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JEFFREY M. WICE
EXECUTIVE DIRECTOR

PRELIMINARY REPORT OF
NEW YORK STATE ASSEMBLY
TASK FORCE ON TOXIC SUBSTANCES:
INQUIRY INTO THE LOVE CANAL
AND RELATED MATTERS

NEW YORK STATE ASSEMBLY
OFFICE OF
STATE-FEDERAL RELATIONS

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TO: THE HONORABLE STANLEY FINK, SPEAKER
NEW YORK STATE ASSEMBLY

May 29, 1980

Investigator: Arthur James Woolston-Smith
Consultant to the New York
State Assembly

SPECIAL MAJORITY TASK FORCE

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INTRODUCTION AND BACKGROUND

LOCATION OF LOVE CANAL.

Love Canal is most often described as a 16-acre, below ground level landfill located in the southwest corner of the City of Niagara Falls, Niagara County, about one quarter mile from the Niagara River. For purposes of this report, this commonly used description, in fact, comprises only the southernmost section of the Canal. Its northern region actually begins in Lewiston, New York, the bordering township just north of Niagara Falls, approximately five or six miles from its most southern region. Accordingly, our use of the term "Love Canal" refers to that region running along Old Military Road from the 16-acre rectangular piece of land in the southeast corner of the City of Niagara Falls into the Township of Lewiston.¹ Both sites are within the borders of the County of Niagara.

In 1970, the population of Niagara Falls was approximately 86,000 and the population of Lewiston approximated 16,000.² A major industrial enterprise of the county was the manufacturing of chemical and allied products. According to the 1970 data of the New York State Department of Commerce, nine major chemical-producing industries employing a total of 5,267 people were then located in the county.

The southern most part of the Love Canal is bordered on two sides by single family homes with a public elementary school separating its two most southern regions. As of July, 1978, 97 families were residing in this area, and approximately 400 students were enrolled in the school.

¹March 3, 1942, Niagara Gazette article by Edward T. Williams, entitled "The Government Project Below the Lewiston Escarpment Recalls Another Promotion in that Locale ..."

²United States Census Figures, 1970

STATE RESPONSE TO HAZARD

The Love Canal problem literally began to surface in recent years as chemical odors in the basements of homes bordering the region became more noticeable. This development followed prolonged heavy rains and one of the worst blizzards ever to hit this section of our country. The ensuing inquiries and investigations turned up an omnibus array of chemicals, buried within the boundaries of the southern section of the unfinished canal for more than twenty-five years -- toxic ingredients which infiltrated scores of nearby homes, threatening health and upsetting the tranquility of hundreds of families in the community. As of the latter part of 1978, scientific analyses have identified 82 different chemical compounds at this section of the landfill, of which one was a known human carcinogen and eleven were known or presumed animal carcinogens.

In response to the identification of a number of organic compounds in the basements of eleven area homes, the State Departments of Health and Environmental Conservation in early 1978 launched an intensive air, soil and groundwater sampling and analysis program. The data collected by the agencies confirmed the presence of a variety of compounds and established precise concentrations for many of the chemical constituents. It became immediately apparent from this data that the problem was not limited to a few homes and that a potential health hazard existed from long term exposure to the chemicals. This data was transmitted to the Chief of Toxic Substances for Region II of the United States Environmental Protection Agency in August 23, 1978, with a recommendation that remedial action be undertaken immediately to prevent further contamination of private property and additional human exposure to unacceptable health risks.

In his Health Report Order with respect to the Love Canal Chemical Waste Landfill dated August 2, 1978, Commissioner of Health, Robert P. Whalen, M.D., concluded that there existed a great and imminent peril to the health of the general public residing in the area as a result of exposure to toxic substances emanating from such site. His recommendations included the temporary relocation of families residing in the area, and the avoidance of homegrown food products from the area. An emergency was declared.

In April of 1979, in response to a request from Governor Carey to investigate, the State Attorney General asked the Governor for \$1 million to pursue lawsuits against companies whose alleged dumping of toxic wastes have created health hazards. Suit was filed in April 28, 1980 to recover damages stemming from the hazards at the Love Canal Dump.

