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RE: AWA Comments Regarding Concerns Regarding Air Quality Analysis and Significance Determinations Within the Crystal Geyser Bottling Plant FEIR

At the request of the above-identified community and environmental interest groups, Autumn Wind Associates has reviewed the above-referenced FEIR and provides these comments regarding our ongoing concerns for assumptions and methods employed by the Lead Agency to estimate and evaluate the significance of the project's potential air emissions.

Our review recognizes the substantial emissions input-related changes implemented due to public comments received by the Lead Agency following issuance of the DEIR. However, despite those revisions—and in one matter because of those revisions—FEIR emissions remain underestimated for CAP and GHG pollutants, and the screening-level HRA conducted for the DEIR and carried through in unrevised form to the FEIR now reflects substantially underestimated, inaccurate health risks. Additionally, language regarding Rule 6.1 thresholds of significance, perceived by the public as a protective threshold option in the DEIR by which all project CAP emissions would be evaluated, has been revised by the Lead Agency to ensure that only the minority share of the project's emissions would be subject to its quantitative thresholds; this shift is inappropriate based on the public's expectation created from the DEIR's wording. Further, the revision will result in substantial increases in CAP emissions and their potential for significant impact over what would have occurred had those thresholds been applied to *all* operational CAP emissions estimated for the project, since, particularly with the addition to the FEIR of certain mobile source emission contributions, the project's related emissions can be expected to exceed Rule 6.1's NO_x threshold. By eliminating the application of Rule 6.1 stationary thresholds or similarly quantitative CEQA thresholds, the Lead Agency avoids the necessity of imposing a determination of significant air quality impact.

In conclusion, the FEIR's quantitative revisions to air quality emissions estimates found in the DEIR have resulted in the underestimation of certain operational, mobile source emission increments and that revised, increased

mobile source emissions were not properly included in health risks estimated for the EIR. These defects are serious, particularly since the addition of new mobile source emissions increments included in the FEIR are virtually certain to cause the project's cancer risk maximum estimate to exceed the applicable threshold of significance. The EIR's Air Quality element must be revised, with those revisions subsequently recirculated for public review and comment.

I. Without Reasonable Evidence, the Lead Agency has Inappropriately Altered Factors Influencing the Accurate Determination of the Project's Operational Onroad Mobile Emissions

At FEIR pg. 3-134, the Lead Agency reaffirms their justification for altering from the DEIR certain portions of the vehicle fleet profile and their emissions estimates; these emission estimates are calculated for the project using the CalEEMod emissions estimation program:

“Please refer to the discussion of fleet mix within Master Response 13 Air Quality and Greenhouse Gas Modeling. Additional information has been added to the Appendix M CalEEMod input table further explaining the origin of the fleet mix percentages. Additionally, the fleet mix within the Final EIR has been revised to be more conservative and to more closely align with the default EMFAC fleet mix. As stated in the CalEEMod user's manual, in situations where site specific data is available and is supported by substantial evidence, the site specific data should be used versus the model defaults. Utilizing site specific data in the CalEEMod improves the degree of accuracy of the Proposed Project's emission estimates.”

In our comments submitted on the DEIR we raised concerns with the unexplained removal by the Lead Agency of three lighter-duty vehicle classes (including those containing pick-up trucks commonly used in the Siskiyou area) and heavier trucks from the EMFAC fleet mix running in the background of the CalEEMod model used to estimate Crystal Geyser's operational mobile source emissions. EMFAC's fleet mix for the Siskiyou area has historically relied on carefully calculated percentages of 13 vehicle types or classes, determined with data supplied by Siskiyou County's transportation planning authority.¹ The process used to estimate Crystal Geyser's operational vehicle emissions (or any other proposed land use project's vehicle emissions) assumes that an individual project will, over its lifetime, generate and result in associated vehicle trips across the spectrum of 13 vehicle classes—the region's fleet mix—identified for the County or region. This carefully developed fleet mix, with percentages of vehicles by fleet type consistent with local and regional vehicle information, is key to CARB's EMFAC model and forms the backbone of CalEEMod's operational mobile source emissions estimation module.

Changes in CalEEMod to the vehicle classes or their percentage proportions of the entire fleet is appropriate only in limited and well-documented cases, since changes to the County or region's fleet mix at the project level must not conflict with fleet mix inputs used for regional transportation reports (as required under state and federal law), and so that transportation planning authority data are valid for use in airshed emission modeling conducted for the Northeast Plateau air basin (containing Siskiyou County); under law, the Siskiyou County Local Transportation Commission controls transportation planning and funding for roadway and highway improvements for the County. Its regional and long-term transportation plans and objectives must integrate and conform with state, federal, and local air agency plans and objectives designed to attain or maintain

¹ Siskiyou County Local Transportation Commission.

ambient air quality standards. Changing the County's fleet mix in CalEEMod modeling conducted for an EIR or MND, by subtracting vehicle types or altering their percentage proportions must occur only on the basis of expert information; changes must be fully explained to corroborate the Lead Agency's decision to alter a default vehicle class or its proportional share in the fleet mix during emissions modeling.

Based on earlier public input, the Lead Agency has in the FEIR replaced three lighter-weight vehicle classes it had previously removed without explanation from the vehicle fleet mix used to prepare CalEEMod modeling of the project's onroad vehicle emissions. However, it has not provided substantive, expert information justifying the FEIR's removal of the HHD (heavy-heavy duty) vehicle class from the General Light Industrial land use type used as input to CalEEMod modeling revisions, nor has it explained why it removed other vehicle classes (e.g. motorcycle) from the area's fleet mix found in EMFAC and utilized by CalEEMod.

