

January 27, 2021

Dear Ms. Herrin:

The Northern Sierra Air Quality Management District (NSAQMD) has reviewed the Air Quality Technical Report, the Mining and Reclamation Plan and the Geotechnical Report for the proposed Portola Aggregates (among other names) project located at 77413 Meadow Way (APNs 025-050-055-000 & 025-100-036-000), near Portola. Unless specified otherwise, references in this comment letter to sections and pages refer to those sections or pages in the Air Quality Technical Report.

As discussed subsequently, a significant amount of additional information and clarification is needed in order to adequately characterize the operation, identify meaningful air quality mitigation measures and tell if the operation is able to comply with existing regulations.

General Observations

First, there does not appear to be room in the Portola federal PM2.5 Nonattainment Area's emissions inventory for the project to proceed, due to federal laws and regulations. This is discussed in the Attainment Status section beginning on the following page.

The Air Quality Technical Report says the mine will operate 180 days/year, but the Mining Plan (in sections 3.9, 4.3.1 and 4.3.5) says it will operate 240 days/year.

The Air Quality Technical Report is labeled "Appendix C," but the Reclamation Plan and the Preliminary Review and Consultation planning document both list the NRCS Soils Report as Appendix C.

The project has gone by several names in the planning materials that the NSAQMD has reviewed. It would be helpful to stick with one name uniformly. Also, it would simplify communication about the project if Appendix A of the Air Quality Technical Report (the last 26 pages) had page numbers. It would also be helpful to include a conversion factor (or factors) to consistently translate between tons and cubic yards, since both units are used throughout the documents. A simple figure for the approximate density of the mine rock would suffice.

The Development Permit Application includes questions intended to provide an overview of the project. Question III.12 reads, "Describe how potential impacts to public health and safety (exposure) will be minimized." The response the applicant provided is, "Operation will follow OSHA and MSHA guidance." OSHA and MSHA are geared toward worker safety, not "public health and safety (exposure)." Onsite workers and the public are not the same and are treated differently in existing legislation

Some of the maps in the Reclamation Plan include a portion of Plumas National Forest in the proposed mine area. The environmental documentation should address if this is outdated or if any federal permitting is triggered.

Attainment Status

The NSAQMD has not determined if it will be possible for the proposed mine to operate, but preliminarily it does not appear to be possible within the existing federal regulatory framework unless nearly all emissions can be offset at a ratio of 1.2:1 (per NSAQMD Rules 411, 417, 428.5.2 et. al.), resulting in a net air quality benefit.

There is a crucial error in section 4.0 (Existing Conditions). The Technical Report says, “Plumas County is in attainment or unclassified for all National Ambient Air Quality Standards (NAAQS); however, the USEPA is considering designating the Portola Valley as being in non-attainment for PM_{2.5}....” Similarly, the Mining and Reclamation Plan erroneously states, “Plumas County is in attainment or unclassified for all federal Ambient Air Quality Standards (AAQS) with the exception of PM₁₀ in the Portola Valley.” However, the Portola area, including the proposed mine site, was federally designated Nonattainment in 2016 under the NAAQS Annual Standard for fine particulate matter (PM_{2.5}) and classified as Moderate, with an attainment date of December, 2021. If the area does not reach attainment by that date and demonstrate Attainment into the future it will be bumped up to the Serious Nonattainment classification. Requirements that apply to Serious Nonattainment areas include a lowering of the major source threshold from 100 tons/year to 70 tons/year, the need for additional pollution control measures, and various restrictions on businesses and residential activities.

Clean Air Act (CAA) requirements for federal Nonattainment areas prevent the establishment of stationary sources that interfere with Attainment or Maintenance of the National Ambient Air Quality Standards (NAAQS). In particular, the CAA (1990 Amendments) Title 1, Part A – “Air Quality and Emission Limitations”, 110(A)(2) requires the prohibition of any source or other type of emissions activity that will interfere with attainment or maintenance of the NAAQS. In short, due to USEPA/CAA, the NSAQMD has a strict emission limitation for new sources, which is the point at which new emissions will make it impossible to demonstrate Attainment of the NAAQS.

