Mr. Robert Romig
Senior Policy Analyst
Texas Sunset Advisory Commission

January 28, 2022

Dear Mr. Romig,

I want to thank you for allowing me the opportunity to provide previous testimony regarding the Texas Commission on Environmental Quality's (TCEQ) administration of environmental programs for the State of Texas. Our dialogue focused primarily on the Aggregate Production Operation Program (APO). During our conversation, you asked a number of questions and one was not addressed due to time. That very important question was, "What makes you think APO (rock quarries and concrete/asphalt batch plants) operations are creating air quality problems?"

We (Rep. Biedermann's Office) strongly believe that after you read the following very detailed and factual information on the TCEQ's administration of the state-wide APO Program, you will discern the need for the TCEQ to conduct an independent, third-party air quality study on APO's in the state. It is of utmost importance due to the potential health impacts from APO's that the Sunset Advisory Commission recommend an independent air quality study.

Our following summary of events and dates pertain to Representative Kyle Biedermann first being elected almost five years ago. He outlined his priorities to his staff based upon constituent input, and one issue of greater importance was air emissions from APO's. A number of other issues were noted involving APO's but for the purpose of this summary, we will attend to the air quality emissions.

Rep. Biedermann's initial strategy focused on visiting a number of APO rock quarries and concrete/asphalt batch plants in Comal County. We made arrangements and met with company staff representing both APO categories (quarries and concrete/asphalt batch plants). We spent time visiting with the public who generally lived within a one-to two-mile radius of these APO's. Additionally, we communicated with a number of local organizations and elected officials like the county groundwater conservation district, county commissioners, and school district staff. In addition, we received information from rock quarry operators and observed blasting operations and the transportation of quarry products by trucks on the local roadways. Our team wanted to conduct a thorough level of due diligence. This resulted in our team being more knowledgeable of our constituent concerns, the size and magnitude of the APO Industry in Texas, and being better prepared to enter into meaningful discussions with the TCEQ Air Quality Program staff, agency leadership, and the aggregate industry.

It took months to gather first-hand information before we visited with the TCEQ. Our initial visit in 2018 with the TCEQ staff was directed on three issues. First, we did not observe real-time ambient air quality data being collected by the TCEQ. This was because air quality monitors were not located close upwind and downwind in the prevailing wind pattern of the Comal County APO's. In fact, there were only a limited number (less than 15) of air monitors in the San Antonio, Texas area that covered roughly 6,000 plus miles. This exceeded the air monitors capability to accurately determine the levels of Particulate Matter (PM 2.5, PM 10), and the composition of PM 2.5. .Secondly, we questioned the accuracy and legitimacy of the TCEQ air quality dispersion models when the agency was not using real-time, ambient air quality information to run and calibrate their models. Our third issue also concerned the aerial extent of the TCEQ air quality dispersion modeling. We asked why wasn't the agency modeling the cumulative effect of air particulates (PM 2.5 and PM 10) because of

the large number of rock quarries and concrete/asphalt batch plants being permitted by the TCEQ in one of the fastest growing population areas in the United States, Comal County, Texas.

From this discussion with the TCEQ staff, we were told that the locations of the existing air quality monitors were acceptable, the data being collected by these air monitors were accurate for their models, and the TCEQ permitting program did not call for cumulative determinations. Furthermore, the TCEQ staff went on to say that the TCEQ air permit was issued for only specific equipment within a single facility, mining operations were not considered in particulate emission assessments, and the agency used other APO permit application predictions for air emissions. Our team discussed these TCEQ responses with private sector firms and Federal agencies like the U.S. Environmental Protection Agency (US EPA) and the Centers for Disease Control and Prevention (CDC). We then met with TCEQ leadership and discussed our observations. We were told the TCEQ Air Quality Program met all the Federal and state regulations and guidance. We did not concur with this response and in turn recommended that a state-wide or Comal County wide air quality study be conducted for two purposes:

1. Real-time air ambient data (on and off property for particulate matter 2.5 & 10) could be collected for a single facility and multiple facilities (cumulative) for input into the state's air dispersion model and

2. The modeling results would be assessed and compared against all appropriate Federal and state air quality standards.

Unfortunately, the TCEQ was non-responsive to either our request for them to conduct an air quality study.

