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ROCKY FLATS

- The Department of Justice has been investigating the Rocky Flats Nuclear Power Plant for almost one year for possible violations of environmental laws. I fully support this investigation.

- In order to determine the validity of allegations the Department of Energy is fully cooperating with the Justice Department.

- Admiral Watkins has promised that it is his intention to operate DOE facilities fully in compliance with all pertinent statutes and in such a matter that the primary concern for the environment, health and safety of the employees and public is satisfied.

- The Admiral has assigned Deputy Secretary Henson Moore as the "on scene" official to assist in the investigation. In addition, the contractor, Rockwell International, has been directed to suspend all potentially unsafe operations until the investigation is completed.

- Admiral Watkins has a good working relationship with Colorado Governor Romer and will keep the Governor appraised of any developments at the Rocky Flats facility.

DATE: 6-8-89

TRANSMITTAL SHEET

OFFICE OF THE SECRETARY
U.S. DEPARTMENT OF ENERGY

TO: Roger Porter / Paul Roellig

White House

456-7139

FROM: John Tuck

Under Secy.

586-6479

NO. OF PAGES: 2

MESSAGE: Per your request

There is a criminal investigation ongoing at the Rocky Flats Nuclear Weapons Facility near Denver, Colorado. The Department of Energy and the operator of the facility, Rockwell International, are cooperating fully with the Department of Justice, the FBI and the EPA in their investigation into alleged violations of important environmental laws. Because this is an ongoing criminal investigation I am not in a position to comment on it in detail. We are all committed to the safe, environmentally sound operation of these important facilities. If it is determined that there have been violations of environmental statutes, appropriate actions will be taken.

The Attorney General said he would take the unusual step of making this investigation a matter of public record because he believes, and I agree, that it is absolutely essential that the public understand that this investigation does not signal any major new environmental safety or health concern.

During this investigation, Energy Secretary Watkins has sent his own team of experts to Rocky Flats to assure full cooperation with the ongoing investigation, to assess the situation and to report regularly and directly to him on any circumstances which could affect continued safe and environmentally sound operations of the facility.

We are coordinating our actions with Governor Romer's office in Colorado to keep them fully apprised of developments.

THE WHITE HOUSE

WASHINGTON

June 15, 1989

Dear Ed:

I have had my staff look into where the Administration stands on Chronar's photovoltaic facility in Fairfield, California.

Officials at the U.S. Department of Energy inform us that they have enjoyed a strong and productive relationship with the Chronar Corporation. A number of DOE-Chronar projects have produced bountiful results. Chronar's R&D team has met or exceeded subcontract milestones through the past nine years of involvement and the Department is optimistic over Chronar's future role in developing alternative energies. To date, however, the department has not received any requests from Chronar for any assistance on the project in Fairfield, California.

The Bush Administration firmly believes that alternative energy must play a part in helping our nation meet its future energy requirements.

Sincerely,

John H. Sununu
Chief of Staff

Mr. Edward J. Carlough
General President
Sheet Metal Workers'
International Association
1750 New York Avenue, N.W.
Washington, D.C. 20006

THE WHITE HOUSE

WASHINGTON

June 16, 1989

MEMORANDUM FOR GOVERNOR SUNUNU

FROM: ROGER B. PORTER

SUBJECT: Letter to Edward J. Carlough

As you requested, my office has prepared the attached draft response to Edward J. Carlough regarding his letter to you concerning Chronar's photovoltaic facility in Fairfield, CA.

Recommendation: That you sign the attached letter.

ID# 029086

FG006-03

THE WHITE HOUSE
CORRESPONDENCE TRACKING WORKSHEET

INCOMING

DATE RECEIVED: APRIL 21, 1989

NAME OF CORRESPONDENT: MR. EDWARD J. CARLOUGH

SUBJECT: GOOD TO SEE YOU DURING THE LEGISLATIVE CONFERENCE; SEEKS ANY HELP ~~GOVERNOR SUNUNU~~ CAN GIVE WITH REGARD TO THE PHOTOVOLTAICS PROJECT

ROUTE TO: OFFICE/AGENCY (STAFF NAME)	ACTION ACT CODE	ACTION DATE YY/MM/DD	DISPOSITION TYPE RESP	DISPOSITION C D	DISPOSITION COMPLETED YY/MM/DD
JOHN SUNUNU	ORG	89/04/18	JS	A	89/5/04
REFERRAL NOTE: REPORT	A	89/5/08			/ /
REFERRAL NOTE: PDMALO	A	89/05/10			/ /
REFERRAL NOTE:		/ /			/ /
REFERRAL NOTE:		/ /			/ /
REFERRAL NOTE:					

