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L&R File Copy (Suppl

1656 Fourteenth Street
San Francisco 14, Calif.

January 14, 1964

Dr. Glenn T. Seaborg, Chairman
U. S. Atomic Energy Commission
Washington, D. C.

Dear Dr. Seaborg:

The Pacific Gas and Electric Company has used your name and speech to the Sigma Delta Chi Fraternity to justify its proposed nuclear power plant on the California coast. This was in an article in the promotional magazine enclosed with its January bills (some part of which must pay for the magazine), in which you were quoted in the headline: "I Would Live Next Door to the Atom.

Permit me to ask: Would you live next door to the atom, at Bodega Head, almost directly atop the San Andreas fault?

As you know, there has been much greater opposition to this particular project than to nuclear-fueled electric power plants in general. Three main points categorize this opposition: It is dangerous; it is not needed; and it will spoil the beauty of the coastline.

I am an electronic engineer. I have dealt throughout my career with the application of reliability and safety factors in electronic and aerospace equipment. This is a subject I know and appreciate. Yet I have never seen anything published anywhere to convince me that the site only one-quarter mile from the center of the San Andreas fault has been adequately studied or even wisely chosen from the standpoint of safety. Remember, it was this fault, the movement of which caused the disastrous earthquakes of 1868 and 1906, serious earthquakes as recently as 1957, and causes continuing smaller tremors. Even not considering the atomic aspect, the location of a major industrial facility in such a place presents an unusual hazard to itself even if not to the surrounding area. Now add the possibilities, however remote, of atomic explosion and the spread of fallout, and the question must arise: "Is it worth it?"

The question of worth becomes even more significant in this area, where we already enjoy cheap and abundant electric power. This is, to be sure, largely due to the vigilance of the California Public Utilities Commission, but reflects a general situation in which prime sources of energy are themselves cheap and abundant. Other localities, where this is not the case, may be good markets for nuclear-generated electrical energy and therefore reasonable locations for nuclear power plants. As you state, such a plant could in theory be built anywhere. Then,

(More)

DR-10

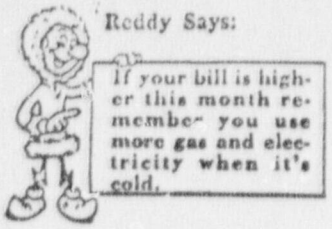
why not build it near the area it would most effectively serve?

The question of the scenic values of Bodega Head is apparently the most controversial, since it involves considerations of beauty vs. utility. As an engineer, I hope I may take some credit for aiding the cause of progress. Thus it seems to me that I am told, as in your last paragraph, that I am "resisting the currents of change" and I am opposed to activity in the 20th century. This is the more ironic at a time when men are finally realizing that the bounties of nature are finite, even in California. It is, I submit, greater progress for our Nation and State if Bodega Head is made a park, available forever to all the people, than if its unique beauty is destroyed to build a plant that could as well be built anywhere else.

Dr. Seaborg, the opposition to this project is far from the stereotype of anti-progress and wooly thinking. Facile phrases like "unreasoning fear of the unknown" and "criticism . . . is a vital part of our American democratic system" (after which acknowledgement it can be safely ignored) are not called for. Calm, thoughtful, unbiased study of all the advantages, disadvantages, and alternatives is more fitting, if for no other reason than that many thousands of voters and taxpayers are closely concerned. May I have the pleasure of your reply?

Very sincerely yours

Anthony H. Perles



PG and E Progress

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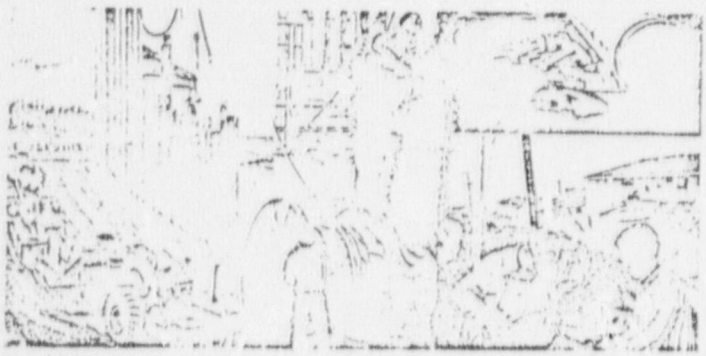
State Outlook For '64 Good



California Economy to Keep Pace With Population Growth

A continued high level of business activity in Northern and Central California is almost certain for 1964.

This optimistic forecast is contained in PG&E's "Market Outlook 1964," a "grass roots" economic study that has been an amazingly accurate barometer of area business for many years.

The following are some of the healthy economic signs:

Population growth will push California farther into the lead as the nation's most populous state and increase market opportunities. By the end of 1964 there will be 18,570,000 Californians, an increase of 590,000 over 1963.

Personal income will increase at an average of 6 per cent with the per capita income 20 per cent above the national average. The $55.2 billion to be earned by Californians this year will be 11.4 per cent of the national total.

Manufacturing employment will increase in the five metropolitan areas by 3.1 per cent to a record total of 359,000 workers.

Residential construction in the 47 counties served by PG&E will include 61,300 single family dwellings and 37,700 new apartments.

Sales of electrical energy to large light and power customers, a clear indication of industrial growth, will gain by 9 per cent. Sales, which amounted to 11⅓ billion kilowatthours in 1962 and surpassed 12 billion in 1963, are expected to reach 13 billion in 1964.

Natural gas use will continue to include new applications, especially as a raw material. Despite constantly increasing demands, PG&E will be able to provide for all domestic and industrial needs.

The construction industry will continue to be a major source of strength in the area's economy. PG&E will again have one of the largest construction outlays of any company in the area with a record $255 million to be spent on gas and electric projects.

In 1964 new construction will add 660,000 kilowatts, giving the company a total capacity of 7,521,500 kilowatts.

Santa Clara County, which started the year with 838,000 residents, will lead the population growth parade in PG&E's service area with a 51,000 increase in 1964. Alameda County, however, will gain 27,000 persons for a population of 1,019,000 and continue its prominence as the most populous county in Northern and Central California.

California farmers will again have cash income in excess of $3 billion to maintain their position as the nation's top agricultural state.

Consumer goods will move at a healthy rate. For example, an estimated 1.3 million new major gas and electric appliances will be sold in the northern and central section of California. Sales of items subject to the use tax should exceed $13.2 billion throughout the state for a 5.9 per cent gain.

Urban renewal will help cities improve their appearance and economic health by checking blight and deterioration and halting declining property values. The most dramatic such project under way in Northern California is the $60 million Golden Gateway complex in San Francisco's former produce district.

PG&E's "Market Outlook" is prepared by the company's market research department, from a cross-section of opinion obtained from local builders, contractors, financial institutions, government agencies and other sources.

Dr. Glenn T. Seaborg, (above) chairman of the U. S. Atomic Energy Commission, recently addressed the national convention of Sigma Delta Chi professional journalism fraternity at Norfolk, Va., on the subject of "Why Nuclear Power?"

As a respected scientist his views have received wide national circulation. The following digest of the talk is presented in the interest of public enlightenment.

"I Would Live Nex

Dr. Glenn Seaborg, AEC Head, S

Some basic questions about the merits of nuclear power have been raised in recent months. The Atomic Energy Commission itself reviewed these questions in a study of civilian nuclear power made public about a year ago and I believe the conclusions of this study still are sound.