In the 86th legislative session, Rep. Biedermann submitted a bill for such a study to be conducted by the TCEQ. During that session, a number of District 73 constituents had formed an eight-person Technical Team consisting of engineers, geologists and scientists highly experienced in surface mining and associated processing facilities. The Technical Team skill sets include over 250 years of experience in engineering and operational mining, hydrogeology, sedimentation, biomedical research, material science, environmental regulations, and facilities design and operational expertise. This Technical Team met with us and provided additional information on APO's. Shortly after the 86th legislative session started, this Technical Team began providing technical and scientific support to a state-wide organization called the Texans for Responsible Aggregate Mining (TRAM). More specifically, the Technical Team had contracted with university professors and private sector firms to collect and analyze similar data to what we had requested from the TCEQ. Also, their concern was not only the particulate matter but also the composition of the particular matter, e.g, crystalline silica. As part of the study's findings, it indicated "significant amounts of silica in aerosol were present in the region". The study also concluded that "it seems completely reasonable to assume that crushing of crystalline silica rich rock is leading to emissions of respirable crystalline silica into the atmosphere". The study leaders recommended that a more detailed air quality analysis be conducted. This advice was based upon the rapidly growing concentration of APO's adjacent to the large and rapidly growing population in Comal County, and the potential health effects that aggregate mining operations can have on the local public. This public financed study was later provided to the TCEQ. Resultantly, we appealed to the TCEQ and the Texas Aggregate and Concrete Association (TACA) for a thorough air quality study. No responses came from either entity.

Before the session ended, our team and district constituents met with the Texas Department of State Health Services (TDSHS). The TDSHS staff indicated they were unfamiliar with the APO

Industry in Texas. They stated they meet periodically with TCEQ staff but this issue had not been raised as one they needed to evaluate. We contacted them a few months later, and the TCEQ still had not requested their input on APO operations. During this approximate one-year time period, we received no responses from the TCEQ, TACA, or individual APO's on our requests to see the actual TCEQ air quality modeling results or the input air quality data used by the TCEQ in their air dispersion models. TACA did meet with us and stated that any new regulations would be excessive and add significant costs to the APO Industry and to the citizens of Texas. We mentioned that the air quality study may not result in the aggregate industry having to install and monitor long-term air sensors. In addition, we requested they show us detailed cost information on what they meant by "excessive and significant costs", but we received no reply. We have never received the requested financial information from TACA. During this time, the Technical Team demonstrated with conceptual-level cost models that the cost of mining regulations like those in place for coal mining in Texas would "add an insignificant incremental cost to the user end of APO Industry products. Their assessment was based on long-term experience with the comprehensive U.S. mining regulations primarily the 1977 Surface Mining Control and Reclamation Act. This act is being implemented in many areas of the United States with the exception being the APO's in Texas. We did hear from the TCEQ air quality program staff that they had "run worst case particulate matter scenarios" and still the TCEQ permits were within Federal and state regulatory limits. We were unable to obtain a copy of these modeling results, but the TCEQ did inform us that they took their air dispersion modeling results seriously. At that time, we also mentioned with the TCEQ leadership that the petrochemical industry in the state was very large and the TCEQ had installed and/or the industry itself a large number of air monitors. These monitors were located on site or immediately off-site to characterize the air quality condition around the petrochemical facilities. With this in mind, we suggested the TCEQ implement a comparable air quality sampling and analysis program for certain APO's in Texas like the existing, in-place program for the petrochemical industry. We heard nothing from the TCEQ on this suggestion.

To summarize, we had constituent concerns that there might be a public health threat. With our team's assessment, we were unable to obtain specific factual and scientific-supported information from the TCEQ, TACA, or individual APO's that there was no public health threat. Additionally, new information from a public led air quality study pointed out that high values of crystalline silica were highly probable in the air emissions being generated by APO's (rock quarries). Moreover, feedback from private sector air quality firms and national agencies were informing us on the important need for the TCEQ to collect real-time air quality data both upwind and downwind from APO's and the need for the TCEQ to consider adding crystalline silica values in their air models for APO permits (single and cumulative). What did all this mean? We had:

* A lead state environmental regulatory agency that was unwilling to share any air quality data with us.

* The lead aggregate organization was unwilling to share any requested information.

* The lead state agency for public health matters was not engaged in evaluating whether a public health threat existed or not.

* We had empirical, real-time ambient air quality data indicating higher than reported values for PM 2.5 offsite of some APO's.

From the middle of 2019 to early 2021, the Technical Team worked with our team spending considerable time canvassing how other states managed and administered their APO Programs. This

was done to develop a more thorough understanding of how the APO Industry was being regulated nationwide. From this, we determined that many other states were working with their APO industry's on developing and implementing operational best management practices (BMP). In our discussion with the TCEQ on BMP's, we were informed that the agency had met with the aggregate industry on creating and establishing BMP's. We were told that when the BMP's were implemented, they would only be voluntary and not required or enforceable via any new state regulations.