ADDITIONAL CORRESPONDENTS: MEDIA:L INDIVIDUAL CODES: ____ ____ ____

CS MAIL USER CODES: (A)_____ (B)_____ (C)_____

*ACTION CODES:	*DISPOSITION	*OUTGOING CORRESPONDENCE:
*A-APPROPRIATE ACTION	*A-ANSWERED	*TYPE RESP=INITIALS OF SIGNER
*C-COMMENT/RECOM	*B-NON-SPEC-REFERRAL	* CODE = A
*D-DRAFT RESPONSE	*C-COMPLETED	*COMPLETED = DATE OF
*F-FURNISH FACT SHEET	*S-SUSPENDED	* OUTGOING
*I-INFO COPY/NO ACT NEC		
*R-DIRECT REPLY W/COPY		
*S-FOR-SIGNATURE		
*X-INTERIM REPLY		

REFER QUESTIONS AND ROUTING UPDATES TO CENTRAL REFERENCE (ROOM 75,OEOB) EXT-2590
KEEP THIS WORKSHEET ATTACHED TO THE ORIGINAL INCOMING LETTER AT ALL TIMES AND SEND COMPLETED RECORD TO RECORDS MANAGEMENT.

THE WHITE HOUSE

May 4, 1989

Dear Ed,

Sorry to take so long to get back to you.

I will have my staff review the situation in the industry and see where we stand on this.

Thanks for your letter.

Regards,

John H. Sununu
Chief of Staff

THE WHITE HOUSE
WASHINGTON

Mr. Edward J. Carlough
General President
Sheet Metal Workers' International
Association
1750 New York Avenue, N.W.
Washington, D.C. 20006

29086

Edward J. Carlough
General President

SHEET METAL WORKERS' INTERNATIONAL ASSOCIATION

1750 New York Avenue, N.W.
Washington, D.C.
20006
202/783-5880

April 18, 1989

Mr. John Sununu
Chief of Staff
The White House
Washington, DC 20500

Dear Governor:

It was good to see you again during our Legislative Conference early today and at the White House this evening. We are still very much interested in energy in fact our Union's National Pension Fund is the principal owner of Chronar Corporation, the country's leading manufacturer of photovoltaic panels.

Concerning the attached March 7 NEW YORK TIMES story regarding ARCO, we are in negotiations with them at the present time to acquire them. Better us than the Japanese or Germans.

Photovoltaics as you know John, is not solar. It is way beyond it and it is much closer to economic reality than most people in the country realize, but you might be interested to know that our Pension Fund, Bechtel, and Pacific Gas and Electric are co-venturing with Chronar to build what will be the world's largest photovoltaic facility in Fairfield, California. We will start breaking ground later this year and the first panels will be rolling off the assembly line late Spring of next year. The plant will have a 10 megawatt capacity which will represent approximately one-fourth of the world's capacity at that time for that one single plant and we will sell electricity at a shade under $.12 per kilowatt hour. People in San Diego and Hawaii are presently paying $.13 per kilowatt hour.

We do need help on the photovoltaic project and are working closely with key members of Congress in both parties on this matter this week. Any help that you can give us will be appreciated.

Sincerely yours,

Edward J. Carlough

Edward J. Carlough
General President

EJC/si

Attachment

5

The New York Times
March 7, 1989

U.S. Companies Losing Interest In Solar Energy

By MATTHEW L. WALD

Some of the nation's biggest backers of solar energy are losing interest just as the technology to transform sunlight into electricity is getting closer to being economically competitive with some conventional power sources.

The world's largest maker of solar cells, ARCO Solar, is on the auction block because the parent company, which once saw its investment as a hedge against [illegible] energy market, [illegible] its money to be [illegible] most expertise, in [illegible].

Photovoltaic cells, which make electricity directly from sunlight, are usually made of silicon, although manufacturers are experimenting with a variety of materials in different shapes: some are flat plates, and others are installed under lenses that magnify the sun's rays.

Too Costly to Compete

The cells are still about four times too expensive to compete with ordinary coal-powered plants, this country's main source of electricity, and still triple the cost of the most expensive electricity, the inefficient sources utilities turn to at hours of peak demand. But in the early years of this decade, the cells were 16 times too expensive, and the price is still falling.