While the FEIR's CalEEMod modeling materials now show 103 heavy-duty truck trips daily used for CalEEMod modeling, it is important to note that the model handles and calculates their emissions separately from the vehicle trips that will occur over the project's lifetime associated with its General Light Industry land use type. (See FEIR Appendix M, pg. 15 of 160.) The 103 truck trips/day component is based on specific information supplied by the Applicant---those truck trips are known by the Applicant to regularly, routinely occur to and from the business site. Importantly, they are, however, separate from trips calculated in CalEEMod for the land use type (General Light Industrial). As noted above, changes to the fleet mix for that land use type must be carefully justified, yet no actual evidence is provided in the Air Quality element for that justification.

Our previous comments on the DEIR noted that changes to the fleet mix, with removal of certain vehicle classes, was inappropriate and not effectively explained. We based our comments on Appendix M's Air Quality Appendix, where it stated that information for the fleet mix changes used in CalEEMod modeling was derived from TIA (Appendix U), Table 4. However, the TIA (Table 4 at pg. 14 of 68) provides only the most basic trip generation characteristics and identifies trips by land use type---with no explanation nor any information to explain or justify the Air Quality element's changes to Siskiyou County's vehicle fleet mix which runs in the background of the CalEEMod model.

The FEIR excerpt above also references "additional information (that) has been added to the Appendix M CalEEMod input table...", to explain changes to the fleet mix, yet there is no explanatory information provided there, either. Review of the CalEEMod inputs shows only this:

"Trips and VMT - Refer to CalEEMod Table in Appendix M."

However, as is obvious, this sentence provides nothing to explain the fleet mix changes made to the FEIR-revised CalEEMod modeling inputs. Worse, it makes no sense since it IS the very line that it refers the reader to for "Trips and VMT" explanatory information. In short, the Lead Agency's substantial evidence to justify important changes to the fleet mix used in CalEEMod to develop the project's emissions estimates is an otherwise empty paper tiger, and we have been unable to find any explanatory information in the FEIR or its appendices to explain the Lead Agency changes to the carefully developed, regionally tailored default fleet mix for the region and that is employed—for reasons noted here—in CalEEMod's calculations for the General Light Industry land use type applied to the Crystal Geyser project.

The excerpt above also shows that the Lead Agency refers to the CalEEMod user's manual to point out that site-specific data (presumably including fleet mix data), supported by substantial evidence, is acceptable for overriding CalEEMod defaults. Unfortunately, the Lead Agency has provided no "substantial evidence" to justify the removal of the HHD, motorcycle, or other vehicle classes from the General Light Industrial land use type. Some—but not all—of the HHD share of trips assumed to occur with that land use type will be supplanted by the 103 heavy-duty truck trips whose emissions are calculated separately in the Lead Agency's CalEEMod runs. Other, unrelated HHD trips will occur to or from the facility over time and it is precisely those trips, a subset of all trips from all 13 vehicle classes operating in the County, associated with trips to and from the project over the project life, that are estimated as part of the General Light Industrial land use type specified in the project's CalEEMod modeling inputs.

To exemplify why the HHD vehicle class, particularly, should not have been removed from the General Light Industry fleet mix, it is likely that unplanned deliveries to the project facility using HHD trucks will occur over time. It is also highly probable that maintenance and repairs to the facility would involve replacement of heavy equipment (boilers, etc.), pouring of concrete, deliveries of unplanned materials or services, etc. that would rely on HHD trucks (to transport the old boiler out/new boiler in, deliver concrete, etc.). Similarly, employees or visitors to the facility should be expected to travel to or from the facility by motorcycle. Removing those and other classes of vehicles from the default fleet mix established for the region and used in CalEEMod for project-related emissions calculations has not been explained in the FEIR. Further, analyzing emissions for the 103 Applicant-identified truck trips/day separately from the Light Industrial land use type in the CalEEMod modeling process is not justification for eliminating the heavy-heavy duty truck increment assigned to the Light Industrial land use type since HHD truck trips that would otherwise be captured under the General Light Industrial land use type (and not represented by the 103 separately analyzed HHD trucks) will occur sooner or later. Unless the Lead Agency can show with reasonable evidence that no HHD trucks, other than the 103 trucks characterized separately from the General Light Industry land use type, will ever travel to or from the project site, their removal should not have occurred. Similarly, other vehicle classes (e.g. motorcycle) should not have been removed from CalEEMod calculations, and the Lead Agency must provide evidence to explain their removal. In the absence of strong justification, CalEEMod must be re-run with default inputs under the General Light Industry land use type, and the incremental emissions increases added back in to the project's total emissions identified in FEIR Table 4.2-5.