On June 1, 1979, New York State Assembly Speaker Stanley Fink commissioned an investigation into the toxic and hazardous contamination in Niagara County resulting in this report of the Special Majority Task Force.

On December 20, 1979, the United States Department of Justice and Environmental Protection Agency filed suits against Hooker Chemical and Plastic Corporation, its parent firm, Occidental Petroleum Corporation and the Olin Corporation demanding cleanup of chemical dumps in the Niagara Falls area and related fines totalling more than \$120 million.

PURPOSE OF TASK FORCE INVESTIGATION

It was the Task Force's intention to delve into all related issues and make an evidentiary report of their findings for submission to the Speaker of the New York State Assembly, and to whomever should be so.

informed. The findings and backup documentation embodied in this preliminary report compel the Task Force to call upon you, the Speaker, to authorize and empower the Assembly Standing Committee on Environmental Conservation to conduct formal hearings, with full subpoena power to examine issues of the improper transportation, storage and disposal of toxic and hazardous wastes.

PRELIMINARY FINDINGS

1. ~~Evidence that the United States government was engaged in extensive wartime and post-war manufacture of munitions, nuclear chemical engineering and the manufacture of items of chemical warfare in the Love Canal region of New York State;~~

2. Evidence that hazardous and toxic chemical wastes were improperly disposed of without regard to the need for decontamination, and without regard to the potential dangers to the health and safety of the people of the Love Canal region;

3. Evidence that the United States government transferred a portion of its dangerously contaminated properties in the Love Canal region of New York State to private concerns, without decontaminating.

HISTORY

Because the Love Canal region contained a source of cheap power, a number of chemical manufacturing enterprises were developed. This development started approximately in 1910 and was accelerated by the intensified industrialization brought about by World War I.

Specific involvement of the United States government in this region, according to newspaper accounts of the period, began between 1939 and 1941 with the manufacture of armaments.

"Department of Defense activities in the Love Canal region with the exception of continued operations of military and military reserve installations, were largely concentrated during World War II and to a lesser extent, the Korean War. This area was a substantial contributor to the war material production effort during both these conflicts.

"During World War II, the Department of the Army mobilized existing industrial resources in the Niagara Frontier by contracting with local manufacturers for the production of war material such as anti-aircraft and steel armor castings, munitions (TNT) and chemical clothing protectors, as well as for the furnishing of combat support services such as the repair and winterization of aircraft, warehousing of aircraft parts, incendiary and napalm bombs and artillery maintenance. Many of these activities were resumed during the Korean War.

~~"The industrial resources of the Niagara Frontier~~
~~also provided crucial support to the Manhattan~~
~~Engineering District (MED) and the Atomic Energy~~
~~Commission (AEC) for the processing of radioactive~~
~~material during World War II. (MED and AEC-related~~
~~activities have since been consolidated under the~~
~~egis of the Department of Energy). After the war,~~
~~uranium ore processing was continued by a number of~~
~~corporations under contract to the AEC for the pro-~~
~~duction (full scale and pilot plant testing) of~~
~~atomic reactor fuels. Uranium fuel processing~~
~~in the Niagara area was gradually phased out~~
~~and finally discontinued in 1956.~~

~~"Current DOD involvement continues in the area~~
~~in connection with the storage of radioactive materials~~
~~at the Lake Ontario Ordnance Works in Lewiston and~~
~~Porters. Since the Korean War, the primary DOD~~
~~industrial-related activities in the area have been~~
~~the production of aircraft parts and the testing of~~
~~rocket engines and rocket fuels."~~³

Congressional Inquiry - Army Investigation

The Report on Army Investigation into Alleged Army Dumping of Toxic Substances in Love Canal Area, Niagara Falls, New York, stated as follows:

"On May 23, 1978, Congressman John J. LaFalce contacted the Department of Defense and the Department of the Army concerning certain

³ Draft report of Interagency Task Force on Hazardous Wastes, March, 1979, pp. 111-133.

allegations which had been made to him to the effect that the Army had dumped certain materials into Love Canal in Niagara Falls, New York, in the late 1940's and early 1950's. Military records were immediately searched, but no evidence of Army involvement in the contamination of Love Canal was found.

