

August 3, 2021

RE: Roper Construction: Alto Concrete Batch Plant

This letter is in response to Ryan Roper of Roper Construction submitting a Universal Air Quality Permit application to the New Mexico Environmental Department to construct a concrete batch plant in Alto, New Mexico to be named the Alto Concrete Batch Plant or Alto CPB.

We have surveyed our 200 plus members on this subject and 9 out of 10 are strongly opposed to this development at the proposed location. As an Association, providing analysis and public input on land use issues is an important contribution we make to our communities. The following outlines the various elements of our case to deny this development at the proposed location.

Concrete batch plants impose a trifecta of impacts upon public health and well-being in that they emit air, light, and noise pollution. Fine particulate matter or PM2.5 air pollution is created from the concrete production process as well as the diesel emissions of trucks and concrete mixers that feed plant operations. Additionally, in the case of the proposed Alto plant, noise and light pollution will weigh heavily on nearby residents as production will occur up to 18 hours a day, 7 days a week, 52 weeks a year.

Concrete batch plants are a significant source of sulfur dioxide, nitrogen oxide and carbon monoxide. These chemical compounds are associated with numerous health and environmental impacts such as water quality deterioration, particulate matter, acid rain, global warming, visual impairment, and ground level ozone. High concentrations of sulfur dioxide can affect breathing and may aggravate existing respiratory and cardiovascular disease. Nitrogen oxide plays a major role in the atmospheric reactions that produce ozone. Carbon monoxide can cause harmful effects by reducing oxygen delivery to the body's organs and tissues. Sulfur Oxide and nitrogen oxide can be converted to fine particulate matter once escaped into the atmosphere.

Fine particles or simply dust is the most visible of these pollutants. It is estimated that for each ton of cement produced, total particulate emissions of 360 pounds will result. PM2.5 can penetrate deep into the lungs and may enter the bloodstream. This kind of pollution can lead to heart and lung disease, as well as cancer, and is known to affect lung development in children; is known to trigger or worsen chronic diseases such as asthma, heart attack, bronchitis, and other respiratory problems; may cause immediate or delayed irritation or inflammation of the eyes, as well as allergic reactions, headaches, nausea, dizziness, and more; and has been associated with a higher risk for birth defects when pregnant mothers are exposed.

In addition to the particulate matter exposure from operations, residents are also exposed daily to particulate matter and diesel exhaust from trucks going to and from the facility. The Alto CBP as proposed could produce up to 500,000 cubic yards/year, or 1300 cubic yards/day of concrete. The



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average concrete truck holds 11-15 cubic yards. The permit's maximum allowable production capacity translates into 90 - 125 trucks a day for this facility.

From Mr. Roper's application, when asked if there are other sensitive areas near the facility he answered "no", however the proposed plant would be virtually across the street from the residential subdivision of Legacy Estates and just down the road is The Mountain View Christian Camp for children. The Alto North subdivision is less than 1500 feet northwest of the proposed plant location and the Ranches of Sonterra subdivision northeast.

Light pollution poses a serious threat to nocturnal wildlife. As nocturnal animals sleep during the day and are active at night, light pollution radically alters their nighttime environment by turning night into day. Birds that migrate or hunt at night navigate by moonlight and starlight. Artificial light can cause them to wander off course. Migratory birds depend on cues from properly timed seasonal schedules. Artificial lights can cause them to migrate too early or too late and miss ideal climate conditions for nesting, foraging and other behaviors. Many insects are drawn to light, but artificial lights can create a fatal attraction. Declining insect populations negatively impact all species that rely on insects for food or pollination. Prolonged exposure to artificial light prevents many trees from adjusting to seasonal variations. This, in turn, has implications for the wildlife that depend on trees for their natural habitat. Research on insects, turtles, birds, fish, reptiles, and other wildlife species shows that light pollution can alter behaviors, foraging areas, and breeding cycles.

Humans are dependent on natural body cycles and the production of melatonin, which are regulated by light and dark (e.g., day and night). Research suggests that artificial light at night can negatively affect human health, increasing risks for obesity, depression, sleep disorders, diabetes, breast cancer and more.

Noise at the plant would come from numerous activities; deliveries of materials, handling, loading, and mixing of concrete, truck movements, reversing beepers, and running of machinery to name a few. Based on information provided on the application by Mr. Roper on the maximum operating schedule of the plant allows for operation from 3:00 a.m. to 9:00 p.m., 7 days a week from May through August. The nuisances and public health impacts could potentially pose a constant threat to the quality of life and safety of residents. Consider, also, that the May through August period is the heart of Lincoln County's summer visitor season. The number one reason visitors arrive here, according to numerous past surveys, is, quite simply, the natural beauty our area affords them.

When commercial trucks haul tons of materials on 2-lane roads that surround this location, the noise, traffic, wear, and tear of local roadways will make living and travel for area residents unsafe and, often, unbearable. In addition, the cost to repair and maintain NM HWY 220 will increase.

Production of cement and concrete places a strain on the availability of a prime natural resource, namely water. Every significant step in producing concrete involves water. Anywhere from 32 to 39 gallons of water is needed to produce 1 cubic yard of concrete. Producing 500,000 cubic yards/year of concrete would require 16,000,000 – 19,500,000, gallons of water annually or 41,000 – 53,000 gallons a



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day. According to the Office of the State Engineer Drought Map a large portion of Lincoln County is in severe to extreme drought and the historically observed impacts range from well water decrease to extreme fire danger. Private wells are the only source for water for residents in the area and the Alto CPB plant utilizing 50,000 gallons a day could create declining water well levels in these neighboring wells.

