JAN 24 1964

50-205

MEMORANDUM FOR: CHAIRMAN SEABORG
COMMISSIONER PALFREY
COMMISSIONER RAMEY
COMMISSIONER TAPE
COMMISSIONER WILSON

SUBJECT: NEWS CLIPPINGS FOLLOWING RELEASE OF INTERIOR DEPARTMENT REPORT ON BODEGA HEAD

Attached for your information are copies of stories which appeared in San Francisco area newspapers following the Commission's January 20 announcement of receipt of the new geological report on Bodega Head from the Department of the Interior.

We transmitted Pacific Gas and Electric Company's statement concerning this report to you on January 20.

(Signed) Philippe G. Jacques
for
Duncan Clark, Director
Division of Public Information

Attachment

cc: A. R. Luedecke, General Manager
R. L. Price, Director of Regulation

R. K. Donovan, OCL
R. Lowenstein, L&R
H. Shapar, OGC
W. B. McCool, SECY

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1/23/1964

SAN FRANCISCO
NEWS-CALL BULLETIN
JAN. 20, 1964

Quake Caused Bodega Head Pit Fault

By George Dushock

Government geologists have concluded that a fault in the Pacific Gas & Electric Company's nuclear reactor pit on Bodega Head was caused by earthquakes.

In event of an earthquake as big or bigger than that of Apr. 18, 1906, the earth on both sides of the pit fault might be shifted from 2½ to 11 feet, a final report by Julius Schlocker and M. G. Bonilla to the Atomic Energy Commission suggests.

SMALLER earthquakes are unlikely to seriously disturb the pit, however, they conclude.

In a 37-page technical report Schlocker and Bonilla virtually reject the alternative possibilities that the pit fault was caused by landsliding or by differing masses of sediments overlying the granite-like bedrock.

They are unable to answer one key question, however.

How recent was the earthquake faulting in the bedrock and overlying sediments?

Therefore the fault may be a mere geological fossil, evidence of earthquake shearing thousands of years ago.

OR IT MAY BE of more recent origin, with the evidence for its age hidden or obscured in the sediments.

Schlocker and Bonilla call the AEC's attention, however, to strong evidence that severe faulting accompanied the 1906 earthquake as far away from the main San Andreas Fault zone as 4,000 feet.

The PG&E reactor pit lies about 1,000 feet from [illegible] commonly accepted western boundary.

TODAY'S REPORT IS by scientists employed by the U. S. Geological Survey. The AEC has already asked seismologists in the U. S. Coast and Geodetic Survey to analyze the Schlocker-Bonilla report and other data, and estimate the probability of earthquake damage to the nuclear reactor if built on Bodega Head.

The final decision as to whether to grant PG&E a construction permit for the 325,000 kilowatt, uranium-fueled power plant will be made following a public hearing in Santa Rosa before the AEC's Advisory Committee on Realtor Safeguards.

A DATE for this hearing is expected to be announced soon.

In the current report, released by AEC today, Schlocker and Bonilla call attention to two "dikes" or thin walls of non-granitic rock crossing the pit fault at nearly right angles.

These have been shifted in relation to each other west and east of the pit fault.

Quake Crack In Bodega Reactor Pit

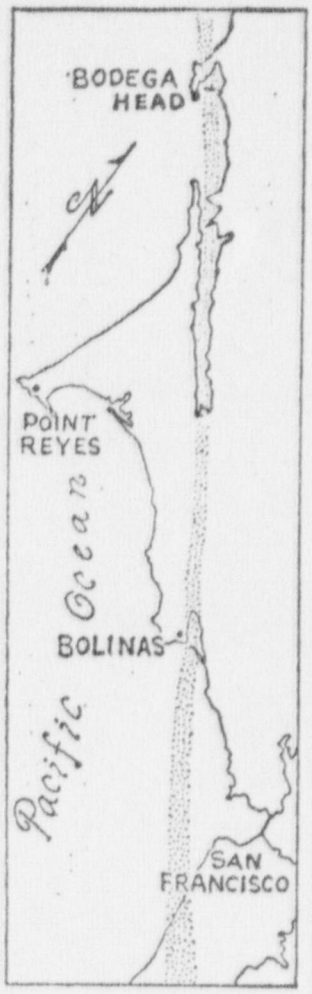
A sharp and violent earthquake—of undetermined age—cracked the earth in Pacific Gas and Electric Co.'s nuclear reactor pit at Bodega Head, Government geologists revealed yesterday.