The most basic question is the following: "Why should we be so concerned about developing nuclear power? After more than a decade of effort, hasn't it turned out to be just another energy source which is still more expensive than coal or oil?"

Finally, there is the question: "Even if nuclear power can provide real benefits, aren't they outweighed by the risks inherent in nuclear reactors and the radioactive wastes they produce?"

Unique Energy Source

First, nuclear power is *not* "just another source of energy." In some important respects, it is unique. For example, nuclear energy is independent of geography. The cost to the consumer is not so much a function of his location with respect to the source of fuel supply as is the case with conventional fuels. Because transportation costs are a substantial factor, cheap and abundant electric energy has been available only in areas relatively near coal or oil fields or cheap hydroelectric sources.

I am sure many of you are thinking: "But what about the radioactivity they produce?" I will discuss this in more detail later, and at this point will say only that very little of the radioactivity produced in a nuclear reactor ever gets into the atmosphere, that any radioactive releases are carefully controlled and monitored, and that they do not add significantly to the natural radiation which always is present everywhere.

Nuclear energy differs in another important way from other energy sources. It is far more abundant; in a comparison with the energy resources in coal, gas, and oil reserves, the energy supply locked in uranium and thorium — the nuclear fuel materials — is almost limitless. Sound national management of our energy resources would seem to dictate the early development of the great energy reserve in uranium and thorium. This is particularly true when one considers the growing importance of the fossil fuels for uses other than electrical generation and heating. Coal has extensive industrial uses, such as in the reduction of iron ore and the production of synthetic chemicals. Oil and gasoline are essential for fueling small mobile power plants, such as those in automobiles, trucks, locomotives, and aircraft, which are not likely ever to use nuclear fuels directly. It seems wasteful to burn coal and oil for heat at a rapidly-increasing rate when we know that they are irreplaceable and that they some day will be depleted — even if that day is far in the future.

As a general rule, the capital costs of nuclear power plants are somewhat higher than those of conventional plants, but the fuel costs are lower with the net result that nuclear power is competitive where the cost of fossil fuels is high.

Savings for Public

Even a small reduction in the cost of electricity will mean large savings to the public. Each reduction of one-tenth of a mill in the average cost of power will be worth a total of about $15 billion to the citizens of our country by the year 2000. The savings will pay many times over the initial development costs of nuclear power.

The final question I would deal with today is one that is often raised about nuclear energy — the risk and hazards of its radioactive products. It is unfortunate that the peaceful uses of nuclear energy were preceded by the wartime weapons development. To many people, I am sure, nuclear energy is the A-bomb or the H-bomb. But if one examines the facts in the matter, one would find immediately that our nuclear industry has one of the best safety records in the country. In about 20 years of operation of reactors of various types, there has not been a single accident that has caused any known injury to the public outside of AEC plant areas and the safety record of personnel working inside AEC-contractor plants has been phenomenally good. This safety record is no accident, but is the result of very careful analysis and control at every stage of nuclear activity.

Safety Is Paramount

The Commission's own concern for the public health and safety has always been predominant. In addition, the power reactor program has been and is being conducted virtually in a goldfish bowl open to continual public scrutiny as well as to frequent review and evaluation by various private and public bodies, including the Congress.

Much of the concern over nuclear reactors relates to the familiar question of how near to a populated area such a nuclear plant can safely be operated. One of the factors which gives rise to the question is the understandable desire on the part of the utilities to minimize the distance between any electrical power plant and its load center. Figures as extreme as $2 million per mile have been mentioned for the construction of electrical transmission lines in a metropolitan area. If the power plant is also to be used for the supply of low-pressure steam for space heating, long distances become completely infeasible. We at the Atomic Energy Commission understand the utilities' economic reasons for wanting to build nuclear plants near their load centers. We must be sure, however, that if this is permitted the safety of the public would not be compromised.

The Atomic Energy Commission recognizes that in the operation of a nuclear reactor a *potential* risk is involved, as there is in almost every other activity in our technological civilization. Radioactivity is generated within the reactor as heat energy is released from the nuclear fuel. To protect against this potential hazard, adequate measures must be taken to ensure that such a potentiality will never be realized.

From the normal operations of a nuclear plant and in the day-to-day activities carried on therein, there is no significant hazard to the people who work in the plant or to the public outside. It is customary in most large reactors for a small quantity of radioactive waste gases and liquids at exceedingly low concentrations to be released at a controlled rate into the

environment. The level of such releases is set by Federal regulations.

Many Safety Checks

The principal potential hazard of more serious proportions which must be guarded against in nuclear reactors is the possibility that an unintended quantity of radioactive material might be released accidentally and find its way into inhabited areas. There are two major lines of defense against this possibility. First, extensive safeguards are provided to *prevent accidents*. Extraordinary measures are taken in incorporating these safeguards into the design, construction, and operation of nuclear reactors. Further, these safeguards are subject to four rigorous evaluations—by the AEC's regulatory staff, by the Advisory Committee on Reactor Safeguards, by atomic safety and licensing boards, and, finally, by the Commission itself. In addition, periodic inspections are made of the reactor throughout its lifetime.

Secondly, all reactors are provided with substantial safeguards to *minimize the consequences of accidents* in case these precautions taken to prevent accidents should somehow fail. Washdown spray systems, emergency cooling systems, internal filter systems, and — most importantly — large, high-integrity containment barriers, such as containment domes, offer strong assurance that dangerous amounts of radioactivity released would be retained within the facility.

Ready for Contingencies

A word should be said about the Commission's ultraconservatism in reactor safety considerations — which goes so far as to postulate the extremes of improbable reactor accidents in order that we might be ready for any contingency. That this has resulted in some public misunderstanding is not surprising. Never before in the public's experience has an agency responsible for the protection of public safety gone to such extremes to allow for every foreseeable contingency. In contrast, there are many serious accidents resulting from the complexities of our technological society where the design features of the apparatus or system through long tradition have made no allowance for the very improbable occurrence — be it an explosion, the bursting of a dam, or whatever.

In my opinion, all of us in the nuclear field should bear a good deal of the responsibility for this misunderstanding by the general public; our use of technical jargon can be misleading. The care which we often take to avoid saying something which is not exactly precise often misleads the layman more than would a less cautious, but more intelligible statement. For example, we term such reactor accidents as the "maximum credible accident" when from the standpoint of ordinary language it might better be termed the incredible accident.

Perhaps it could best be summed up by saying: The probability of a serious accident is extremely low. The likelihood of a dangerous consequence should a serious accident occur is even lower.

Safety Contained

One additional concern expressed by some about reactor safety focuses upon the so-called high-level wastes of reactors and their ultimate disposal. Essentially all the radioactivity produced in a civilian nuclear power plant remains safely contained in the nuclear fuel elements. These fuel elements have an extremely high integrity and are designed to withstand high temperature, corrosive media, and mechanical stresses and strains. Once the usable portion of the nuclear fuel in these elements has been consumed, the elements are shipped intact to remote areas for chemical reprocessing. This shipment takes place under very strict regulations and controls. Specially designed shipping casks are used to contain, shield, and cool these solid fuel elements. Our extensive experience to date is that thousands of fuel elements have been shipped literally across country without a single radiation injury.

