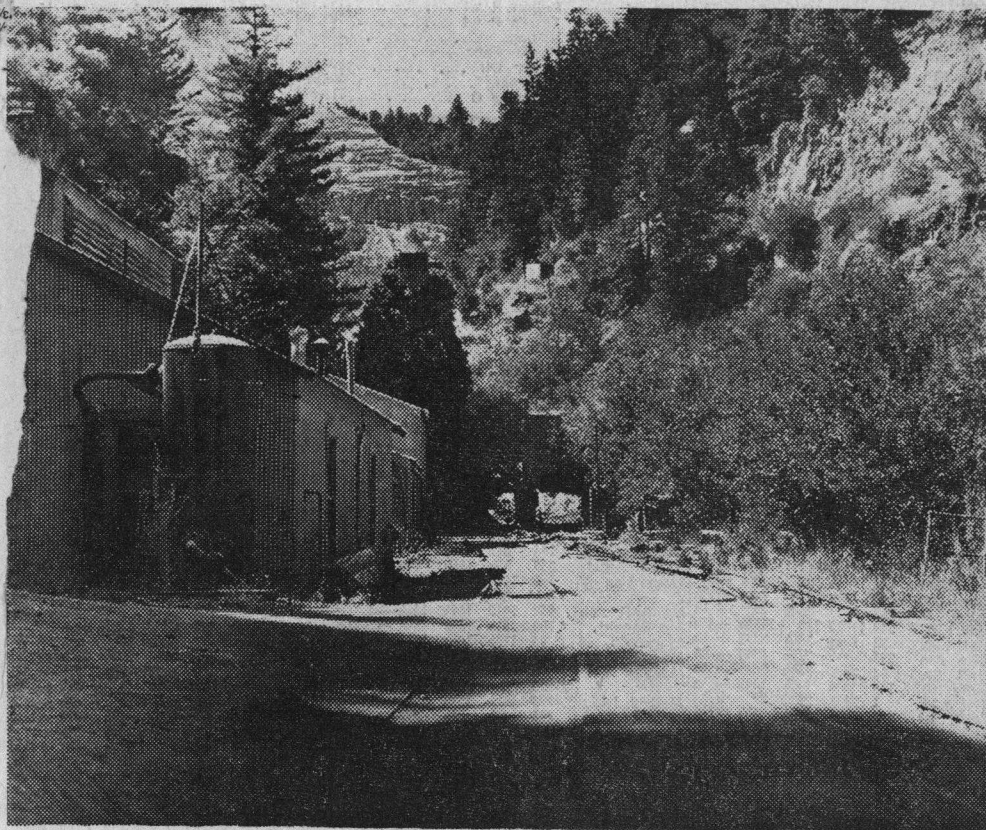


Pacific Coast Aggregates

PCA Is Winning Its Battle Against Dust In Davenport

Sunday, Sept. 26, 1971

Santa Cruz Sentinel — 21



Once upon a time rocks blasted from old quarry in background were hauled from this narrow-gauge railroad station in San Vicente Canyon

to PCA plant in Davenport. Called the Santa Cruz Portland Cement Company Line, the railroad featured Baldwin-Westinghouse electric

engines bought from an Alaskan mine in 1927. Caves in old quarry are sealed off and trespassing is strictly forbidden.

By BILL NEUBAUER
Sentinel Staff Writer

Like almost any housewife, the Pacific Cement and Aggregates Co. in Davenport could also write a book about the thousand and one challenges posed by powdery dust.

But maybe this division of Lone Star Industries, Inc., could write a bigger book on the subject because it has a bigger plant than even 100 housewives would care to whisk a dustmop over.

The plant includes vast limestone and shale quarries, a conveyor belt three miles long, huge buildings for grinding, "cooking" and otherwise converting rocks into cement, and great bins for ultimate storage of this product, which is powdery dust.

If nicely sacked and headed for some do-it-yourselfer's home for use in making a concrete patio or walkway, this dust makes company officials purr.

But if the dust is blowing across the plant grounds or spewing from a stack or settling on community buildings or farms, the same officials can fuss and fume much as unhappy housewives are sometimes alleged to do.

The company is three-fourths into a \$4.25-million program of air pollution control. By shutting down six old rotary kilns which dated back to 1906, PCA has ended visible dust emissions from the 230-foot stack that has been a coastal landmark for threescore and five years.

