Joe Fouchard, Hous Service Branch Division of Public Information, MQ

Reducy L. Southwick, Assistant to the Manager for Public Information, SAN

PETITICE RE BOUECA BAY MUCLEAR PLANT

MI:RLS

Attached is a copy of the patition filed by the Northern California Association to Fraserve Bodaga Head and Harbor in Superior Court, Santa Mona, Senome County, to force the Board of Supervisors to set aside its permit granted to Pacific Gas & Electric Co. for construction of a nuclear power plant on Bodaga Head.

A bacring has been scheduled for April 1, 1963, at Senta Rosa, California.

Maclosure: As stated above.

นั้นหมายที่มีที่ **หลังสีน้ำคอร่องชิว**ที่มี¹⁸5

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co: Lawenstein, Dir., Didl, HQ w/enc Howard K. Shapar, GC, HQ, w/enc

E. C. Shute, Manager, IAM w/enc

J. M. Thomas, OCC, EAM w/ama

E. W. Saith, Dir., Cample, Region V, w/and



Barch 25, 1963

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	11	IN THE SUPERIOR COURT OF THE STATE OF CALIFORNIA
NERT	12	IN AND FOR THE COUNTY OF SONOMA
ET 61	13	
MAJNK B TO	14	NORTHERN CALIFORNIA ASSOCIATION) TO PRESERVE BODEGA HEAD AND)
. 341 CISCO 2-132	15	HARBOR, a corporation, MARY DARLING,) SILAS DARLING, CHARLES GOODALE
FRAN	16	and DORIS SLOAN,
SAN EXa	17	Petitioners,)
4CHON	18	vs. j' NO.
01 10	19	THE BOARD OF SUPERVISORS OF THE
a A	20	CALIFORNIA, STATE OF
	21	Respondent.)
•	22)
	23	PETITION FOR WRIT OF MANDATE OR CERTIORARI
	24	The verified petition of NORTHERN CALIFORNIA ASSOCIATION TO
	25	PRESERVE BODEGA HEAD AND HARBOR, a corporation, MARY DARLING,
	26	SILAS DARLING, CHARLES GOODALE and DORIS SLOAN, for a writ of
	27	mandate or certiorari respectfully shows:
	28	I
	29	Petitioner NORTHERN CALIFORNIA ASSOCIATION TO PRESERVE
	30	BODEGA HEAD AND HARBOR is a corporation organized and existing under
	51	and by virtue of the laws of the State of California; its corporate purposes are
	32	to protect and preserve the scenic beauty and recreational values of Bodega
•		

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Head, Sonoma County, against commercial and industrial intrusion.

Petitioners MARY DARLING and SILAS DARLING are now and have been at all times mentioned herein residents, citizens and taxpayers of the County of Sonoma, State of California; they reside on real property owned by them situated in the town of Bodega Bay, approximately one and one-half miles from the site of a certain proposed nuclear-fueled reactor at Bodega Head, hereinafter described.

III

TT

Petitioner DORIS SLOAN is now and has been at all times herein
mentioned a resident, a citizen, and a taxpayer of the County of Sonoma,
State of California; she resides on real property owned by her situated at 734
Litchfield Avenue, in the City of Sebastopol, approximately eleven miles from
the site of the said proposed nuclear-fueled reactor at Bodega Head.

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IV

16 Petitioner CHARLES GOODALE is now and has been at all times 17 herein mentioned the owner of real property situated rear Bloomfield in the 18 County of Sonoma, State of California, and a taxpayer on the tax rolls of 19 Sonoma County; his real property is approximately six miles from the site of 20 the said proposed nuclear-fueled reactor at Bodega Head.

Respondent BOARD OF SUFERVISORS OF THE COUNTY OF
SONOMA (hereinafter referred to as "BOARD") is composed of the
following duly elected, qualified and acting members; E. J. Guidotti,
Guy King, Arthur Ruonavaara, Leigh Shoemaker and Carson
Mitchell.

VI

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28 PACIFIC GAS AND ELECTRIC COMPANY was and is now a 29 corporation organized and existing under and by virtue of the laws of the 30 State of California, with its principal place of business in the City and County 31 of San Francisco, State of California.

.32

On or about February 9, 1960 respondent BOARD did by Resolution Number 19082 grant to the Pacific Gas and Electric Company a use permit to construct a steam generating power plant on Bodega Head.

