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# Davenport cement plant hopes to double capacity

By DON WILSON  
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DAVENPORT — Lone Star Industries has applied for a permit for a \$40 million project to radically modify its cement plant here.

It plans to use coal instead of heavy oil to fire its kilns, hopes to increase its efficiency and expects with the modifications to nearly double its production capacity.

The county planning commission has slated a tour of the plant next Thursday.

And a hearing on the permit proposal is scheduled for Dec. 14.

The cement company already is facing a Dec. 9 hearing before the Santa Cruz-Monterey County Air Pollution Control District board, which wants the plant to stop spewing cement dust into the air periodically.

The plant was extensively modified a few years ago and the output of cement dust into the air over Davenport was cut back considerably. But malfunctions in equipment have occurred too often recently, according to the air pollution control board.

In anticipating the hearing on the coal conversion permit, the county has had the Environ Company of San Leandro prepare a massive environmental impact report on the proposal. The report, according to senior county planner John Warren, cost \$50,000.

The report includes not only the anticipated impact of the modifications to the plant, but also delves into the history of the company.

According to the report:

Lone Star Industries' proposal would increase the plant's total production capacity from its present maximum of 475,000 tons of cement per year to 775,000 tons per year. It would do so by adding a high efficiency new kiln system and replacing obsolete equipment with fewer, more efficient units.

And, says the impact report, the key is in the conversion of the plant's primary fuel from heavy oil to coal.

The Davenport plant was start-

ed in 1906 and has been producing cement for the Northern California market continuously since. It uses limestone and shale from quarries in the nearby hills. These materials are brought by a conveyor to the plant where they are ground and blended with iron ore, heated in kilns to produce a chemically changed substance known as "clinker," ground again into a very fine cement powder, and finally shipped by rail and truck.

The plant modifications would require no changes in the quarry, the storage of raw materials or the handling, storage and shipping facilities for finished cement. It is anticipated that quarries at nearby Bonny Doon have reserves which are adequate to sustain the plant for 40 years and their crushers and conveyors were built with sufficient capacity to handle the modernized plant's demands.

Major changes will occur in the processing of raw material, however. Existing equipment for crushing, screening and drying, as well as raw mill grinders will be eliminated — and replaced by a new single unit roller mill. Other new equipment would include a kiln with a preheater and flash system, which would include extensive electrostatic dust collection equipment.

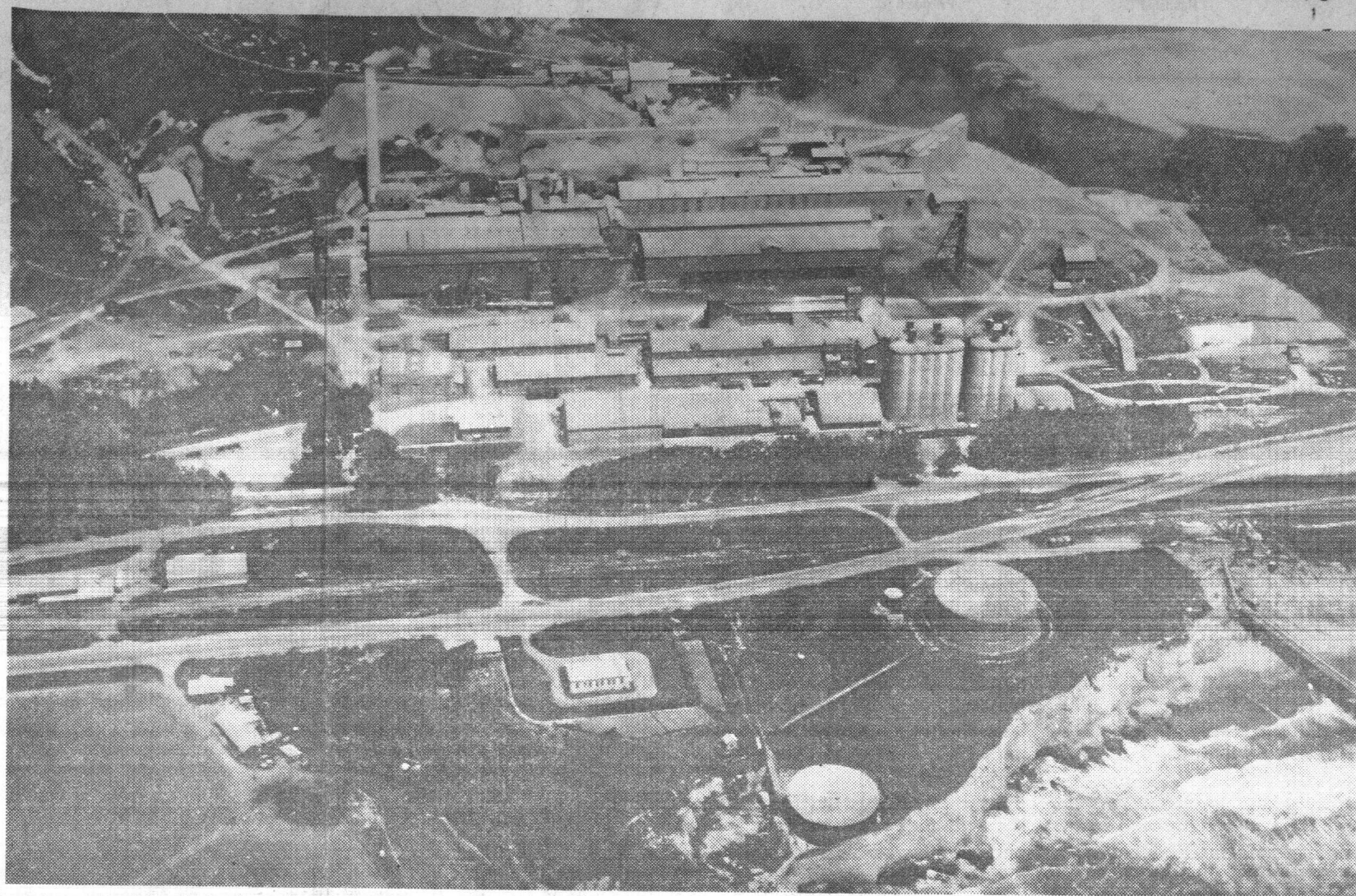
To convert to the use of coal will require additional spur railroad tracks, an unloading building, conveyors, a transfer tower, surge bins, and coal pulverizing equipment. The coal to be used for fuel would be stored in stock piles in an open area north of the main plant buildings.