The California Air Resources Board (CARB) has noted that the estimated new emissions from the proposed mine would make it impossible to demonstrate Attainment. The federally approved Portola Fine Particulate Matter (PM_{2.5}) Attainment Plan includes modeling results that indicate that the area can barely demonstrate Attainment under current conditions. CARB performed a roll-back modeling run specifically to ascertain if the proposed mine could be allowed. CARB concluded that if the project were to proceed as proposed, it would be impossible for the Nonattainment area to demonstrate Attainment. As examples, CARB used nominal quantities of 5 tons per year (.0137 tons per day) of direct PM_{2.5} or 0.001 tons per day of mobile source emissions in determining that the project would make it impossible to demonstrate Attainment. When PM_{2.5} precursors (such as NO_x and SO_x) are added in, the situation is exacerbated. The air quality monitors in Portola are located 1 mile west of the mine pit (downwind when there is a diurnal downslope flow).

40 CFR 51.1013 codifies requirements relating to Quantitative Milestone Reports (QMRs). The next QMR for the Portola Nonattainment Area is due October 2022. Here is a list of what must be included in the QMR:

- A certification by the Governor or Governor's designee that the SIP control strategy is being implemented consistent with Reasonable Further Progress (RFP);
- Technical support, including calculations, sufficient to document completion statistics for appropriate milestones and to demonstrate that the quantitative milestones have been satisfied and how the emission reductions achieved to date compare to those required or scheduled to meet RFP; and
- A discussion of whether the area will attain the applicable PM_{2.5} NAAQS by the projected attainment date."

Also, if Attainment cannot be reached or demonstrated for ten years after redesignation (per CAA 175A), the Nonattainment area will be moved to the next category of Nonattainment, which is Serious. If the NSAQMD were to simply not submit the required attainment demonstration, consequences would include the possible takeover of parts of the local air program by EPA and the loss of federal highway money.

CEQA Ramifications of Exceeding NSAQMD Emission Limitations Under the CAA

Among the many facets of CEQA is a set of provisions to make sure no project interferes with Attainment or Maintenance of the NAAQS. The California Legislature included streamlining procedures in SB 375 to "encourage developers to submit applications and local governments to make land use decisions that will help the state achieve its climate goals" and "assist in the achievement of state and federal air quality standards."

Appendix G of the CEQA Guidelines includes the checklist item (III), "Would the project: a) Conflict with or obstruct implementation of the applicable air quality plan?" Since the answer is "yes," this is a Potentially Significant Impact, requiring the preparation of an EIR. Per CEQA Guidelines 15125 (d): The EIR shall discuss any inconsistencies between the proposed project and applicable general plans, specific plans, and regional plans. Such regional plans include, but are not limited to, the applicable air quality attainment or maintenance plan or State Implementation Plan...."

Regarding (III)(b), CEQA Guidelines, section 15206 reads:

"PROJECTS OF STATEWIDE, REGIONAL, OR AREAWIDE SIGNIFICANCE

(b) The Lead Agency shall determine that a proposed project is of statewide, regional, or areawide significance if the project meets any of the following criteria:

...(2) A project has the potential for causing significant effects on the environment extending beyond the city or county in which the project would be located. Examples of the effects include generating significant amounts of traffic or interfering with the attainment or maintenance of state or national air quality standards. Projects subject to this subdivision include: ... (E) A proposed industrial, manufacturing, or processing plant... occupying more than 40 acres of land...." Thus, in the case of the proposed project, there would be significant areawide impacts.

Progress Toward Attainment

Historically and currently, the NSAQMD has worked diligently to improve air quality in the Portola Nonattainment area. The NSAQMD has paid to change out 413 old wood stoves and fireplaces as of the end of 2020 and has engaged in a number of additional clean air programs in Portola. This was accomplished using mainly federal Targeted Airshed Grant money (which is only awarded to areas of the nation with the worst air quality problems), supplemented with out-of-county violation settlement money. The District contributed additional funds (up to \$60,000) from the Plumas County portion of the District's Assembly Bill 2766 Motor Vehicle Registration fee surcharge.

