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DGD  
10/4/82

BEST COPY AVAILABLE

October 4, 1982

Dr. William E. Mott, KP-323, Room D-224, ATTN: Andy Mallo,  
J-122, Germantown, MD 20545

**SEARCH EFFORT FOR NEW YORK STATE ASSEMBLY FREEDOM OF INFORMATION  
ACT REQUEST**

Attached is a memorandum which estimates the cost of DOE effort at  
Oak Ridge regarding the response to the Freedom of Information Act  
request from the New York State "Task Force on Toxic Substances."  
If you have any further questions concerning this matter, please  
contact Mr. David G. Darugh at FTS 626-1213.

ORIGINAL SIGNATURE  
James L. Foutch

James L. Foutch  
Deputy Chief Counsel  
for Legal Services

CC-10:DGD

Attachment:  
As Stated

CC-10:DGD:ekg:6-1213:10/4/82

Unreadable pages  
contained in this  
group  
K. K. K.  
12-1-94

REPOSITORY Oak Ridge Operations  
COLLECTION Records Holding area  
Documents 1944-94  
BOX No. A-16-1 89-71 29 of 46 Bldg. 2714-H  
FOLDER Personnel-1 FOIA  
New York State Assembly

PERSONNEL - 1  
FOIA

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*Robert Barber*

March 2, 1981

James W. Nehls, Research Division

SEARCH EFFORT FOR NEW YORK STATE ASSEMBLY FREEDOM OF INFORMATION ACT REQUEST

The effort and cost to DOE/ORO in responding to the NYS Assembly "Task Force on Toxic Substances" Freedom of Information Act (FOIA) request of July 24, 1980, was substantial.

The request was submitted by Michael P. Zweig, Special Counsel to the NYS Assembly "Task Force on Toxic Substances." DOE/ORO commenced the search effort at once (DOE/ORO's first interim response was dated August 7, 1980) and retransmitted the request to the DOE Headquarters Director of FOIA and Privacy Act Services, Milton Jordan, for further DOE action. The search effort at ORO was not completed until November 21, 1980.

Pursuant to this effort, thousands of file cards were examined. Five hundred forty-one boxes of stored records were identified as possibly containing information responsive to the request. DOE and contractor personnel additionally reviewed active files within ORO and contractor field operations. In all, about 900 cubic feet of information was reviewed in detail.

The search and review efforts were time consuming, meticulous and extensive. Roy V. Anderson, a retired employee familiar with many of the documents in storage, searched and identified many of the documents. Additionally, NLO, DOE/ORO Environmental Protection Branch, Technical Services Division, and Supply Division records were searched. The person hours devoted to search and review alone are difficult to recalculate because it was determined by DOE to waive costs associated with response. It is likely that over 350 professional employee hours of effort were devoted to search alone. This can be billed at \$4.50 per quarter hour under DOE regulations. Additional time was devoted to declassification, copying, re-review by the Office of Chief Counsel and transmittal by the Authorizing Official. Classification personnel reviewed over 70,000 pages of information.

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*Darius*

Roy V. Anderson was paid \$6,000 for his search effort (which represents 280 of the search hours cited above). Over 70,000 pages were reproduced which could have been billed at 10¢ per page. Other costs devoted to search and review are difficult to calculate, and could not normally be billed by DOE anyway.

CC-1

DGD

3/2/

One thing is clear, and that is the quality and spirit of the effort was of the highest order. Mr. Zweig visited DOE/ORO on September 18 and 19, 1980, to assist in the scoping of his request. Rather than criticizing our search effort, he complimented it and narrowed the parameters of our search. I personally talked to Mr. Zweig about twice a week during the 3-1/2 month search concerning documents he was reviewing pursuant to our on-going partial releases of responsive documents. Altogether 10 boxes of responsive documents were transmitted. At the conclusion, Mr. Zweig complimented me on ORO's being the quickest, most thoroughly responsive to his FOIA request of all the numerous other agency offices which received copies for action. In view of Mr. Zweig's high regard for DOE/ORO efforts, I should hardly think we would be in line for criticism.

Original Signed By  
David G. Darugh

David G. Darugh, Attorney  
Office of Chief Counsel

CC-10:DGD

CC-10:DGDarugh:mh:61213:3-2-81



34/3

THE ASSEMBLY  
STATE OF NEW YORK  
ALBANY

ROBIN L. SCHIMMINGER  
140th District

3514 Delaware Avenue  
Kenmore, New York 14217  
(716) 873-2543

Rm. 462 Legislative Office Bldg  
Albany, New York 12248  
(518) 455-5214

February 2, 1981

Honorable James B. Edwards  
Secretary  
Department of Energy  
1000 Independence Avenue S.W.  
Washington, D. C. 20585

Dear Mr. Secretary:

As you know, the New York State Assembly Task Force on Toxic Substances has documented extensive federal involvement in the disposal of chemical and atomic wastes in what is now my Assembly District during World War II.

Specifically, the report documents the dumping of somewhere near 37 million gallons of highly caustic and somewhat retroactively contaminated liquid wastes into wells on the site of what is now the Linde Division of Union Carbide. These disclosures, to me at least, constitute new information which has not heretofore come to my attention or the attention of the responsible parties in our state. I feel it is paramount that your agency immediately undertake to ascertain first, whether or not these wastes remain in the underground wells or the environs thereof, and secondly, if they do remain, the degree of danger that remains to workers and residents of the area. This may mean drilling, boring, water sampling, and other methods of on-sight inspection and analysis.

I address this request to you as the head of the Federal Department, which is the successor agency to the Manhattan Project which used the Linde site during World War II in the production of materials necessary to the war effort.

I look forward to working closely with your department and offices toward a speedy determination of the presence or absence of these wastes today and the degree, if any, of hazard that endures.

Sincerely yours,

  
ROBIN SCHIMMINGER

RS:k

1117067

disposal of toxic and hazardous wastes in the Niagara Frontier Region.

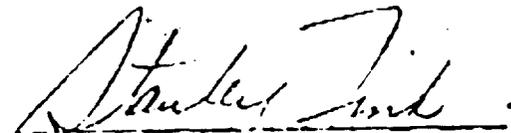
- 4. The Department of Energy must decommission and decontaminate its Niagara Falls Storage Site so as to close out activities at this facility. The Department of Energy and its predecessors have known for some time that the Site is unsuitable for storage of radioactive waste. This action is long overdue.

We are advising both the Environmental Protection Agency and the New York State Departments of Environmental Conservation and Health of our requests and trust that your efforts will be closely coordinated with these agencies.

The nature of the issues presented, and the considerable concern and anxiety expressed by area residents over possible health and environmental hazards resulting from federal activities in the Region, mandate that the serious questions raised by the Task Force Interim Report be promptly resolved. Accordingly, we are requesting that the Department of Energy apprise the Task Force within two weeks of your proposed plan of action.

Thank you in advance for your anticipated cooperation.

Very truly yours,

  
 Stanley Fink  
 Speaker,  
 New York State Assembly

  
 Maurice Hinckley  
 Chairman,  
 Task Force on Toxic  
 Substances and Assembly  
 Committee on Environmental  
 Conservation

Enclosure: Task Force Report

- cc: Hon. Daniel P. Moynihan  
 Hon. Alfonse D'Amato  
 Administrator, Environmental Protection Agency  
 Commissioner, N.Y.S. Department of Health  
 Commissioner, N.Y.S. Department of Environmental Conservation  
 Assemblyman Robin Schirminger  
 Congressman John La Falce  
 Michael C. O'Laughlin, Mayor, Niagara Falls, N.Y.  
 G. Delwin Hervey, Mayor, Tonawanda, N.Y.



THE ASSEMBLY  
STATE OF NEW YORK  
ALBANY

341

STANLEY FINK  
SPEAKER

February 11, 1981

The Honorable James Edwards  
Secretary of Energy  
United States Department of Energy  
Forrestal Building  
1000 Independence Avenue, S.W.  
Washington, D.C. 20535

Dear Mr. Secretary:

As you are aware, the New York State Assembly Task Force on Toxic Substances recently issued an Interim Report (a copy of which is enclosed) detailing Federal government involvement in the disposal of toxic and hazardous wastes in the Niagara Frontier Region and the exposure of civilian workers at Manhattan Project and Atomic Energy Commission sites to excessive levels of radiation.