At the remote processing plants, the nuclear fuels left in the fuel elements are separated from the radioactive wastes. These radioactive wastes are then stored underground in large steel tanks at these remote sites. The reason this kind of storage is used is that it is safe and it is the most economical way to manage the waste at present; it also preserves the long-lived fission products for which many uses are continually being discovered. For our long-range power program, alternate means of disposal are being extensively investigated. These have progressed to the pilot plant and demonstration phase. All indications are that practical and economical full-scale plants for ultimate disposal of these materials are well within present technology.

Preventive Approach

The nuclear energy industry, unlike many other industrial and even community developments in this country, recognized at its earliest stage the very essential requirement that its wastes be managed in a way to assure no adverse effect on man and his environment. Ours was a preventive approach — we did not allow a situation to develop in which a curative approach would be necessary.

Perhaps I can best summarize my feelings about the safety of these power reactors by saying that I would live next door to the atom. I would not fear having my family residence within the vicinity of a modern nuclear power reactor built and operated under our regulations and controls. I appreciate the fact that many have an unreasoning fear of the unknown—and radioactivity appears as such an unknown. Let me assure you that it is not. There is always more to be learned; but with what we already know and what we are continually learning about radioactivity and its effects, we are able to proceed with assurance in assessing the safety of nuclear power plants.

The philosophical note I should like to conclude on is that—like it or not—we are living in the 20th century. Our country and the world are undergoing a period of change. We are all swept by the tide of discovery that is the Scientific Revolution. Nuclear power is but one facet of this over-all tide of scientific progress. Even in less revolutionary periods, people have resisted the currents of change. It is, therefore, not surprising to me to find a program such as ours subjected to criticism — for this is a vital part of our American democratic system. We, in the Government of this country, should be responsive to the sound criticisms of its citizens. I believe we are.

NATION'S nuclear program was the subject of this meeting between Dr. Glenn Seaborg and the late President John F. Kennedy.

Door to the Atom"

Nuclear Plants Safe, Economical

HELPING YOUNGSTERS to achieve their goals is both a vocation and avocation with Don Dowdell, PG&E personnel representative. Here he addresses a group of S.F. Mission High students interested in drafting as a career.

ON THE JOB

Helpful Hand for Students

Don Dowdell Recruits Technically Trained for PG&E

Many Bay Area high school students who are confused about their future, or who are toying with the idea of dropping out of school, often find a sympathetic advisor in Donald A. Dowdell.

A member of PG&E's personnel department, Don's responsibility involves filling professional and technical positions. On his frequent recruiting visits to high schools and junior colleges he finds himself answering all sorts of questions on vocational guidance.

A native San Franciscan, Don Dowdell has worked hard all his life. He always had an outside job while attending Polytechnic High School and Cogswell Polytechnical College. Structural engineering technology was his major subject during two years at the latter school. Armed with an Associate in Engineering degree, he joined PG&E as a draftsman in 1957.

Meticulous in detail, he became a junior engineering designer within a year and by 1961 he advanced to engineering designer. Seeking to broaden his interests, he transferred six months ago to the work of personnel recruiting.

Among the men who have done much to mold his character and challenge his intellect has been Marvin J. Feldman, vice president for development at Cogswell. Now engaged in a Ford Foundation project to discourage school dropouts, Feldman has enlisted the aid of his one-time mathematics student in this endeavor.

Dowdell attempts by every means to encourage students not only to complete high school but to go on to college. He uses many practical illustrations to convince boys and girls that continuing their education has practical advantages as well as personal gratification. In 1961 he was one of four advisors who supervised a Junior Achievement company by which they taught youngsters the practical aspects of small business.

Dowdell's outside interests are varied. Using his drawing-board skill he likes to do precise landscaping around his Richmond home. In addition to participating in many professional personnel seminars through the company, he recently completed a Dale Carnegie course on personal improvement with his wife, Cathleen. They have two youngsters, Deidre, 5, and Dawna, 1.

He is studying industrial management and personnel relations in his spare time and also hopes soon to qualify by examination for a state engineer-in-training certificate, ultimately to achieve professional registration as a civil engineer.

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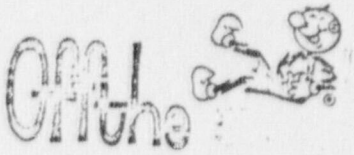


One blistering hot day when the family had guests for dinner, the mother asked her four-year-old son to say grace. "But I don't know what to say," the boy explained.

"Oh, just say what you hear me say," the mother replied.

Obediently, the boy bowed his head and murmured, "O, Lord, why did I invite those people here on a hot day like this?"

—Industrial News Review

What used to be an eagle has now become a mother hen.

—Farm & Ranch Magazine

The fact-finding youngster faced his mother one day, asking:

"Didn't you tell me the stork brought me?"

"Why yes, dear."

"And I weighed eight pounds?"

"Yes."

"Well, for your information," said the boy, "a stork doesn't have the wing spread to carry an eight-pound load!"

—Manteca Bulletin

Some people's "lot in life" appears to be their own backyard and little else.

—David Wanvig

A rooming house landlord received a phone call from the mother of a college freshman. "Please keep an eye on Albert for me," begged the mother. "See that he gets plenty of sleep and doesn't drink or run around too much.

"You see," she added in an apprehensive tone, "this is the first time he's been away from home—except for two years in the Marines."

—Muellier "Off the Record"

Los Angeles is represented by two teams — the Dodgers and the Angels. And with the way traffic is down there you are either one or the other.

—Humboldt Times

Teacher: "How would you punctuate this sentence?: 'I saw a five dollar bill on the sidewalk'."

Jimmy: "I'd make a dash after it."

—Pac. Tel. Magazine

421° BELOW ZERO IN SACRAMENTO!

Linde Opens $20 Million Liquid Hydrogen Plant

When U.S. astronauts zoom off to the moon, the force that will send them will be liquid hydrogen and liquid oxygen.

Theoretically the ideal rocket fuel, liquid hydrogen is stored at 421 degrees below zero Fahrenheit, which is 321 degrees below the coldest reading ever taken in the Arctic.

A new $20 million plant, the largest of its kind in the free world, is scheduled to begin producing liquid hydrogen this month near Sacramento. The plant has been built by Union Carbide Corporation's Linde Division under a 7-year, $85 million liquid hydrogen supply contract with the National Aeronautics and Space Administration.

60-Ton Daily Output

The new plant will produce 60 tons of liquid hydrogen per day to meet the fast growing requirements of West Coast aerospace programs. This is double the output of Linde's facility at Ontario, California, which has been the largest liquid hydrogen producer in the United States.

Located on a 56-acre site southeast of Sacramento, Linde's new plant will use more than 14,000,000 cubic feet of natural gas a day as a raw material. This is sufficient to supply all of the natural gas needs of a city the size of Richmond, California with more than 71,000 persons and many industries.

Purified, Liquefied

The process consists of extracting the hydrogen from natural gas by means of a heat reformer cycle of high temperatures and high pressures. Natural gas is a mixture of several hydrocarbons, chiefly methane, whose molecule is made up of three atoms of hydrogen and one of carbon. The hydrogen product is further purified and liquefied by refining and refrigeration. It is then transferred to a 200-ton storage sphere where it is held at minus 421 degrees.