The modifications to the plant are expect to cost between \$30 million and \$35 million, plus an additional \$6 million for the coal conversion.

Lone Star Industries had hoped that construction can begin late this year and be completed in early 1980.

Construction of the project should employ an average of 300 workers for two years.

The capital investment in the new equipment and facilities would generate well over a million



1958 aerial view of cement plant when it had just switched from oil to gas power; now it wants to use coal

dollars a year in additional taxes within the county.

The principal impacts from the project would relate to air emissions, increased production of waste dust, water discharge, energy use, and transportation of materials to and from the plant.

The elimination of obsolete equipment to be replaced with more efficient units is expected to decrease the dust emissions from the plant by nearly 30 percent. Also, there would be a decrease in emission of sulphur oxides, and only a minor increase in nitrogen oxides.

Most importantly, there is expected to be a 60 per cent decrease in the sources of the dust which is carried in the direction of Davenport by prevailing winds.

The increase in the plant production, however, will result in more production of waste dust — which would be collected by special dust control equipment before the gasses from the plant are discharged into the air.

Lone Star proposes that this dust material be mixed with water and pumped as a "slurry" to a disposal site in a nearby canyon. It is expected that when that canyon is filled, two additional canyons will be used.

backs on contracts for supplying cement to the Panama Canal Project, and a 1907 bank crisis led Dingee to lose his holdings to the Crocker Bank in 1908.

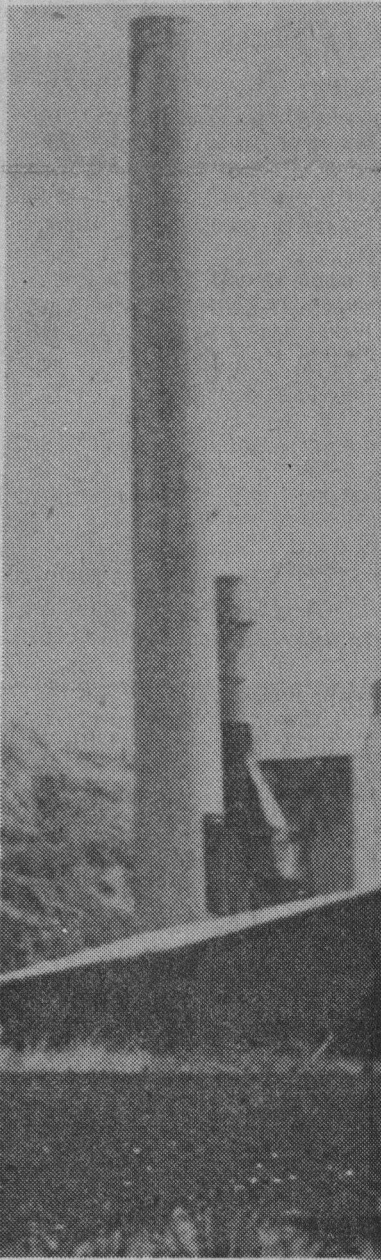
The first quarry operation started in 1906 in the steep Canyon of San Vincente. Tunnels were dug into the hillside by hand and stockpiles of loose raw materials were formed by detonating thousands of pounds of dynamite in the tunnels.