If ARCO sells the solar subsidiary it bought in 1977, it would follow the Exxon Corporation and the Shell Oil Company in leaving the business. Motorola Inc. has also left the field. But the Amoco Corporation is still a significant presence, through its Solarex Corporation subsidiary, which is the second-largest domestic manufacturer.

Experts say the waning interest of American companies may mean that if

Continued on Page D20, Column 4

Companies Abandon Solar Energy

Continued From Page 1

the photovoltaic industry becomes a giant, it will be dominated by Japan, which already has a lead in production of low-technology solar cells. West Germany is also a contender. Potential bidders for ARCO Solar include Japanese and German companies.

The problem, many in the field say, is that big corporations in this country do not see a sure enough prospect of substantial returns on their investment to spend years on further development of solar power. They would rather put the money in their core business of oil and gas.

People in the industry believe that sometime in the next decade solar cells will provide cheaper electricity than some generators that consume oil or gas. It could then become a multibillion-dollar industry.

'Not a Prudent Thing'

The problem is that no one knows how soon that will occur. Making business plans that depend on accurately predicting the timing is "probably not a prudent thing to do," said James M. Caldwell, a 23-year veteran of ARCO who was president of ARCO Solar until late last year, when he left to try to assemble investors to make a bid for it.

Some are troubled by the possible sale. "It will shake the Department of Energy's program to its roots if this sale is concluded to a foreign country," said Kenneth B. Zweibel, who manages the Federal research contract with ARCO Solar.

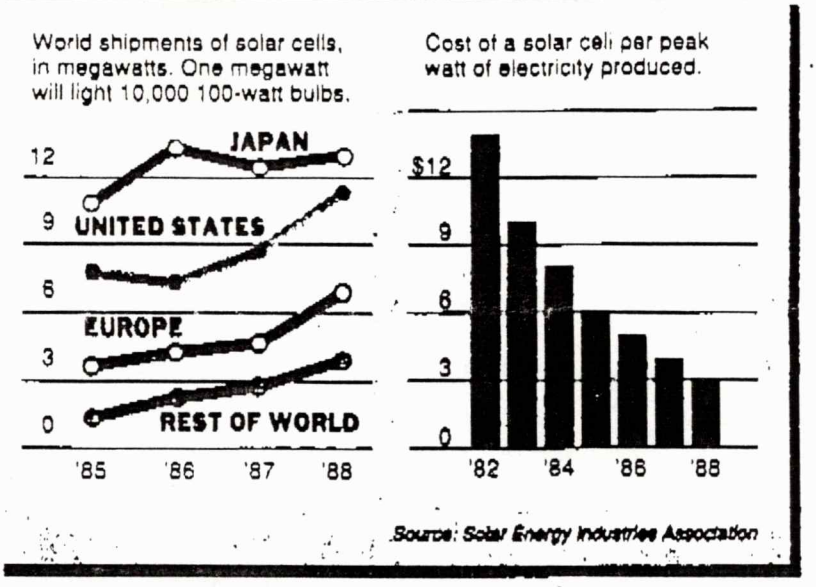
Mr. Zweibel said that ARCO Solar was developing a material called copper indium diselenide, which he calls "the best hope of photovoltaics in the United States in the next three to five years." ARCO, he said, "has the global leadership in this technology."

A spokesman for the company, Stephen K. Lowe, said, "ARCO's hope is that we'll find a buyer that will continue ARCO's world-class development of this technology."

The world market for solar cells is now only about $125 million a year, of which ARCO has about $30 million, but if the cost of solar cells continues to fall — or if oil and natural gas rise in price — the technology will have real economic importance in a few years, utility experts agree.

Emphasis on Short-Term Profits

Production Rises as Costs Drop



The New York Times/March 7, 1989

...federal ...g even ...ed cuts proposed by President Ronald Reagan. In 1981 the Government spent $155 million a year.

Last year, for the first time, the Governments of West Germany and Japan spent more on research and development than Washington did, according to the Solar Energy Industries Association, a trade group.

First Goal Is in Sight

But the cuts are coming at a time when experts see solar technology close to its first major goal: producing cells inexpensive enough to compete with the most expensive power source used by electric utilities, the turbines powered by natural gas or light fuel oil. Utilities turn to these high-cost sources on hot, sunny afternoons when all the cheaper sources of power, like coal and hydroelectricity, have already been tapped.

The ability to provide that electricity, called "peaking power," at a competitive cost could come in some applications in as little as two to three years, said Edgar DeMeo, manager

...air-conditioning ... highest when the sun is brightest.