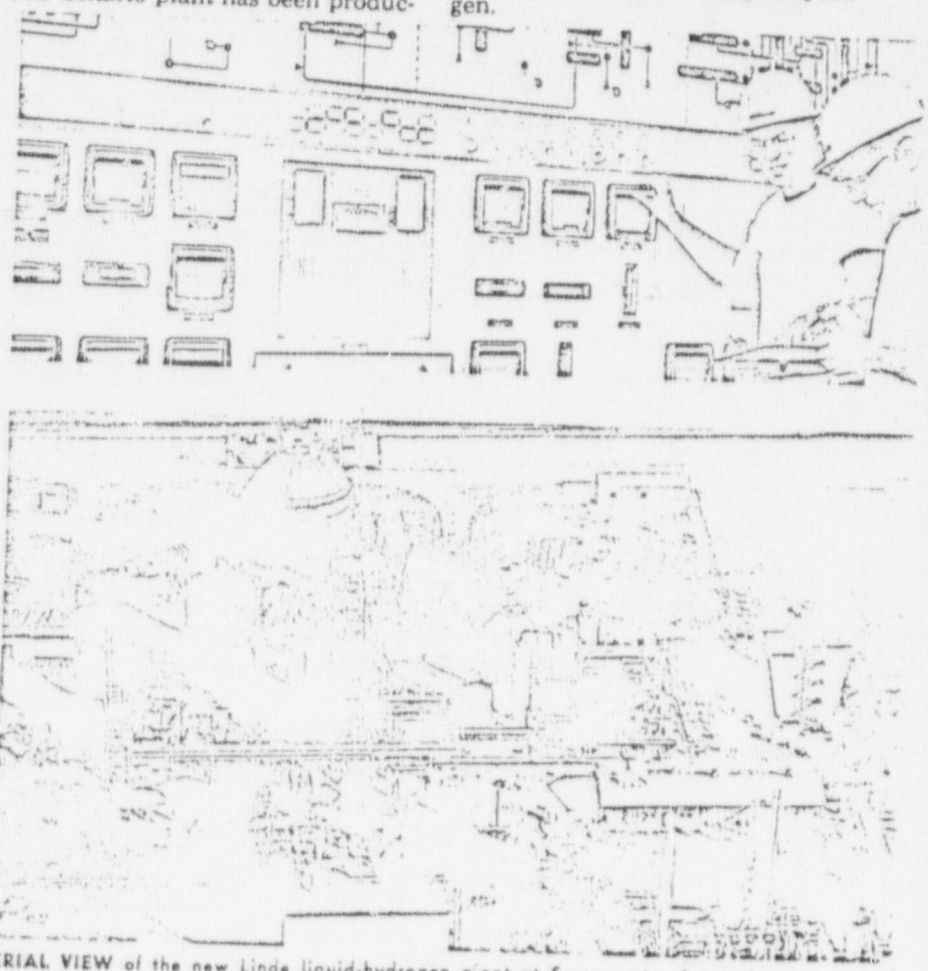
Most of the plant's output will go to nearby NASA rocket development projects being conducted by Aerojet-General Corporation and Douglas Aircraft Company.

Aerojet is developing the 1.2 million pound thrust M-1 rocket engine and Nerva, the nation's first nuclear powered rocket engine. The M-1 engine is expected to power upper stages of manned space vehicles for interplanetary flights beyond the moon. Douglas is working on the S-IV second-stage Saturn vehicle and the S-IV-B upper stage of the Saturn, both utilizing liquid hydrogen-liquid oxygen systems.

The Sacramento plant will be the third liquid hydrogen plant built by Linde in California. The company's plant at Torrance, first privately owned and operated liquid hydrogen plant in the U.S., has been supplying NASA projects since mid-1960. The Ontario plant has been producing 26 tons daily since June, 1962.

Before man-made machines venture into outer space, they must be subjected to the extreme environmental factors they will encounter. Missile and satellite systems are exposed in outer space to wide variations in temperatures: minus 440° F. on the side away from the sun and several hundred degrees above zero on surfaces exposed to direct solar radiation.

Since the vacuum of space is extreme—up to a million-billion times greater than the highest vacuum produced by conventional, earthbound equipment, familiar piston engines and turbojet engines fail totally because they run out of air. Thus rockets are the only propulsion means available for driving through the space vacuum. All upper-stage space missions are to be handled with liquid oxygen-hydrogen.



AERIAL VIEW of the new Linde liquid-hydrogen plant at Sacramento shows the many structures used to transform natural gas into a liquid propellant for space vehicles. At top, operators study control board of $20 million facility.

Recipe of the Month

QUAINT beauty their Monterey re taurant forms pretty backgrour as Mr. and Mr Gallatin Powe pause in front old adobe.

Leisurely Dining Featured at Colorful Monterey Restaurant

The leisurely air of California's early days, when Spanish grandees set the pace for gracious living, is nicely maintained in the atmosphere one finds at Gallatin's, a charming restaurant located at 500 Hartnell Street in Monterey.

Housed in what the natives call "The Old Adobe," built during the Spanish reign and lovingly restored in the spirit of a mellow tradition, owner Gallatin Powers jokingly boasts that his colorful restaurant is halfway between the hospital and the jail. He admits, also, that he got into the restaurant business because someone gave him a cookbook as a gift. The first Gallatin's was a rickety little old shack hanging over a cliff on the beautiful Big Sur coast. As word of Mr. Powers' delicious experiments in the culinary arts spread, he found it advisable to move to the larger and less rickety Old Adobe.

Gallatin's faithfully reflects its location in the oldest section of Monterey, historic capital of California during the years before the Gold Rush—when Californians took the time to savor the good things of life. By offering sumptuous epicurean dinners, impeccably served in a warmly attractive setting, Gallatin Powers has made his establishment famous far beyond picturesque Monterey.

Here is the recipe for one of hi most popular appetizers.

MUSHROOMS A LA CREME GEORGE

1 pound mushrooms
2 tablespoons butter
2 tablespoons dry sherry wine
1 cup commercial sour cream
½ cup grated Parmesan cheese
½ teaspoon Ac-cent
Salt; freshly ground pepper

Clean mushrooms; remove stems and chop Saute caps and chopped stems in butter fo 2 minutes. Add sherry; cook another min ute. Add sour cream, Parmesan cheese Ac-cent, salt, and pepper; blend thoroughly Cook until sauce thickens; serve on buttere toast points. Makes 2 servings. (If desired serve over English muffins as a luncheo dish. Or fold into a fluffy omelet.)

A Symphony of Recipes

OBOIST Merrill Remington serves Segreto Della Dama to Mrs. Russell Clark, editor of the San Francisco Symphony Cookbook.

Once in awhile a published collection of personal favorite recipes turns out to be a real gem. This is true of the San Francisco Symphony Cookbook.

Contributed by orchestra members, guest artists, music patrons, and critics, the recipes, as might be expected from the world of music, had their origin in many countries, They cover the full range of food possibilities from appetizers to desserts. Most pages in the book carry a picture of the contributor plus his or her comments about the recipe.

Sponsored by the San Francisco Symphony Foundation, one purpose of the book is to raise funds for the maintenance of the Symphony. To purchase a copy, send your check or money order for $4.31 to the San Francisco Symphony Foundation, Box 3323, San Francisco.

As a teaser, here is a dessert rec ipe contributed by Merrill Reming ton, principal oboist in the Sym phony.