As a group, we are also very concerned about the actual water rights that applicant may or may not possess as, certainly, even if the existing livestock well on the property is converted or upgraded to a commercial well this in no way would be sufficient to supply the water volume this plant will consume. At this juncture, have the appropriate governing bodies been provided an analysis by the applicant of anticipated usage versus available water rights?

Concerning wastewater from this plant, it most certainly will contain potential pollutants such as cement and aggregates that can increase the turbidity of local waterways like Little Creek. Cement contaminated water can also be highly alkaline. Inappropriate storage and handling of chemicals and fuels onsite can also lead to polluted surface and ground waters. Heavy metals include arsenic, antimony, cadmium, chromium, copper, lead, selenium and many more can leach into drinking water from cement plants. These metals can contaminate private wells through groundwater movement and surface water seepage and run-off. Persons who consume high levels of these heavy metals risk acute and chronic toxicity, liver, kidney, and intestinal damage, anemia, and cancer.

Consider, too, that this proposed location for the Alto CBP would be located along the Billy the Kid Scenic Byway. The Billy the Kid Scenic Byway is part of the "America's Byways Program" and is designated a National Scenic Byway. Originally created by Congress the National Scenic Byways program was intended to foster economic development and to help recognize, preserve, and enhance selected roads with high scenic value based on one or more intrinsic qualities – archaeological, cultural, historic, natural, recreational, or scenic. Allowing industrial and manufacturing plants to be constructed and operate along a scenic byway destroys the experience for which the scenic byway was created. Scenic byways preserve the beauty of the designated scenic corridors, which reap rewards by protecting community character and providing economic opportunities in tourism and recreation.

Also, and disturbingly, the proposed location for the Alto CBP would be located 1.1 miles from the White Mountain Wilderness, a Class I Wilderness Area. The United States Congress designated the White Mountain Wilderness in 1964 and encompasses nearly 47,000 acres. As a Class I Area the White Mountain Wilderness was singled out for special protection from air pollution under the Clean Air Act Amendments and is an area protected by the Regional Haze Program by the Environmental Protection Agency. These protections were designed to prevent significant deterioration of existing clean air resources. Per the Clean Air Act Federal Land Managers are tasked and have explicit responsibility to protect the air quality and air quality related values, such as vegetation, soils, water, fish, wildlife, and visibility, of Class I lands and whether industrial facilities will have an adverse impact on these values.

Also, found within Mr. Ropers application, regarding sensitive areas near the facility, when asked if there was likely to be public comment or opposition he answered "no". We believe though, as you have read



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herein, and most probably have heard from others there is, in fact, a great deal of community opposition to the location of the concrete batch plant.

As an Association of REALTORS® it is our obligation to recognize that the interests of the nation and its citizens require the highest and best use of the land and the widest distribution of land ownership. To require the creation of adequate housing, the building of functioning cities, the development of productive industries and farms, and the preservation of a healthful environment to the community. A concrete batch plant at this location brings nothing positive for anyone except Mr. Roper.

Sincerely,

Robert S. Moroney
Ruidoso Lincoln County Association of Realtors
President

Resources

- US Forest Service White Mountain Wilderness
 - https://www.fs.fed.us/air/technical/class_1/wilds.php?recordID=87
 - <https://www.fs.usda.gov/attmain/lincoln/specialplaces>
- Billy the Kid Scenic Byway
 - <https://www.newmexico.org/places-to-visit/scenic-byways/billy-the-kid/>
 - [https://dot.state.nm.us/content/dam/nmdot/planning/Byways/Billy the Kid National Scenic.pdf](https://dot.state.nm.us/content/dam/nmdot/planning/Byways/Billy%20the%20Kid%20National%20Scenic.pdf)
 - <https://efotg.sc.egov.usda.gov/references/public/NM/ScenicBeauty.pdf>
- Environmental Quality
 - <https://law.utexas.edu/wp-content/uploads/sites/11/2019/01/2019-EC-ConcreteBatchPlantsGuide.pdf>
 - https://www.epa.gov/sites/default/files/2015-12/documents/concrete_batch_background_doc_version_1_0.pdf
 - <https://kinder.rice.edu/urbanedge/2020/08/19/houston-air-pollution-breathe-concrete-plants-TCEQ>
 - <https://www.camelway.com/support/faq/concrete-plant-environmental-issues.html>
 - <https://onebreathhou.org/newsroom/2020/08/concrete-batch-plants-health-impacts-permitting-texas/>
 - <https://www.epa.gov/enforcement/cement-manufacturing-enforcement-initiative>
 - https://en.wikipedia.org/wiki/Environmental_impact_of_concrete
 - https://www.researchgate.net/publication/40497595_Environmental_Impact_of_Concrete
 - https://www.researchgate.net/publication/322315967_Impacts_of_booming_concrete_production_on_water_resources_worldwide
 - <https://www.nature.com/articles/s41893-017-0009-5>
 - <https://www.fluencecorp.com/concrete-industry-water-use/>
 - <https://www3.epa.gov/ttnchie1/ap42/ch11/final/c11s06.pdf>
 - <https://pubs.usgs.gov/of/2005/1152/2005-1152.pdf>
 - <https://www.epa.gov/sites/default/files/2015-12/documents/cement.pdf>
 - <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2627884/>
 - <https://www.darksky.org/light-pollution/human-health/#:~:text=Exposure%20to%20Artificial%20Light%20at%20Night%20Can%20Harm%20Your%20Health&text=Research%20suggests%20that%20artificial%20light,diabetes%2C%20breast%20cancer%20and%20more>
- Water
 - <https://www.epa.gov/privatewells/potential-well-water-contaminants-and-their-impacts>
- Sensitive Age Groups
 - <https://www.census.gov/quickfacts/fact/table/lincolncountynewmexico/PST045219>