

Air pollution

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Moss Landing plant under attack for pollution

By Grant Harden

Although there has been much concern expressed in recent years about the careless way that man has been slowly but surely poisoning his own environment with pollution -- in the soil, in the water, and in the air -- the realities of what is happening has escaped the interest of most residents of Santa Cruz county.

That is, until the current furor over a pressing pollution problem that has developed in our own back yard; the pollution of the atmosphere by Pacific Gas and Electric giant steam generating plant at Moss Landing.

The plant, which has been responsible for the out-pouring of some hundreds of thousands of pounds of irritating oxidants daily, is currently under fire from officials of the new Monterey-Santa Cruz County Unified Air Pollution Control Board. The "heat" was getting so hot that PG&E officials called a special press conference in Santa Cruz last week to answer the charges and to explain PG&E's position.

Anyone who has passed by the utility's Moss Landing plant, since it placed in operation its new generating plant last year, could not miss the new addition to the "scenic wonders" of Monterey Bay. It usually materializes in the shape of a puckish-looking cloud, and on a calm day can be seen hovering over the giant coastal plant.

The smog that results has been measured regularly and the samplings taken by air pollution control officials for the district have been anything, if not disquieting. A recent sampling for a one-month period, taken at Loma Prieta school in Santa Cruz mountains, showed 25 adverse hours of irritating oxidants, with a peak of .25 ppm (parts per million). A concentration of .15 ppm is considered adverse.

The power plant at Moss Landing used to produce 613,000 kilowatts of electric power. With the addition of the new generating units the capacity has been upped to

2,113,000 kilowatts, the largest steam generating plant in the nation and second largest in the world.

To produce the heat needed to operate the plant, PG&E uses up to 18 million cubic feet of natural gas an hour. When the plant switches to fuel oil (which it does during the winter months when the peak load of natural gas is needed for residential and commercial use) it consumes up to 70,000 barrels per day under a heavy load.

Natural gas, said Frederick M. Mielke jr., vice president and assistant to the chairman of the board at PG&E told the press last week, "is the cleanest commercial fuel we know of, aside from atomic fuel."

The discoloration in the sky over the Moss Landing plant was described as coming as something of a surprise to PG&E officials.

"Because of these characteristics of natural gas, you can perhaps appreciate our amazement when we found that the modern and efficient 750,000 kilowatt units were creating a visible yellow plume," Mielke said.

He said that was not PG&E's intent, when they design or operate its plants "to cause air pollution problems. PG&E is committed to finding a way to eliminate the yellow-brown haze that is being caused by operation of the two new units at this plant."

The yellow plume is apparently the result of the formation of nitrogen dioxide, a substance not considered particularly detrimental to humans, but it was disclosed during the press conference

that PG&E is economically committed to burn between 1.2 million and 1.5 million barrels of high-sulfur fuel oil at its Moss Landing plant during 1969.

Sulfur fuel produces sulfur dioxide, however, on combustion, and when combined with oxygen and moisture in the atmosphere produces minute and eye-smarting quantities of sulfuric acid. Oxides of sulfur, an estimated 500,000 pounds of them on an average day, is the end result.

Air Pollution Control officer Ed Munson says the plant would emit more oxides of sulfur in a single day than is emitted by all sources in the eight million-plus population of the Los Angeles basin.

PG&E has been conducting a series of tests at the new units to determine the best means of reducing the discoloration.

"Our investigations to date have not yet developed a clear-cut solution to the problem," said Mielke, "but they have developed some pertinent facts, and they have pointed the way sufficiently to give us reason to believe that we can meet our goal of eliminating the yellow plume."

Cited as examples were efforts towards changing and improving plant operation, study of possible design revisions, analysis of the effects on air quality, and design of a monitoring program to "define any potentially adverse effects from oxides of nitrogen in stack effluents," added Mielke.

In the meantime, PG&E plans to restrict use of fuel oil at Moss Landing, if it must be consumed, to the months of December through April. The

fuel oil now burned for short periods at the plant ranges up to a maximum of 2 percent sulfur content by weight. Fuel oils with a lesser sulfur content were described as "too exotic and expensive."

Local proposals to adopt in the Monterey-Santa Cruz a law used by the Los Angeles air pollution district, was objected to by Mielke. The rule limits combustion of sulfur-laden fuels to .5 percent sulfur by weight. A low sulfur content oil known as Sumatra crude meets this specification and is used by Southern California Edison Co. in the Los Angeles basin.

But Mielke says the company needs time to complete current tests it is making (to be completed within a month or so), following which it would make appropriate changes in plant operations. And if this did not solve the problem, then additional time would be needed to make design revisions.

PG&E would rather try burning its high sulfur-content fuel and natural gas simultaneously. Company officials feel this would lower the output to no more than .5 percent.

In the meantime, the United States goes merrily along its way pouring at least 130 million tons of poison into the air every year, two-thirds of a ton for every man, woman and child in America.

But industrial sources are not the only culprits in contaminating the atmosphere. Cars contribute almost as much of an environmental problem as anything. In the U.S., a baby is born every 12 seconds and a car is produced every five seconds. The two to-

gether set up a new demand for living space that is eating away two acres of countryside every minute.

Every year this country discards 7 million automobiles, along with 20 million tons of paper, 48 billion cans, 26 billion bottles and jars. A good deal of this material is made of aluminum and plastics which virtually defy decay.

Some solutions have been offered. For example, the Santa Cruz County Fish and Game Commission has proposed dumping old auto bodies into Monterey Bay.

They would provide fish havens, if placed in areas where they would not result in a navigation hazard.

A United Nations study released last December accused the U.S. and the Soviet Union of being the leading contributors to world pollution, a problem their burgeoning populations can only make worse. A billion pounds of DDT has crept into the world's flora and fauna, the study revealed, with traces of the insecticide being found even in penguins in the Antarctic.

It was also noted that a four-engined jet plane emits more than two and a third tons of carbon dioxide and a ton and a third of water every 10 minutes of normal flight.

Scientists say the atmosphere has already been contaminated with more than 10 percent of carbon dioxide, contributing to a phenomenon that threatens to produce a "greenhouse effect" around the world raising global temperatures so that polar ice caps will melt and sea levels rise out of control.

And many of our great lakes, rivers and estuaries are dying because of some 50 trillion gallons of hot water being dumped into them. If a man were to fall into Lake Erie or the Hudson river today he would be advised to have a tetanus shot.

It is frightening to consider that with a 10 percent annual increase of wastes, there will be 20,000 times more wastes to pollute the earth on which we live by the end of 100 years.

What a legacy to leave our descendants!

PG&E granted three months delay

Pacific Gas and Electric company's request to the Monterey-Santa Cruz Air Pollution Control District for a six-month delay before being directed to comply with specific rules on the control of air pollutants at its Moss Landing plant (see above story) was granted, by half, by district

directors meeting yesterday in Santa Cruz.

Directors voted to wait at least until the early part of March before deciding whether or not it would require the giant California utility to comply with a local version of the highly-restrictive Rule 62, developed for the Los An-

geles basin.

Specifically, the rule limits the kind of fuel oil that can be burned, permitting the use of only fuel oil producing .5 percent or less of sulfur through emission.

The next meeting of the Monterey-Santa Cruz APCD is set for Feb. 10 in Salinas.