All in all, through various programs, the NSAQMD has spent approximately \$1.5 million to reduce air pollution in the nonattainment area. Aside from the wood stove change-out program, other clean air projects have included building wood sheds, a chimney sweep voucher program, paying for green waste disposal, working with the City of Portola on their Wood Stove and Fireplace Ordinance, establishing a Wood Burning Device Curtailment Program and distributing moisture meters to assist residents in using adequately dry firewood. The progress made through all these programs, measures and rules would theoretically be erased by emissions from the mine unless it could offset emissions to near zero.

Toxics

Regarding toxics, the NSAQMD recommends that the applicant perform a Health Risk Assessment (HRA) using the latest Toxic Air Contaminant risk values and methodology from OEHHA. Asphalt plants emit a wide variety of toxic compounds and heavy metals in addition to criteria pollutants. If the mine is approved, it will require an Authority to Construct/Permit to Operate issued by the NSAQMD and an HRA will be mandatory. However, it would be helpful to the public and decision-makers to understand the potential toxics risk during the planning stages.

Odors

Regarding odors, the air district has serious concerns. The sentence in the Air Quality Technical Report, "The odor emissions, if any, would be unlikely to cause a nuisance to the nearby residential areas" is not substantiated by data. Odor complaints about asphalt plants are common throughout California and the US, sometimes from receptors well over a half mile away. An Internet search quickly turns up dozens of articles about lawsuits and communities in strife due to nearby asphalt plants. For example, see <https://www.azcentral.com/story/news/local/mesa/2018/07/11/smells-vulcan-asphalt-plant-bedevils-zoning-mesa-community-lehi-crossing/696689002/>. The discussion of odors is not founded on an odor study or any other quantitative basis. Therefore, the NSAQMD is unable to support the conclusion of the odor discussion: "Given the previous information, odor impacts associated with the location of the proposed project would be less than significant." It is very difficult to address odor complaints, partly because individuals perceive odors differently, but it is well established that odors can constitute public nuisances and can have a significant effect on quality of life.

Proposed Mitigation Measures

The air district has established Thresholds of Significance that are designed to make sure air resources will not be significantly impaired by a project. However, in light of the Nonattainment issues previously discussed, mitigations would have to offset nearly all project emissions – not just those emissions that exceed the Thresholds of Significance.

The Air Quality Technical Report concludes that even beyond the standard Thresholds of Significance there would be significant air quality impacts that are proposed to be balanced out by "Mitigation Measure AQ-5: The applicant shall participate in an offsite mitigation program to reduce emissions." That program is not identified, and it is not clear that adequate offsets are possible. The NSAQMD has access to more than \$1 million for clean air projects in the Nonattainment area and has been unable to find additional emission reductions that would assist meaningfully in reaching Attainment. The document notes that Placer County has an offsite mitigation fund that project proponents can pay money into to offset the air quality impacts of a project, but the NSAQMD has not established such a fund. The concept of paying into an offsite mitigation fund to counteract localized sources of emissions is extremely controversial because it doesn't equitably reduce impacts on receptors closest to the emissions source. NSAQMD Rule 411 (Emission Offset Eligibility) discusses requirements for emission offsets. Any offset program should be fully described (with all costs and legal aspects clearly figured out) and include a Mitigation Monitoring and Reporting Program (mitigation measures under CEQA must be accompanied by a Mitigation Monitoring and Reporting Program).

Measure AQ-1 is required by NSAQMD Rule 226 (Dust Control). However, it conflicts with Measure AQ-3, the implementation of an Asbestos Dust Mitigation Plan (ADMP). They are both dust minimization plans, but with conflicting conditions. An ADMP would be required if ultramafic rock were to be discovered onsite, which is unlikely. It doesn't make sense to have both an ADMP and a standard Dust Control Plan – it should be one or the other. An ADMP is more stringent than a standard dust control plan, so going with an un-required ADMP instead would be a solid mitigation measure.

The last element of Mitigation Measure AQ-2 diverges from California law. There is no provision for exemptions "where Tier 4 engines are not commercially available within 200 miles." Such an exemption would be the opposite of a mitigation measure, exacerbating emissions. Under the statewide ATCM, if compliant engines are available anywhere in the USA, they must be used. All equipment must meet the requirements of California Airborne Toxic Control Measures, which are listed at <https://ww2.arb.ca.gov/resources/documents/airborne-toxic-control-measures>.

Emissions Estimates

The emissions estimates should be corrected or clarified on a number of points.