And it is possible, they said in a report to the Atomic Energy Commission, that it could occur again "if, in some future earthquake, surface rupture comparable in severity to that produced in 1906 occurs on the San Andreas fault . . . ."

A PG&E spokesman said, however, that geologic and seismologic consultants retained by the firm to evaluate the Bodega site have concluded, "that it is suitable for the proposed reactor."

"They advise us," said S. L. Sibley, general manager of PG&E, "that the plant can be built safely by application of sound seismic,

See Page 18, Col. 1



Scientists traced a crack left by an earthquake

Bodega--- Reactor Pit Cracked

From Page 1

civil and structural design in view of known geological and seismological considerations . . ."

The report of the PG&E consultants, he said, will be submitted to the Atomic Energy Commission within a week or ten days and be made public.

He said there were several areas of disagreement between conclusions of Government geologists and those retained by PG&E.

WEAKNESS

Government geologists M. G. Bonilla and Julius Schlocker concluded in their report that the fault in the 73-foot deep reactor shaft "is an important zone of weakness. . . ."

In the event of another earthquake equal in shock power to that of the one in 1906, they said, "the near-surface granitic rock of Bodega Head would be expected to rupture."

"The nature, direction, and amount of displacement cannot be predicted, nor can the location of such ruptures."

DISPLACEMENT

But, they added, "judging from the surface rupturing observed on Point Reyes Peninsula after the 1906 earthquake, displacement on the order of a few feet, either horizontally or vertically, should be expected."

The conclusions were reached after careful study of the main fault in the pit and comparison with similar formations left by the 1906 earthquake farther down the coast at Point Reyes.

Radio carbon measurements indicated that the reactor shaft fault "may have originated 42,000 to 400,000 years ago."

RECENT

"On the other hand," the report said, "it is just as resonable to postulate that displacement in the granitic rock at some more recent time ruptured the lowest of sedimentary deposits . . . in the pit."

Yet it was concluded by the two scientists that an extremely strong earthquake could shift earth and rock on both sides of the reactor pit 2½ to 11 feet.

REQUEST

AEC Chairman Glenn T. Seaborg requested the current report last October after the fault was discovered at the site of the 325,000 kilowatt plant.

Interior Secretary Stewart Udall submitted the findings to the AEC yesterday. Seaborg is expected to call another hearing on the controversial plant soon.

The PG&E said last night that it has not formulated alternate plans for the Bodega power plant site if the AEC decides to reject the company's application to build its reactor on it.

"That's a bridge we would crosse when we get to it," a spokesman said.

OAKLAND TRIBUNE
JAN. 20, 1964

Bodega Quake Peril Noted In U.S. Reactor Site Report

Oakland Tribune 1/20/64

BERKELEY — Bodega Head, the proposed site for a nuclear reactor, could be shaken severely by a strong earthquake along the San Andreas Fault, the U.S. Geological Survey said today.

A quake as strong as that which struck in 1906 could heave granite there several feet up, down or sideways, the report said.

The Pacific Gas & Electric Co. has asked the Atomic Energy Commission for a permit to build a 325 megawatt nuclear power plant on the site, north of Pt. Reyes Peninsula. Work to prepare the site for construction is underway. But the AEC is still gathering evidence before scheduling hearings.

The report today, prepared at AEC request, contended that although Bodega Head is outside the San Andreas Fault zone, a strong quake could cause faulting as much as a mile outside the zone.

"If in some future earthquake surface rupture comparable in severity to that produced in 1906 occurs on the San Andreas Fault, the near-surface granitic rock of Bodega Head would be expected to rupture," the report said.

It cannot be determined whether the faulting found on Bodega Head is active or inactive, the geologists said. It could be that the last quake took place there more than 42,000 years ago, but "it is just as reasonable . . . that displacement . . . at some more recent time ruptured the lowest of the sedimentary deposits. . ."

An earthquake much weaker than the 1906 quake would not be expected to affect Bodega Head, the report added.

A PG&E spokesman said the findings of the government report were at odds with the conclusions of geologic and seismologic consultants retained by the company.

"They advise us that the plant can be built safely and reliably by the application of sound seismic, civil and structural design . . ." said S. L. Sibley, vice president and general manager.

The PG&E consultants included Dr. George W. Housner, professor of applied mechanics and civil engineering and Dr. Hugo

Continued Page 3, Col. 4

U.S. Finds Quake Peril At Bodega

Continued from Page 1

Benioff, professor of seismology, both of California Institute of Technology. Dr. Housner also is president of the Earthquake Engineering Research Institute.