When the kilns were shut down Aug. 17, an employee traced in the dust on one of them: "Goodbye old kilns — for sale."

Shutdown of the kilns and stack eliminated 90 per cent of the company's dust emissions, which totaled around 16 tons of particulate matter daily, according to the Monterey-Santa Cruz County Air Pollution Control District.

Other emissions will be eliminated by Dec. 31 through installation of equipment to eliminate need for opening relief stacks on three new Lepol kilns that give the plant the capacity to manufacture two million barrels of cement yearly. Dustbags will also be installed to collect the stuff of which air pollution and untidiness are made. Yard

ed by PCA, however, to fill in now unusable canyons, terrace hillsides. Along with this work, a reforestation program is carried out under guidance of Jim Grieg, the company's forestry consultant.

Other rock for the crusher is reduced to manageable size by a three-ton ball smasher handled by Nello Radicchi, who has been with PCA for 22 years. The crusher can handle a rock five feet in diameter and reduce it to a minus 6-inch product.

In the company's shale quarry in the San Vicente Creek area, a similar crusher is used to obtain the second ingredient of Portland cement.

The conveyor belt carries one type of rock at a time from the quarry to the plant.

Rock transport is accomplished under cover throughout the full three-mile length of the belt, a technical arrangement to prevent wind gusts from whipping dust around. The conveyor is operated only in the daytime, to prevent night noise pollution, and is patrolled constantly by plant employees.

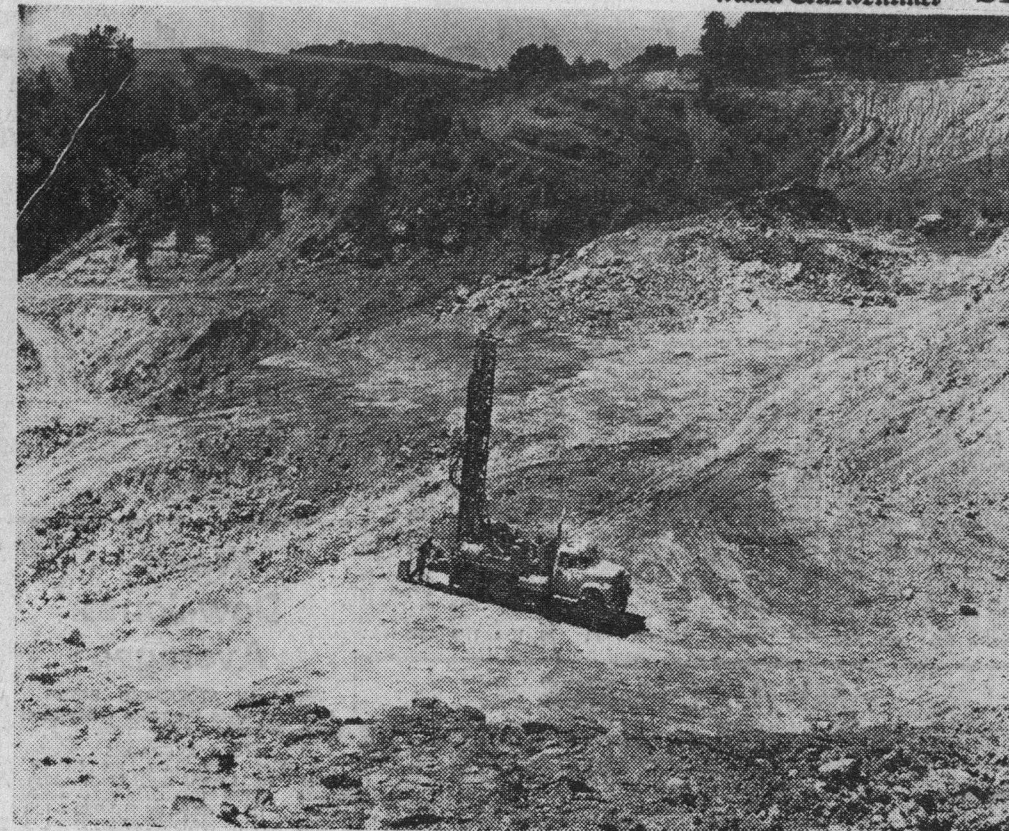
At the plant the raw materials shipped from the quarry are passed through dryers to eliminate excess moisture (the shale floats when its moisture has been removed). This heating in the rotary dryers is needed in the dry-process manufacturing technique used by PCA to insure effective operation of crushing rolls, screens and grinding mills.