All of the Air Quality Calculations assume a throughput of 150,000 tpy, but the proposed production is 350,000 tpy (per the Mining Operation Plan in the Reclamation plan document). This is an important parameter to clarify. Also, the production figures for asphalt, asphalt storage, lime slurry and aggregate production are all listed as being the same. Is that correct?

Aggregate Processing: 150,000 tons/year
Asphalt Plant: 150,000 tons/year
Asphalt Storage Silo: 150,000 tons/year
Lime Slurry Plant: 150,000 tons/year

Is the asphalt plant a 2006 model? The report says, "The asphalt hot mix plant would be similar to a facility located at Ward Lake Pit in Lassen County (Permit # PTO-18-140): 2006 Almix Duo Drum 100." Additional information on the asphalt plant would be helpful.

Under the discussion titled Asphalt Processing Plant, the Report says, "The asphalt hot mix plant (propane fired) would be rated at 300 tons per hour." But then in the same paragraph it says, "The asphalt hot mix plant contains a bag house for emissions control and a 100 million British Thermal Units per hour diesel-fueled burner." Please clarify if the asphalt plant is diesel-fired or propane-fired or both, and if both then which components are fired with which fuel.

The asphalt plant emissions calculations are based on emission factors from two sources, but do not distinguish between them: "The emission factors were determined using the methodology found in Section 11.1 of USEPA's Compilation of Air Pollutant Emission Factors (AP-42) and Ward Lake Facility Permit to Operate from Lassen County APCD (PTO-18-140)." The Ward Lake permit is not a generally accepted reference, and is not in the public domain. The origins of the emission factors should be clarified and made public. Also, the references to AP-42, Section 11 have a date of 2006, although that section of AP-42 has not been updated since 2004. The emission factor citations should list which table in AP-42 is being cited.

Evaporative ROG emissions from the asphalt plant storage silo and truck loadout are proposed to be controlled by a blue smoke control device. Additional information on that control technology would be helpful.

Regarding generator engine emissions, on page 34 the 201 hp engine is calculated to use the same amount of fuel as the 1073 hp engines, with the same emissions. A brief explanation there would be helpful.

Table A-6 indicates a greater mass of PM2.5 than of PM10. Since PM10 includes PM2.5, there must be a mistake. Also, the NSAQMD was unable to verify the presence of the applicant's emission factors in AP-42, and it is unclear how they were derived. Clarification would be helpful.

There are some aspects of the emission calculations comprising Tables 1 through 3 that don't make sense. For example, compare generator emissions of PM10 and PM2.5 among the three tables. Table 1 (Normal Operations) lists PM10 and PM2.5 as both being 9.31 lbs/day. Table 2 (Maximum Operations) lists PM10 as 228 lbs/day but PM2.5 as only 18.6 lbs/day. It doesn't seem logical that doubling operation hours would increase PM10 by a factor of 24.5 while PM2.5 only increases by a factor of 2. The NSAQMD recommends that the calculations be redone and double-checked.

Would there be any sort of solvent-based wash system for mechanical parts?

The Aggregate Processing section says, “The aggregate processing plant would be rated at 250 tons per hour.” Later in that same paragraph it says, “The maximum daily production would be 7,200 tons.” However, 250 tons/hour x 24 hours yields 6,000 tons. Clarification on the plant’s apparent ability to operate beyond its rating should be included.

There is no mention of water sprays on the processing equipment, which should be clarified for emissions estimation purposes. They would be required by operating permits.

Regarding on-road emissions, while there is a brief discussion of how on-road emissions were calculated (2nd unnumbered page of Appendix A), the figures seem to jump from there straight onto the summary tables on pages 7 and 8. It would be helpful to include a table or at least some additional detail to show how the methodology was applied and what fraction of the emissions is from exhaust, along with any assumptions of whether they are loaded or not. Also, would the aggregate and asphalt haul trucks potentially be driving long distances to reach the project site each day, or would they be parked overnight at the facility?

The table in Appendix A titled “Onsite Offroad Equipment Average Daily Emissions” does not appear to be average daily emissions, but rather daily emissions under the “normal” operating scenario. Average daily emissions would theoretically include both maximum operation and normal operation scenarios.