"Again, on June 26, 1978, Congressman LaFalco wrote the Department of Defense, urging a more extensive investigation into possible Army involvement. Also on June 26, 1978, Robert P. Whalen, M.D., Commissioner of Health of the State of New York, wrote the Secretary of the Army, seeking data concerning possible Army disposals in Love Canal.... On June 29, 1978, a more extensive investigation was directed to confirm the original findings of no evidence of Army involvement in the contamination of Love Canal. The investigation plan was to interview persons in the Niagara Falls area, to locate knowledgeable Army personnel who were at the Niagara Falls Army Chemical Plant in the late 1940's and early 1950's, to make a more detailed analysis of past official records, and to meet with certain chemical company officials and employees concerning their knowledge of past events and manufacturing processes.

"On July 7, 1978, the Office of the Chief of Engineers formally requested the Commander, United States Army Material Development and Readiness Command (DARCOM), to investigate the allegations of possible Army involvement in the contamination of Love Canal. Immediately, the Army's Project Manager for Chemical Demilitarization and Installation Restoration began a more thorough search of available records concerning Army-related chemical activities in the Niagara Falls area. As of July 15, 1978, record repositories at Aberdeen Proving

Ground, Maryland; Washington National Records Center, Suitland, Maryland; National Personnel Records Center, St. Louis, Missouri; Dugway Proving Ground, Utah; U.S. Army Armament Materiel Readiness Command, Rock Island, Illinois; and U.S. Army Armament Research and Development Command, Dover, New Jersey, had been searched. Also being screened were various historical files, including city maps, city council minutes, and newspaper files, at the Niagara Falls City Library."⁴

The Army investigation concluded that there was no evidence of direct Army involvement in the Love Canal site.

Our investigation, as will be documented herein, shows that while the Army itself may not technically have been directly involved in the Love Canal site, the United States government itself and/or through its agencies and proprietary corporations were so involved, at least inasmuch as we have defined the region.

UNITED STATES GOVERNMENT INVOLVEMENT

The Reconstruction Finance Corporation ("RFC") was created by an Act of January 22, 1932 to, in part, acquire strategic and critical materials, provide financing for plant conversion and construction and undertake many other activities, some of which later became involved in the World War II effort.⁵

It soon established The Metals Reserve Company as a subsidiary corporation to procure, stockpile and dispose of metals, minerals, defined as "strategic and critical", and to pay subsidies to the producers of such materials.⁶

⁴The Report on Army Investigation, etc. Aug. 14, 1978

⁵National Archives of the United States, "Records of the Reconstruction Finance Corporation (Record Group 234)."

⁶181D, Incorporated on June 29, 1940

The Metals Reserve Company established a number of buildings on the property of Hooker Electrochemical Company in Niagara Falls. Documents dated November 16, 1942, from the Sign and Zoning Inspector, City of Niagara Falls show that buildings on the real property of ~~Hooker Electrochemical Company~~ were owned and operated by the Metals Reserve Company.

In this ref to the bldg used by the AEC?
In addition, a sworn statement from the Assistant Assessor of the City of Niagara Falls ~~shows that a United States government building on Hooker's property in accordance with the permits was demolished sometime between 1947 and 1957.~~⁷

The United States government was also involved through its defense procurement programs. Plancor, the code name for any plant of the Defense Plant Corporation, a subsidiary of the Reconstruction Finance Corporation, organized August 22, 1940 to finance and supervise construction and equipping of industrial facilities was operated for the most part by private concerns sponsored by Federal agencies administering defense and war programs. The Plancors, for reasons of security, were given numbers and numbered into the thousands. They were Army, Navy, and Army Air Corps operations which received their orders from the Army-Navy Munitions Board. The Plancors were involved in the production of chemicals critical to the war effort. After the war the government decided to sell various Plancors to private companies as they had been determined to be surplus.⁸

⁷Statement of Michael Farina, Assistant Assessor, City of Niagara Falls, May 15, 1979

⁸A letter to John F. Sonnett, Assistant U.S. Attorney General, February 18, 1948. In the letter it is proposed that Plancor-45 be sold to the Hooker Electrochemical Company for a sum of \$171,000. The letter further states that the "cost of the property proposed to be sold is in excess of \$1,000,000."