...Even at the current low level of production, American consumers increasingly see the solar cells entering the marketplace.

First were the tiny uses, like pocket calculators, but for several years campers have been equipping their recreational vehicles with panels of cells to handle larger burdens, like charging the batteries that run small refrigerators, television sets and fluorescent lights.

More recently, discount stores have begun selling garden walkway lights that need no wiring; cells built into the top charge a battery during the day. Several hundred Oldsmobiles are equipped with solar cells that keep the battery charged when the engine is not running, countering the drain from digital clocks and onboard computers.

More Common in Third World

The growing field may come to be dominated by the Japanese.

Emphasis on Short-Term Profits

"I think we're nearly there," said Philip K. Verleger Jr., an energy economist at Charles River Associates. He added that costs had come down by 90 percent since the technology was first developed for the space program.

But American corporations are "too tied up in short-term profits" to stick with the investments, he said, and a publicly held company that invested heavily in solar technology would probably become the target of a corporate raider, who would argue that shareholders' money could get quicker profits elsewhere.

"It's the VCR syndrome," said Scott Sklar of the Solar Industries Association, a trade group in Washington. The [illegible] make videocassette [illegible] developed in [illegible] dominated by foreign manufacturers, especially the Japanese.

Government Cutbacks Proposed

"The closer we get, we ought to have more courage, more willingness to remain in the market," said Representative Vic Fazio, a California Democrat who is a leading Congressional backer of solar power. "But we're getting an opposite reaction."

Enthusiasm also seems to be waning in the Bush Administration, which has proposed a 30 percent cut in research and development funds from

The growing field may come to be dominated by the Japanese.

of the solar power program at the Electric Power Research Institute, a utility-sponsored nonprofit organization in Palo Alto, Calif., that monitors the industry and sponsors some work of its own.

"The industry isn't yet really taking off," he said, "but I think it will, reasonably soon."

[illegible] of the industry [illegible] cost per kilowatt-hour — the amount of electricity needed to light 10 100-watt bulbs for an hour.

"Right now, this technology's at about 25 cents a kilowatt-hour," he said. "I think it will be driven down in the near term to 12 to 15 cents," about what utilities spend to get electricity from their least efficient plants when fuel prices are high.

If the cells are used for peaking power, storage is not a problem, since most utilities' peak loads come from

More Common in Third World

Around the United States, solar cells are widely used to power mountaintop communications relay stations, foghorns and other navigational aids. They are far more common in the third world, however, where the cells power irrigation pumps and charge the batteries that run television sets and radios where there is no electricity, and power refrigerators for remote health clinics.

While many of these uses seem like gimmicks or tiny niche markets, they provide an increasing demand. But officials at ARCO said that the market was not growing fast enough. The chairman, Lodwrick M. Cook, said in an interview last month that after 10 years of operating the subsidiary, he was "losing patience" with solar power and ready to sell the company, which is in Camarillo, Calif., and has 350 employees.

ARCO Solar's Prospects

The sale price would be in the range of $20 [illegible] $50 million, [illegible] ARCO has [illegible] system, a [illegible] company. He added that this investment dwarfed the $2 million the company had received from the Government. ARCO Solar will get an additional $800,000 in Federal financing this year.

ARCO's exit, some industry watchers believe, would provide a quick avenue for advancement by the Germans or the Japanese. Two possible bidders, some say, are Siemens A.G., the West German electrical company, and Showa Shell Sekiyu, a Japanese oil company affiliated with Royal Dutch/Shell. Both concerns operate joint ventures with ARCO Solar to market ARCO's products.

But Mr. Annan of the Energy Department and others are not certain that foreign ownership would represent a serious blow. Mr. Caldwell, the former president of ARCO Solar, said: "The United States has the biggest concentration of technical talent, and the biggest market is the U.S. As long as those are here, it's not something that somebody's going to steal away and run and hide with."

Mr. Caldwell said he recognized that in some cases, "people are aghast" that ARCO wants to sell the subsidiary. Recalling the days of the energy crisis, when oil companies' every move was studied for sinister overtones, he added, "They are the same people who were aghast that Big Oil were the only people funding photovoltaics for a while."

