

New York State Department of Environmental Conservation
50 Wolf Road, Albany, New York 12233



Peter A. A. Berle,
Commissioner

January 18, 1978

Mr. Louis Margitus
Assistant Manager
Office Services
Hooker Research Center
Long Road
Grand Island, New York 14072

Re: Hooker Chemicals & Plastics
Corporation
Grand Island (T), Erie Co.
NY 000 1201

Dear Mr. Margitus:

This office has received your September 16, 1977 letter to Mr. Speed, of the Department's Region 9 Office.

After reviewing the attached material, including the company's response to New York State's Industrial Chemical Survey, it is the determination of this Office that the company's report on the handling and disposal of hazardous materials is largely satisfactory, but that concern exists with regard to vinyl chloride.

The quantities of other chemicals used are not considered significant at the present time. The useage of vinyl chloride, however, is considered significant and a short-term, high-intensity monitoring program is needed to quantify vinyl chloride, if any, in the effluent from this facility.

It is proposed that during a period when vinyl chloride is in use at your facility, final effluent samples, composited over the length of the operating day, be collected on each of three consecutive days. All three samples should then be tested for vinyl chloride, using gas chromatography methods, sensitive to 10 ppb. Results should be reported to the Department in both kilograms or grams per day and concentration.

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EPA 837166

OCC 5925

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NA

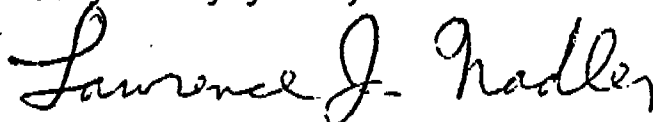
January 18, 1978

The above is now standard Departmental procedure for following up Industrial Chemical Survey Responses. The request for a short-term, high-intensity monitoring program does not indicate a certainty on the part of the Department that the substances in question are being discharged, but merely the intent to determine if such materials are present and, if so, at what levels. Normal Departmental procedure is also to modify the discharge permit, if necessary, to include the requirement for the short-term, high-intensity monitoring program. However, this procedure is not considered necessary, if an agreement can be reached with the company to carry out these monitoring requirements.

The normal time period provided for the conducting of such a sampling program and the submission of results is three months. If, for any reason, monitoring results could not be submitted within three months from the date of this letter, please respond and indicate the reasons.

If there are any other questions please feel free to contact the undersigned at (518) 457-1158.

Very truly yours,



Lawrence J. Nadler, P.E.

Chief

Chemical Systems Section

LJN/sm

cc: NYSDEC Region 9

OCCJ0172201

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VCH

July 27, 1978

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Statement of Problem

Long Island must depend on underground aquifers for both the public, residential, commercial and industrial water supply. These aquifers have recently been declared "sole source aquifers" by USEPA.

In 1973, health authorities became aware that water from some of the over 1,400 wells in Nassau and Suffolk Counties used for public and industrial water were contaminated with chlorinated hydrocarbons, some of which are known to cause cancer in animals. A number of public and non-public water supply wells in Nassau and Suffolk Counties were restricted for use after chemical analysis confirmed that these wells were contaminated with several types of halogenated hydrocarbons.

Extent of Problem

The first measurements on chloro-organics in well water were made at the Bethpage plant of Grumman Aerospace Company. Extensive contamination was found with vinyl chloride concentrations up to 270 ppb, trichloroethylene up to 25,000 ppb and trichloroethane, tetrachloroethylene, trichlorotrifluoroethane, dichloroethylene, chloroform, and phenols in the range of 200 to 500 ppb. A portion of the Grumman well problem may be attributed to a Hooker Chemical Company plant which had manufactured polyvinyl chloride in the past.

Although, measurements on public water supply systems have not detected any vinyl chloride, trichloroethylene at levels of 240 ppb, tetrachloroethylene at levels of 137 ppb, and trichloroethane at levels of 610 ppb have been found.

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chloroform, 1,1,2-trichloroethylene, tetrachloroethylene, bromodichloromethane, carbon tetrachloride, 1,2-dichloroethylene, chloroethyl ethyl ether, chloromethyl ethyl ether, or methyl chloroide exceed 50 ppb individually or the sum of all of these exceeds 100 ppb.

Acting on these guidelines, as of July 27, 1978, 18 public and 16 non-public water supply wells have been restricted for use (they can be used only in an emergency after all other sources are exhausted) and 4 more public water supply wells are placed in a reserve status (to be used only after all non-restricted wells have been used).

An intensive well monitoring program is continuing and NYS DOH officials are continuing to examine the guidelines in the light of new health evidence that may appear.

Most of the affected wells are in the Bathpage-Ricksville area and southwest corner of Suffolk County with the wells on Gorman Aerospace property being the most contaminated. A possible source for this contamination is the previous discharge to groundwater from the Hooker Chemical and Plastics Corporation which operates on property adjacent to Gorman, as well as from the Gorman Corp. itself. As of 1974, Hooker ceased discharging and has since incinerated all its waste. Industries in Nassau and Suffolk Counties suspected of using chlorinated organic compounds are being inspected by county agencies and possibilities for release of these compounds noted. The SPDES permit mechanism is then being used to control the discharges.

Other non-industrial sources of chlorinated hydrocarbons are being investigated. Numerous consumer products containing chlorinated organics are sold for home use. In Nassau County alone 26,900 gallons of suspected carcinogens or other harmful organic compounds are sold in the form of carpet and drain cleaners. Almost all of this goes into the groundwater.

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State legislation and legal action are being developed to ban the sale of
ceaspool cleaners containing chlorinated organics in Nassau and Suffolk
Counties.

Over 130,000 gallons of organic chemicals are used each year by dry
cleaning establishments. Although much of this is recycled, some is lost to
groundwater. Evaporation losses with subsequent fallout in rain also occur
and are a potential source of groundwater contamination. As sources are
located and controlled, losses to groundwater can be reduced. But the
contamination problem has built up over decades and will continue to be with
us for some time to come.

For more information contact:

Mr. Albert Machlin
Regional Engineer for
Environmental Quality
NYS Dept. of Environmental
Conservation
Building 60
State University of New York
Stony Brook, New York 11790
(516) 751-7902

Don't forget to call

EPA NY 840756

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The chlorinated hydrocarbon levels from most wells vary considerably over time and this suggests that the contamination may not be uniformly mixed with the aquifer water.

Other chemicals detected at the ppb. level include naphthalene, methyl and dimethyl naphthalene, ethyl toluene, dimerane, dibutyl and diethyl phthalate, bromoform, pentachloropropane, and dibutoxy ethoxy methane. The Glacial Aquifer appears to be, from all present indications, much more heavily contaminated than is the Magothy Aquifer. However most water reaching the coast does so through the Glacial Aquifer.

Health Effects

Vinyl chloride is a known human carcinogen and chloroform and trichloroethylene are carcinogenic or suspected to be carcinogenic in animals. In most cases there are insufficient data to estimate the risk of drinking contaminated water.

Management Status

Since the aquifer contamination became known, the Nassau County Health Department (NCHD), the Suffolk County Department of Health Services (SCDHS), the Suffolk County Department of Environmental Control (SCDEC), the USGS, the USEPA, the NYS Department of Health (NYS DOH), and DEC have been cooperating in dealing with the problem.

The NYS DOH has proposed guidelines that are used by the County departments to restrict the use of wells that show a level of contamination that might pose a serious health risk. The NYS DOH presently recommends that use of water from wells be restricted if vinyl chloride concentrations exceed 10 ppb, if concentrations of benzene, carbon tetrachloride,

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