DISPOSAL OF IMPREGNITE

To find out what was being developed, we searched the records of the Chemical Corps Journal, which originally was the publication of the Army Chemical Corps Service. In this document we found the history of the Chemical Corps plant known as the Niagara Falls Chemical Warfare Plant as it was built by E. I. DuPont de Nemours and Company. It was to develop an impregnite for military fabrics. The first impregnite formula was known as RH-195, which was very unstable. It was replaced with CC-2, which was also unstable, but not as unstable as RH-195. The solvent for both was tetrachlorethane.

This document, referring to the manufacturer of CC-2 and RH-195, states that the manufacturer had a serious problem with insoluble residues.⁹

The above document does not inform as to the disposal of insoluble residues from this process. However, there is circumstantial evidence to indicate that such residues were dumped in the southern end of the Love Canal. This evidence consists of the following: On July 19, 1978, Mr. Frank Ventry, a former employee of the City of Niagara Falls, who operated heavy equipment at the Love Canal dump site, made a statement to the Army Board of Inquiry investigators:

"With reference to the Army incident, I recall three specific times that the Army disposed of material in the Love Canal area. Each time a Captain arrived in a jeep with his driver and a six by six truck, Army color, perhaps with stripes on the bumper, perhaps with the number 17, which comes to mind. Each time prior to unloading the truck, I was requested to loosen up the dirt in the area where the drums were to be dropped from the truck to provide a cushion

⁹The Chemical Corps Journal, Official publication of the Chemical Corps Assoc., dated April, 1948, published from Room 523, 1129 Vermont Ave. NW, Wash. 5, D.C., Lt. Colonel Harold Rodier, Chemical Corps, Retired.

effect. Then the drums were pushed into the water with a bulldozer by myself. The drums were a little smaller than 55 gallon drums, however the shape was different, more like a beer keg. The markings on the drums were yellow stripes and the exterior of the drums appeared as if they were covered with lead or zinc. The outer coating was painted with Army olive drab color. There were five men and one officer in each party, three men normally handled each drum and the men wore rubber gloves and fatigue clothing. Drums were skidded off the back of the truck. The officer in charge, the Captain, wore a sidearm. To the best of my memory, the men stated that they came from the plant on Buffalo Avenue. At this time the Director of Public Works indicated to me that the Army plant was closing down and being taken over by one of the civilian plants. Army personnel did not request me to sign any documents or receipt for material placed in the dumps. At no time during my tenure of responsibility in the Love Canal area was I required to sign for material placed in the dump nor maintain an inventory of material dumped therein. There was no specific criteria to reject material from being dumped. Anything delivered was placed in the dump. About 30 or 50 truckloads a day...."

The Army headquarters in Washington, D.C. established an inquiry, and their report dated August 14, 1978 states that they found no evidence to support Army dumping at that time.¹⁰

¹⁰Department of the Army, Report on Army Investigation into Alleged Army Dumping of Toxic Substances in Love Canal Area, Niagara Falls, New York, dated August 14, 1978

Mr. Dudley Barton, General Manager of Haveg Industries, Inc. stated that the main type of container used by the various Plancors and defense installations in the Niagara Frontier during World War II for corrosive materials was supplied by Haveg Industries, Inc. of 900 Green Bank Road, Wilmington, Delaware.¹¹ He supplied the Task Force with information pertaining to the equipment, and informed us that he was the salesman of this equipment at the end of World War II. He also supplied a catalog of all the containers used during World War II by the various establishments.¹² One particular container in the catalog which is described with diagrams appears to be identical to that described by Mr. Ventry.

The catalog description was given to Mr. Ventry, who confirmed that the Haveg container could be what he saw. The use of Haveg containers was further substantiated in discussions with Lieutenant Colonel Arnold Arch, Former Commanding Officer of the Niagara Falls Chemical Warfare Plant.