While the emissions increments of these trips may seem trivial, they are not—particularly since some excluded vehicles are diesel powered and diesel particulate matter, a toxic air contaminant, is the greatest source of health risk evaluated in the project's screening level HRA. Their incremental addition to a revised HRA should increase the maximum estimated, increased cancer risk of 8.7/million. The missing emission increments also affect the accuracy of GHG emissions estimates, and GHG credits identified to mitigate the project's GHG impacts are likely underestimated. The 103 truck trips/day complement is appropriately calculated separately in the CalEEMod modeling for the project based on "site specific" information provided by the Applicant, yet the FEIR fails to justify removal of all HHD trips from the separate General Light Industry land use type for CalEEMod modeling. The FEIR similarly fails to provide any "substantial evidence" justification for the removal of motorcycle vehicle or other classes from CalEEMod inputs. Our search of the Traffic Impact Analysis, cited by the Lead Agency to explain the removal of certain vehicle classes from the revised CalEEMod modeling, never mentions the "motorcycle" vehicle class, nor does it explain removal of any vehicle class from the project's fleet mix.

In conclusion, the Lead Agency's removal of certain classes of vehicles from the General Light Industrial classification in the Air Quality element was inappropriate. Removal of the classes was not, contrary to claims made in the FEIR, substantiated with reasonable evidence and explanation. The project's mobile source emissions have been incrementally underestimated as a result, rendering the EIR's estimates of mobile source emissions inaccurate. While slight, these underestimated emissions negatively affect the project's screening level HRA process and the EIR's accuracy of estimated health risks, along with GHG emissions and related credit amounts.

II. Modeled Emission Increases for the FEIR Failed to Include Revisions to the Screening-Level HRA's Risk Estimates

At FEIR Response-to-Comments pg. 3-27 the Lead Agency responds to concerns for changes made to the project's operational truck trips and fleet mix vehicle-class percentages found in the DEIR, and new revisions are enumerated in Table 5 (pg. 15/160) of FEIR Appendix M. The increases in trips along with the proportions of heavier diesel vehicles in the fleet mix have been included in revised CalEEMod modeling, resulting in modeled CAP emission increases. Not surprisingly, increases in trips and the proportion of heavier vehicles have caused estimated exhaust emissions to increase.

At DEIR Appendix M pg. 26 of 160, CalEEMod was used to estimate annual operational emissions of mobile exhaust PM2.5 at .4057 tons/yr. At FEIR Appendix M pg. 27, changes to the vehicle fleet composition, trips, and miles traveled have combined to increase the project's mobile PM2.5 exhaust emissions to .6817 tons/yr. This represents a **68% increase** in PM2.5 exhaust emissions. Mobile exhaust PM2.5 contains toxic diesel particulate matter (DPM), and DPM emissions play the primary role in project-specific, operational ambient air-related increases in chronic and acute hazard index values, and cancer risks expressed in chances per million.

FEIR Appendix M Table 4-2, using information developed for the DEIR, identifies the project-related maximum increased individual cancer risk at the highest existing residential receptor as 8.7/million. Comparing this calculated cancer risk increase to the CEQA threshold of significance applied by the Lead Agency of 10/million, the maximum increased cancer risk for the residence location used in the screening level HRA was determined to represent a less than significant impact.

We have found no information in the FEIR to show that the increase in exhaust PM2.5 resulting from recent revisions made to the fleet mix, vehicle trips, and total miles traveled resulted in adjustments to the health risk estimates identified in Table 4-2. While the FEIR was revised to include greater mobile source emissions activity, particularly of heavier diesel vehicles, it appears that it failed to make correlative adjustments to the screening level health risk assessment conducted for the DEIR. If this is the case, this represents a serious shortfall since the project cannot be sure that the 8.7/million increased cancer risk value noted above will not exceed the 10/million significance threshold applied by the Lead Agency.

Dispersion modeling used in the process of estimating health risks involves a complex number of interacting variables and increases in one input values may or may not cause a proportional increase in modeling results.

Empirically, however the 68% increase in mobile, operational DPM emissions identified above is a very substantial increase since DPM represents the lion's share of all toxics underpinning the HRA analysis. If proportionally applied to the EIR's 8.7/million increased risk estimate found at Table 4-2, project cancer risks would increase to 14.16/million. In such case, the project's significance threshold would be exceeded by a large margin, and any value over the threshold of significance would require a determination of significant impact.

In sum, emissions estimated in the FEIR's revised Air Quality element have increased substantially over what was used in the DEIR to model the project's health risks. We expect the increase in DPM-containing PM2.5 will cause the project's maximum cancer risk for the most at-risk residence to substantially exceed the 10/million increased cancer risk threshold of significance, rendering the FEIR's determination of a less-than-significant TAC risk invalid. The screening level HRA's results should have been corrected prior to issuance of the FEIR, and it appears that they were not. Without running the screening-level HRA model again with the addition of new mobile emission increments, the EIR cannot conclude that the project's health risk impacts are less than significant. To correct the deficiency, corrected emission inputs must be used to re-model the projects health risks.

III. The FEIR's Continued Use of the Urban Trip Length in CalEEMod Modeling Remains Inappropriate

At Response-to-Comment pg. 3 -135 the Lead Agency has rejected our previously submitted concerns that use of the shorter-distant urban trip rates for estimating the project's employee trip-related vehicle emissions was inappropriate; our concerns were based on the expectation that the project will draw employees and project-serving vehicles from a much wider area than would be typical of an urban setting, with longer trip lengths resulting in greater overall emissions quantities. We continue to hold that the use of urban trip lengths for the project's vehicle trips is not appropriate and that the project's onroad mobile source operational emissions in the EIR are underestimated as a result.