The Task Force believes strongly that the following recommendations for action by your Department should be acted on without delay:

1. The Department of Energy must conduct a thorough study of the environmental impact of the disposal of 37 million gallons of liquid chemical waste contaminated with uranium oxide in five underground wells located on the property of Union Carbide (Linde Division) in Tonawanda, New York.
2. The Department of Energy must, in conjunction with the Department of Health and Human Services, conduct a comprehensive survey of the effects of the excessive exposure to radiation and uranium dust on the health of civilian workers at Manhattan Project and Atomic Energy Commission facilities in the Niagara Frontier Region.
3. A re-review of Department of Energy, Atomic Energy Commission and Manhattan Engineering District records is mandated in light of the failure of previous federal studies and record searches to uncover serious incidents involving the improper

760 ->  
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ROUTING AND TRANSMITTAL SLIP		Date
		12/12/80
TO: (Name, office symbol, room number, building, Agency/Post)	Initials	Date
1. C. A. Keller, Assistant Manager for		
2. Manufacturing and Support		
3. W. R. McCauley, Jr., Assistant to Manager		
4. <u>W. P. Snyder, Chief Counsel</u>		
5.		
Action	File	Note and Return
Approval	For Clearance	Per Conversation
As Requested	For Correction	Prepare Reply
Circulate	<input checked="" type="checkbox"/> For Your Information	See Me
Comment	Investigate	Signature
Coordination	Justify	
REMARKS		

Attachment:

Ltr., Duff to Zweig, Log Number 526

97.1

DO NOT use this form as a RECORD of approvals, concurrences, disposals, clearances, and similar actions.

FROM: (Name, org. symbol, Agency/Post)	Room No.—Bldg.
Kathryn A. Walter, Classification Officer Office of Assistant Manager for Manu. and Support	B116 FOB
	Phone No. 6-0955

8761 ✓

5041-102

OPTIONAL FORM 41 (Rev. 7-76)  
Prescribed by GSA  
FPMR (41 CFR) 101-11.206

PERSONNEL  
FOIA

NY State Assembly

1117072



Department of Energy  
Washington, D.C. 20545

DEC 9 1980

In Reply Refer To:  
A7822, FOIA #07258007P

Mr. Michael P. Zweig, Special Counsel  
Standing Committee on Environmental  
Conservation, New York State Assembly  
New York State Office Building, Rm 1514  
270 Broadway  
New York, NY 10007

Dear Mr. Zweig:

Reference is made to the letter to you dated November 21, 1980, from Mr. W. R. McCauley, Jr., of DOE's Oak Ridge Operations Office, with regard to 13 documents relating to your July 24, 1980 Freedom of Information Request, sent to this office for review.

We have reviewed the 13 documents and have determined that deletions are required in some. Transmitted herewith are the documents with deletions made where required.

The information is denied in my name as the denying official pursuant to Exemptions 1 and 3 of the Freedom of Information Act, 5 USC 552(b)(1) and (3), and DOE Regulations 1004.10(b)(1) and (3). The legal basis for citing these exemptions is the Atomic Energy Act of 1954, as amended.

Sincerely,

  
Robert T. Duff  
Director  
Office of Classification

13 Enclosures:  
See Attached List

cc: K. Walters, OR✓  
M. Jordan, AD-44  
W. Mott, EV-13

526

1117073

Per telephone  
3/6/85 <sup>at</sup> Enclosure  
(about ten boxes)  
still at R.R.  
(Big New York State  
thing)

NOV 2 1 1980

Michael P. Zweig, Esquire  
Special Counsel  
New York State Assembly  
Standing Committee on  
Environmental Conservation  
New York State Office Building  
270 Broadway, Room 1514  
New York, New York 10007

Dear Mr. Zweig:

**FREEDOM OF INFORMATION ACT REQUEST OF JULY 24, 1980**

Pursuant to our understanding, as reflected in my letter to you dated August 14, 1980, I am transmitting under separate cover the final box of documents responsive to your Freedom of Information Act request of July 24, 1980. This, in conjunction with DOE's transmittals of August 29, September 26, October 7 and October 29, and the information given to you during your visit to Oak Ridge on September 16 and 17, amounts to about ten boxes of information.

Pursuant to the entire search effort, thirteen (13) documents identified as responsive to your request possibly contain classified information and cannot be included by me in this final release. The thirteen documents have been transmitted to Robert T. Duff, Director, Office of Classification, A2-3220, U.S. DOE, Washington, D. C. 20545, in accordance with the DOE FOIA regulation at 10 CFR § 1006(d). Accordingly, he will serve as Authorizing Official with regard to the subject documents. If he determines to invoke an exemption for the records or portions thereof because of classification, he will identify the records for you and set forth your right to appeal his determination. My failure to include the documents in this transmittal is not intended to be a denial. Rather, it is my intention to inform you that pursuant to the DOE FOIA regulations, I lack authority to make a final determination concerning the releaseability of the subject documents.

**CERTIFIED MAIL**  
**RETURN RECEIPT REQUESTED**

PERSONNEL

1117074



Add your address in the "RETURN TO" space on reverse

1. The following service is requested (check one):

- Show to whom and date delivered.....
- Show to whom, date and address of delivery.....
- RESTRICTED DELIVERY  
Show to whom and date delivered.....
- RESTRICTED DELIVERY  
Show to whom, date, and address of delivery.....

(CONSULT POSTMASTER FOR FEES)

2. ARTICLE ADDRESSED TO:  
*M. P. Zweig*  
*270 Broadway, Rm 1514*  
*New York, NY*

3. ARTICLE DESCRIPTION:  
INSURANCE NO. CERTIFIED NO. INSURED NO.  
*P15 8767543*

(Always obtain signature of addressee or agent)

4. I have received the article described above.  
SIGNATURE *Michael P. Zweig* ADDRESS *New York, NY* CIRCUMSCRIBED AREA

DATE OF DELIVERY  
*11-25-70*

5. ADDRESS (Completely if requested)

6. UNABLE TO DELIVER BECAUSE:

NY 0107111

SENDER Complete items 1, 2, and 3.

1. The following service is requested (check one):

- Show to whom and date delivered.....
- Show to whom, date and address of delivery.....
- RESTRICTED DELIVERY  
Show to whom and date delivered.....
- RESTRICTED DELIVERY  
Show to whom, date, and address of delivery.....

(CONSULT POSTMASTER FOR FEES)

2. ARTICLE ADDRESSED TO:  
*Michael P. Zweig, Esq.*  
*New York State Office Bldg.*  
*270 Broadway, Rm 1514*  
*New York, NY 10007*

3. ARTICLE DESCRIPTION:  
INSURANCE NO. CERTIFIED NO. INSURED NO.  
*P15 8767542*

(Always obtain signature of addressee or agent)

4. I have received the article described above.  
SIGNATURE *Michael P. Zweig* ADDRESS *New York, NY* CIRCUMSCRIBED AREA

DATE OF DELIVERY  
*11-24-70*

5. ADDRESS (Completely if requested)

6. UNABLE TO DELIVER BECAUSE:

NY 0107111

P15 8767543  
RECEIPT FOR CERTIFIED MAIL  
NO INSURANCE COVERAGE PROVIDED—  
NOT FOR INTERNATIONAL MAIL  
(See Reverse)

P15 8767542  
RECEIPT FOR CERTIFIED MAIL  
NO INSURANCE COVERAGE PROVIDED—  
NOT FOR INTERNATIONAL MAIL  
(See Reverse)

SENT TO  
*Michael P. Zweig, Esq.*

STREET AND NO.  
*NY St. Off. Bldg.*

P.O. STATE AND ZIP CODE  
*270 Broadway, Rm 1514*  
*NY, NY 10007*

POSTAGE \$

CONSULT POSTMASTER FOR FEES	OPTIONAL SERVICES	CERTIFIED FEE	¢
		SPECIAL DELIVERY	¢
	RESTRICTED DELIVERY	¢	
	RETURN RECEIPT SERVICE	SHOW TO WHOM AND DATE DELIVERED	¢
		SHOW TO WHOM, DATE, AND ADDRESS OF DELIVERY	¢
		SHOW TO WHOM AND DATE DELIVERED WITH RESTRICTED DELIVERY	¢
	SHOW TO WHOM, DATE AND ADDRESS OF DELIVERY WITH RESTRICTED DELIVERY	¢	
TOTAL POSTAGE AND FEES		\$	
POSTMARK OR DATE <i>Separate Envelope</i>			