The Army report of August 14, 1978, states that these types of containers were suitable for the movement of dangerous chemicals. The Haveg brochure indicates the same. Indeed, the Army report indicates that such containers were used for the movement of impregnite CC-2 and its predecessor, RM-195.

One of the heavy equipment operators for the Conestoga-Rovers, Inc., the contractor hired by New York State to cap the Love Canal, disclosed in August 1979 that while operating excavating equipment in the Love Canal area, at a depth of 10 feet, a number of fiber containers of the Haveg description were punctured, and a white substance poured forth. The white substance was, apparently, not tested but would conform with a description of impregnite.¹³

new
to
Ventry
c
unit

¹¹Investigator interview with Mr. Dudley Barton, dated 12/3/79
¹²Catalog of the products made by Haveg Corporation during the World War II
¹³Interview with im Ligator August 6, 1979.

MANUFACTURE OF PHOSGENE

The Army report states that the United States Army did not produce Phosgene in the Niagara Frontier area during or after World War II.¹⁴ Further, it indicates that at no time would chemical warfare materials be shipped in military vehicles.

From the declassified documents of the Aromatics and Intermediate Chemical Division of the War Production Board of the United States government dated October 7, 1943, the Task Force obtained a report showing that Phosgene was being manufactured under the direction of the Army with a Coordinating Officer by the name of Major Willard. Phosgene was being produced at the Niagara Chlorine Plant in Lockport and Hooker Electrochemical Company. The Chemical Warfare Service was receiving Phosgene from both locations to meet their requirements.

In documents of the same organization, the Task Force found that Phosgene was shipped in high-pressure cylinders and at the time that the document was written there was a shortage of high-pressure cylinders; therefore, because of Interstate Commerce Commission trucking regulations, the War Production Board requested that the Army make arrangements to ship Phosgene from the various plants in Army vehicles carrying one-ton cylinders so that there would be no violation of the I.C.C. regulations.

The military services which required Phosgene as a munitions stabilizer were the Navy Rocket Project, the Soviet government, and the Chemical Warfare Service. The Chemical Warfare Service was

¹⁴Phosgene is described in the Army investigation as a lethal chemical warfare gas in World War I. Subsequent documents list it as a major component of Dyes, Centralite and Theophylline (a heart stimulant) during 1944.

to receive the majority of their Phosgene from the Army Ordnance
Plancor.¹⁵

Major Willard reports that as of May 25, 1944 the Army Ordnance
planned to expand their own facilities for producing Phosgene, and
the Chemical Warfare Service would continue to obtain only a supple-
ment of Phosgene manufactured by private industry. The Hooker
Chemical Plancor was not able to supply the amount for which they were
contracted unless they utilized additional facilities. The documents
indicate extremely dangerous chemical substances were being produced
in the area of the Love Canal, substances dangerous to personnel.

Therefore, contrary to the Army investigation report of August 14,
1978, it appears that the Army was in fact producing Phosgene and
transporting it in military vehicles in the Love Canal area during
and/or after World War II.

It has been demonstrated herein that a major effort was under-
way by the United States government in the early 1940's to establish
chemical production in the Love Canal region. Aerial photographs
show a change in the environmental conditions in the area from 1940
to 1958, a time period coinciding with the effort by the United
States government to foster chemical production in this region.¹⁶

¹⁵Memorandum to Mr. R.G. Ruark, War Production Board, from Walter Runge, Chief Intermediates Unit, dated April 18, 1944, with production report on Phosgene by War Production Board for years 1943, 1944, 1945.

¹⁶A series of aerial photographs examined by or in the possession of the Assembly Investigator clearly indicate the accumulation of foreign matter in the Love Canal itself and on the banks of the Niagara River. PHOTOGRAPHS: Military picture, ROLI-3-V42342, National Archives, WB-537, Record Group No. 373. Canadian Archives, CAN 3A921. Agriculture Dept. stabilization photograph dated October, 1951, ARB-511-215.