THE WHITE HOUSE
WASHINGTON

Date: May 9, 1989

FOR: Nancy Maloley

FROM: WILLIAM L. ROPER

- [x] Action
- [ ] Draft Response
- [ ] FYI
- [ ] Let's Talk

COMMENTS:

OK Nan

[redacted]

THE WHITE HOUSE
WASHINGTON

Date: 5/9

TO: BILL ROPER

FROM: **JOHN S. GARDNER**
Special Assistant to the President
and Assistant Staff Secretary

The attached Presidential message came in yesterday afternoon. If approved, it would be read by Undersecretary Tuck at noon today. Could we please have OPD comments/clearance as soon as possible?

Thanks.

[redacted]

THE WHITE HOUSE

WASHINGTON

May 8, 1989

As a President deeply concerned with reducing our nation's dependence on imported oil, I believe developing an integrated and balanced national energy strategy is essential to America's economic growth and energy security. As long as the highest safety standards are maintained, nuclear power must be included among our energy resources. Our increasing dependence on unstable supplies of imported oil underscores the vital role nuclear power must play in the Nation's energy future.

America gave birth to nuclear technology, and as we approach the 21st century, this Nation can lead the world into a new era of safe, reliable, economical, and environmentally clean nuclear power. Today, more than 100 nuclear power plants supply almost 20 percent of the Nation's electricity. In regions such as New England and New York, nuclear power spares consumers from becoming overly dependent on oil-fired electrical generation. Through the efforts of our commercial nuclear power industry, our national energy security is strengthened and environmentally harmful emissions are reduced.

In order to enhance the contribution that safe nuclear power can make to solving our national energy needs, we must proceed with reform of the lengthy and cumbersome process through which nuclear power plants are licensed. The Nuclear Regulatory Commission is to be commended for the important progress it has made recently on this issue. I have asked the Secretary of Energy to work with the Nuclear Regulatory Commission and the Congress to ensure that any additional reforms are made expeditiously.

As the theme of your conference so poignantly reminds us, "The Future is Now." Now is the time to implement reforms for the nuclear industry. Now is the time to put on line the safe and viable nuclear power plants that are licensed and ready to operate. And now is the time for America's nuclear

industry to take its rightful place in helping to meet the Nation's energy needs for the next decade and the next century.

You have my best wishes for an enjoyable and productive conference. God bless you.

THE WHITE HOUSE

WASHINGTON

April 4, 1989

MEMORANDUM FOR NANCY A. MALOLEY

FROM: PAUL D. ROELLIG

SUBJECT: Cold Fusion

For the last few days I have been running down leads relating to the cold fusion announcement by scientists at the University of Utah. Luckily, my father is a nuclear physicist and through his introductions I have been able to discuss the latest developments with the principal players in this very complex and fast moving arena. According to these sources, in the next two weeks we will witness one announcement after another of major scientific breakthroughs which may eventually lead to a revolution in the field of energy.

ACTION FORCING THE ISSUE: On March 23, scientists working at the University of Utah made an unprecedented claim to have achieved a sustained hydrogen fusion reaction, thereby harnessing in the laboratory the fusion power of the hydrogen bomb. The promise of what such a potential discovery could yield instantly propelled the claim to national headlines, including story one of the CBS evening news.

BACKGROUND: Until recently, physicists have believed the only way to a practical fusion power plant is to recreate the high pressures and temperatures that exist in the interior of the sun -- and for a fraction of a second, in an exploding hydrogen bomb.

The basic elements of the Utah experiment -- run at ordinary temperatures rather than in the millions of degrees previously thought necessary -- are two metal electrodes, platinum and palladium, separated by a region containing heavy water. A current is then passed through the water. In addition to the heat generated by the current, heat attributed to the generation of fusion reactions is claimed to have been observed in such quantity as to produce net power. Also, radiation has been observed. The two highly respected scientists operating the experiment claim that with no more equipment than might be used in a freshman chemistry class, they had triggered a small fusion reaction in a test tube that continued for more than 100 hours. The early reaction within the scientific community was one of incredulity. The amount of energy observed from the reaction was much higher than could be expected even if fusion was taking place.

EXPECTED DEVELOPMENTS: In the last 24 hours, the concept of cold fusion has been accepted by a very select and influential group of physicists. A number of research centers -- Brookhaven, Yale, U.C.L.A., Princeton -- have replicated the Utah experiment and have achieved cold fusion. The scientists associated with these efforts are no longer racing to prove or disprove the cold fusion theory, but rather, are frantically trying to discover where the excess energy is coming from in cold fusion reactions. One theory, which purports that the lithium is actually fusing with the deuterium, is being tested with results due within two to three days. If this theory proves to be fact, the world may enjoy a new source of energy within just a few years.