PS Form 3800, Apr. 1976

SENT TO  
*Michael P. Zweig, Esq.*

STREET AND NO.  
*270 Broadway, Rm 1514*

P.O. STATE AND ZIP CODE  
*NY, NY 10007*

POSTAGE \$

CONSULT POSTMASTER FOR FEES	OPTIONAL SERVICES	CERTIFIED FEE	¢
		SPECIAL DELIVERY	¢
	RESTRICTED DELIVERY	¢	
	RETURN RECEIPT SERVICE	SHOW TO WHOM AND DATE DELIVERED	¢
		SHOW TO WHOM, DATE, AND ADDRESS OF DELIVERY	¢
		SHOW TO WHOM AND DATE DELIVERED WITH RESTRICTED DELIVERY	¢
	SHOW TO WHOM, DATE AND ADDRESS OF DELIVERY WITH RESTRICTED DELIVERY	¢	
TOTAL POSTAGE AND FEES		\$	
POSTMARK OR DATE			

Form 3800, Apr. 1976

910111

NOV 2 1 1980

Robert T. Duff, Director, Office of Classification,  
DP-60, Room A23200, Germantown, Maryland 20545.

**REVIEW OF MATERIAL FOR FOIA REQUEST - NEW YORK STATE**

On November 13, 1980, Kathryn A. Walter, the Oak Ridge Operations (ORO) Classification Officer, transmitted to your attention thirteen possibly classified documents. Personnel representing me, as Authorizing Official for ORO, have reviewed the subject documents and have determined them to be responsive to the Freedom of Information Act (FOIA) request of the Special Counsel, to the New York State Assembly, Task Force on Toxic Substances dated July 24, 1980 (copy enclosed). Please consider the subject transmittal as one having been made pursuant to the DOE FOIA regulations at 10 CFR § 1004.6 - Requests for Classified Records.

I have no objection to the release of the documents subject to any exemption which should be invoked by you for unclassifiable documents or portions thereof. Accordingly, you, as the Director of Classification, may respond directly to the requester as denying official for the classified portion of such records pursuant to § 1004.6(d) of the DOE FOIA regulation.

I have already released a very large amount of material to the requester. The documents transmitted to you represent the only responsive documents not yet released to the Special Counsel.

The DOE FOIA number assigned to this request is Ref. No. 07258007P. A copy of your determination should be furnished to both Milton Jordan, Director FOI and Privacy Act Services, and Dr. William E. Mott, EV-13, Room D-224, Mail Code E-201, Germantown, Maryland 20545.

1117077

PERSONNEL

FOIA





THE ASSEMBLY  
STATE OF NEW YORK  
ALBANY

MAURICE D HINCHEY  
Chairman  
Environmental Conservation Committee

Room 625  
Legislative Office Building  
Albany, New York 12248  
(518) 455-4436

July 24, 1980

Mr. Wayne Range  
Freedom of Information Officer  
Dept. of Energy/Oak Ridge Operation  
Post Office Box E  
Oak Ridge Tennessee 37830

Dear Mr. Range:

Pursuant to the Freedom of Information Act ("FOIA"), U.S.C. Section 552 (as amended), and the regulations promulgated thereto, the New York State Assembly Standing Committee on Environmental Conservation ("Committee") hereby requests copies of all of the records listed in the attached enclosure which are in your possession or control. Please include in your search both the central files and the files of any past or present division or regional bureau.

If it is determined that requested portions of a file are exempted from release, the Committee understands that, as the FOIA requires, all non-exempt portions of the file which are reasonably segregable will be provided.

While the Committee is prepared to pay reasonable costs for the location and reproduction of the requested records, we are informed that the FOIA provides for such fees to be waived if the request is deemed in the public interest. Since the requested records are required by the Committee as part of its lawfully constituted legislative investigation, we are certain that the instant request meets the "public interest" criterion. The Committee's inquiry generally concerns the transportation, storage and disposal of toxic and hazardous substances in New York State. An issue being actively explored is the question of possible Government or military involvement in the toxic contamination of areas located within the State, including, although not limited to, the Love Canal region in Niagara County. We believe that only a thorough investigation into the circumstances surrounding Government activities in this area will enable us to accurately assess the problem and to consider the possible solutions to the health dangers caused by improper toxic waste disposal. It is our belief that the information and records that are to be furnished will be of great-benefit to the public. Hence, it would be entirely appropriate for all fees to be waived in this instance.

ALEXANDER B GRANNIS  
Chairman  
Sub-Committee on Toxic  
And Hazardous Substances

Room 411  
Legislative Office Building  
Albany, New York 12248  
(518) 455-5282

DAVID W KEIPER  
Staff Director  
Agency #4 Bldg  
Rockefeller Plaza  
Albany, New York  
(518) 455-3633

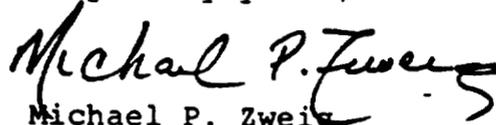
40  
OFFICE

July 24, 1980

If you have any questions regarding this request, please telephone the undersigned at (212) 488-7697. All written communications, and responses of documents, should be sent to the address indicated below. The Committee is prepared to undertake any reasonable measures to make compliance with this request as efficient and as economical as possible. If a substantial number of records are determined to be responsive to the request, review of the records by a representative of the Committee, prior to duplication, could be mutually arranged.

As provided in the FOIA, we expect to receive a response to this request within ten (10) working days.

Very truly yours,



Michael P. Zweig  
Special Counsel  
New York State Standing Committee  
on Environmental Conservation

New York State Office Building  
270 Broadway - Room 1514  
New York, New York 10007

MPZ:nw  
Enclosure

FREEDOM OF  
INFORMATION OFFICE  
USDOE/DOE

'80 JUL 29 PM 1:40

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STANDING COMMITTEE ON ENVIRONMENTAL CONSERVATION

FREEDOM OF  
INFORMATION OFFICE  
USDOE (27)

DEFINITIONS

'60 JUL 29 PM 1:50

1. "Record" means any written, typewritten, recorded, transcribed, printed, taped, photographic or graphic matter, whether sent or received or neither, including but not limited to notes, letters, memoranda, reports, drafts, files, notices, instructions, charts, telegrams, cables, telex messages, communications of any kind, graphs, maps, surveys, studies, diaries, photographs, diagrams, microfilm, microfiche, recordings, transcriptions, books, pamphlets, articles, handbooks, manuals, and periodicals.

2. "U.S. Government" means any past or present agency, department, armed services branch, quasi-public corporation, or any divisions and sub-divisions thereof, of the United States Government, including but not limited to the Departments of Agriculture, Defense, Energy, Justice, Army, Navy, Air Force, Reconstruction Finance Corporation, War Assets Administration, Metals Reserve Corporation, Defense Plants Corporation, Smaller War Plants Corporation, War Production Board, Army-Navy Munitions Board, Manhattan Engineer District ("MED"), Atomic Energy Commission ("AEC"), Energy Research and Development Administration, Nuclear Regulatory Commission, General Services Administration, and Environmental Protection Agency.

3. "Niagara Frontier Region" includes Niagara and Erie Counties.

4. "may include, among others," as used herein, should be read as indicating that to facilitate the initial record search, certain names and other information have been specified in the request; however, the record search should be inclusive and not limited to the items specifically described.

1111081

1. Contracts--All records constituting, relating or referring in any way to contracts, agreements, understandings or arrangements between the U.S. Government and any private corporation, concern or individual, relating to the manufacture, processing, transportation, storage or disposal of munitions, metals, gases, chemicals, toxic or hazardous substances, radioactive materials, wastes or residues in the Niagara Frontier Region in the period 1940-1960.

a) The above-mentioned private corporations or concerns may include among others, the following:

1. African Metals Corp.
2. Bell Aerospace Co.
3. Carborundum Corp.
4. E.I. Dupont Co.
5. Durez Plastics and Chemicals Corp.
6. Electromet Corp. (Electrometallurgical-Union Carbide)
7. Hooker Electrochemical Co. (and its successor companies)
8. Knolls Atomic Power Laboratory, Schenectady, N.Y.
9. Massachusetts Institute of Technology
10. Oldbury Electrochemical Co.
11. Olin Corp. (and its predecessor and successor companies)
12. Stauffer Chemical Co.
13. Titanium Corp; Titanium Alloy Mfg. Co.; NL Industries
14. University of Rochester
15. Vanadium Corp.
16. National Lead of Ohio
17. Mathieson Alkali
18. Niagara Alkali
19. General Chemical Co.
20. Linde Air Products

b) The above-mentioned contracts, agreements, etc., may include, among others, the following:

- 1) All contracts between the Chemical Warfare Service War Production Board, U.S. Army, Manhattan Engineer District ("MED") or the Atomic Energy Commission ("AEC") and any of the companies listed in paragraph 1 (a) of this request
- 2) All contracts between the AEC or MED or other U.S. Government agencies and the Knolls Atomic Power Laboratory relating to the "Chart of the Nuclides".