Our team prepared a bill during the 87th legislative session to transfer the APO Program from the TCEQ to the Texas Railroad Commission (RRC). One primary reason involved the surface mining regulatory authority and history the RRC had in administering the programs for uranium mines and lignite/coal mines in Texas. The other primary reason was the RRC had extensive state-wide experience in managing surface mining activities and oil and gas operations. While specific permits (not air quality) were being issued, the Texas Railroad Commission leadership and staff paid close attention to public feedback and the potential for engineering, science, and public health-based problems. During this time, our team found out that additional air samples and material samples had been taken by the public for the Comal County air quality study previously discussed. These samples were pending analyses. At a public hearing in 2021 on the issuance of a TCEQ permit for the Vulcan's Material APO facility In Comal County, testimony was presented on behalf of Rep. Biedermann. It was recommended that a more thorough and complete review be made of the local geological conditions because the proposed APO facility was to be located over the Edwards Aquifer Recharge Zone. It was pointed out that this very unique and sensitive groundwater aquifer is the major source of drinking water for over 2 million people. The TCEQ Commissioners elected to issue the air permit per the agency staff recommendation without additional review. Afterwards, our team queried the TCEQ staff and they stated that if an APO applicant met all the permitting requirements a permit would be issued. This meant to our team that the TCEQ did not perform an extensive on-site geological and material assessment of the applicant's submitted information to ensure it was valid, accurate, and fully protective of the Edwards Aquifer.

Later, in March, 2021, Maya Guerra Gamble of the 459th District Court issued rulings that involved the TCEQ permitting the Vulcan's Material Proposed APO. Three of the pertinent rulings follow:

1. TCEQ's determination that the Plant's crystalline silica emissions will not negatively affect human health or welfare was not supported by substantial evidence.

2. Vulcan's silica emissions calculations are not representative of the site and are not supported by substantial evidence.

3. TCEQ's determination that Vulcan properly conducted it Air Quality Analyses was not supported by substantial evidence and was arbitrary and capricious.

3a. Vulcan's air dispersion modeling fails to adequately account for or address cumulative impacts, and quarry and road emissions were not adequately considered.

3b. Vulcan's choice of the relevant background concentrations it used in its voluntary Full Minor National Ambient Air Quality Standard analyses was not supported by substantial evidence and was arbitrary and capricious.

Since June 2021 to December 2021, we contacted other state environmental regulatory agencies and reached back to the CDC and U.S. EPA. The two Federal agencies indicated they have not conducted any specific air modeling of APO activities in the U.S. for a long time but are interested in reviewing the air and material samples collected and sampled by independent third parties in Texas.

There are at least two additional independent air sampling programs for concrete batch plants that began roughly one to two years ago. These were located in the Houston, TX. and the Dallas, TX. areas. Without going into great detail, I believe that the results of air sampling show that concentrations of residual crystalline silica taken close to Concrete Batch Plants are higher than those modeled by the TCEQ.

We need to be open and confirm our position. That is, we did not know almost five years ago and we and the public still don't know today whether the TCEQ has accurately and correctly determined the public health impacts of APO air emissions. In addition to what was previously presented, the TCEQ recently identified that the agency had completed an APO study. The study concluded that there is no impact to the public's health from Concrete Batch Plant air emissions. To a number of professional scientists and engineers outside the TCEQ, a number of critical concerns arise regarding the study.

1. The TCEQ does not identify whether the rock composition having being analyzed in the other states is the same as the rock formations found in Texas.
2. There is no mention of the location and proximity of the air monitors to the APO facilities either in the states identified or the State of Texas.
3. It is not identified whether the locations for the APO's in other states are experiencing high increases of population.
4. It is not mentioned whether other state environmental regulatory agencies update their air dispersion models with real-time ambient air quality data.

We ask you to consider: Is this a valid study and, do the results truly measure what they are supposed to measure? The answers to both questions are no. Reliable scientific studies should present all perspectives before any valid conclusions are made.

We recognize the significance of the APO Industry to the State of Texas and its importance in providing valuable resources to the economic prosperity of Texas and the nation. Additionally, we are not saying that new air quality regulations governing APO's need to be implemented by the TCEQ. We are however saying that real-time, scientific supported data collected by independent third parties strongly indicate the TCEQ air quality models are not presenting an accurate and holistic view of crystalline silica air emissions or other potentially harmful chemicals originating from APO's in Texas.

We are recommending the TCEQ be required to perform an independent third-party study of the potential health effects of air emissions from individual and cumulative APO's.

Respectfully,

Lawrence O. Bailey, Jr.
Senior Policy Analyst
State Representative Kyle Biedermann