5-year rolling average reduces the arsenic concentrations from the maximum annual average, it also masks the excess cancer risk by 45%. *Id.* ¶¶ 59-61, 63, 70.

In sum, the testimony will show that DEQ's use of a five-year rolling average masks individual years during which the Stibnite Gold Project will cause arsenic concentrations to exceed the AACC, and this allows dangerous high-dose, short-duration exposures to occur and does not comport with the Air Rules.

III. AVERAGING WEST END PIT AND NON-WEST END PIT EMISSIONS SCENARIOS FURTHER MASKS THE TRUE RISK FROM ARSENIC.

The Board found that there was insufficient evidence to demonstrate whether non-West End Pit production was limited and enforceable under the PTC conditions. REC 3714.

Mr. Tiedemann will testify that the Board was correct in questioning whether production from all pits was properly constrained. Tiedemann Decl. ¶ 46. Mr. Tiedemann found that the permitting record does not provide sufficient evidence as to exactly what emission sources and which time period Respondents considered in developing the 5-year rolling average. *Id.* ¶ 48. He will further testify, that in his experience, to comply with the AACCs and demonstrate TAPs compliance, a worst case scenario for arsenic emissions in any one year should have been calculated, modeled at the operation boundary, and compared to the AACC. *Id.* ¶ 49. Only then,

could permit conditions be included that include a true maximum annual ore generation limit. *Id.* Mr. Tiedemann will testify that the worst case year is likely when 100% of mine production is from the West End Pit. *Id.* Mr. Tiedemann will conclude his testimony finding that the PTC as written does not sufficiently constrain ore production on an annual basis such that it can be demonstrated that it complies with the AACC in the TAPs rule. *Id.* ¶ 50.

Dr. von Lindern will testify that he further investigated this issue, finding that the likely maximum annual emissions scenario has considerably higher arsenic emissions than currently calculated. von Lindern Decl. ¶¶ 56–63. Dr. von Lindern will testify that his review of the record showed the "WEP2" scenario was the worst case scenario considered by Respondents for the Stibnite Gold Project, but that Respondents reduced the true maximum annual average arsenic concentration in their "WEP2" scenario by 41% by combining 8 different 5-year rolling average scenarios: Respondents combined the 5-year rolling average of the WEP2 scenario with 7 non-WEP 5-year rolling averages. *Id.* ¶ 64. Those non-WEP scenarios have lower arsenic emissions than the WEP2 scenario, and the effect of this adjustment is to further dilute the apparent arsenic concentration and excess cancer risk by an additional 41%, which is inconsistent with calculation of the maximum annual average required by the TAPs rule. *Id.* ¶¶ 64-67.

IV. CONSIDERED TOGETHER, THE THREE ADJUSTMENT FACTORS ARE A SIGNIFICANT DEPARTURE FROM THE AIR RULES AND GREATLY UNDERESTIMATE CANCER RISK FROM THE STIBNITE GOLD PROJECT.

Dr. von Lindern will testify regarding the effect of the three adjustment factors and how together the dilution effects are multiplicative and function to undermine the health protectiveness of the TAPs rule for carcinogenic risk. von Linder Decl. ¶ 68. For example, Dr. von Lindern will explain how the 5-year rolling average functions to dilute arsenic concentration

by 45%; the non-WEP adjustment factor dilutes the arsenic concentration further by another 41%; and finally, the 16/70 Project-specific adjustment factor dilutes this number by an additional 78% to result in a arsenic concentration value in the permit record. *Id.* ¶ 69. Dr. von Linder will testify that it is only by these successive dilutions or "dose averaging" of the arsenic emissions that Respondents were able to push the corresponding cancer risk factor below the T-RACT acceptable excess cancer risk of 1:100,000. *Id.* ¶ 70.

Finally, Dr. von Lindern will testify that DEQ's approach in applying these adjustment factors to dose average, and thus lower the true ambient air arsenic concentration, for longer term projects such as the Stibnite Gold Project is unprecedented in Idaho, and has significant implications for and undermines the protection of human health statewide. *Id.* ¶¶ 73–74.

CONCLUSION

Petitioners' expert testimony will show that for each of the Remaining Issues, DEQ employed a technique that deviates from what the Air Rules require, and that using each technique results in a greater health risk than the Air Rules intended.

DATED: October 11, 2024

Respectfully submitted,

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CERTIFICATE OF SERVICE

I hereby certify that on October 11, 2024, a true and correct copy of the foregoing PETITIONERS' PRE-HEARING STATEMENT was served on the following by electronic service:

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