3) All contracts between the AEC or MED or other U.S. Government agencies relating to gaseous diffusion, or the production or processing of uranium hexafluoride or uranium tetrafluoride.

c) The above-mentioned contracts, agreements, etc., may include among others, the following:

1. Contract No. W 7405 Eng. 26
2. " " W 7405 Eng. 28
3. " " W 7405 Eng. 280
4. " " W 7405 Eng. 94
5. " " W 7405 Eng. 75
6. " " W 7405 Eng. 76
7. " " W 7405 Eng. 14
8. " " W 7401 Eng. 14
9. " " W 7405 Eng. 260
10. " " W 7405 Eng. 258
11. " " W 7401 Eng. 49
12. Lease Contract No. W-2288-Eng-551 (Army Air Force)
13. Contract No. A-53-120-C (U.S. Navy)
14. Contract No. AF33(600) - 33060 (Air Force)
15. Contract No. DA-18-108-CML-5293 (Army Chemical Center-Olin)
16. Contract No. W-285-CWS-4848 (Hooker Electrochemical)
17. Contract No. W-18-108-CM-609 (Hooker Electrochemical)
18. Contract No. DA-30-070-CML-23 (Hooker Electrochemical)
19. Contract No. DA-30-115-ORD-PO-263 (Hooker Electrochemical)
20. Contract No. DA-30-115-ORD-841 (Hooker Electrochemical)
21. Contract No. OEM<sup>Sr</sup> 696
22. Contract No. OEM<sup>Sr</sup> 811

d) The above-mentioned contracts, agreements, etc., may relate to the production, processing or refining of, among others, the following substances:

1. arsenic trichloride
2. hexachloroethane
3. chlorinated benzene
4. Phosgene (carbonyl chloride)
5. thionyl chloride
6. Hexafluoroxylyene
7. polymeric trifluorochloroethylene
8. chloronaphthalene
9. defoliant
10. trinitrotoluene
11. lithium, lithium chloride
12. Boron X

2. Production and Disposal Records--All records constituting, relating or referring in any way to the manufacture, processing, transportation, storage or disposal of munitions, metals, gases, chemicals, toxic, hazardous or contaminated substances, radioactive substances, or wastes or residues (collectively "materials") in the Niagara Frontier Region in 1940-1960 by the U. S. Government, or any of its private contractors.

a) The above-mentioned records may include, among others, the following:

- 1) records reflecting the quantities of materials manufactured, processed, transported, stored or disposed of;
- 2) records reflecting the end uses or functions of these materials;
- 3) records reflecting the methods of waste disposal employed;
- 4) records reflecting the methods of transportation of these materials, including any U.S. Government manuals or regulations pertaining to the movement and transportation of toxic and hazardous wastes;
- 5) records reflecting the location of disposal sites, and the dates of disposal;
- 6) records reflecting the individual names and addresses of the U.S. Government and private personnel who were involved in the manufacture, processing, transportation, storage or disposal of these materials, including but not limited to, personnel at:
  - a) the private concerns identified in paragraph 1(a) above.
  - b) 71st Chemical Smoke Generator Company.
  - c) 190th Chemical Depot Company.
  - d) 40th Explosive Ordnance Disposal Unit.
  - e) all service commands units located in Niagara Falls, N.Y. during 1940-1960. (1202nd, 1206th, 1208th, 1217th, 2212th, 4206th, 4220th).

1117084

- 7) records ref. cting the types of barrel and containers used for the transportation, or disposal of materials by the U.S. Government or by any of its private contractors.
  - 8) All regulations, policy manuals and statements governing, or relating to U.S. Government contracts with private contractors for the production and processing of the materials described above, including but not limited to the operation of government-owned, contractor-operated ("GOCO") plants.
- b) The above-mentioned records may include, among others, the following:
- 1) the New York Chemical Procurement District History (three volumes)
  - 2) the History of the Northeast Chemical Warfare Depot
  - 3) History of New York Chemical Warfare Procurement; production reports and weekly war letters
  - 4) History of the Niagara Falls Army Chemical Plant, and monthly reports
  - 5) Records of the New York Ordnance District
  - 6) Records of the Buffalo and/or Tonawanda District Engineers
  - 7) Records of the New York District Corps of Engineers
  - 8) War Department Technical Bulletin T B Eng-57
  - 9) War Assets Administration Manual of Operations 4-3, Part IX
  - 10) Madison Square Records of the "MED" (as to uranium waste inventory and storage locations)
  - 11) Manual of Operations, WD Form SB-5-52
  - 12) Manual W4-3, Memorandum of Understanding, Exhibit 10-1, Appendix
  - 13) Activities of the Metals Reserve Corporation in Niagara Falls, N.Y.
  - 14) "P-45" facility located on Hooker Electrochemical site in Niagara Falls, N.Y. and sold to Hooker by U.S. in 1947

3. Contamination Records--All records constituting, relating or referring in any way to the chemical or radioactive contamination of any areas located within New York State, arising out of, or caused by the

transportation, manufacture, processing, storage or disposal of any of the materials described in paragraph 2.

a) The areas in New York State which may have been contaminated by chemicals, radiation or other toxic or hazardous substances may include, among others, the following:

- 1) "Love Canal," Niagara Falls, N.Y.
- 2) "Love Canal," Lewiston, N.Y.
- 3) Lake Ontario Ordnance Works
- 4) New York Ordnance Works
- 5) Seneca Ordnance Works
- 6) Areas surrounding plancors in Farmingdale and Syosset, Long Island, N.Y.
- 7) Air Force Plants 38 and 68, Lewiston, N.Y.
- 8) Aircraft Modification Center No. 7, Niagara Falls, N.Y.
- 9) 102nd Street (River Run) Dump, Niagara Falls, N.Y.
- 10) 66th Street School, Niagara Falls, N.Y.
- 11) Pine Avenue Bowling Alley and nearby commercial locations, Niagara Falls, N.Y.
- 12) Youngstown Test Annex, Youngstown, N.Y.
- 13) Hooker Chemical Corp., Niagara Falls, N.Y.
- 14) Niagara Falls Army Chemical Plant
- 15) Necco Park (duPont)
- 16) Somerset Group, Inc. - Industrial Park
- 17) Services Corp. of America (SCA) (formerly Chem-trol, Inc.)-disposal site, Lewiston, N.Y.

b) The above-mentioned records may include, among others, the following:

1. inspection or real property disposal reports or reports of excess property prepared by U.S. Government departments or agencies such as the Army Corps of Engineers, the War Assets Administration, the Department of Agriculture, the Atomic Energy Commission, the General Services Administration, the Department of Energy, the Environmental Protection Agency, or private or independent contractors;
2. maps and photographs reflecting the areas of contamination;
3. decontamination certificates, inspection and other reports or records;
4. documents reflecting the methods used for decontamination, the costs of such efforts, and the results achieved;

5. any U.S. Government manuals or regulations pertaining to the standards and procedures used for decontamination by the U.S. Government or any private or independent contractors;
6. any records relating in any way to the storage, disposal and/or burial of lithium, lithium chloride, or potassium chloride at former Air Force Plant 68 in Lewiston, N.Y.;
7. any records relating in any way to the existence of cesium on the grounds of the former Lake Ontario Ordnance ("LOOW") site, or at Love Canal in Niagara Falls, N.Y.;
8. any records relating in any way to chemical or radioactive contamination of lands which were formerly part of the LOOW site, and were subsequently sold to private owners;
9. all reports prepared by the Industrial Research Corp. for the War Assets Administration, pursuant to Contract No. WS (p) - 402, dated October 16, 1947, concerning an industrial survey and appraisal of eleven surplus U.S. Army Ordnance Works locations at
  - a) Badger Ordnance Works, Baraboo, Wisconsin
  - b) Gopher Ordnance Works, Rosemount, Minnesota
  - c) Keystone Ordnance Works, Meadville, Pa.
  - d) Kentucky Ordnance Works, Paducah, Kentucky
  - e) Oklahoma Ordnance Works, Pryor, Oklahoma
  - f) Plum Brook Ordnance Works, Sandusky, Ohio
  - g) New York Ordnance Works, Baldwinsville, N.Y.
  - h) Weldon Springs Ordnance Works, Weldon Springs, Mo.
  - i) West Virginia Ordnance Works, Point Pleasant, W. Va.
  - j) Lake Ontario Ordnance Works, Lewiston, N.Y.
10. any records relating in any way to animal experiments conducted at the University of Rochester involving biological uptake of radioactive isotopes, or the disposal of radioactive wastes from the University of Rochester at the Lake Ontario Ordnance Works or other locations in New York State.