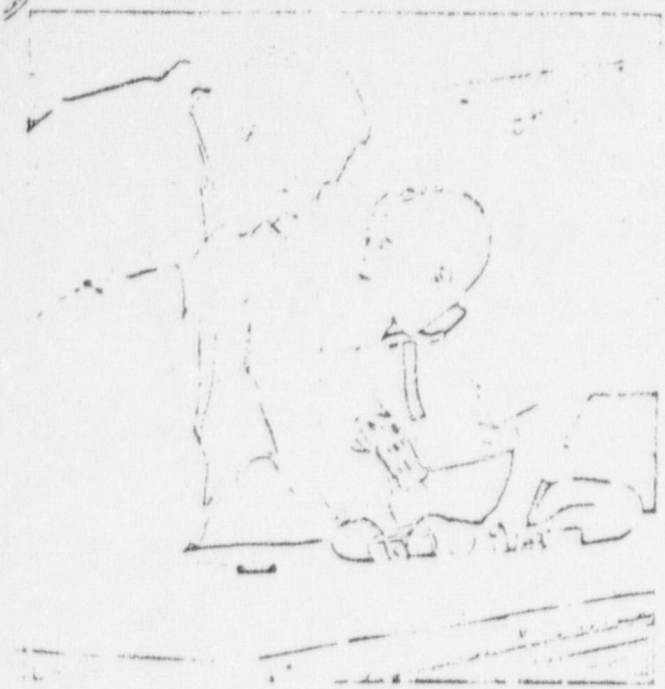
SEGRETO DELLA DAMA

1 pound lady fingers
1 cup rum
½ pound sweet butter, room temperature
2 heaping tablespoons sugar
6 egg yolks
¼ cup sweet ground chocolate
¾ cup chopped blanched almonds

Line a 1-pound loaf pan with aluminu foil. Crumble lady fingers in bowl; add ru a little at a time; set aside. Cream butter; ad sugar and egg yolks, beating well. Add choc late; blend. Stir in almonds and lady finger mix well. Turn into prepared pan. Cove chill in refrigerator overnight. Slice ar serve with whipped cream. Makes 10 to 1 servings.

NEW ROLE FOR MARCH OF DIMES

Research and Treatment of Birth Defects Needed by One of Every 16 Infants



DR. PAUL WILSON, associate director of the Birth Defects Center at San Francisco's Children's Hospital is himself examined as he examines Saul David, a patient at the center maintained through March of Dimes funds.

Saul David is a small, brown-haired three-year old with a happy, friendly disposition, and devoted hard-working parents who want the best in life for him.

In this he is like millions of other children—but with a tragic difference. Saul David was born with multiple defects—heart disease, faulty vision, impaired speech function—a whole complex of physical misfortune. Something went wrong for Saul David before he was born, as it does for one in every 16 American babies.

Can Saul David ever know the fun of normal boyhood? A few years ago, the answer might have been a heartbreaking "no." Today, Saul David is talking clearly and observing the world with normal curiosity.

Two Bay Area Centers

Saul David has good friends who offered him hope and help—the skilled personnel of the March of Dimes Birth Defects Center in Children's Hospital of San Francisco—one of two such centers serving Northern California. The second is at Children's Hospital of the East Bay, in Oakland.

The Bay Area centers, two more in Los Angeles, and 40 in other states are part of an expanding network of 75 March of Dimes Treatment and Research Centers for the victims of birth defects, arthritis and polio. They are aided by the National Foundation through contributions to the annual March of Dimes this month.

Birth defects cripple more American children in one year than polio in its worst epidemic decade. They are the principal cause of infant mortality in the U. S.

Just how limited this life will be is a matter for the child experts—pediatricians and other specialists in all clinical fields—plus educators, psychologists, occupational therapists, physiotherapists, social work counselors, speech audiologists, and reading therapists.

Total Child Considered

Birth Defects Centers bring these specialties together under one roof for referring physicians or clinics. In this setting, professional teams are able to consider the total child and his potential—not his mental or physical handicaps alone. His family can be counseled.

Dr. Hulda E. Thelander, one of the country's foremost pediatricians, and director of the San Francisco Birth Defects Center, expresses its philosophy thusly:

"When working intimately with children who are blind, deaf, halt, retarded, disturbed, deprived, and sometimes grotesquely deformed, it is the child behind the handicap that emerges, and the likeness of this child to all other children places the imperfections in a new perspective."

The centers seek to understand birth-handicapped children, and help their parents find answers to such questions as: "What is the future of my child?" "Will he be able to go to school?" "Will he be able to work?"

As Dr. Thelander remarks: "The parents of children born with defects have all the questions asked by the parents of normal children—*and a thousand and one more!*"

Yesterday, the March of Dimes found the answers to polio — the Salk and Sabin vaccines. Today it is fighting to make the birth of a normal child a certainty.

PG&E Capacity 6,861,500 KW; 4 Millionth Meter Installed

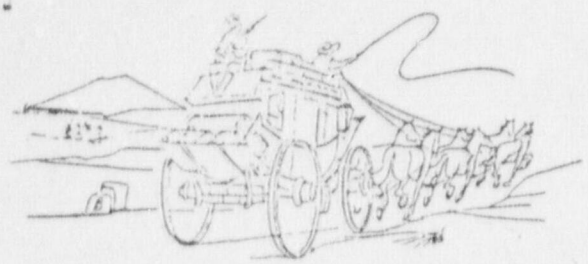
PG&E recently passed a number of milestones which reflect the rapid growth of Northern and Central California and the constant demand for more energy.

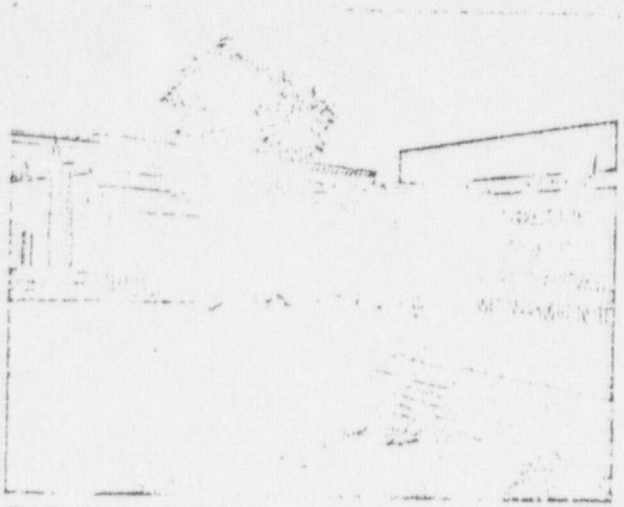
The four millionth meter on the Company's gas and electric system has been installed. It reached one million customers in November 1928 and took 19 years to reach the second million in November 1947. The third millionth meter was in service in February 1955.

In 1963 PG&E could say that in less than eight months the Company had increased its electric generating capacity by more kilowatts than in any full year in the past. The expansion of four plants and the replacement of two others added 825,000 kilowatts for a new total of 6,861,500 kilowatts.

"Such trends call attention to the importance of PG&E's electric growth rate, which compounds at 7 per cent a year," Shermer L. Sibley, vice president and general manager, said. "This is what lies behind development of a recently-announced PG&E super system which will add 15 million kilowatts in a construction schedule running through 1980."

California's Historical Monuments





RICH in the history of the Gold Rush, the old Shasta Courthouse is filled with fascinating relics.

OLD SHASTA COURTHOUSE

Reading's Trinity River Gold Strike Brought Sudden, Brief Fame

Like Gold Rush towns in many parts of California, the rise and fall of "Old Shasta" was sudden, tragic and colorful. Oldest town in the far northern section of California, this colorful mountain community became a supply and transport center soon after Major Pierson Barton Reading discovered gold in abundance at the mouth of Clear Creek Canyon in March, 1848, at what is now Reading's Bar.