Following rough mix of the rocks, the material goes to a raw mill for preliminary grinding to quarter-inch size. Next grind is in a ball mill plant.

Now, as dust, the material is pumped to the plant's three new Lepol kilns, where it is "cooked" into clinker at a temperature of some 2700 degrees. F.

This "cooking" is the essence of cement manufacture. The material is heated to a certain temperature for a certain time so that desired chemical reactions will occur, and cooling of the resultant product is done at such a rate as to control the crystallization and transformations of the resulting compounds.

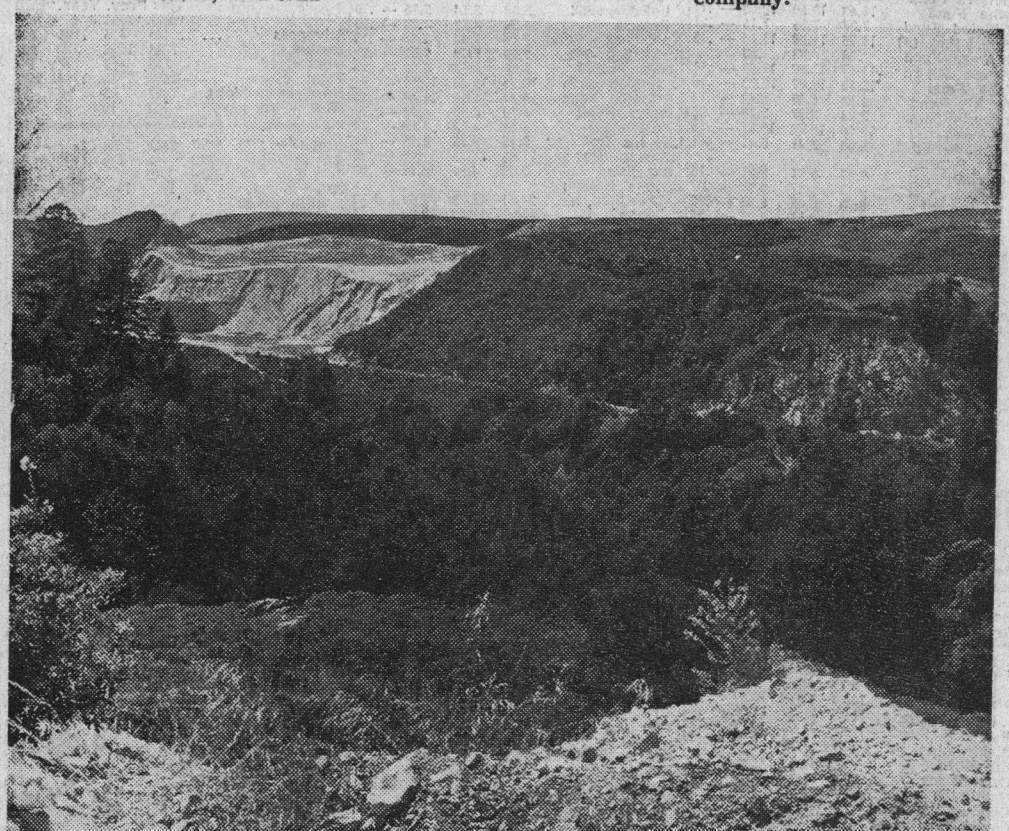
The clinker is put through crushing rolls and then through



Highgrade limestone is blasted from PCA's Bonny Doon quarry off Smith Grade Road with help of this drill rig. Holes are drilled deep, some 20 in a series, then load-

ed with ammonium nitrate (a fertilizer) and set off with a dynamite blasting cap. Purest limestone has yellow crystals and arresting beauty. Waste

products in this quarry are used to fill in now unusable canyons, terrace hillsides and form base for reforestation projects performed by the company.



Near the PCA shale quarry, another basic ingredient of Portland cement, the company replanted that slope adjoining bare hillside. Trees

and groundcover are planted under guidance of Jim Grieg, the PCA forestry consultant. Work is part of PCA's parent company, Lone Star

Industries, Inc., program "to be in full compliance with our legal and community obligations in an economic and efficient manner."

SCOPE To Put Efforts Into Bike Trail Project

A new project, with a new president at the helm, is on the agenda this fall for SCOPE (Santa Cruz Organization for Progress and Euthenics).