The open face in the quarry reached a height of 500 feet before heavy slides in 1922 stopped that type of quarry. To overcome the difficulties which had been experienced the "glory hole" method of mining was introduced. The rock

boat to an offshore pipe intake near Scott's Creek, 2½ half miles north of the plant and was carried by pipeline to storage tanks at the plant, one of which used to be on the ocean side of Highway 1. Ship delivery of oil continued until the plant was converted to pipeline-delivered natural gas in 1958. Late in 1976, faced with a 75 per cent reduction in natural gas, the plant was reconverted to use heavy oil, which has been delivered by truck.

Cement was first shipped from the plant by rail. When the Santa Cruz Municipal Wharf was completed in 1913, ocean-going vessels became the primary method of transportation. This continued for many years until the Santa Cruz Portland Cement Co. built its own 3-

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Plant stack towers over town

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By the time the foreseeable production is completed, the canyons will be completely filled. The dry fill would then be capped with top soil and seeded for revegetation.

Now, the only water discharged at the site is water used for cooling equipment. Water used in the processing of the material is recirculated on the site.

It is expected that the amount of water discharged from the site will be decreased in the future.

There will be an impact on traffic from the new modifications because shipping of materials to and from the plant will substantially increase. A large proportion of the increased production is expected to be sent north to the San Francisco Bay area and there would be substantially increased use of railroad for transporting both finished cement and fuel.

As a result, the truck traffic is expected to be increased only four per cent — traffic which is using the already congested Mission Street in Santa Cruz.

Modifications to the equipment will increase the total fuel used by about 20 per cent and a total electric power increase of about 60 per cent — but both of these will be below the 63.2 per cent increase in production capacity. This would result in a substantially decreased amount of energy required per unit of the finished cement product.

Conversion to coal would assure a long term fuel supply which would not be subject to interruption as has been the use of heavy oil in the past.

The original town of Davenport Landing was developed on the old Rancho San Vicente Mexican land grant after Capt. John Davenport built a 450-foot-long wharf at the beach in 1867 to handle the dairy, timber and quarry products, which had no way of reaching the San Francisco market. By 1875 the community obtained a hotel, stores, shops, homes and a school. By 1886, following construction of roads in San Mateo County, the wharf was already decreasing in importance and the town beginning to decline.

Since the first years of this century, the history of the Davenport area has been intimately related to the establishment and growth of the local quarries and cement plant. In 1905 cement king William Dingee, following two years of local opposition to his plans to build a cement plant in downtown Santa Cruz, purchased land for a plant at the present site. By October of that year construction of the plant had begun, but the 1906 San Francisco earthquake caused a scarcity of mechanics and laborers and it was not until April, 1907, that the Santa Cruz Portland Cement Co., already employing 400 men, was producing superior quality cement.

A number of setbacks, which included the 1906 earthquake, cut-

formed by detonating thousands of pounds of dynamite in the tunnels. The open face in the quarry reached a height of 500 feet before heavy slides in 1922 stopped that type of quarry. To overcome the difficulties which had been experienced the "glory hole" method of mining was introduced. The rock was allowed to drop to the bottom of the quarry and was pushed into holes in train tunnels below.

The town of Davenport was constructed concurrent with the cement plant. It was originally built and owned by Coast Dairies and Land Company to provide rental units and services for cement plant employees. By the time the plant went into operation, there were two hotels, 60 homes, retail stores and a school, with 40 children living in Davenport.

The town of New Davenport on the other side of the plant was built between 1910 and 1915 by the Santa Cruz Portland Cement Co. to provide alternate housing for supervisory personnel. Neither Davenport nor New Town ever grew larger because the relatively short half hour commute — first by train and later by bus — encouraged many workers to live in Santa Cruz.

The plant operated on heavy fuel oil from 1906 to 1958. In the beginning, oil was delivered by

was reconverted to use heavy oil, which has been delivered by truck. Cement was first shipped from the plant by rail. When the Santa Cruz Municipal Wharf was completed in 1913, ocean-going vessels became the primary method of transportation. This continued for many years until the Santa Cruz Portland Cement Co. built its own 3,000-foot wharf in 1934.

Eventually difficulties from storm damage to the wharf and loss of the company's ship to the federal government for wartime use in 1941 brought the end of maritime shipment of cement from the Davenport plant. Since then, all output has been shipped by rail and truck, with the vast majority carried by truck. All iron ore and most of the gypsum used in production is delivered by truck.

Ownership of the cement plant operation has been stable. The first of two mergers with subsequent changes of identity occurred in 1956, when Santa Cruz Portland Cement Co. was acquired by Pacific Coast Aggregates, and the new firm was called Pacific Cement and Aggregates. The second change came in 1965 when Pacific Coast and Aggregate merged with Lone Star Cement Corp. becoming an operating division of Lone Star Industries, Inc.