The Lead Agency has noted in its Response-to-Comments document that it contacted the local air district for input on urban vs. rural trip lengths, and received no response. This is not surprising since the air district has no CEQA thresholds and does not participate in providing analysis or comments as a CEQA trustee agency. State law requires that they administer air quality regulations and requirements applying to permitted stationary sources, which comprise only the minor share of the pollutants affecting Siskiyou breathers and influencing the region's air quality attainment status. State law does not require they evaluate indirect sources of air pollution such as the proposed Crystal Geyser project now under CEQA review or that they promulgate CEQA thresholds. Mobile source emissions in land use development ("indirect sources" since associated vehicle use effectively serves as a permanent source of CAP and toxics emissions) may be regulated by the air district under authority granted in the CA Clean Air Act, but the SCAPCD has no indirect source regulation nor any CEQA thresholds. The air district's failure to respond on the matter shouldn't be implied as presumptive evidence that it agrees with the Lead Agency's perspective on the trip length issue. SCAPCD staff did not participate in the development or beta testing of CalEEMod,² and it is unlikely that air district personnel are familiar with background details affecting the determination of when rural or urban trip lengths are justified as inputs to CalEEMod modeling.

² CalEEMod User's Guide, v. 2013.2; pg i.

The Lead Agency has assumed without substantive evidence that the City of Mount Shasta, population ~3300, is urban for the purposes of establishing trip distances applicable to Crystal Geyser's emissions calculations. Misuse of the urban trip distance in CalEEMod will render artificially low emission estimates in comparison to estimates based on the rural trip length calculation option. The City of Mount Shasta's population density is higher than densities found outside population centers in the County, but for the purposes of calculating operational emissions in the project area, "urban" means something quite different than the term's municipally-based use to distinguish between the County's relatively low-population densities in the City of Mount Shasta or Dunsmuir compared to the extremely low populations outside those or other population centers. Underscoring that this is a matter of semantics and not dispositive for purposes of CalEEMod trip distance determination, "urban" in relation to City of Mount Shasta's population is exponentially different from "urban" in Los Angeles county where the CalEEMod model was designed. The average population density in Siskiyou County is 7/square mile, whereas the population density in Los Angeles County is 2491/mile.³ The "urban" area of Los Angeles-Long Beach-Anaheim has a population density of 7000/square mile.⁴ By comparison, the City of Mt. Shasta's population density is 900/square mile.⁵

Based on the information above, "urban" in context to CalEEMod modeling inputs is a term for a populated area where citizens are afforded a high degree of alternative forms of transportation, access to rapid transit and a highly developed bus network with regular routes and daily schedules, mixed-use retail and residential developments where personal vehicles are largely unnecessary, broadly developed pedestrian and Class I and II bikeways, etc. In the form argued by the Lead Agency, "urban" means little more than a location where households are more concentrated than in those the extremely low population densities (avg. 7/square mile) found beyond Dunsmuir, City of Mount Shasta, Weed, etc. Without debate, the "urban" characteristics affording alternatives to reliance on personal vehicle operation are not representative of conditions in the City of Mount Shasta or any other more populated area of the County, and therefore the "urban" option for calculating Crystal Geyser's operational vehicle emissions was inappropriate.

The Lead Agency has noted that CalEEMod is silent on the matter of whether a project should use the urban or rural trip length to calculate project emissions. This is understandable since the South Coast AQMD, the creator of the model, quickly understood that it had little knowledge of transportation issues occurring in what was by comparison to their area an extremely rural, remote area of CA. They also understood that CEQA projects across CA represent wide variations in the types, locations, settings, and other contextual details relevant to their environmental review. It is also important to note that rural and urban trip lengths for CA counties used in CalEEMod were not estimated by local air districts, but were provided by transportation planning authorities and from study information developed by Caltrans.

Rather than contacting the local air district with no CEQA thresholds and little or no involvement in CEQA land use development-related environmental reviews, the Lead Agency should have contacted the local transportation planning authority, the Siskiyou County Local Transportation Commission to determine the criteria appropriate to estimating average trip length distances for inputting to the CalEEMod model for use in the Crystal Geyser EIR. At FEIR pg. 3-135, the Lead Agency indicates the decision to specify urban trip lengths in CalEEMod modeling was based on "professional judgement", yet it provides no expert transportation agency

³ http://www.city-data.com/county/Los_Angeles_County-CA.html

⁴ <https://la.curbed.com/2012/3/26/10385086/los-angeles-is-the-most-densely-populated-urban-area-in-the-us>

⁵ https://en.wikipedia.org/wiki/Mount_Shasta,_California

input or other substantive evidence to support that all or nearly all project’s trip lengths associated with the project’s General Light Industrial land use type would occur at shorter urban trip lengths. Employee and delivery trips to and from the project are virtually certain to routinely cover distances beyond those represented by the “urban” trip length option in CalEEMod. CEQA anticipates use of the most reasonably conservative analytical approach to estimating a project’s emissions, and it is unreasonable to believe that a considerable portion of the project’s operational vehicle trips will not regularly involve travel outside the 9.5-mile radius travel distance cited by the Lead Agency.