Reading arrived in California from New Jersey in 1843 and a year later was granted Buena Ventura Rancho, embracing 26,663 acres on the Upper Sacramento River, by Mexican Governor Micheltorena. Reading served with Fremont's California Battalion and helped negotiate peace terms with Mexico before ending his military career in 1847.

News of Reading's discovery spread rapidly and prospectors came from Oregon, Sacramento and San Francisco. They were attracted by the cold springs gushing from the hills amidst unbroken forests of pine and oak which furnished dense shade and fuel for campfires.

Colorful Camps Nearby

The area became an ideal camping place convenient to such rich and richly named placers as Mad Ox Gulch, Whiskeytown, Kettlebelly, Jackass Flat, Tin Cup Gulch, Poverty Ridge, Dog Town and Mad Mule Town.

When California's first 27 counties were originally designated on February 18, 1850, Shasta was among them. It extended from Butte City north to Oregon and from the summit of the Coast Range to Nevada. Lands carved from it by 1865 include what is now Modoc County and the major portions of Siskiyou and Tehama Counties.

Founded as Reading's Springs, the name was changed to Shasta City June 8, 1850, and shortened to Shasta with the opening of a postoffice in 1851.

Fire, the ever-present menace to mining towns, swept Shasta in December, 1852 and an even more devastating blaze caused $500,000 damage in 33 minutes on June 14, 1853.

Shasta's most prosperous years were from 1852 to 1857 when the population reached 3,000 and as much as $5 million in gold a year was shipped out.

Supplies moved north from Sacramento in great quantities and for much of the distance the valuable merchandise was hauled by mule. Shasta became the center of "Whoa Navigation" for the vast mining empire of the Trinity, Scott and Salmon rivers. There were no wagon roads north of Shasta before 1856 and 2,000 pack mules bore the heavy burden of traffic.

Shasta residents were hopeful that when the Central Pacific Railroad pushed its tracks north from Tehama it would serve their community. When railroad officials decided the grade from the Valley was too great and they created a new town of Redding in 1872, six miles to the east, Shasta's future was doomed. By 1878 most of the gold had been taken out and another fire destroyed a block on both sides of Main Street.

County Seat Shifted

After much controversy, two elections and a lawsuit, the county seat was transferred to Redding May 15, 1888. The latter city was named for Benjamin Barnard Redding, of Sacramento, land agent of Central Pacific.

Today the old "main street" of Shasta on Highway 299 is a well-kept reminder of the past. The shells and facades of what was the longest row of brick buildings in California are mute signs of yesteryear. Only the Masonic Hall (oldest lodge in the state) and the courthouse are complete buildings.

The courthouse, built in 1855, is operated by the State Division of Beaches and Parks. It has an excellent collection of relics of the time, even to a reconstructed gallows in the rear. It is open daily from 8 a. m. to 5 p. m., seven days a week.

This is the 27th in a series on California's official State Historical Monuments. Reprints of earlier articles may be obtained free by writing PG&E PROGRESS, 245 Market Street, San Francisco, 94106.

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

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FOR RELEASE AT 12:30 P.M. EST
THURSDAY, NOVEMBER 7, 1963

Remarks by
Dr. Glenn T. Seaborg, Chairman
U.S. Atomic Energy Commission
at the
National Convention - Sigma Delta Chi
Norfolk, Virginia
November 7, 1963

WHY NUCLEAR POWER?

It is a pleasure for me to be here today to discuss a frontier of science and technology which I believe to be of the first order of importance. It is also heartening to see in the audience so many young candidates to the Fourth Estate. The replenishment and growth of our journalistic ranks are, I believe, of first importance in our democratic society. All of us in the United States owe a real debt to the journalists who fought to achieve and to enlarge our democratic freedoms from the very beginnings of the Nation. Sigma Delta Chi has had a vital role in preserving this tradition of freedom over the past 54 years. Without vigor and intelligence, this freedom would soon perish; without searching inquiry into the events of the day, it would quickly erode.

As our society changes, reporters and editors must become familiar with new fields and new concepts. For example, the press, television, and radio now are devoting considerably more attention to science and technology than they were even a decade ago. The trained science writer no longer is a rarity, although I believe his ranks still need to be increased. Perhaps the greatest stimulus toward increased news coverage of science was the development of nuclear energy in the early 1940's. Today, I would like to review one aspect of that development -- nuclear power for peaceful uses -- from the vantage point of the present.

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Some basic questions about the merits of nuclear power have been raised in recent months. The Atomic Energy Commission itself reviewed these questions in a study of civilian nuclear power made public about a year ago, and I believe the conclusions of this study still are sound.

The most basic question is the following: "Why should we be so concerned about developing nuclear power? After more than a decade of effort, hasn't it turned out to be just another energy source which is still more expensive than coal or oil?"

This question is inevitably followed by another one: "Even if nuclear power will be important at some distant date, why should the Government be spending the taxpayers' money to push its development on the present time-scale?"

Finally, there is the question: "Even if nuclear power can provide real benefits, aren't they outweighed by the risks inherent in nuclear reactors and the radioactive wastes they produce?"

Full answers to these questions are neither simple nor brief. In the time available today, I can only touch on the most important elements involved.

First, nuclear power is not "just another source of energy." In some important respects, it is unique. For example, nuclear energy is independent of geography. The cost to the consumer is not so much a function of his location with respect to the source of fuel supply as is the case with conventional fuels. Because transportation costs are a substantial factor, cheap and abundant electric energy has been available only in areas relatively near coal or oil fields or cheap hydroelectric sources. The costs of transportation of nuclear fuels are insignificant, so that the cost of power produced from this source is independent of its proximity to its fuel supply. When one considers the large areas both here and abroad which have been hampered in industrial growth by distance from supplies of conventional fuel, it takes little imagination to understand the potential significance of nuclear power.

Conventional generating plants, burning fossil fuels, inject the products of combustion into the atmosphere, adding to the increasing amount of industrial wastes in the air we breathe. No one has much information today on just how this contamination of the atmosphere may affect the public health, but there is no doubt that it can be hazardous. As

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Senator Ribicoff pointed out in a recent magazine article, heavy smog in a locality can result in a mortality rate hundreds above the normal expectancy.

Nuclear power plants do not place these chemicals in the atmosphere. I am sure many of you are thinking: "But what about the radioactivity they produce?" I will discuss this in more detail later, and at this point will say only that very little of the radioactivity produced in a nuclear reactor ever gets into the atmosphere, that any radioactive releases are carefully controlled and monitored, and that they do not add significantly to the natural radiation which always is present everywhere.

Nuclear energy differs in another important way from other energy sources. It is far more abundant; in comparison with the energy resources in coal, gas, and oil reserves, the energy supply locked in uranium and thorium - the nuclear fuel materials - is almost limitless. Sound national management of our energy resources would seem to dictate the early development of the great energy reserve in uranium and thorium. This is particularly true when one considers the growing importance of the fossil fuels for uses other than electrical generation and heating. Coal has extensive industrial uses, such as in the reduction of iron ore and the production of synthetic chemicals. Oil and gasoline are essential for fueling small mobile power plants, such as those in automobiles, trucks, locomotives, and aircraft, which are not likely ever to use nuclear fuels directly. It seems wasteful to burn coal and oil for heat at a rapidly-increasing rate when we know that they are irreplaceable and that they some day will be depleted - even if that day is far in the future.

