



County of Santa Cruz

DEPARTMENT OF COMMUNITY DEVELOPMENT AND INFRASTRUCTURE

701 OCEAN STREET, FOURTH FLOOR, SANTA CRUZ, CA 95060-4070
Planning (831) 454-2580 Public Works (831) 454-2160

Matt Machado, Deputy CAO, Director of Community Development and Infrastructure

Carolyn Burke
Assistant Director
Unified Permit Center

Stephanie Hansen
Assistant Director
Housing & Policy

Kent Edler
Assistant Director
Special Projects

Steve Wiesner
Assistant Director
Transportation

Travis Cary
Director
Capital Projects

Kim Moore
Assistant Director
Administration

June 17, 2022

Agenda: June 22, 2022

Planning Commission
County of Santa Cruz
701 Ocean Street
Santa Cruz, CA 95060

Subject: Report back on complaint of excessive dust emissions from the north cement kiln dust (CKD) area closure plan project at the former Davenport Cement Plant approved under Coastal Development Permit 28372

Recommended Actions

Accept and file this report in response to a complaint regarding excessive dust emissions from the north cement kiln dust (CKD) area closure plan project at the former Davenport Cement Plant

Executive Summary

The north CKD area closure plan at the former Davenport Cement Plant was permitted in February 2021 and has been under construction since April 2021. The project includes approximately 165,000 cubic yards of grading to construct an engineered cover and vegetated soil cap with drainage controls to close the CKD landfill. A complaint regarding excessive dust from the project was received from a local resident. This report responds to the complaint and concludes that, while there are temporary dust impacts from the project, implementation of best management practices are ongoing and additional measures have been implemented as a result of the complaint to improve dust control as part of ongoing adaptive management. Continuous monitoring of air quality in the project area indicates no exceedance of established air quality standards.

Background

On February 24, 2021 the Planning Commission approved a Coastal Development Permit, Grading Permit, and a Riparian Exception for this project to implement the final north CKD area closure plan at the former Davenport Cement Plant as required by the Central Coast Regional Water Quality Control Board (RWQCB). In summary, the project includes construction of an engineered cover and vegetated soil cap with drainage

controls to hydrologically isolate the CKD landfill material and prevent surface waters and some groundwater from contacting and interacting with the CKD. The overall volume of grading (approximately 165,000 cubic yards) triggered a requirement for Planning Commission review of the project. The project has been under construction since April 2021 with a shut down during the winter of 2021/2022, and project activities resumed in April 2022. Grading activities are occurring on approximately 23 acres of the Cement Plant property, located within a larger 43.5-acre project boundary that also includes access roads, portions of the cement facility, and adjacent lands.

As part of the Project the applicant prepared a Dust Mitigation Plan, which was reviewed by the Monterey Bay Air Resources District (MBARD), and the permit conditions of approval require implementation of the plan throughout the project. The plan consists of two parts: (1) best management practices (BMPs); and (2) a real-time air quality monitoring network. The BMPs include, but are not limited to:

- Watering with a water truck(s)
- 15 mph on-site speed limit
- Load covers for offsite truck transport
- Soil binder application in disturbed areas not being actively graded
- Designated on-site person(s) available to respond to community complaints and posting of the contact information in the community
- These measures are to be continuously applied throughout the project, with locations and intensities of application informed by the monitoring program.
- Adaptive management and implementation of additional measures, if needed

The monitoring network consists of the following elements:

- Air quality sensors located in four locations surrounding the project site in generally upwind and downwind locations to detect dust emissions
- Meteorological stations collecting information on temperature, wind speed and direction, and precipitation
- The air quality sensors are internet connected making the data publicly available in real time on the [PurpleAir](#) website. Historical data can also be downloaded from the website.
- Data from the monitoring network is submitted to MBARD and County staff on a weekly basis.
- There are hundreds of similar air quality sensors deployed throughout Santa Cruz County accessible through the same website including a sensor at the Pacific School in Davenport located approximately a half-mile from the project site.

Analysis

On Tuesday, May 24, 2022 the County received a complaint from a resident of Davenport regarding excessive dust emissions from the project. The complainant indicated they were one of many Davenport residents concerned about the impacts of dust emissions on human health and natural resources and described their concerns, which are summarized as follows:

- *Residents were told that fugitive dust would not be transported offsite.*
- *CKD is classified as a hazardous material and known carcinogen.*

- *MBARD has recommended that Project operations cease when winds are 15 mph or more.*
- *A short video was submitted showing deposition of dust in Davenport including a video clip from a drone flight above the project site.*
- *A request to close operations during winds greater than 15 mph.*
- *A request to ensure that adequate wetting occurs during grading activities and during high wind events.*

County staff has emailed a response to the complainant and continues to follow up with the project management team regarding dust mitigation. A summary of the response, ongoing monitoring of the project, and additional information is provided below.