Edward P. (Bud) Prindle presided at the organization's first fall luncheon meeting at Colonial Inn. Main order of business was bike paths, which SCOPE intends to push as far and fast as feasible.

Ray Miller was named chairman for the bicycle project, which will include the placing of bike racks on Pacific

Avenue Mall. Dave Dominguez of Salz Tannery is cooperating in the design and placing of racks. Others working on it are Ed Wood and John Corder.

"Eventually SCOPE would like to see a network of bike paths to elementary schools and local points of interest," Prindle said.

First phase of the project will be to encourage city designation of its first official bike path, starting at San Lorenzo Park. From the park it will run South along the San Lorenzo River to

Laurel Street, then to West Cliff Drive and out to Natural Bridges Park.

From Natural Bridges the proposed path will go along Mission Street to King Street, from Escalona Drive to Bay Street and up to the USCS campus.

SCOPE officers voiced the hope that USCS will designate several bike paths through various areas of the campus as part of the proposed Route 1 Bicycle path.

From UCSC the path will proceed down High Street to the cul-de-sac at the very end, and down what is now a narrow trail to Harvey West Park. From the park it runs down Coral Street,

288 Donate Their Blood

A total of 288 pints of blood Spalding, and Theodore W

sweeping, washdowns and other programs are being used to get rid of even more dust.

The cleanup program has the full support of the parent Lone Star Industries, which has established a Management Environmental Council to implement corrective measures throughout its nationwide operations "to be in full compliance with our legal and community obligations in an economic and efficient manner."

To PCA's Davenport manager John Brotzman, who has been in the cement business since 1951 (and his father since 1924), the big challenge in the operation of cement plants today "is in getting rid of the last of the dust emissions and accumulations."

Brotzman said "The objective is an entirely clean operation."

A tour of the sprawling facilities owned by PCA from the Bonny Doon quarry off Smith Grade Road to the Davenport manufacturing plant indicated to this reporter that Brotzman, PCA and Lone Star are zeroing in on sundry air pollution and other environmental problems more effectively than is generally realized.

Hard line environmentalists who question that statement should perhaps make the tour too.

The company's housecleaning problem stems from the fact that it's primary product is really powdery dust. The finished Portland cement it manufactures from limestone, shale and gypsum is a product so fine its dimensions can only be measured in microns — units of about 1/25,000 of an inch.

The 15,000 tons of crushed rock sent weekly via the covered, three-mile conveyor belt to the Davenport plant are actually ground into a powder so fine that nearly all of it will pass through a sieve with 40,000 openings to an inch, a sieve that will hold water.

Making this dust called Portland cement begins in the quarries served by the conveyor belt. The Bonny Doon quarry yields limestone, which composes around 80 per cent of the finished cement product. A drilling rig is used to bore blasting holes, which are loaded with ammonium nitrate (a fertilizer) and set off with dynamite blasting caps. Loaders with 5- and 10-yard buckets carry the rocks to a Jeffrey Model 607 Rockbuster crusher, which can be moved periodically to the quarry face.

Equipped with a complete dust-collection system and control room, the crusher handles about 60,000 tons per month, about half of which is a waste product, industrially speaking.

The waste product is being us-

a ball mill to get a primary grind product. A second grinding, during which gypsum is added, is done with tube mills to produce the finished cement.

The gypsum is added, incidentally, to retard setting time after the cement is mixed with water, so that the consumer will have a fair chance to properly place the concrete and mortar.

The finished cement is pumped as a powder into silos (moisture free), which hold the equivalent of 220,000 barrels of cement.

About 90 per cent of the plant's production is trucked to market, the rest goes by rail. Although the company has provided all the cement used for such milestone structures as the Golden Gate Bridge and the Oakland Bay Bridge, the market of biggest interest to it is the individual who goes to his local supply house to get a sack or two of cement for his home projects.

Portland cement is the key ingredient of concrete, the most widely used building material in the world. According to the Portland Cement Assn., almost twice as much concrete is used yearly in the U.S., on a pound for pound basis, as all the wood, structural steel, brick, tile, aluminum, building glass and other materials combined.

Brotzman and Lone Star concede, though, that making all that powdery dust does create housekeeping problems for the plant, for the area.

Capitola Council To Meet

A \$6.5-million development will be in the balance Monday as the Capitola city council decides whether to annex the Vetterle Bros. begonia garden property to the city.