"It will be up to the AEC to evaluate all of these reports and to weigh all other evidence in making its determination as to the suitability of the site," Sibley said.

He said the report of the company's consultants would be transmitted to the AEC shortly and would be made public at that time.

Sibley also said PG&E was hopeful that public hearings would be called as soon as possible.

The reactor site is about 750 feet from the edge of the San Andreas Fault zone. Dr. Pierre Saint-Amand, a seismologist, reported last summer that he believed Bodega Head to be a "very poor location" for a reactor. He said there was a probability of a great earthquake at least once a century and that "hence, another may be expected within the lifetime of the (proposed) plant."

INTERIOR REPORT Santa Rosa Press Democrat 1/20/64

SANTA ROSA PRESS-DEMOCRAT JAN. 20, 1964

A-Plant Hit On Three Sides

Pacific Gas & Electric Co.'s proposed nuclear power plant on Bodega Head today is under attack on three pronged attack.

In Fresno the California Democratic Council directors yesterday unanimously passed a resolution criticizing the Assembly Rules committee for dragging its heels in carrying a study of the utility's nuclear reactor at Bodega Head.

Then in Washington D.C. the Interior Department reported to the Atomic Energy Commission today that an earthquake could cause rupturing of bedrock near the site of a proposed nuclear power plant at Bodega Head.

The third assault came from the Western Water and Power Users' Council also meeting in Fresno last weekend, which passed a resolution urging abandonment of the Bodega Bay idea in favor of early development of an extra high voltage publicly owned electrical transmission intertie between the Pacific Northwest and the Pacific Southwest.

The California Democratic Council resolution states that allegations of the PG&E's lobbyist pressure tactics have been "abetted by the Rules Committee's failure to assign the Bodega Study, and the committee's failure to communicate with the public as to its intentions in this matter."

The measure goes on to urge Chairman Thomas Bane of the Rules Committee and speaker of the Assembly Jesse Unruh "to exercise immediately the prerogatives of their respective offices to quiet these unfortunate allegations by assigning the Bodega study to an appropriate interim committee for an unprejudiced, exhaustive and honorable public investigation and that such intentions be communicated to the citizens of the state."

The assembly rules committee had adopted a resolution by Alfred Alquist, San Jose Democrat, urging the Bodega Head investigation.

Interior Report

The Interior Department's conclusion was reached in an additional report requested by the Atomic Energy Commission, which is considering an application from the PG&E to build the atomic power plant.

Geologists Julius Schlocker and Manuel G. Bonilla say they cannot determine if a fault crossing the site of the proposed reactor is "active or inactive."

But they conclude "if in some future earthquake, surface rupture comparable in severity to that produced in 1906 occurs on the San Andreas fault the near surface granitic rock of Bodega Head would be expected to rupture."

And then they say that on the

(Continued on Page 5, Col. 4)

Bay A-Plant Cut On Three Fronts

(Continued from Page 1)

basis of their studies on Point Reyes "displacement on the order of a few feet either horizontally or vertically should be anticipated."

The U.S. Geological Survey report draws no conclusions about the safety of the site. They say there is "no basis for saying" that the fault through the site "would move in preference to other faults" on Bodega Head.

An earthquake "appreciably less severe than the 1906 earthquake would not be expected to cause rupturing on Bodega Head."

The report was requested in October by AEC Chairman Glenn T. Seaborg after an earlier report by the geological survey indicated presence of a fault at the site of the proposed plant.

Interior Secretary Stewart L. Udall opposed construction of the plant on grounds it would be unsafe.

Udall, in the letter to Mr. Seaborg, cited a report by the geological survey indicating that rock at Bodega Head was similar to that which ruptured at Point Reyes during the 1906 San Francisco earthquake. Point Reyes is about 35 miles northwest of San Francisco, while Bodega Head is about 15 miles beyond Point Reyes.

In case of a similar quake, the report said, "rupturing of near-surface granitic bedrock would be expected somewhere on Bodega Head."

PG&E seeks to build a 325,000-kilowatt nuclear plant at the Bodega Head site.

Water Group

The Western Water and Power Users' Council's resolution noted that Consolidated Edison Co. of New York Jan. 6 withdrew its application to the AEC for construction of a 1 million kilowatt nuclear power plant at Ravenswood in the heart of New York City.

The council said Consolidated Edison gave economic reasons for its decision to withdraw. However, "it is clear that widespread public opposition to the nuclear facility in New York had a strong bearing on the decision also."