VIII

The said use permit granted Pacific Gas and Electric Company by 6 7 respondent BOARD was and is illegal in that Pacific Gas and Electric Company failed to furnish to the Planning Commission of Sonoma County or to the 8 9 respondent BOARD, together with its application for the said use permit, any sets of plans and elevations showing the detail of the proposed use, as 10 required by Ordinance Number 573 and the Zoning Ordinance of the County of 11 12 Sonoma, which ordinances were at all times herein mentioned duly adopted and 13 in full force and effect.

IX

15 The said use permit granted Pacific Gas and Electric Company by ' respondent BOARD is illegal in that neither the Planning Commission of 16 Sonoma County or the respondent BOARD gave notice of hearing upon the said 17 application for use permit by Pacific Gas and Electric Company by publication 18 in a newspaper of general circulation, or by posting such notice in conspicuous 19 20 places close to the property affected thereby, or by use of the United States mails, , or in any other manner, as required by Section 65951 of the 21 Government Code of California, 22

X

24 The said use permit granted Pacific Gas and Electric Company by respondent BOARD is illegal in that neither the Planning Commission of 25 Sonoma County nor the respondent BOARD held a public hearing upon the said 26 27 application for the said use permit to determine whether the proposed use would be detrimental to the health, safety, peace, comfort and general welfare 28 of the people of Sonoma County, or whether the proposed use would be detri-29 30 mental to the character or development of the territory in and around Bodega 31 Harbor or would not otherwise adversely affect the welfare of the said 32 territory or of the said county, all as required by Section 55951 of the

CARRY, DREYFUS & MCTERNAN MEMONT BUILDING. 341 MAMET 571 8AN FRANCISCO 5 EXGNOOK 2-1320 2

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VII

Government Code of California. 1

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The said use permit granted Pacific Gas and Electric Company by 3 respondent BOARD is illegal in that the respondent BOARD failed to require 4 the Planning Commission of Sonoma County, prior to the formulation of its 5 recommendations to the respondent BOARD respecting the said application for A use permit, to forward to the Sonoma County Tidelands-Harbor and Beach 7 Commission, for its review and recommendation, a copy of the said use 8 permit application and a set of the plans and elevations showing the detail of 9 the proposed use, and further failed to require the said Planning Commission 20 to receive and consider the recommendations of the Harbor Commission with 11 respect thereto, all as required by said Ordinance Number 573. 12

XI

BUILDING, 341 MARKET STR SAN FRANCISCO S GARRY, DREYFUS & MCTERNAN

The said use permit granted Pacific Gas and Electric Company by the 14 respondent BOARD is illegal in that the respondent BOARD amended the Zoning 25 Ordinance of Sonoma County without compliance with the requirements of the 16 said Zoning Ordinance or of Chapter 4, title 7 of the Government Code of 17 California, in that the respondent BOARD granted the said use permit (a) for a 18 period of five years, and (b) without requiring the applicant to submit two sets 19 of plans and elevations showing the detail of the proposed use. 20

XII

XIII

Respondent BOARD's said issuance of the said use permit to Pacific 22 Gas and Electric Company was in excess of the jurisdiction of the Board, was 23 unlawful, improper, arbitrary and capricious and constituted an abuse of the 24 "oard's power and discretion.

XIV

26 By reason of the foregoing acts and omissions of the respondent 27 28 BOARD, petitioners were deprived of substantial rights, including the right to 29 notice of the said application for use permit, the right to be heard in opposition thereto, and the right not to be injured in person and property by the 30 31 proposed nuclear-fueled reactor, and have been deprived of property without 32 due process of the law.

Purporting to act under authority of the said use permit, Pacific Gas
 and Electric Company now threatens to construct, and within sixty days last
 past has commenced constructing, including necessary site preparation, and
 threatens to operate, at Bodega Head a nuclear-fueled boiling-water reactor
 electric-generating unit.

XV

XVI

If the said ruclear-fueled reactor is constructed pursuant to the said
a illegal use permit, petitioners will be substantially damaged in that the value
of their real property will be lowered and the security of their homes and
businesses menaced by radioactive materials and wastes, and will thereby be
deprived of property without due process of law.