Lipziger

(Dr. Ernst Lipziger)

D. Nett's office - [unclear]

- Arthur Whitman 233-5437

- D-220 -

E-201

OCT 2 9 1980

Michael P. Sweig, Esquire  
Special Counsel  
New York State Assembly  
Standing Committee on  
Environmental Conservation  
New York State Office Building  
270 Broadway, Room 1514  
New York, New York 10007

Dear Mr. Sweig:

YOUR FREEDOM OF INFORMATION ACT REQUEST OF JULY 24, 1980

Pursuant to our understanding, as reflected in my separate cover to you dated August 14, 1980, I am transmitting responsive to your Freedom of Information Act request of July 24, 1980.

All information responsive to your request from records located at DOE's Oak Ridge Operations Office have been identified and marked for declassification and reproduction. The declassification process, as explained to you by Mr. David G. Darugh of my staff, is the most time-consuming portion of responding to your request. I can assure you that additional manpower has been assigned to the declassification task. Every effort is being made by my staff to complete the response and transmittal of all remaining information to you by December 4, 1980. When the declassification process is complete, I will then be able to inform you if any documents identified as being responsive to your request cannot be declassified at the Oak Ridge Operations Office level.

CERTIFIED MAIL:  
RETURN RECEIPT REQUESTED

PERSONNEL - 1

OFFICIAL FILE COPY

FOIA 7678



October 27, 1980

F. O. Christie, Assistant Manager for Administration

**NEED AND AEC RETIRED RECORDS**

DOE-ORO is currently responding to a Freedom of Information Act (FOIA) request from the New York State Assembly, Task Force on Toxic Substances, requesting all information concerning the transportation, storage, use or disposal of toxic or radioactive substances in New York State between the years 1940 and 1960. Pursuant to this request, Roy V. Anderson was retained to search for responsive documents now in storage at DOE-ORO. In Mr. Anderson's review of these documents, he brought to my attention many records which, if released to the public, could violate the Privacy Act (5 U.S.C. § 552a.).

During the search for responsive records, the following Privacy Act problems were discovered:

1. Psychiatric Records. Though not prevalent in volume, the records contain references to psychiatric treatment to specifically named individuals.
2. Medical Records. There are frequent references to individually named persons with various maladies. An example is a record of social diseases which identify the date and place of contact, and, if known, the contact's name and address.
3. Criminal Offenses. There are investigations and reports on individuals who are named and who have been involved in pilfering, drunkenness, forgery and even armed robbery.
4. Security Investigations. There are records of security investigations of named individuals relating to clearances and which include allegations for which clearances were summarily terminated.

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*[Handwritten signature]*

In addition to the Privacy Act problems, classification remains a consideration as well. A large volume of the early files were at one time declassified and later determined to contain classified information. It will, of course, be necessary to review all documents again for classification prior to their leaving the Records Center to assure proper classification.

In view of the items noted immediately above, there are very strong reasons for thorough review before any of the records dealing with the Manhattan Engineering District (MED) and Atomic Energy Commission (AEC) are released to storage centers, or loaned to outside offices or personnel, or otherwise released to the public domain. You should be aware that the Privacy Act contains an exemption from the prohibitions and release of records maintained on individuals where the release is to the National Archives of the United States as a record which has sufficient historic or other value to warrant its continued preservation by the United States Government or for evaluation by the Administrator of General Services or his designee to determine whether the record has such value (5 U.S.C. § 552a.(b)(6)).

Future questions concerning the application of the Privacy Act to documents identified for release from the Records Center should be referred to Counsel to assure proper application of the law.

ORIGINAL SIGNED BY  
**JAMES C. HALL**

James C. Hall  
 Deputy Chief Counsel  
 for Operations

CC-10:DGD

cc: R. A. Evans, Supply Division

CC-10:DGDarugh:klc:6-1213:10/23/80

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CONCURRENCE
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**SENDER.** Complete items 1, 2, and 3.  
Add postmarks in the "RETURNED" space.

1. The following service is requested (check one):

- Show to whom and date delivered..... c
- Show to whom, date and address of delivery..... c
- RESTRICTED DELIVERY  
Show to whom and date delivered..... c
- RESTRICTED DELIVERY.  
Show to whom, date, and address of delivery..... c

(CONSULT POSTMASTER FOR FEES)

ARTICLE ADDRESSED TO:  
*Michael P. Katz, Standing  
 N.Y. State Assembly, Standing  
 Committee on Environmental Conservation,  
 Room 1674, New York, N.Y. 10007*

REGISTERED NO. CERTIFIED NO. INSURED NO.

*P15 8767662*

[Always obtain signature of addressee or agent]

I have received the article described above.

SIGNATURE  Addressee  Authorized agent

DATE OF DELIVERY  
**OCT 10 1980**

6. ADDRESS (Complete only if requested)

6. UNABLE TO DELIVER BECAUSE:

PS Form 3800, Apr. 1976



★GPO : 1979 300-450

P15 8767662

**RECEIPT FOR CERTIFIED MAIL**

NO INSURANCE COVERAGE PROVIDED—  
NOT FOR INTERNATIONAL MAIL  
(See Reverse)

*Michael P. Katz  
 N.Y. State Assembly  
 Standing Committee on Environmental  
 Conservation, N.Y. State  
 Capitol Building, Room 1514  
 4th Broadway,  
 New York, N.Y. 10007*

CONSULT POSTMASTER FOR FEES	CERTIFIED FEE	c
	SPECIAL DELIVERY	c
	RESTRICTED DELIVERY	c
	OPTIONAL SERVICES	
	RETURN RECEIPT SERVICE	
	SHOW TO WHOM AND DATE DELIVERED	c
	SHOW TO WHOM, DATE AND ADDRESS OF DELIVERY	c
	SHOW TO WHOM AND DATE DELIVERED WITH RESTRICTED DELIVERY	c
	SHOW TO WHOM, DATE AND ADDRESS OF DELIVERY WITH RESTRICTED DELIVERY	c
TOTAL POSTAGE AND FEES		\$
POSTMARK OR DATE		

PS Form 3800, Apr. 1976

1117093

Box #1

**SENDER:** Complete items 1, 2, and 3. Add your address in the "REVERSE" box space on reverse.

1. The following service is requested (check one):  
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 Show to whom, date and address of delivery.....

**REGISTERED MAIL DELIVERY**  
 Show to whom and date delivered.....  
 Show to whom, date, and address of delivery.....

**CONSULT POSTMASTER FOR FEES**

2. **ARTICLE ADDRESS TO:**  
 State Dept. Office Bldg.  
 370 Broadway  
 New York, N.Y. 10007

3. **ARTICLE DESCRIPTION:**  
 REGISTERED NO. CERTIFIED NO. SECURED NO.  
 P15 8767661

(Always obtain signature of addressee or agent)

I have received the article described above.  
**SIGNATURE:**  Addressee  Authorized agent  
*Paula Israel*

4. **DATE OF DELIVERY:** 10-9-85

5. **ADDRESS (Complete only if required)**

6. **UNABLE TO DELIVER BECAUSE:**

U.S. MAIL  
 300  
 CLEAR  
 1985

☆GPO : 1979-300-459

**REVERSE:** Complete items 4 and 5. Add the address of the addressee on reverse.

1. The following service is requested (check one):  
 Show to whom and date delivered.....  
 Show to whom, date and address of delivery.....  
 Show to whom, date, and address of delivery.....