While CalEEMod provides no criteria to determine when urban or rural trip lengths should be used in project emissions modeling runs, a study involving 8 counties containing both rural and urban land use settings in the San Joaquin Valley, conducted by the University of California at Davis Institute of Transportation Studies, has determined that trip-related vehicle emissions decrease only when an area (e.g. the City of Mount Shasta) reaches a level of higher household population density. As noted in the 2011 report⁶ on the study:

At the regional level, the modeling results show consistent patterns across growth scenarios: compared to the BG (baseline growth) scenario, higher-density land use patterns in the CG (controlled growth) scenario with average densities between 6000 and 8000 households per square miles tend to result in lower vehicle miles traveled (VMT) and vehicle hours traveled (VHT) at the regional level, as well as shorter travel distances at the trip level; conversely, significant increases in VMT, VHT, and average trip length are associated with low-density development in the UG (uncontrolled growth) scenario.

This information reinforces our assertion that the EIR should have used the more conservative rural trip lengths for CalEEMod modeling. As noted above, land use-related trip emissions increase in rural areas where household densities are low; this would include the City of Mount Shasta and Dunsmuir. In the study, vehicle trips and trip distances were reduced only when the household density climbed to a relatively high concentration: 6000 – 8000 per square mile. Under this criterion, the City of Mount Shasta is not “urban” for the purposes of establishing average trip distances appropriate for use in the Crystal Geyser EIR.

To establish the City of Mount Shasta’s household density average, we used this information obtained from Wikipedia (see [Wikipedia article](#)):

Area ^[2]	
• Total	3.77 sq mi (9.76 km ²)
• Land	3.77 sq mi (9.75 km ²)
• Water	0.00 sq mi (0.01 km ²) 0.10%
Elevation ^[3]	3,586 ft (1,093 m)
Population (2010)	
• Total	3,394
• Estimate (2016) ^[4]	3,292
• Density	874.14/sq mi (337.49/km ²)

Population density within the City is 874 people/square mile. The average household in Siskiyou County has two inhabitants (see http://www.city-data.com/county/Siskiyou_County-CA.html). Therefore, the household density

⁶ The Journal of Transport and Land Use; “**The impact of residential growth patterns on vehicle travel and pollutant emissions**”, by Deb Niemeier, Song Bai, Susan Handy; UC Davis. Fall, 2011. See pg 72. for “Regional-level Comparison section.”
<https://www.jtlu.org/index.php/jtlu/article/view/226>.

of the “urban” area cited by the Lead Agency would equal about 437 households per square mile. This density represents, at a maximum, just 7.2% of the 6000 households/square mile threshold use to determine an urban setting, directly relevant to the determination of land use development-related vehicle emissions, in the UCD study noted above. Using an alternative approach, residential water meters in the City of Mount Shasta may also be used to determine the number of households. Using that approach (1800 residential meters), the household density would be 477/square mile.

For the reasons discussed above, it is clear the Lead Agency has erred in its use of the rural trip length for CalEEMod modeling performed during the analysis of Crystal Geyser’s operational “General Light Industry”-related emissions, and that emission estimates are incrementally underestimated.

IV. Critical FEIR Changes to Information Regarding Application of Rule 6.1 Thresholds Will Result in Increased Potential for Significant Air Impacts

At DEIR pg. 4.2-13, the Lead Agency notes use of the local air district's stationary source thresholds (Rule 6.1) to evaluate the proposed project's CAP-related potential emission impacts:

“The County is in attainment or unclassified for all CAPs and SCAPCD has not adopted specific CEQA thresholds relating to air quality. For purposes of this EIR, emissions of CAPs are compared against current SCAPCD rules including “Rule 6.1 – New Source Siting” which includes thresholds for new stationary sources. Stationary source emissions of CAPs are considered significant if they exceed the thresholds presented in Table 4.2-2.”

The Lead Agency insists that the use of SCAPCD Rule 6.1’s stationary source thresholds were not presented in the DEIR as an option for determining the significance of the project’s mobile or areas source emissions. We disagree.

As clearly shown in the excerpt from the DEIR above, the Lead Agency has not limited the use of Rule 6.1 thresholds for the review of only one particular portion of the project’s overall operational CAP emissions. Rather, it provides a clear message to the public that the EIR will rely on Rule 6.1 thresholds to evaluate all project emissions, stating that ***“emissions of CAPs are compared against....’Rule 6.1—New Source Siting”***.

Our comment letter on the DEIR reflects that perception, since we took the excerpt’s second sentence at face value, assuming it was the logical response to the antecedent represented in the first sentence—that it responded to the lack of available CEQA thresholds from the local air district (“...and SCAPCD has not adopted specific CEQA thresholds”). As written in the DEIR, the reader understands that because the local air district has not provided CEQA thresholds to evaluate the project’s emissions, Rule 6.1’s stationary source thresholds would substitute for significance determinations of any or all project’s operational mobile, area source, and stationary source criteria air pollutant (CAP) emissions.

However, the Lead Agency added two words in the FEIR to the section quoted above. The effect of those two words is to reverse the inclusive nature of the review of Crystal Geyser’s total operational emissions that would result from the combination of its mobile (vehicle) emissions, area source emissions, and stationary source

emissions to one that evaluates no more than its stationary source emissions. The effect of this reversal is to greatly reduce Rule 6.1's use within the impact significance determination process, while separating and then effectively ignoring the larger portion of the project's CAP emissions.

