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MORE TROUBLE BREWING FOR VINYL
CHLORIDE -- SEZIKOFF, BIRTH EFFECTS, TUNNEY
TORKELSON, WAGONER, HARDING, SENATE

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C AND EN 12-13 SEPT 2, 1974

Brief Summary

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SUMMARY:

R&S 112091

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Date 9/12/74

Gordon, H. L. 2030
 Langner, R. R. 607
 Oelfke, K. H. Freeport
 Rausch, D. A. 2020
 Roberts, D. J. 2030

RV Johnston, Freeport
V. K. Rowe, 1803

From: T. R. Torkelson,
 9008

, and technical assistance
 a licensing or rule making

ng the nuclear regulatory
 ay for costs and other fees
 ors and other "eligible"
 nuclear licensing proceed-

g the designation of sites
 power parks in each of the
 e electric power reliability
 = U.S.

ime last week, both House
 had recessed for a two-
 ion with the constituency.
 scheduled to resume activi-
 ter Labor Day, and action
 e version of S. 1283—which
 lify matters for the con-
 the reorganization act—is
 or soon thereafter. Even so,
 s won't have much time to
 erences among House and

Senate provisions for an ERDA, an
 NEC, or an NSLC, because Congress
 hopes to adjourn by Oct. 15 to go elec-
 tion. Still, it's virtually certain
 that some form of an energy reorgani-
 zation bill will be on President Ford's
 desk long before then.

deterrent in the accomplishment of the
 energy R&D programs." He would also
 be charged with assuring the collec-
 tion, analysis, and dissemination of
 manpower supply and demand data re-
 lating to energy R&D.

- Making available certain informa-

Pollution control spending on the rise

According to the Government's first
 all-industry survey of capital spending
 for air and water pollution abatement
 this year and last, the chemical indus-
 try spent \$416 million in 1973, and
 plans to spend \$609 million in 1974.
 These figures represent 9.6% of total
 chemical industry spending for new
 plant and equipment in 1973 and
 11.6% in 1974.

The chemical industry ranked fourth
 among the five leading industries—
 electric utilities (\$1.4 billion), petro-
 leum (\$600 million), nonferrous metals
 (\$500 million), and paper (\$400 mil-
 lion)—in spending for air and water
 pollution control. The survey was con-
 ducted by the Department of Commer-
 ce's Bureau of Economic Analysis last

winter, and the results were released
 late last month.

One of the more interesting results of
 the survey is that when companies
 were asked the question, "Have restric-
 tions on pollution discharges caused
 your company to reduce expenditures
 for new plant and equipment in
 1973—or planned expenditures in
 1974—from what they would have oth-
 erwise been?" only 2% of the com-
 panies thought that the pollution
 abatement regulations have interfered
 with their capital investment plans.
 This statistic, according to BEA, indi-
 cates that business as a whole does not
 think of pollution abatement regula-
 tions as reducing investment in new
 plant and equipment.

Industry may spend \$6 billion on control equipment this year

NEW PLANT AND EQUIPMENT EXPENDITURES
 1973^a 1974^b

\$ Millions	Air	Water	Total	Total capital invest- ment	Air	Water	Total	Total capital invest- ment
All industries	\$3176	\$1762	\$4938	\$100,076	\$4346	\$2196	\$6542	\$112,114
Manufacturing	2050	1103	3153	38,003	2929	1517	4446	44,404
Durable goods	1207	372	1579	19,389	1523	540	2063	22,611
Nondurable goods	843	731	1574	18,614	1406	977	2383	21,793
Foods, including beverages	68	84	152	3,048	112	118	230	3,276
Textiles	9	20	29	787	17	26	43	773
Paper	174	181	355	1,893	326	174	500	2,484
Chemicals	203	213	416	4,324	293	316	609	5,249
Petroleum	352	203	555	5,409	610	316	926	6,888
Rubber	26	23	49	1,567	33	18	51	1,580
Other nondurables	12	7	19	1,586	16	9	25	1,543
Nonmanufacturing	1126	659	1785	62,073	1418	679	2097	67,710

a Estimates. b Planned. Source: Department of Commerce

More trouble brewing for vinyl chloride

Exposure to vinyl chloride may cause
 both genetic damage and birth defects.
 And the chemical, already alleged to
 cause a rare form of liver cancer, also
 may increase the danger of developing
 other types of cancer, the Senate Com-
 merce Subcommittee on Environment
 was warned late last month. The sub-
 committee hearings, called ostensibly
 to examine evidence on the potential
 health hazards of vinyl chloride, also
 seemed aimed at influencing the prog-
 ress of toxic substances legislation,
 which has been stalemated in a confer-
 ence committee for more than nine
 months. Most of the witnesses came
 prepared to testify on the need for such
 legislation.

Testifying before the subcommittee,
 Dr. Irving J. Selikoff of Mount Sinai
 School of Medicine said, "Early find-
 ings indicate that vinyl chloride may
 be mutagenic, as well as carcinogenic."
 He reports that examination of chro-
 mosomes in a group of 11 U.S. vinyl
 chloride workers has shown "chromo-
 some changes to be present considera-
 bly more frequently than expected."
 Dr. Selikoff also cites laboratory stud-
 ies in Sweden, recently confirmed in
 the U.S., that show vinyl chloride to be
 mutagenic in salmonella test systems.
 He adds that investigations by the
 Ohio State Department of Health have
 found increased birth malformations in
 three Ohio counties in which vinyl
 chloride plants are located.

Although admitting that the "evi-
 dence is still limited and requires wide
 extension and confirmation," Dr. Seli-
 koff says that "nevertheless, those data
 that are available give ground for con-
 cern." These data, he says, suggest
 "considerable caution and prudence in
 the exposure of humans to the mate-
 rial," especially men and women in the
 fertile ages.