**CONSULT POSTMASTER FOR FEES**

2. **ARTICLE DESCRIPTION:**  
 REGISTERED NO. CERTIFIED NO. SECURED NO.  
 P15 8767644

(Always obtain signature of addressee or agent)

I have received the article described above.  
**SIGNATURE:**  Addressee  Authorized agent  
*Paula Israel*

4. **DATE OF DELIVERY:**

5. **ADDRESS (Complete only if required)**

6. **UNABLE TO DELIVER BECAUSE:**

U.S. MAIL  
 300  
 CLEAR  
 1985

☆GPO : 1979-300-459

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SEP 26 1980

Michael P. Zweig  
Special Counsel  
New York State Standing Committee  
on Environmental Conservation  
New York State Office Building  
270 Broadway, Room 1514  
New York, New York 10007

Dear Mr. Zweig:

Please accept this letter as a followup to your recent visit to Oak Ridge Operations (ORO) on September 17 and 18, 1980, at which time we released to you additional documents responsive to your Freedom of Information Act (FOIA) request dated July 24, 1980.

During your visit you also requested the expeditious release of several documents in the folder titled "Ceramics Plant (Wells)" which were classified and not available for your examination. Accordingly, the following documents were declassified and are provided herewith:

1. Letter dated June 2, 1948, from E. C. Kent to A. R. Holmes, subject "Step I Effluent";
2. Letter dated August 25, 1945, from the Superintendent of The Linde Air Products Company to Major E. L. Van Horne regarding history of the wells on the Ceramics Plant property used for the disposal of Step I effluents;
3. Two-page document listing Tables I through VII regarding wells at the plant; and
4. Letter dated May 26, 1948, from E. C. Kent to A. R. Holmes, subject "Step I Effluent Water."

CERTIFIED MAIL:  
RETURN RECEIPT REQUESTED

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SEP 26 1980

In accordance with the Department's determination to waive fees associated with the processing of your request, there is no charge for the transmitted information. Further effort to identify and declassify documents responsive to your request is continuing in accordance with the guidelines which you provided my staff during your visit to Oak Ridge.

Release of additional information will be made in accordance with the agreement set forth in the DOE-ORO letter to you dated August 14, 1980.

Sincerely,

Original Signed By  
W. R. McCauley, Jr.

W. R. McCauley, Jr.  
Authorizing Official

CC-10:DGD

Enclosures:  
As stated

cc w/o enclosures:  
Milton Jordan, HQ FOI  
(Ref. #07258007P)

bcc w/o enclosures:  
F. O. Christie, AMA  
C. A. Keller, AMM&S  
Wayne Range, PIO  
James L. Foutch, OCC  
Dr. William E. Mott, EV-13, GTN

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COMPANY CORRESPONDENCE

HUGH  
cc log  
LAB  
CS

(GENERAL) COMPANY CERAMICS - WCT LOCATION TONAWANDA, NEW YORK

sent 6/8  
4 25

TO The Linde Air Products Company  
LOCATION New York 17, New York

DATE June 2, 1948

ATTENTION Mr. A. R. Holmes  
COPY TO Messrs: J. L. Chapman  
V. Osinski  
D. L. Voisinet

ANSWERING LETTER DATE

SUBJECT Step I Effluent

Dear Mr. Holmes:

In our discussions last week concerning the effluent from Step I the writer stated that a sample stalactite from Plant I utilities tunnel had been submitted to our laboratory for analysis. Don Voisinet now reports the analysis of this material as follows:

Date Received	-	5-26-48
Date Analyzed	-	6-1-48
Constituents - %	-	
CaO	-	42.1
CO <sub>2</sub>	-	34.6
SO <sub>3</sub>	-	0.03
M <sub>2</sub> O	-	Trace
Na <sub>2</sub> O	-	0.19
Fe <sub>2</sub> O <sub>3</sub>	-	0.30
H <sub>2</sub> O	-	1.44
Mx <sub>3</sub> O <sub>8</sub>	-	nil
Organic Matter	-	21.26

SPECIAL REREVIEW  
FINAL DETERMINATION  
UNCLASSIFIED

By: *K. A. Walker*  
Date: *9/22/80*  
*Ed Davis*  
*9/19/80*

On the basis of this analysis it would now appear that no difficulty is being experienced in the utilities tunnel which can be attributed to the action of the effluent since the effluent consisted principally of sodium sulphate. In addition, the presence of organic matter would indicate that a new factor is entering the picture and that whatever seepage is currently taking place is probably contaminated with materials from activities taking place in the Research Laboratory.

The above results have been discussed with Mr. Hugh Hayward of Plant I who will investigate the situation.

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Very truly yours,

*E. C. Kent*

E. C. Kent: jag

*Ed Davis*  
*9/19/80*

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This document contains restricted data within the meaning of Atomic Energy Act of 1946 and/or information concerning the National Defense of the United States within the meaning of the Espionage Act, 50 U.S.C. and amended. Its transmission or revelation of its contents in any manner to an unauthorized person is prohibited and may result in severe criminal penalty.

~~CONFIDENTIAL~~

~~CONFIDENTIAL~~  
SPECIAL REREVIEW  
FINAL DETERMINATION  
UNCLASSIFIED

By: *Kawala*  
Date: *9/22/80*

*Jed Davis*  
*9/19/80*



*HH*  
*SP77*  
*PBP*  
*GRH*

August 25, 1945

The District Engineer  
Area Engineer, Tonawanda Area  
United States Engineer Office  
Post Office Box 8  
Kenmore 17, New York

Attention: Major E. L. Van Horn

Gentlemen:

The following is the history of the wells on the Ceramics Plant property used for the disposal of Step I effluents:

Drilling on #1 well was started on May 3rd.

Effluent was started into the well on May 14th.

By June 5th approximately 2,115,000 gals. had been pumped into #1 well. The pressure on this date was running from 25 to 30 lbs./sq. in.

By June 11th 3,325,000 gals. had been pumped into the well. The pressure was 82 lbs.

By June 18th 4,652,000 gals. had been pumped into the well. The pressure was 125 lbs. On this day the second well was started.

By June 28th 5,885,000 gals. had gone down #1 well. Well #2 was completed June 27th.

By July 15th 9,438,700 gals. had been pumped into both wells.

By July 22nd 10,519,100 gals. had been pumped into both wells. The maximum pressure this day was 80 lbs.

By August 5th 12,821,700 gals. had gone down both wells. The pressure was 148 lbs.

By August 12th 13,985,500 gals. had been sent down both wells. The pressure during this last period had risen to 170 lbs. and the wells were not taking all the effluent at times. It was necessary to divert some liquid to the Plant I wells, but they can only handle a very limited quantity. On several occasions it has been necessary to divert small quantities of effluent to the ditch, in order to avoid slowing down Step I. The use of the ditch for the disposal of Step I liquors, it is felt, cannot be continued, particularly since increasing quantities must be sent in this direction as the capacity of the present wells decreases.

It is therefore requested that approval be given for drilling two more wells on the Ceramics Plant property. One of these

1117100

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- 2 -

Major E. L. Van Horn

August 25, 1945

would probably be sunk at the N.W. corner of Step III and the other out by the incinerator.

We have been following the pressure of the wells closely on the lookout for a phenomenon known as "parting of the planes". This refers to the fact that when hydrostatic pressure is exceeded, usually by 2 to 4 times, the overburden is lifted and fissures or seams are opened which allow the passage of fluids.

On two occasions it was noted that after the pressure had risen to 140 lbs. it suddenly dropped to about 50 lbs. and then started up slowly. It is felt that some possibility exists that a certain amount of "parting" took place. At present, however, we have reached the limit of pressure available with our pumps and no further action can be expected. It is, therefore, requested that approval be granted to purchase a pump with which pressure of 400 lbs./sq. in. can be attained. The following installation is desired:

2" Gould pump, 2 stage, all iron, centrifugal, ball bearing, capacity 200 g.p.m. at 400 lbs./sq. in.	\$ 392.00
100 H.P., 3500 R.P.M. motor	<u>1,226.00</u>
	\$1,618.00

If a pumping unit of similar characteristics were available from Army surplus stock better delivery would probably be obtained.