Public hearing upon due and legal notice to adjoining property owners
and to the public, and plans and elevations of the proposed generating unit, if
furnished, all would have disclosed that:

XVII

16 A. Pacific Gas and Electric Company proposes to construct a
17 nuclear-fueled boiling water reactor electric-generating plant at Bodega Head,
18 constituting a serious threat to marine life in and around Bodega Bay.

B. (1) The proposed nuclear-fueled reactor at Bodega Head will
 discharge radioactive wastes into the air and into the ocean water, contamina ting surrounding ocean waters and the atmosphere of Sonoma County.

(2) Radioactivity is the name given to the processes whereby
 atoms produce certain radiation by reactions of the atomic nuclei. A material
 containing atomic nuclei that produce these radiations is called radioactive.

(3) Ionizing radiations are of great significance to human
beings because the amount of energy contained in a single unit of the radiation
as emitted by the nucleus of an individual atom is sufficient to disrupt or
ionize molecules by separating electrons from them or by causing other
damage to them. The effects of ionizing radiations on living cells are chemical
in nature.

Radiations known as gamma rays are produced by radioactive
 nuclei. In general gamma rays are highly penetrating, so that the gamma rays

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from a source exterior to the human body may pass through the entire body, and affect every part of the body, through absorption by the tissues of the body. 2 The gamma rays ionize atoms or molecules and also produce fast moving 3 electrons that serve further to ionize atoms or molecules in the tissues of the body.

Gamma rays may also be produced by radioactive nuclei within the tissues of the human body itself. Their effects upon the tissues of the body are similar to those of the gamma rays from exterior sources. 8

Beta rays or beta particles, which are electrons emitted by the 9 radioactive nuclei, have a limited range in the tissues of the human body. Beta 10 particles from a radioactive source external to the human body may irradiate 11 the tissues to a certain depth, and may cause skin burns and other damage. 12 Beta particles from internal radioactive materials such as beta-emitters in 13 the bones, irradiate the adjacent tissues and may cause damage. 14

Alpha particles, from alpha emitters in the human body produce 15 damage to the adjacent tissues, similar to the damage done by other forms of 16 high-energy radiation. 17

(4) The radioactive process cannot be easily speeded up nor 18 slowed down; their rates in general depend only on the nature of the radio-19 active atomic nuclei that are involved. The rate of a particular radioactive 20 reaction of an atomic nucleus is described by its half-life. The half-life is the 21 period of time during which half of the atomic nuclei undergo reaction. At the 22 end of one half-life one half of the nuclei have decayed, and the radioactivity of 23 the sample is reduced to half of its initial value; at the end of two half-lives 24 three guarters have decayed, and the radioactivity is one guarter of the 25 initial radioactivity, and so on. The half-lives of some radioactive nuclei are 26 as high as billions of years, while the half-lives of others are only a fraction 27 of a second. 28

29 From the biological point of view any quantity of radio-(5) 30 active fallout, no matter how small, is undesirable.

31 Penetrating radiation of the sort produced by radioactive 32 fallout does harm to the human body and the pool of human germ plasm that

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determines the nature and well-being of future generations of human beings. 2 2 Exposure of the reproductive organs of a living organism, in-3 cluding a human being, results in genetic damage through the production of genetic mutations. There is no minimum amount of radiation dose that must be 4 exceeded before mutations occur. Mutations are believed to occur in number 5 essentially in direct proportion to the dose of radiation, for small amounts with 6 an increase in the proportionality factor, perhaps fourfold, for very large 7 amounts of radiation in a short period of time. 8

A genetic mutation is a change in the hereditary material of an
organism, a change in the genes and chromosomes on which heredity depends.
It is this hereditary material, germ plasm, that is transmitted to offspring,
and that determines the nature of the offspring.

Almost all mutations in human beings are harmful. They re-13 sult in fetal death, still-births, childhood deaths from various diseases of 14 hereditary origin, and serious physical and mental defects that increase the 15 amount of human suffering. Extremely few mutations in human beings are 16 beneficial. It is believed by geneticists and molecular biologists that the 17 reason that most mutations are harmful is that a mutation is essentially a 18 random change in the molecules that constitute the genetic material, and that 19 at the present time the genetic material has, through a process of natural 20 selection, been selected in such a way that it is extremely difficult for it to 21. be improved, and that a random change is accordingly much more likely to be 22 harmful than beneficial. 23

The mutant gene that is produced by a mutation is passed down 24 to subsequent generations, and may do harm in some future generation. 25 Deleterious mutant genes that cause major impairment are eventually elimina-26 ted from the pool of human germ plasm, since they increase the death rate or 27 lower the fertility of the persons carrying them. Mutant genes that cause only 28 a small amount of harm persist much longer and may affect a correspondingly 29 larger number of persons. Minor mutations hay in the long run cause more 30 human suffering than the more serious ones, because they are eliminated more 31 32 slowly from the pool of human germ plasm.