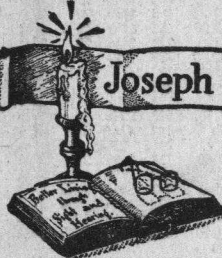
Fisher Corp. of Fresno has proposed a 342-unit apartment complex and a number of professional offices for the land. Work is expected to begin on the big development shortly after the start of the new year.

City officials see little opposition for the annexation, noting the city served notice it

was willing to annex the Vetterle Property when it attempted to take in that land, along with a larger portion of property, during the recent Capitola Heights annexation election.

Also on the agenda for Monday is the setting of a hearing on rescinding most of the off-street parking requirements in the village area.

The meeting is set to begin at 7:30 p.m. in the city council chambers.



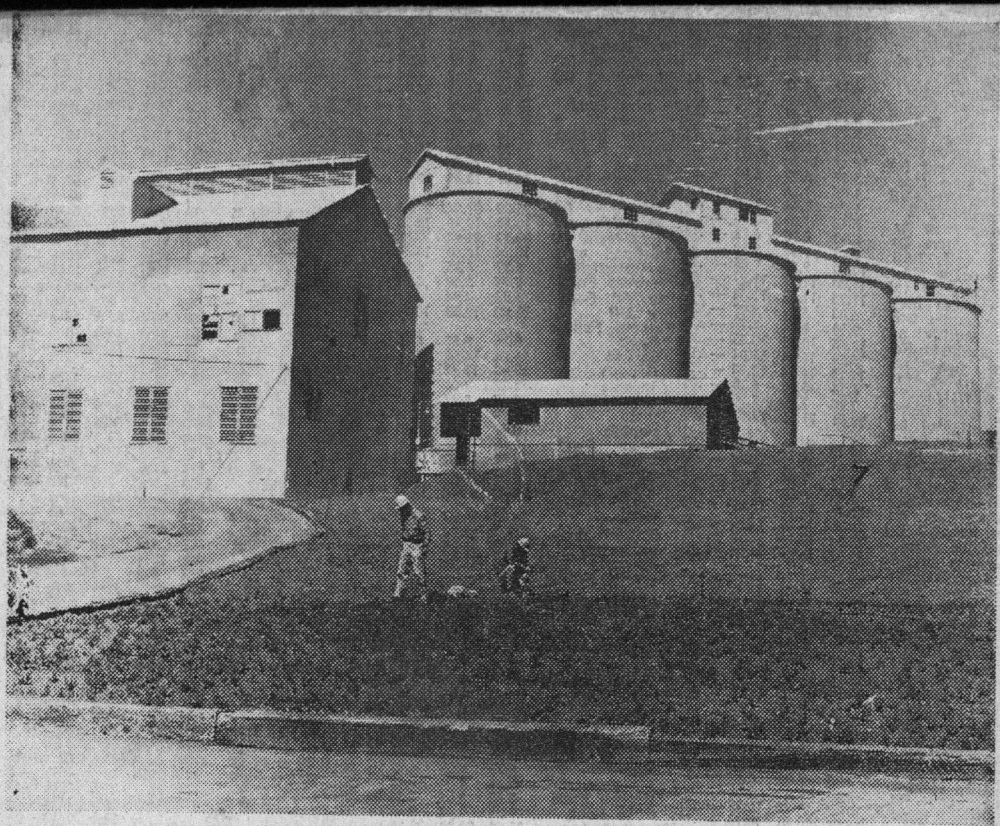
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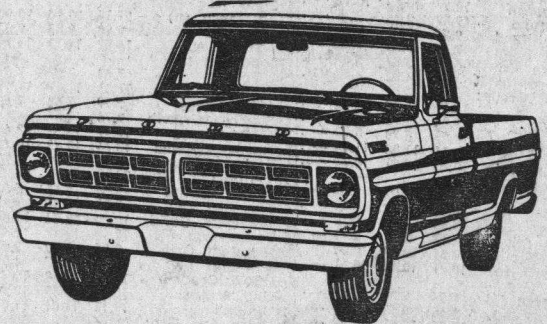
Having ended 90 per cent of the dust emissions at the PCA cement plant in Davenport, Manager John Brotzman and his workers are housecleaning diligently to prevent remaining dust from blowing with the wind. These men are putting in ice plant. Company \$4.25-million program to achieve its objective of a dust-free operation.

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