It can be pointed out that the cost of drilling the two existent wells and casing them was about \$1,200.00. This extended to the oxide produced from the liquors sent down the wells amounts to about 0.34/lb.

Very truly yours,

THE LINDE AIR PRODUCTS COMPANY  
CERAMICS PLANT

  
Superintendent

OWRehm:HOB

cc: Mr. A. R. Holmes ✓  
Mr. F. L. Neuman  
Mr. R. S. Abrams

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TABLE I - VOLUME OF EFFLUENT PUMPED TO WELLS

Plant #1 Wells	-	16,500,000	gallons
Ceramics Well #1	-	13,000,000	"
Ceramics Well #2	-	6,000,000	"
Ceramics Wells #3 and 4	-	1,500,000	"
<b>TOTAL</b>		<u>37,000,000</u>	"

SPECIAL REREVIEW  
FINAL DETERMINATION  
UNCLASSIFIED

By: *Kell Walter*  
Date: *9/22/80*  
*John Davis*  
*9/19/80*

TABLE II - HISTORY OF WELLS

<u>Well</u>	<u>Date In Service</u>	<u>Date Out of Service</u>	<u>Total Volume Pumped to Wells</u>
Plant #1	* 2-27-45	6-27-45	16,500,000
Ceramics #1	5-16-45	1-1-46	13,000,000
Ceramics #2	6-27-45	10-8-45	6,000,000
Ceramics #3 & 4	6-4-46	** 7-15-46	1,500,000
	6-6-46		

\* - Date in Step I Effluent Service

\*\* - Date Wells #3 and 4 were taken out of service as a consequence of the closing down of Step I.

TABLE III - WELL SPECIFICATIONS

<u>Well No.</u>	<u>Location</u>	<u>Depth</u>	• Well Casing		<u>Cost</u>
			<u>Diameter</u>	<u>Depth</u>	
Ceramics 1	North of Step I	150'	8"	95'	\$535.00
2	East of Step I	180'	8"	95'	560.00
3	North of Step III	140'	6"	95'	628.00
4	Cowper Gate	140'	6"	95'	628.00
** Linde					
Plant 1 1	Boiler House	350'	-	-	-
2	Boiler House	150'	-	-	-
3	Boiler House	150'	-	-	-

\* - Well casing was driven into caprock for a distance of approximately two feet.

\*\* - The Linde - Plant 1's wells were drilled in 1942 for the purpose of providing a supply of cooling water to be used on air compressors and turbines.

TABLE IV - FLOW REQUIREMENTS AND CAPACITIES

- (a) Overall average effluent flow - 110 gpm
- (b) Peak effluent flow - 200 gpm
- (c) Flow capacity - Ceramics Well #1 - 100 gpm at 85 psi on June 7, 1945
- Negligible Flow at 150 psi on January 1, 1946.
- (d) Flow capacity of Ceramics Well #2 - less than 100 gpm at 85 psi in July 1945.
- (d) Negligible Flow at 150 psi on October 8, 1945.
- (e) Flow capacity of Ceramics Wells #3 and 4 combined - less than 100 gpm at 150 psi in June 1946.

This document contains restricted data within the meaning of the Atomic Energy Act of 1946 and/or information affecting the National Defense of the United States within the meaning of the Espionage Act, Sections 793 and 794 as amended. Its transmission or the revelation of its contents in any

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TABLE V EARTH STRATUM IN TOMAHAWKA AREA

0 - 93'	-	Red clay
93 - 103'	-	Caprock (hard calcium carbonate and calcium sulfate)
103 - 300'	-	Porous white limestone containing fresh water veins
300 - 500'	-	Grey Niagara limestone containing black water with H <sub>2</sub> S
500 - 570'	-	Black shale
570 - 600'	-	Clinton gas sands (poor gas yields)
600 - 608'	-	Shale
608 - 673'	-	Red Medina sandstone
673 - 678'	-	Chalk
678 - 693'	-	Shale
693 - 718'	-	White Medina gas sands
Next 2000 feet	-	Red, grey and brown shales
Next 500-800'	-	Trenton limestone
Below Trenton limestone-	-	Potsdam sands containing gas veins

TABLE VI - LOG OF PLANT I'S DIFFICULTIES CAUSED BY CONTAMINATION OF SURFACE WATER

- 1-15-46 - Surface water seeping into the pipe tunnel between the Power House and Factory buildings was noted to have a corrosive effect on conduit boxes and cables.
- 2-4-48 - A sample of seepage water from the pipe tunnel was analyzed as follows:

pH	-	9.
Na	-	43.64%
SO <sub>4</sub>	-	37.21%
Ca	-	1.05%
CO <sub>2</sub>	-	6.74%
Fe	-	0.67%
H <sub>2</sub> O	-	9.04%

The above analysis indicates that the surface water had definitely been contaminated by the effluents from the Step I process.

- 1948 - 3 blowouts of junction boxes and telephone cables were attributed to the corrosive action of seepage water. The boxes were repaired by the Telephone Company at no cost to The Linde Air Products Company.
- 1948 - Corrosive surface water seeped into a cracked sump in the Boiler House causing 5 armatures to burn out on 2 motors during the year. These armatures were repaired at a cost of \$45 each or a total expense of \$225.
- 1948 - Cracks in pipe tunnel and power house sump were repaired at low cost to eliminate or reduce seepage of surface water.

TABLE VII - PRESENT STATUS OF SURFACE WATER CONTAMINATION IN PLANT I

- (a) Seepage into pipe tunnel is at present very little. Some stalactites however, are slowly being formed at points of seepage. A sample stalactite was submitted to the Ceramics analytical laboratory for analysis on 5-26-48.
- (b) Plant I reports very little trouble being experienced at present as a consequence of corrosion from contaminated surface water. It is concerned however, about the action of the effluent on the concrete forming the pipe tunnel. The observation was made that the north wall of the Research Laboratory lies directly over this tunnel. Examination of the concrete did not indicate a destructive action has taken place at the present

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GENERAL COMPANY CERAMICS - NCT LOCATION TOMAHAWK, NEW YORK

ASH

TO The Linde Air Products Company  
LOCATION New York 17, New York  
ATTENTION Mr. A. R. Holmes  
COPY TO Messrs: V. Osinski  
J. L. Chapman

DATE May 26, 1948

7

ANSWERING LETTER DATE

SUBJECT Step I Effluent Water

Dear Mr. Holmes:

In confirmation of our telephone conversation today, we are attaching the data we discussed in connection with the disposal of Step I effluent water.

Ceramics Wells #1, 3 and 4 are still piped to the effluent disposal system. It is very doubtful, however, if these wells have any further use since, at the time of closing down Step I in July, 1946, great difficulty was experienced in disposing of the effluent. Mr. H. Hayward of Plant I also reports that its three well water wells are plugged as a result of the action of the Ceramics Plant effluent. These wells have been capped and are no longer in use.

This office has had the assistance of Messrs. V. Osinski, J. L. Chapman and W. O. Quick, in the preparation of the subject report. The report matter was also reviewed by Mr. C. J. Breitenstein who indicated that it was correct to the best of his recollection.

Very truly yours,  
E. C. Kent

E. C. Kent:jag  
attachments\*

SPECIAL REREVIEW  
FINAL DETERMINATION  
UNCLASSIFIED

KACWalt  
9/22/80  
Jed Davis  
9/19/80

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This document contains restricted data within the meaning of the Atomic Energy Act of 1946 and/or information affecting the national defense of the United States within the meaning of the Espionage Act, 50 USC 1835 and 1836. Its transmission or the revelation of its contents in any manner to an unauthorized person is prohibited by law and may constitute a criminal offense.

~~CONFIDENTIAL~~

TABLE I - VOLUME OF EFFLUENT PUMPED TO WELLS NO. 1 OF 5 COPIES, SERIES A

Plant #1 Wells	-	16,500,000	gallons
Ceramics Well #1	-	13,000,000	"
Ceramics Well #2	-	6,000,000	"
Ceramics Wells #3 and 4	-	1,500,000	"
<b>TOTAL</b>		<b>37,000,000</b>	"

SPECIAL REREVIEW  
FINAL DETERMINATION  
UNCLASSIFIED

By: *K. J. Walker*  
Date: *9/22/86*  
*John Daves*  
*9/19/80*

Total Volume Pumped to Wells

TABLE II - HISTORY OF WELLS

<u>Well</u>	<u>Date In Service</u>	<u>Date Out of Service</u>	<u>Total Volume Pumped to Wells</u>
Plant #1	* 2-27-45	6-27-45	16,500,000
Ceramics #1	5-16-45	1-1-46	13,000,000
Ceramics #2	6-27-45	10-8-45	6,000,000
Ceramics #3 & 4	6-4-46 6-5-46	** 7-15-46	1,500,000

\* - Date in Step I Effluent Service

\*\* - Date Wells #3 and 4 were taken out of service as a consequence of the closing down of Step I.