Transfer of Contaminated Property

On April 23, 1942, as part of the Defense Program, the United States government took aerial photos which indicate a large military-style housing facility called Griffin Manor in the Love Canal area westerly from Love Canal towards the line of Great Lot 60. Griffin Manor was built by the Defense Homes Corporation, which was established on October 23, 1940 to alleviate a housing shortage for defense workers in cooperation with the office of the National Housing Administration. The Defense Homes Corporation was organized under the Reconstruction Finance Corporation. After World War II Griffin Manor was deeded to the City of Niagara Falls for housing.¹⁷ ~~The deed con-~~

~~veys an easement pertaining to fissionable materials on the property as set forth under Executive Order 9908.~~

Standard procedure on all deeds of the day transferred by the Federal Government.

However, ~~in the quitclaim deed between the United States and the Board of Education of the School District of Niagara Falls for the area north of Colvin Boulevard~~ which is in direct line running north of Griffin Manor, ~~was included an easement pertaining to Uranium and all other materials pursuant to Section 5(b)(1) of the Atomic Energy Act of 1946 and in accordance with Executive Order 9908.~~ (18)

These two parcels were adjacent to and running parallel with the area known as Love Canal.

~~Another site of United States Government involvement was the Lake Ontario Ordnance Works. The Lake Ontario Ordnance Works occupied large tracts of land on the northern end of Love Canal area with the townships of Porter and Lewiston. These lands were owned~~

¹⁷Quitclaim deed by and between The Public Housing Administration of the United States government and the Niagara Falls Housing Authority as recorded in LIBER 1173, page 262.

¹⁸Quitclaim deed by and between the United States of America and the Board of Education of the School District of the City of Niagara Falls as recorded in LIBER 987 page 26.

by the United States Army.¹⁹ These Townships, which were farmland and orchards, were converted into a complex of chemical plants and munitions factories, railway sidings and roads.

Surrounding the military establishment there was a civilian-paramilitary operation organized directly under the RFC and the Army-Navy Munitions Board. ~~The military and civil government, nuclear and chemical production, were intermingled with the blunders and the military establishments used the same drainage and easements into Lake Ontario and the Niagara River.~~

A document from the U.S. Surplus Property Board, including maps and easements, shows that the land of the Lake Ontario Ordnance Works was owned by the United States Army, and lists specific buildings that were carried on the Army inventory for the Lake Ontario Ordnance Works.

~~There is language in this document which could reasonably bear the interpretation that these properties were contaminated during the U.S. government involvement in the area.~~

→ "DECONTAMINATION: A Decontamination program was initiated, but was not completed as it was determined that it would be to the advantage of the government to defer this program until the property is disposed of. It is reasoned that in the event the manufacturing area is disposed of to a concern manufacturing chemicals, decontamination would not be required."²⁰

¹⁹General Services Administration, Real Property Transaction Advice No. 215491, dated August 28, 1963.

²⁰United States of America Surplus Property Board, Declaration of Surplus Real Property from the War Dept. Army Service Forces Corp of Engineers, January 13, 1947.

Not relevant to Love Canal but very relevant to any subsequent radiological survey of accented lands at Love. Drilling could be dangerous!

Subsequently, the War Assets Administration verified the contamination of these lands:

In a section marked "Type of facility and physical characteristics" it describes the central area, Reference 3 and 4, as highly contaminated: "~~This area is impregnated with dangerous combustible and corrosive acids from residual TNT materials.~~"

"Below grade extensive pipe iron lines interlace these areas and can never be fully decontaminated or safely removed except at considerable cost."²¹ ~~Further documentation suggests that the U.S. government was involved in nuclear chemical engineering in this area during the 1940s²².~~

was is this?

There is a compendium of documents obtained from the General Services Administration under the caption of: Real Property Transaction Advice, Number 215491, prepared on August 28, 1963. This compendium of documents demonstrates that the Lake Ontario Ordnance Area in Lewiston, New York, included Air Force and Navy installations. ~~There were storage areas and lines apparently under the control of the Atomic Energy Commission including a potable water line.~~²³

²¹War Assets Administration, Report Control No. RP-F-13, October 17, 1947.