The off-road equipment list is inconsistent and switches inexplicably between plural and singular. The off-road calculations seem to be missing the self-loading grader that is discussed in the Mining Plan. There appear to be some emission points unaccounted for. Following is a summary list of emission points that are mentioned or implied in the Mining Plan and the Technical Report. This information may not be entirely correct, as the process description is difficult to follow. The list below should be checked against the emission estimates to see if emission points are being left out of the calculations. There are no “fines crushing” emissions in the calculations, so the applicant should state if that is the case. The end results of the calculations yield significantly lower emissions than the NSAQMD sees for other permitted aggregate and asphalt plants, on a ton-for-ton basis. There is not time in the CEQA process to analyze why this is the case.

Particulate Matter Emission Points (excluding exhaust)

Fugitive dust from wind

Fugitive dust from all vehicle tires or tracks

Self-loading grader

- Scrape surface soil

- Transport soil

- Place soil in stockpiles or berms

Hydraulic excavator(s)

- Dig raw material from earth

- Drop into stockpiles

Front-end loader(s)

- Take raw material from stockpiles

- Drop into off-highway truck(s) for transport to processing plant

Off-highway truck(s)

- Transport raw material to processing plant

- Dump into stockpiles for processing

Track dozer

- Level processing areas, haul roads and fill

Front-end loader(s)

- Take from stockpiles

- Drop raw material into grizzly/conveyor chutes

Conveyor chutes

- Drop raw material into jaw crusher

Jaw crusher

- Crushing

- Drop onto conveyor

Conveyor

- Drop into cone crushers (2)

Cone crushers

- Drop onto conveyors

Conveyors

- Drop onto screen(s)

Screen(s)

- Screening of raw material

- Drop onto conveyors

Conveyors

- Drop into wash plant

Wash plant

- Drop onto conveyors (minimal emissions)

Conveyors

- Drop into stockpiles

Loader(s)

- Take from stockpiles

- Drop into hoppers

Hoppers

- Drop onto conveyors

Conveyors

- Drop into asphalt plant rotary dryer

Dryer

- Drop onto "set of vibrating screens"

Screens

- Drop onto conveyors

Conveyors

- Drop into hot bins

Bins

- Drop into weigh hopper

Weigh hopper
 Drop into mixer for dry-mixing
Mixer
 Drop into asphalt drum/mill with asphalt oil
Asphalt drum/mill
 Drop onto conveyor
Conveyor
 Convey into hot storage silo

New Source Performance Standards (NSPSs)

There are at least three federal NSPSs that apply: 40CFR Part 60 Subparts I (Hot Mix Asphalt Facilities), OOO (Nonmetallic Mineral Processing Plants) and IIII (Stationary Compression Ignition Internal Combustion Engines). The project documentation should discuss these NSPSs and include detail on how compliance will be achieved.

Additional Possible Mitigation Measures

The NSAQMD recommends that no open burning be allowed on the site. Alternatives include chipping, hauling, grinding and cutting for firewood. If open burning is found to be the only feasible method of vegetation disposal, the associated emissions calculations must be included in the air quality report.

Foregoing the use of diesel generators in favor of line power would be a substantial mitigation. Certain passages of text in some project documents make it sound like this is an option, but in other places it sounds like the use of diesel generators is definitely part of the project (such as in the “Diesel Generators” section of the Air Quality Technical Report, Appendix A).

Specify that all haul trucks must have an engine that is less than 10 years old.

Use electric off-road equipment wherever feasible instead of diesel equipment.

Conclusion

Federal regulations require that emissions be held below the federally imposed NSAQMD emission limitations in order to be able to reach Attainment for the PM_{2.5} NAAQS and demonstrate Attainment into the future. Based on CARB’s calculations and on the Portola SIP, which is available on EPA’s website, fewer than 5 tons per year of increased emissions in the Nonattainment Area will make it impossible to demonstrate Attainment and negate years of work at great monetary expense that have been invested in cleaning up the air in and around Portola.

The possible mitigation measures listed above are only a starting point. Additional offsets would be necessary.

The nonattainment area only occupies approximately 13% of Plumas County. Considering the federal regulatory structure regarding nonattainment areas, it would obviously be much more simple and less expensive to establish the largest mine in the County somewhere in the other 87%.