In our free society, we do not ordinarily require an industrial firm to use one fuel rather than another. But as nuclear power plants become more attractive economically, we can expect that industry will turn increasingly toward nuclear power for sound business reasons, as some have already done. One result of this trend will be the conservation of the fossil hydrocarbons of coal, oil, and gas for those purposes to which they are uniquely suited.

This brings me to my final point in listing the ways in which nuclear energy is more than just another source of energy. This point is one of economics - the dollars and cents cost of the power used in our factories and homes. I have already noted that nuclear power is independent of

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geographic location, so that it will tend to eliminate high-cost power areas. It also has another economic advantage: as the size of nuclear power plants is increased, they become more and more economic in comparison with conventionally-fueled plants.

As a general rule, the capital costs of nuclear power plants are somewhat higher than those of conventional plants, but the fuel costs are lower with the net result that nuclear power is competitive where the cost of fossil fuels is high. In larger size plants, the capital cost differential over fossil-fueled plants becomes less, and the nuclear plants can compete in areas where the cost of fossil fuels is relatively lower.

Dual-purpose power plants ranging from medium to very large size now are under study for use in the production of electricity and the desalting of water - an increasing important need in various parts of this country and abroad. Such plants could be used to produce fresh water from the sea. Nuclear power, especially as plant size increases, would appear to be more attractive than conventional power for the plants of this type which eventually may be required.

Even a small reduction in the cost of electricity will mean large savings to the public. Each reduction of one-tenth of a mill in the average cost of power will be worth a total of about $15 billion to the citizens of our country by the year 2000. The savings will pay many times over the initial development costs of nuclear power. There is reason to believe that nuclear power has already contributed to reduction in delivered prices of power produced by fossil fuels because of its impending competition.

These considerations also relate to the second question I mentioned earlier, which is: "Why, if nuclear energy is so economically attractive, is it necessary that the Government finance and support such a large effort on the present time-scale, and why is not industry allowed to develop nuclear energy at its own pace and as fast as its economic need dictates?"

One needs also to consider this question against the historical background. We should realize that a government-sponsored reactor development program would have to be carried out in any case to meet military needs, whether or not any government support was given to civilian nuclear power. The reason for the development of reactors was for the production of

plutonium for weapons; later, the heat of a reactor was utilized to produce power for such military needs as our naval propulsion program.

To those critics who might think that substantially curtailing the civilian nuclear power program would save the taxpayer billions of dollars a year, let me point out that expenditures directly applicable to civilian nuclear power are only about five per cent of the Atomic Energy Commission's total annual budget of about $3 billion.

I, myself, prefer to look at these expenditures for civilian nuclear power in a positive sense. After all, in these days of national concern about the "spin-off" of benefits from our defense and space research and development efforts, is not civilian nuclear power a successful "spin-off" from our weapons and military reactor programs? I believe that the expenditures made by the Atomic Energy Commission to bring the benefits of nuclear energy into the mainstream of American industry have been worth every cent.

There are at least two other points that should be considered in examining the basis for Government support of nuclear energy. After nuclear energy was harnessed in the wartime Manhattan Project, it was strongly felt that it should be kept under the control of the Government because of its weapons implications. Later, when it was decided to pursue the peaceful development of power reactors, it was recognized that the development costs would be larger than any one industrial concern could bear by itself and that it was altogether proper for the Government to undertake it on behalf of all our people.

Some critics say that the Atomic Energy Commission is proceeding on a "crash" program to develop nuclear power; other critics say we are going at a far too leisurely pace. However, I would point out that in many of the developed countries of the world, with nuclear energy programs more or less independent of ours, such as that of the Soviet Union, one sees a very similar time-scale of development.

There is one nuance in this question I have not yet commented upon and that concerns the rate of technological progress. This time-scale is not very different from that foreseen by most of the scientists and engineers in the nuclear energy program 20 years ago. Much of the early optimism about nuclear energy was generated, not by these people, but by the popularization of an eye-catching scientific phenomenon which

was splashed in the headlines in all the world's newspapers on the announcement of its birth at Hiroshima. I have never felt that nuclear power could be soundly developed on anything less than the present time-scale; in fact, it is developing on a faster time-scale than I had expected! It has been a relatively short time-scale when one considers that the first reactor was completed in 1942, the first electricity was produced by a reactor in 1951, and the first atomic power station in continuous operation began in 1954. Today, reactors in this country alone are producing about one million kilowatts of power and an additional capacity of about two million kilowatts is either under construction or firmly planned - and the latter almost entirely at the utilities' expense. That seems quite a remarkable achievement for only a 20-year period.

I might add, in concluding this question on the Government's role, that the Atomic Energy Commission in some ways is a unique Government agency - one trying to work itself out of a job. Our main effort in the civilian nuclear energy field, as I have said, is to transfer the technology of nuclear energy into the mainstream of American industry. As a reactor type is developed to the point where it can be successfully and economically used, then we propose gradually to withdraw Government support. This phasing out is already happening in the case of the water-cooled and water-moderated reactors which now appear to be almost economically competitive in the high-cost fuel areas of this country. I believe that the proper role for the Atomic Energy Commission in future years lies in the research and development of promising converter reactors and of new and advanced reactor types, such as the breeder reactor about which so much has been said of late. In addition, the Commission is pressing for the private ownership of nuclear fuel materials to permit nuclear energy to take its place in the normal pattern of our free enterprise system.

The final question I would deal with today is one that is often raised about nuclear energy - the risk and hazards of its radioactive products. It is unfortunate that the peaceful uses of nuclear energy were preceded by the wartime weapons development. To many people, I am sure, nuclear energy is the A-bomb or the H-bomb. But if one examines the facts in the matter, one would find immediately that our nuclear industry has one of the best safety records in the country. In about 20 years of operation of reactors of various types, there has not been a single accident that has caused any known injury to the public outside of AEC plant

areas; and the safety record of personnel working inside AEC-contractor plants has been phenomenally good. This safety record is no accident, but is the result of a very careful analysis and control at every stage of nuclear activity.

The Commission's own concern for the public health and safety has always been predominant. In addition, the power reactor program has been and is being conducted virtually in a goldfish bowl open to continual public scrutiny as well as to frequent review and evaluation by various private and public bodies, including the Congress.

The Commission has always followed an ultraconservative approach with respect to safety. We believe this has been mandatory. As more operating experience is obtained from our many programs presently under way, and as additional data are derived from our safety research and development programs, it is clear that this degree of conservatism can be reduced and a more realistic approach adopted. But I must emphasize that this reduction of conservatism which I foresee in the years to come will not in any way compromise the public health and safety.

Much of the concern over nuclear reactors relates to the familiar question of how near to a populated area such a nuclear plant can safely be operated. One of the factors which gives rise to the question is the understandable desire on the part of the utilities to minimize the distance between any electrical power plant and its load center. Figures as extreme as $2 million per mile have been mentioned for the construction of electrical transmission lines in a metropolitan area. If the power plant is also to be used for the supply of low-pressure steam for space heating, long distances become completely infeasible. We at the Atomic Energy Commission understand the utilities' economic reasons for wanting to build nuclear plants near their load centers. We must be sure, however, that if this is permitted the safety of the public would not be compromised.

The Atomic Energy Commission recognizes that in the operation of a nuclear reactor a potential risk is involved, as there is in almost every other activity in our technological civilization. Radioactivity is generated within the reactor as heat energy is released from the nuclear fuel. To protect against this potential hazard, adequate measures must be taken to ensure that such a potentiality will never be realized.