²²War Assets Administration, Z1-PMD, Report Control Number RP-F-13; A letter dated July 11, 1947 to Mr. Thomas E. Drumm, Deputy Administrator, Office of Real Property Disposal, Washington, D.C. from Harry Filene, Associate Deputy Zone Administrator for Real Property Disposal, Zone 1, War Assets Administration, to the effect that Lake Ontario Ordnance Works had not been decontaminated as of the date of the letter. The letter also documents that the Army Corps of Engineers had not complied with numerous requests that such decontamination be completed; similarly, follow-up letter dated July 11, 1947, and others in the same vein.

²³op.cit. G.S.A. Real Property Transaction Advice #215491, dated August 28, 1963.

As of the end of March, 1944, certain areas had been dismantled, including a power area, an acid area, a magazine area, an acid and TNT area, and a nitration area.

The Town Clerk of the Town of Lewiston, upon receiving complaints from residents who own homes in the Lewiston escarpment area known as the Whittaker Subdivision commissioned a soil evaluation. The Dominion Soil Investigation, Incorporated, of 104 Crockford Boulevard, Scarborough, Ontario, Canada, completed their contract and established that the Whittaker Subdivision was built on top of the northern end of the Love Canal, which had been filled during World War II.

An analysis and statements by Lt. Colonel Arnold Arch indicated that the chemicals in that region, permeating the soil and destroying the foundations and pipes of the housing in the Whittaker Subdivision,

~~used in the development of the atomic bomb and in chemical engineering.~~ 24

On June 1, 1947 the Buffalo Academy of the Sacred Heart, known as Stella Niagara New York, obtained a lease from the United States Army for \$30 payable annually in advance for certain properties adjacent to the Niagara River and a part of the Lake Ontario Ordnance Works. This is the precise area described in official documents as having been heavily contaminated. (with what?)

The leased property was designated for surface agricultural use. ~~A school and a seminary was built on this property.~~

~~One of the leasees alludes to the possibility that below the surface of this property were uranium, thorium, and other materials.~~

24 Investigator interview with Lt. Col. Arnold Arch, November 11, 1979; in which his analysis of the Dominion Soil Investigation, Incorporated Report, Reference Number 78-9-16 dated March, 1979 prepared for the Town of Lewiston, was recorded.

On May 6, 1949, the United States government, through the Public Housing Administration, deeded to the School District, Board of Education, of Niagara Falls property known as the 93rd Street School for educational purposes. The deed includes the statement, ~~"that uranium, thorium and all other materials determined pursuant to the Atomic Energy Act of 1947 to be peculiarly essential to the production of fissionable material contained in whatever concentration remains the property of the United States government."~~²⁵

See earlier comment on deed

Additional documentation of the toxic pollution of the area has been obtained by the Task Force and is attached. ²⁶ See below

The United States government has also been involved with another type of enterprise dating from 1956 to the present. This enterprise involves experimentation in electromagnetics conducted under the auspices of the United States Air Force. The experiments are to determine biological effects of microwave radiation. ²⁷ — so what?

CONCLUSION

In summation, it is our view that the documents and interviews obtained by the Task Force lead to a finding that the United States government was engaged in extensive wartime and post-war manufacture of munitions, ~~nuclear-chemical engineering~~ and the manufacture of items of chemical warfare; that the government improperly disposed of various attendant wastes from these projects and that the government knowingly transferred contaminated properties to private concerns without decontaminating them and without regard to the health and safety of the people of the Love Canal region.

²⁵ Lease to the Buffalo Academy of the Sacred Heart, Stella Niagara, from the United States Army, Corps of Engineers, Contract Number W30-075/cny3571 dated June 1, 1947. A deed as recorded in the Niagara County Court, Liber 953, page 96 dated 8th day of May, 1949 between the United States government and the School District, City of Niagara Falls.

²⁶ Former Hooker Chemical Company employee inter-office memoranda, as received by the Securities and Exchange Commission, dated May 1, 1979.

²⁷ A report and maps by Officers of the United States Air Force, addressed to the Honorable F. Edward Hebert, House Armed Services Committee Chairman, December 29, 1972.