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1 The number of mutations produced by radiation is proportional to the amount of radiation received by the reproductive organs, and the pro-2 portionality between the number of mutations and the amount of radiation holds 3 even for small amounts of radiation. The total harm to the population measure 4 by the effect on future generations is proportional to the amount of radiatic: 5 received by the reproductive organs of human beings. There is no such thing 6 as a safe dose of ionizing radiation. Any amount of ionizing radiation, however 7 small, that reaches the gonads of a numan being who may later reproduce 8 involves a risk proportional to that amount. The genetic damage from atom. 9 radiation is spread over a long time in the future, with only a small fraction 10 11 appearing in the first generation.

The average amount of exposure of the gonads of human beings 12 from the tests of nuclear weapons as they have been carried out during recent 13 years have been estimated to be in the neighborhood of 0.1 roentgen in thirty 14 years from external gamma radiation and additional amounts of roughly the. 15 same magnitude, perhaps somewhat smaller, possibly somewhat larger, from 16 internal gamma radiation of ingested cesium 137 from the world-wide fallout. 17 The effects of exposure of the gonads of human beings to ionizing radiation are 18 such that hundreds of seriously defective children may be expected to be pro-19 duced in Sonoma County and adjoining counties by the fallout from a nuclear pow 20 ered reactor. Some thousands of additional seriously defective children may be 21 expected to be produced by the mutations caused by this fallout of radioactive 22 wastes. 23

(6) There is also a high probability that damage is being done to the health of human beings now living that is comparable to the genetic damage that is being produced by fallout and that will impair future generations. There is a high probability that fallout radioactivity is producing and will produce additional cases of leukemia, bone cancer, and other diseases that will lead to deaths of human beings that would not have occurred or would not occur in the absence of a nuclear reactor at Bodega Bay.

Fission reactions of nuclear reactors lead to the production of
 radioactive strontium, strontium-90. The chemical properties of strontium,

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including strontium-90, are closely similar to those of calcium. Strontium-90 1 that drops on to the surface of the earth is taken up, together with calcium 2 3 (although there may be a discrimination factor that operates to decrease the amount of strontium-90 taken up), by growing plants, such as vegetables that 4 are ingested by man and grass that is eaten by cows. The strontium-90 that has 5 been eaten by cows in considerable part is transferred to the milk produced by 6 the cows and that is then drunk by human beings, especially children. The 7 strontium-90 in the vegetables eaten by human beings and in the milk that is 8 drunk by them is then in considerable part deposited, together with calcium, in 9 the bones of the human body. All human beings who have lived during recent 10 years have strontium-90 in their bones, whereas a few decades ago there was 11 no strontium-90 whatever in the bones of any human beings. 12

beta particles. After emitting beta particles, the nucleus becomes a nucleus

of yttrium-90, which is also a beta-emitter, and which, because of the higher

energy of its beta particles, produces more damage than the parent strontium-

90 beta particle. These beta particles that result from the ingestion of

The nucleus of the strontium-90 atom is radioactive. It emits

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cluding the bone marrow that produces constituents of the blood,
There is a high probability that the radiation from strontium-90
and its daughter by decay, yttrium-90, as well as from other radioactive nuclei
produced by fallout, uch as the external gamma emitters, produces cases of
leukemia and bone cancer.

strontium-90 do damage to the tissues in the neighborhood of the bones, in-

(7) Iodine 131 (radio active iodine) produced by nuclear
reactors concentrates in the thyroid and may cause cancer in that part of the
humananatomy. Scientists believe that infants amd embryos are probably
especially susceptible to cancer of the thyroid so generated.