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From the normal operations of a nuclear plant and in the day-to-day activities carried on therein, there is no significant hazard to the people who work in the plant or to the public outside. It is customary in most large reactors for a small quantity of radioactive waste gases and liquids at exceedingly low concentrations to be released at a controlled rate into the environment. The level of such releases is set by Federal regulations, on the basis of the best advice available from experts in this field, to be only a small percentage of the normal level of radiation which is naturally present in the environment, such as from ever-present cosmic rays.

The principal potential hazard of more serious proportions which must be guarded against in nuclear reactors is the possibility that an unintended quantity of radioactive material might be released accidentally and find its way into inhabited areas. There are two major lines of defense against this possibility. First, extensive safeguards are provided to prevent accidents. Extraordinary measures are taken in incorporating these safeguards into the design, construction, and operation of nuclear reactors. Further, these safeguards are subject to four rigorous evaluations -- by the AEC's regulatory staff, by the Advisory Committee on Reactor Safeguards, by atomic safety and licensing boards, and, finally, by the Commission itself. In addition, periodic inspections are made of the reactor throughout its lifetime.

Secondly, all reactors are provided with substantial safeguards to minimize the consequences of accidents in case these precautions taken to prevent accidents should somehow fail. Washdown spray systems, emergency cooling systems, internal filter systems, and - most importantly - large, high-integrity containment barriers, such as containment domes, offer strong assurance that dangerous amounts of radioactivity released would be retained within the facility.

A word should be said about the Commission's ultraconservatism in reactor safety considerations - which goes so far as to postulate the extremes of improbable reactor accidents in order that we might be ready for any contingency. That this has resulted in some public misunderstanding is not surprising. Never before in the public's experience has an agency responsible for the protection of public safety gone to such extremes to allow for every foreseeable contingency. In contrast, there are many serious accidents resulting from the complexities of our technological society where the

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design features of the apparatus or system through long tradition have made no allowance for the very improbable occurrence - be it an explosion, the bursting of a dam, or whatever.

In my opinion, all of us in the nuclear field should bear a good deal of the responsibility for this misunderstanding by the general public; our use of technical jargon can be misleading. The care which we often take to avoid saying something which is not exactly precise often misleads the layman more than would a less cautious, but more intelligible statement. For example, we term such reactor accidents as the "maximum credible accident" when from the standpoint of ordinary language it might better be termed the incredible accident.

Perhaps it could best be summed up by saying: The probability of a serious accident is extremely low. The likelihood of a dangerous consequence should a serious accident occur is even lower. The possibilities for such improbable accidents in many other areas of our technological society are not given equivalent attention.

One additional concern expressed by some about reactor safety focuses upon the so-called high-level wastes of reactors and their ultimate disposal. Essentially all the radioactivity produced in a civilian nuclear power plant remains safely contained in the nuclear fuel elements. These fuel elements have an extremely high integrity and are designed to withstand high temperature, corrosive media, and mechanical stresses and strains. Once the usable portion of the nuclear fuel in these elements has been consumed, the elements are shipped intact to remote areas for chemical reprocessing. This shipment takes place under very strict regulations and controls. Specially designed shipping casks are used to contain, shield, and cool these solid fuel elements. Our extensive experience to date is that thousands of fuel elements have been shipped literally across country without a single radiation injury.

At the remote processing plants, the nuclear fuels left in the fuel elements are separated from the radioactive wastes. These radioactive wastes are then stored underground in large steel tanks at these remote sites. The reason this kind of storage is used is that it is safe and it is the most economical way to manage the waste at present; it also preserves the long-lived fission products for which many uses are continually being discovered. For our long-range power program, alternate means of disposal are being extensively

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investigated. These have progressed to the pilot plant and demonstration phase. All indications are that practical and economical full-scale plants for ultimate disposal of these materials are well within present technology.

The nuclear energy industry, unlike many other industrial and even community developments in this country, recognized at its earliest stage the very essential requirement that its wastes be managed in a way to assure no adverse effect on man and his environment. Ours was a preventive approach - we did not allow a situation to develop in which a curative approach would be necessary.

Perhaps I can best summarize my feelings about the safety of these power reactors by saying that I would live next door to the atom. I would not fear having my family residence within the vicinity of a modern nuclear power reactor built and operated under our regulations and controls. I appreciate the fact that many have an unreasoning fear of the unknown - and radioactivity appears as such an unknown. Let me assure you that it is not. There is always more to be learned; but with what we already know and what we are continually learning about radioactivity and its effects, we are able to proceed with assurance in assessing the safety of nuclear power plants. There are of course many factors that must be considered in approving the location of any particular nuclear power plant; therefore, my remarks today are addressed only to the general subject of reactor safety; and I, of course, am not speaking about any particular plant.

Let me conclude my remarks today by noting a few things I have not mentioned. I have not pointed out other aspects of the Atomic Energy Commission's program - the other 95 percent of the budgetary expenditures. These include, as you know, the development and production of weapons, which account for the major fraction of these monies, and also the conduct of basic research at universities and national laboratories, the development of nuclear rockets and nuclear power sources for our national space program, aid to education and training of our country's young scientists and engineers, and the development of other nuclear energy by-products such as radioisotopes which have had an immense impact on medicine, agriculture, and industry. I have not mentioned the importance of this country's leadership in the nuclear energy field - in the worldwide struggle for men's minds.

The philosophical note I should like to conclude on is that - like it or not - we are living in the 20th century. Our country and the world are undergoing a period of change.

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We are all swept by the tide of discovery that is the Scientific Revolution. Nuclear power is but one facet of this over-all tide of scientific progress. Even in less revolutionary periods, people have resisted the currents of change. It is, therefore, not surprising to me to find a program such as ours subjected to criticism - for this is a vital part of our American democratic system. We, in the Government of this country, should be responsive to the sound criticisms of its citizens. I believe we are.

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11/6/63

FROM: Anthony H. Perles
San Francisco 14, Calif.

TO: Seaborg (Referred to DR for appropriate handling, by Chairman)

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DESCRIPTION: (Must Be Unclassified)
Ltr. protesting against the Bodega Bay nuclear plant...

ENCLOSURES:

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~~H. L. Price: 1-22~~ ATTN: C. T. Edwards 1/23 w/SUPPL. FILE CY. FOR ACTION 4 extras			
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OFFICE OF THE CHAIRMAN

1-21
(Date)

TO: DR

____ For Information

✓ For appropriate handling

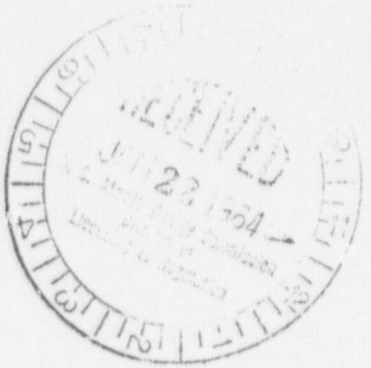
____ For preparation of reply for Chairman's signature

____ For discussion at Commissioners' Information Meeting

____ For distribution to other Commissioners

____ Daily Log

REMARKS: Please send cy of reply to Chairman's Office



Rec'd Of. Dir. of Regn.

Date 1/23/64

Time 3:45

H ST Burk

Howard C. Brown, Jr.
For the Chairman

DR-41