The addition of "stationary source" in the FEIR's air quality element is noted at the bottom of pg. 4.2-13 (and again at pg. 4.2-17):

*"For purposes of this EIR, **stationary source** (emphasis added) emissions of CAPs are compared against current SCAPCD rules including 'Rule 6.1 – New Source Siting' which includes thresholds for new stationary sources."*

At FEIR pg. 4.2-17, the broader use of Rule 6.1 thresholds to evaluate all project emissions is again noted to have been narrowed substantially, with the over-write reflecting the change from the original version found in the DEIR:

*"**Stationary source** eEmissions (emphasis added) resulting from the Proposed Project would not conflict with any policies of the SCAPCD...."*

The addition of "Stationary source" in the FEIR's explanation of Rule 6.1 thresholds alters the original impact review approach identified for use by the public in the DEIR. By belatedly specifying that only the project's stationary source emissions are to be evaluated with Rule 6.1 thresholds, the vast majority of project emissions—emitted by mobile sources that will serve or be served by the Crystal Geyser facility across its lifetime—are now excluded from this portion of the impact significance review process. The Lead Agency justifies this major shift at FEIR pg. 4.2-17 with:

*"**The region is in attainment or unclassified under federal and California standards for all CAPs. Mobile and area source emissions resulting from the Proposed Project would not conflict with any policies of the SCAPCD, violate any air quality standard, or contribute substantially to an existing or projected air quality violation.**"*

At FEIR pg. 4.2-17, the Lead Agency again notes the absence of local air district CEQA thresholds of significance as justification for belatedly excluding the project's mobile source emissions from review using Rule 6.1's thresholds:

*"**The County is in attainment or unclassified for all CAPs and SCAPCD has not adopted specific CEQA thresholds relating to air quality.**"*

While descriptive information in the DEIR regarding Rule 6.1 thresholds was written to not limit Rule 6.1's quantitative thresholds to any one particular portion of the project's anticipated CAP emissions, the Lead Agency has now changed horses in the middle of the stream with the addition of language in the FEIR proscribing use of Rule 6.1 thresholds for evaluating the project's considerable mobile and area source emissions estimates. The change in language between the DEIR and the FEIR is not trivial since restricted use of Rule 6.1 threshold (to evaluating only the project's stationary source emissions) shows that the Lead Agency will not permit application of the thresholds to the review of the project's total, combined CAP emissions. Severing mobile and area sources emissions from its stationary emissions, prior to applying Rule 6.1's quantitative

thresholds, ensures that the quantitatively larger proportion of mobile source emissions will be ignored for potential significance in combination with its stationary source increment.

The Lead Agency implies that because the Lead Agency has no CEQA thresholds, it needn't capture those mobile and area source emissions and include them with its stationary source emissions estimates for significance determinations using Rule 6.1 thresholds. However, the absence of local air district thresholds does not release the Lead Agency from its CEQA duty to develop and employ scientifically sound thresholds for the review of all Crystal Geyser's estimated emissions. The Lead Agency should have considered and discussed in the EIR the use of scientifically designed and validated CEQA thresholds established and used by other CA air districts. This is particularly relevant since at pg. 142 of 160 in the FEIR's Appendix M, the Lead Agency notes that it reviewed other air district's CEQA thresholds---but only for "risk-based thresholds" applicable to the evaluation of the project's potential health risks:

"The Siskiyou County Air Pollution Control District (APCD) has not developed thresholds of significance pertaining to health risk for application under the California Environmental Quality Act (CEQA). Therefore, a search of risk-based CEQA thresholds commonly applied in other California air districts was performed in order to guide the Lead Agency in selecting appropriate thresholds for the Crystal Geyser Bottling Plant Projects."

Why has the Lead Agency accepted the notion here that use of other air district CEQA thresholds was appropriate for the project's health risks, but inappropriate for use, in the absence of local air district CEQA thresholds, for evaluating Crystal Geyser's estimated CAP emissions? CAP emissions are no less important in the CEQA environmental impact review process than the project's potential to cause acute or chronic health risks, and thus the Lead Agency should have discussed use of other air district's CEQA thresholds for the evaluation of all project air emissions.

The Lead Agency also failed to discuss the option to use Rule 6.1's stationary source thresholds as CEQA significance thresholds, particularly since Rule 6.1's quantitative thresholds were set at levels designed specifically to ensure protection of Siskiyou's air quality and air quality "attainment" designations.⁷ In fact, wording in the DEIR's Air Quality element, particularly at pg's 4.2-13 and 4.2-15, and with inclusion of Rule 6.1's thresholds used for the construction emission significance evaluation in Table 4.2-3, supports the conclusion

⁷ All CA air districts have federally required stationary source thresholds of significance, set at levels tied to their air basin's federal attainment or nonattainment status, implemented and enforced through permits and inspections by air district personnel at permitted stationary sources. Because those quantitative thresholds, expressed in lbs/day and-or tons/yr for CAPs are designed to maintain or re-attain the federal air quality standards in context to the air basin's existing and anticipated stationary source emissions growth, they have in many air districts been used as the basis for CEQA thresholds. SJVUAPCD and SMAQMD, for example, each originally established their CEQA thresholds using their stationary source thresholds. Ironically, vehicle-related CAP emissions in CA's 14 air basins far exceed annual quantities of CAPs emitted by their permitted stationary sources. Attainment or nonattainment in CA is, therefore, influenced by far greater quantities of vehicle pollution than permitted stationary source pollution, explaining why most air districts have developed CEQA thresholds, and why land use developments are now evaluated in the majority of CA EIRs and MNDs for mobile source emissions impacts using locally or regionally developed CEQA thresholds of significance. The Crystal Geyser project exemplifies the disparity between its air basin's minority-share stationary source emissions and its much greater increment of mobile source emissions, particularly since Crystal Geyser's estimated mobile CAP emissions substantially exceed its stationary source emissions for all but one pollutant---something the Lead Agency notably fails to point out or discuss in the Crystal Geyser EIR. Crystal Geyser's mobile source emissions will, over the project's lifetime, far outrun its stationary source emissions and with greater relative environmental impact significance. Against this backdrop, the Lead Agency's FEIR-refusal to use Rule 6.1's thresholds to evaluate all Crystal Geyser CAP emissions shortchanges the integrity of the CEQA review process. Not surprisingly, the Lead Agency's refusal and the SCAPCD's lack of CEQA thresholds are not inconsistent with one another since essentially the same elected officials act as directors for each entity.