(8) Neutrons released in the reactions occurring in a
nuclear reactor react with nitrogen nuclei in the air to make carbon-14 (radioactive carbon, which has a half-life of about 5,600 years). Scientists employed
by the Atomic Energy Commission and others have made estimates according
to which carbon-14 from testing of nuclear weapons through the year 1958 will

1 cause substantial genetic damage to the peoples of the world and the petitioners 2 say on information and belief that they believe that the carbon-14 produced by 3 nuclear weapons tests up to and including 1958 will cause 100,000 gross defect. 380,000 still-births and childhood deaths and 900,000 embryonic and neo-natal 1 deaths with some possible overlap between the still-births and the neo-natal 5 deaths. Scientists are in substantial agreement and the petitioners state on E their information and belief that carbon-14 may well represent a larger genetic 7 danger than fission products from ordinary fallout if one compares an infinity 8 dose delivered over an effective period of 8,000 years (the me an life of radio-9 active carbon) to one delivered over an effective period of about 40 years (the 10 mean life of ordinary fission products). 11

(9) The human race has always been exposed to some ionizi:
radiation. It is continually being irradiated by radiation from natural sources
from the general environment, such as uranium, thorium, radium, etc., and
their decay products; from cosmic radiation and from cosmic ray induced.
radioactive materials. The aggregate of these radiation sources is known as
the natural background radiation.

In addition to the natural background radiation, members of the
human race are exposed to X-rays used in the healing arts and some members
thereof, because of their occupation, are exposed to X-rays in industry.

21 The radiation resulting from the two sources, namely, the 22 natural background radiation and X-ray radiation has affected and now affects 23 mankind along the lines indicated as resulting from radiation. The effect upon 24 the human race resulting from the radiation produced by the reaction and re-25 lease of radioactive gases is in addition to the effect resulting from the 26 natural background and X-ray radiation.

C. Property owners in Sonoma County are now and will be unable
to insure real and personal property gainst risk of loss by damage from a
nuclear fueled reactor, whether caused by accident or ordinary operation,
drastically lowering property values in Sonoma County.

31 D. The proposed Nuclear fueld reactor will contain approximately
32 150 times as much fissionable material as that contained in the bomb dropped

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on Hiroshima, menacing the public health, safety and general welfare of the
 people of Sonoma County, and will be detrimental to property and improvements
 in the neighborhood.

4 E. The proposed nuclear reactor is to be located one quarter of a 5 mile from the San Andreas Fault line, measurably increasing the possibility of disastrous accidents, threatening communities as far away as Santa Rosa, 8 Petaluma, San Rafael and San Francisco with radioactive fallout or destruction. 7 8 The proposed nuclear reactor at Bodega Head will cause F. petitioners to suffer grave and irreparable injury to their property and business 9 10 The proposed nuclear reactor at Bodega Heal will despoil the G ... 11 character of the tideland, harbor, bay and beach areas of Bodega Bay. H. 1. History of nuclear fueled reactors in the United States, Canada and Great Britain shows that accidents are not infrequent, occur without 13 anticipation or explanation although all prescribed safety measures have been 14 met, and are uniformly disastrous causing death, irradiation of persons and 15 property, and contaminating substantial surrounding areas with radioactive 16 materials and waste. 17

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Petitioners have no plain, speedy or adequate remedy in the course of
 law.

XVIII

WHEREFORE, petitioners pray:

1. That a writ of mandate issue out of and under the seal of this
 court, directed to the respondent above named, commanding respondent
 BOARD to set aside its decision granting to the Pacific Gas and Electric
 Company a use permit on or about February 9, 1960 to construct a steam
 electric generating plant on Bodega Head.

27 2. That pending judgment, the court stay the operation of Resolution
28 Number 19082 of the Board of Supervisors of Sonoma County.

That a writ of certiorari issue from this court directed to
 respondent BOARD, commanding it to certify fully to this court, at a specified
 time and place, a transcript of the record and proceedings of said BOARD in
 granting a use permit to the Pacific Gas and Electric Company on or about

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1.								
	1	February 9, 1960 to the end that same be reviewed by this court, and the						
	2	Resolution of the Board granting such use permit be set aside and annulled as						
	3	 being made and ordered without jurisdiction in the premises. 4. For costs necessarily incurred by petitioners herein. 5. For such other and further relief as may be meet and proper in 						
	4							
	5							
	6	the premises.						
	7	Dated:						
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