However, Dow Chemical's Dr. Theo-
 dore R. Torkelson, testifying on behalf
 of the Manufacturing Chemists Associ-
 ation, told the subcommittee that
 there is no evidence either for or
 against the proposal that vinyl chloride
 causes mutagenic effects in humans.
 His position agrees with that of Ralph
 L. Harding, Jr., president of the Soci-
 ety of the Plastics Industry, who says,
 "It must be emphasized that the infor-
 mation developed thus far does not yet

constitute a body of 'hard data' on the totality of the vinyl chloride hazard." However, Mr. Harding adds, "there seems to be no dispute at this time that vinyl chloride monomer is a carcinogen in both man and animals."

Further evidence as to the human carcinogenicity of vinyl chloride was presented to the subcommittee by Dr. Joseph K. Wagoner, director of field studies and clinical investigations for the National Institute for Occupational Safety and Health, which has conducted a study of causes of death for workers at two polyvinyl chloride manufacturing facilities. Dr. Wagoner says that although the "overall number of deaths of these workers is just slightly greater than expected," a 57% increase in deaths due to cancer beyond what would have been expected has been ob-



Tunney: system to evaluate substances

served. Although there were 12 times as many deaths due to liver cancer than normally would be expected, there also was an excess mortality observed for cancers of the respiratory system, the blood forming tissues, and the brain and central nervous system, he says. Dr. Wagoner also reported at the hearings the discovery of another death due to angiosarcoma of the liver in a U.S. polyvinyl chloride manufacturing worker.

Sen. John V. Tunney (D-Calif.), chairman of the subcommittee, said, "It is absolutely indefensible to me that the only way we became aware of the dangers of vinyl chloride was because of the deaths of at least 16 vinyl chloride workers." And in what appeared to be a push for the toxic substances bill, Sen. Tunney added that it is essential that "we establish some orderly, comprehensive system for evaluating substances before we're confronted with a Hobson's choice between protecting health or preserving jobs."

Both toxic substance bills now before the House-Senate conference commit-

tee contain provisions giving the Government authority to require testing and screening of chemicals before they are marketed commercially. The Senate bill, S. 426, would require premarket screening for all new chemical substances and all new uses of chemical substances under the direction of the Environmental Protection Agency. However, the House version of the bill, H.R. 5356, would require screening only for new chemical substances and new uses of existing substances that have been identified by EPA as posing a substantial danger to health or the environment.

Toxic substances legislation drew strong support from James L. Agee, assistant EPA administrator. He told the subcommittee that "the potential environmental threat from high volume industrial chemicals has not received high enough priority either from Government or industry." Mr. Agee says, "A far more effective means of dealing with such chemicals would be on the basis of the Toxic Substances Control Act. . . . It cannot be assumed that adequate research, testing, and related safety measures have been or will be undertaken."

SPI president Harding also supported the legislation, saying that "SPI has no quarrel with legislation that attempts to reduce the future impact on human beings and the environment of new chemical substances." However, he adds, "the House language more realistically addresses the problem of premarket testing and the proper assessment of environmental and human health impact prior to the development of new technologies."

It's not clear what effect, if any, these hearings will have on the fate of the toxic substances legislation. Conference working out the differences between the House and Senate bills held their first meeting in several months only two days before the hearings started. But a staff aid says that he still feels that the legislation will be passed this session even though Congress faces a long, election-year adjournment.

New regulations for air quality proposed

The Environmental Protection Agency has come up with some proposed regulations that may help clarify the 1970 Clean Air Act. The new proposal would give states the task of determining the amount of air quality deterioration, if any, allowed within their borders.

One of the requirements the 1970 act neglected to spell out is that in "enhancing and protecting" air quality, what happens to air that is already cleaner than the national standards set and implemented by EPA? Can this air be dirtied or should it be "protected" from any pollution?

Four environmental groups—the Sierra Club, Metropolitan Washington Coalition for Clean Air, New Mexico Citizens for Clean Air and Water, and the Clean Air Council of San Diego County—took EPA to court over this issue in 1972 and obtained a ruling that there should be no "significant deterioration" of existing pristine air. However, the court left the chore of defining precisely what is "significant" to EPA.

Under the new proposal, states would designate their air in one of three classifications: Class I—areas where any change in air quality would be significant; Class II—areas where moderate change is acceptable but where stringent air quality is nevertheless desired; and Class III—areas where major industrial or other growth is de-

EPA proposals would set limits for pollutants in air . . .

Pollutants	AREA DESIGNATION	
	Class I ^a	Class II ^b
Particulate matter		
Annual geometric mean	5	10
24-hour maximum	10	30
Sulfur dioxide		
Annual arithmetic mean	2	15
24-hour maximum	5	100
3-hour maximum	25	700

^a Increases in concentration (micrograms per cubic meter) over presently existing levels. ^b Areas where no change from current air quality is desired. ^c Areas where moderate change in air quality is acceptable.

require states to review control plans for new plants^a

Fossil-fuel-fired steam electric plants of more than 1 billion B.t.u. per hour heat input
Coal cleaning plants (thermal dryers)
Kraft pulp mill recovery furnaces
Portland cement plants
Primary zinc smelters
Iron and steel mill metallurgical furnaces
Primary aluminum ore reduction plants
Primary copper smelters
Municipal incinerators capable of handling more than 250 tons per day of refuse
Sulfuric acid plants
Petroleum refineries
Lime plants
Phosphate rock processing plants
By-product coke oven batteries
Sulfur recovery plants
Carbon black plants (furnace process)
Primary lead smelters
Fuel conversion plants
Sintering plants

^a Applicable to 19 categories shown.