that the Lead Agency intended to create the perception that Rule 6.1 thresholds would be used to evaluate more than just the project's stationary source emissions—but only at the DEIR stage.

The FEIR's belated rejection of Rule 6.1 to evaluate the project's mobile and area source emissions *with* its stationary source emissions raises the question of how the public would evaluate the significance of the project's non-stationary emissions using the information provided during the CEQA EIR process. The excerpts from the FEIR that make clear the Lead Agency's resistance to use of Rule 6.1 thresholds to non-stationary emissions indicate that the Lead Agency intends to effectively ignore any impacts that could and likely will result when project stationary source emissions combine with its area and mobile source emissions.

And the Lead Agency cannot say with certainty that the project's combined (mobile+ area source +stationary) emissions will not conflict with local SCAPCD policy or plans, or cause or contribute to an ambient air quality exceedance event on the basis that there is no method to evaluate those combined emissions against a valid threshold. Without a soundly-developed quantitative threshold for comparison there is no benchmark against which those emissions can reasonably be evaluated, and the Lead Agency has similarly failed to conduct dispersion modeling or develop other methods to reasonably conclude that the project's considerable NOx and particulate emissions quantities, now increased in the FEIR over those identified in the DEIR, will not cause or contribute to local and regional exceedances of federal or state 24-hour ozone and particulate standards.

Because the area's air quality has not yet exceeded air quality standards, the Lead Agency is assuming that Crystal Geyser's mobile and area source emissions, quantitatively estimated in the EIR, are not relevant in relation to the lesser share of CAP emissions that will come from the project's stationary sources. This makes no sense and is not adequately protective since total project emissions will exceed the NOx threshold of significance developed for stationary sources subject to air district regulation. While the DEIR's Air Quality element was written to allow the perception that Rule 6.1 thresholds were available for inclusive review of all CAP emissions estimates, the FEIR has revoked the inclusive approach with the result that otherwise significant environmental impact will be ignored.

This is not by mistake as an inclusive approach would require a significant impact determination, as combined mobile and stationary source NOx emissions would exceed Rule 6.1's NOx threshold of 250 lbs/day.⁸ Such a finding of impact significance would then require more effective mitigation measures. By how the EIR's Air Quality element has been written (DEIR) and then re-written (FEIR) it appears the scales have been tipped in favor of avoiding a finding of significant air quality impact. By noting in the DEIR that the thresholds would be used for evaluating the project's CAP emissions—without restricting them to stationary source emissions only—and by providing them in Table 4.2-3, the perception provided to the public was that Rule 6.1's thresholds were appropriate to evaluate combined estimates of project CAP emissions, with this approach being more protective of local and regional air quality.

Treatment of the project's construction emissions show that Rule 6.1's thresholds were made available by the Lead Agency for evaluating potentially significant emissions from more than just its stationary sources. At DEIR pg. 4.2-15 the Lead Agency applied Rule 6.1's quantitative thresholds for evaluation of Crystal Geyser's estimated construction emissions:

⁸ See FEIR Tables 4.2-3 and 4.2-4 to develop combined, totaled CAP emission estimates; combined NOx emissions exceed the 250 lb/day NOx threshold identified in Rule 6.1.

“As shown in Table 4.2-3, construction-related emissions would be substantially below SCAPCD’s Rule 6.1 significance thresholds for stationary sources. Although these thresholds do not apply to construction activities, they serve as point of reference for levels of emissions that would trigger the District’s requirements for mitigation and best available control technology.”

From the DEIR, pg. 4.2-16:

TABLE 4.2-3
CONSTRUCTION RELATED EMISSIONS

Year	ROG	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}
	pounds per day					
2015	0.21	0.39	4.05	0.00	0.38	0.10
2016	0.18	0.34	3.53	0.00	0.39	0.11
2017	5.12	54.11	38.93	0.05	14.97	9.23
2018	37.79	16.81	16.66	0.02	1.28	1.11
Highest Year Emissions	37.79	54.11	38.93	0.05	14.97	9.23
SCAPCD Rule 6.1 Threshold	250	250	2,500	250	250	250
Exceed?	No	No	No	No	No	No

Source: CalEEMod, 2013; Appendix M.