Beginning in March of 2021 weekly project updates including phone and email contact information have been provided by CEMEX to key community contacts to forward to other residents through existing channels. As a result of the recent complaint, County staff has provided this contact information, including contact information for the onsite project manager, Cemex personnel, and County staff, directly to the complainant in case there is an issue that needs to be addressed immediately or to discuss any issue related to the project directly with the project team.

Dust emissions from the project are being monitored both visually by onsite personnel and by the instrument monitoring network on the project site. The instruments have been positioned with input from MBARD staff. The network includes monitoring stations located generally upwind and downwind of the project site and the town of Davenport. The monitoring data is submitted weekly to the County and Air District and is publicly available in real time on the PurpleAir website. This is in addition to implementation of the BMPs in the Dust Mitigation Plan listed above. In addition, according to the project manager, the project has been occasionally shutting down early during periods of high winds, which typically occur in the afternoon. The project has been starting earlier in the day than would normally be allowed to try to get as much work done as possible before the afternoon winds. As a result of the complaint and in an effort to mitigate the impacts of early shutdowns on the project timeline, an even earlier sunrise start has been implemented. Although there has been some confusion in the past on this issue, there is no requirement the project shut down if winds speeds exceed 15 mph. Additionally, as a result of the recent complaint, additional measures have been implemented to mitigate dust including increased use of soil binder material, the addition of a second water truck, and trying to adjust timing and location of machinery movements to minimize dust generation.

Unfortunately, based on the complaint it sounds like an impression was created that no dust would leave the site when that is not the standard and virtually impossible to completely prevent during a very large grading project on a windy site such as this. There are air quality standards that apply, however, and must not be exceeded including State ambient air quality standards, as well as MBARD Rule 400 (visible emissions) and Rule 402 (nuisances). County staff can't address Rules 400 and 402 but can address ambient air quality standards because the data is available from the monitoring network. The California ambient air quality standard for particulate matter (PM10) is a 24-hour average of 50 micrograms per cubic meter. Note that the Air Quality Index (AQI) numbers displayed on the PurpleAir site are a different calculated value. The air quality monitoring data gathered during the project do not show any exceedance of the ambient air quality standard for PM10. Staff is prepared to present graphical summaries of the data at the request of the Planning Commission. This data is publicly available on the PurpleAir site

and can be downloaded in the proper format (micrograms per cubic meter, 24-hour average). This does not mean the lack of dust generation; it means that the ambient air quality standard is not being exceeded. It also does not indicate there is a lack of spikes in dust generation because the standard is a 24-hour average measurement. Nevertheless, this is not a case of just regulating to the ambient air quality standard, the goal is to minimize off site dust generation.

The complaint references the CKD safety data sheet that indicates it is a hazardous material and known carcinogen, particularly with respect to crystalline silica. County staff is not aware of a concern regarding crystalline silica specifically, primarily because it has not been raised as a significant issue in any of the regulatory documentation County staff is aware of for this project and the project has gone through a lengthy review process with the RWQCB and MBARD. The focus has been on dust emissions in general. It is also important to not just focus on hazard categories and pictograms of the potential hazard on the data sheet but consider the actual numbers for percent crystalline silica content in CKD and exposure limits and compare those to the PM10 standards and monitoring data to put any perceived exposure into context. In this case, County staff's understanding is that potential exposure does not rise to anywhere near a hazardous level according to established criteria.

It should also be noted that any dust generation in the area is not necessarily going to be all CKD; there are exposed natural soil areas on site and there are other sources of dust in the general area, including an approximately 80-acre tilled and unplanted, unirrigated agricultural field across Hwy 1 and generally upwind from the town of Davenport. This is not to say the dust deposition in Davenport is all from that field, just that there are other, relatively large sources of potential dust in the area.

In summary, the following additional measures have been implemented as a result of the complaint to improve dust control as part of ongoing adaptive management:

- Provided contact information to the complainant for the project manager, Cemex personnel and County staff
- Earlier start times to avoid typically strong afternoon winds
- Increased use of soil binder material
- Addition of a second water truck
- Trying to adjust timing and location of machinery movements to minimize dust generation

In conclusion, County staff understands there are short term dust impacts associated with the project and will continue to require the project fully implement the BMPs in the Dust Mitigation Plan along with additional adaptive management strategies to minimize off site dust generation and address future issues. The project has progressed to the stage of installation of the geotextile liner covering the CKD, which will soon completely isolate the CKD material from wind impacts. The geotextile liner is simultaneously being covered with a soil cap, which will then be covered with a layer of topsoil and revegetated at project completion sometime in Fall 2022.

Prepared by

David Carlson
Resource Planner