The quantitative stationary source thresholds in Rule 6.1 were obviously provided in the Table so that the public and decisionmakers could gauge the significance of CAP construction-related pollution estimates—or else they would not have been provided in the Table. Those thresholds in the Table, as explained in the DEIR’s Air Quality element, are to “serve as a reference for levels of (construction) emissions that would trigger requirements for mitigation...”, and thus are, de facto, CEQA thresholds. Had the Lead Agency not intended they be used to evaluate emissions impact significance, they should not have listed them in DEIR Table 4.3-3 and again in FEIR Table 4.3-4. Even though the project’s construction emissions are temporary in nature, the listing of Rule 6.1 thresholds in Table 4.2-3 is additional evidence that the Lead Agency provided those thresholds for review of *all* potentially significant CAP-related air pollution project-related impacts.

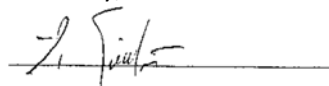
As noted above, the DEIR clearly provides the perception that Rule 6.1 thresholds will be used to determine the significance of Crystal Geyser’s total operational CAP emissions, and there is no language found in the DEIR that limits their use in evaluating Crystal Geyser’s combined, total operational CAP emissions. Further strengthening the perception that Rule 6.1 thresholds were appropriate for evaluating Crystal Geyser’s various source of emissions, construction emissions in the DEIR are evaluated for significance in Table 4.2-3—using Rule 6.1 thresholds. By contrast, however, changes made by the Lead Agency in the FEIR specify that those thresholds must only be used to evaluate the project’s stationary source emissions.

Why, if the DEIR was written to give the the perception that Rule 6.1 thresholds were available to evaluate all CAP emissions and not just those of Crystal Geyser’s stationary sources, has the Lead Agency shifted its approach in the FEIR to make clear that those must not be applied to evaluate the project’s total, combined CAP emission estimates? It appears that public comments received by the Lead Agency regarding flaws in the DEIR’s air quality review subsequently caused the Lead Agency to realize that, to avoid a determination of adverse air quality impact, it must not allow Rule 6.1’s thresholds to apply to all project CAP emissions estimates and particularly to the evaluation of the project’s mobile source emissions estimates.

Public comment regarding flaws in the DEIR's calculations of the project's mobile source emissions have also resulted in increased numbers of truck trips, trip distances, and the total number of vehicle types in the project-serving fleet mix. With the FEIR's addition of vehicle trips and miles-traveled, and the return⁹ of the three vehicle classes to the CalEEMod-modeled onroad fleet mix that will serve or be served by the project over its planning lifetime, the project's total emissions for certain CAPs have increased. Were those mobile emissions to be subject to Rule 6.1 thresholds, they would then be evaluated in combination with the project's stationary and area source emissions---and the combined emissions would require a finding of air impact significance.¹⁰

In conclusion, the DEIR contained language and examples of application of Rule 6.1 thresholds application supporting the public perception that they would be used to assess the significance of the combined, total CAP emissions estimated for the proposed project. This approach would be more protective of breathers and the environment since permitting use of Rule 6.1's thresholds to evaluate only the stationary source emissions estimates would act to effectively ignore the project's greater increments of area and mobile sources. Changes to the FEIR show that the Lead Agency will not permit use of Rule 6.1 thresholds to evaluate project-related area and mobile source emissions, on the basis that lack of local air district CEQA thresholds and the region's good air quality and attainment status justify the decision to effectively ignore those emissions for their potential to cause significant impacts when combined with the project's stationary source emissions. The Lead Agency should have employed Rule 6.1 thresholds to evaluate the project's combined emissions to ensure protection of air quality resources, particularly since the DEIR was written with language giving that perception. Alternatively, it should have discussed the potential to use other air district's CEQA thresholds for use to evaluate the total CAP emissions estimated for the project, particularly since it had evaluated them for use of their health risk thresholds in the Crystal Geysers review. As written, the EIR ensures that the Crystal Geysers' criteria pollutant emissions will not be determined significant, to the benefit of the Applicant and the dis-benefit of the environment and breathers.

Sincerely,



Greg Gilbert

Autumn Wind Associates

⁹ Three classes of vehicles within the total fleet mix in Siskiyou County were removed without discussion or explanation in the DEIR by the Lead Agency's CalEEMod modelers prior to emissions modeling conducted for the DEIR. The effect of the removal was to reduce total estimated project emissions. The FEIR has since added those vehicle classes back in for revised CalEEMod emissions estimates.

¹⁰ We noted in our comment letter on the DEIR's air quality element, dated February 14, 2017, that mobile source-related corrections would very likely cause the project's mobile source emissions to exceed Rule 6.1's NOx threshold of significance: "Because only a slight increase over daily NOx emissions modeled for the project—no more than .11 lbs/day against the 250 lb/day threshold—would lead to an exceedance of that threshold, any single issue we have identified as a probable defect... holds the potential to undo and derail the accuracy of the DEIR's significance determinations."

Greg Gilbert has provided air quality project analysis and strategic services to land use-related and other clients since forming Autumn Wind Associates in 2001. Prior to 2001 he worked at 2 CA air districts for 11 years, with broad responsibilities in stationary source enforcement; compliance; public education and outreach; rule development; air emissions inventory analysis; development and implementation of low-emission mobile source incentive programs; development and implementation of CEQA guidance, thresholds of significance, and mitigations; and analysis, review, and commentary involving many EIRs and MNDs. Since 2001 he has provided air quality analysis of CEQA and NEPA documents, for both private-sector and air district clients. Mr. Gilbert received his undergraduate degree in Environmental Studies from UCSB, thereafter completing numerous professional and graduate-level courses in transportation, planning, law, and air quality.