TABLE III - WELL SPECIFICATIONS

<u>Well No.</u>	<u>Location</u>	<u>Depth</u>	<u>* Well Casing</u>		<u>Cost</u>
			<u>Diameter</u>	<u>Depth</u>	
Ceramics 1	North of Step I	150'	8"	95'	\$535.00
2	East of Step I	180'	8"	95'	560.00
3	North of Step III	140'	6"	95'	628.00
4	Cowper Gate	140'	6"	95'	628.00
** Linde					
Plant 1 1	Boiler House	350'	-	-	-
2	Boiler House	150'	-	-	-
3	Boiler House	150'	-	-	-

\* - Well casing was driven into caprock for a distance of approximately two feet.

\*\* - The Linde - Plant 1's wells were drilled in 1942 for the purpose of providing a supply of cooling water to be used on air compressors and turbines.

TABLE IV - FLOW REQUIREMENTS AND CAPACITIES

- (a) Overall average effluent flow - 110 gpm
- (b) Peak effluent flow - 200 gpm
- (c) Flow capacity - Ceramics Well #1 - 100 gpm at 85 psi on June 7, 1945
- Negligible Flow at 150 psi on January 1, 1946.
- (d) Flow capacity of Ceramics Well #2 - less than 100 gpm at 85 psi in July 1945.
- (d) Negligible Flow at 150 psi on October 8, 1945.
- (e) Flow capacity of Ceramics Wells #3 and 4 combined ~~this does not exceed 100 gpm.~~ within the meaning of the Atomic Energy Act of 1954 and/or information affecting the National Defense of the United States within the meaning of the Espionage Act, 50 U.S.C. 1835 and 32 as amended. Its transmission or the disclosure of its contents in any manner is prohibited.

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~~CONFIDENTIAL~~

TABLE V - EARTH STRATUM IN TONAWANDA AREA

0 - 93'	-	Red clay
93 - 103'	-	Caprock (hard calcium carbonate and calcium sulfate)
103 - 300'	-	Porous white limestone containing fresh water veins
300 - 500'	-	Grey Niagara limestone containing black water with H <sub>2</sub> S
500 - 570'	-	Black shale
570 - 600'	-	Clinton gas sands (poor gas yields)
600 - 608'	-	Shale
608 - 673'	-	Red Medina sandstone
673 - 678'	-	Chalk
678 - 693'	-	Shale
693 - 718'	-	White Medina gas sands
Next 2000 feet	-	Red, grey and brown shales
Next 500-800'	-	Trenton limestone
Below Trenton limestone-	-	Potsdam sands containing gas veins

TABLE VI - LOG OF PLANT I's DIFFICULTIES CAUSED BY CONTAMINATION OF SURFACE WATER

- 1-15-46 - Surface water seeping into the pipe tunnel between the Power House and Factory buildings was noted to have a corrosive effect on conduit boxes and cables.
- 2-4-46 - A sample of seepage water from the pipe tunnel was analyzed as follows:

pH	-	9.
Na	-	43.64%
SO <sub>4</sub>	-	37.21%
Ca	-	1.05%
CO <sub>2</sub>	-	6.74%
Fe	-	0.57%
H <sub>2</sub> O	-	9.04%

The above analysis indicates that the surface water had definitely been contaminated by the effluents from the Step I process.

- 1946 - 3 blowouts of junction boxes and telephone cables were attributed to the corrosive action of seepage water. The boxes were repaired by the Telephone Company at no cost to The Linde Air Products Company.
- 1946 - Corrosive surface water seeped into a cracked sump in the Boiler House causing 5 armatures to burn out on 2 motors during the year. These armatures were repaired at a cost of \$45 each or a total expense of \$225.
- 1946 - Cracks in pipe tunnel and power house sump were repaired at low cost to eliminate or reduce seepage of surface water.

TABLE VII - PRESENT STATUS OF SURFACE WATER CONTAMINATION IN PLANT I

- (a) Seepage into pipe tunnel is at present very little. Some stalactites however, are slowly being formed at points of seepage. A sample stalactite was submitted to the Ceramics analytical laboratory for analysis on 5-26-48.
- (b) Plant I reports very little trouble being experienced at present as a consequence of corrosion from contaminated surface water. It is concerned however, about the action of the effluent on the concrete forming the pipe tunnel. The observation was made that the north wall of the Research Laboratory lies directly over this tunnel. Examination of the concrete indicates a destructive action has taken place at the present in any member to another person is prohibited

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MEMOR: Complete items 1, 2, and 3.

1. The following service is requested (check one.)

- Show to whom and date delivered.....
- Show to whom, date and address of delivery.....
- RESTRICTED DELIVERY
- Show to whom and date delivered.....
- RESTRICTED DELIVERY.
- Show to whom, date, and address of delivery.....

(CONSULT POSTMASTER FOR FEES)

*Michael P. Lewis, Special Counsel  
New York State Standing Comm. on  
Environmental Conservation  
New York State Office Building  
390 Broadway, Room 1514  
New York, N.Y. 10007*

REGISTERED NO. CERTIFIED NO. INSURED NO.

*P105089129*

Address obtain signature of addressee or agent

I have received the article described above.

SIGNATURE  Addressee  Authorized agent

*Paula Smith*

DATE OF DELIVERY **SEP 29 1980**

5. ADDRESS (Complete only if requested)

6. UNABLE TO DELIVER BECAUSE:

NEW YORK ST. CHURCH ST. STA. SEP 29 1980 NEW YORK N.Y.

MEMOR: Complete items 1, 2, and 3.

1. The following service is requested (check one.)

- Show to whom and date delivered.....
- Show to whom, date and address of delivery.....
- RESTRICTED DELIVERY
- Show to whom and date delivered.....
- RESTRICTED DELIVERY.
- Show to whom, date, and address of delivery.....

(CONSULT POSTMASTER FOR FEES)

*James J. ...  
Environmental Protection Bureau  
100 World Trade Center  
New York, New York 10047*

REGISTERED NO. CERTIFIED NO. INSURED NO.

*P105089130*

Address obtain signature of addressee or agent

I have received the article described above.

SIGNATURE  Addressee  Authorized agent

DATE OF DELIVERY

5. ADDRESS (Complete only if requested)

6. UNABLE TO DELIVER BECAUSE:

NEW YORK ST. CHURCH ST. STA. SEP 29 1980 NEW YORK N.Y.

P10 5089129

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED—  
NOT FOR INTERNATIONAL MAIL  
(See Reverse)

*Michael P. Lewis*

Special Counsel  
New York State Standing  
Committee on Environmental  
Conservation  
New York State Office Building  
390 Broadway, Room 1514  
New York, N.Y. 10007

POSTAGE	\$
CERTIFIED FEE	€
SPECIAL DELIVERY	€
RESTRICTED DELIVERY	€
OPTIONAL SERVICES	
RETURN RECEIPT SERVICE	
SHOW TO WHOM AND DATE DELIVERED	€
SHOW TO WHOM, DATE AND ADDRESS OF DELIVERY	€
SHOW TO WHOM AND DATE DELIVERED WITH RESTRICTED DELIVERY	€
SHOW TO WHOM, DATE AND ADDRESS OF DELIVERY WITH RESTRICTED DELIVERY	€
TOTAL POSTAGE AND FEES	\$
POSTMARK OR DATE	

U.S. Form 3800, Apr. 1976

P10 5089130

RECEIPT FOR CERTIFIED MAIL

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NOT FOR INTERNATIONAL MAIL  
(See Reverse)

*James J. ...  
Asst. Attorney General  
Environmental Protection Bureau  
100 World Trade Center  
New York, N.Y. 10047*

POSTAGE	\$
CERTIFIED FEE	€
SPECIAL DELIVERY	€
RESTRICTED DELIVERY	€
OPTIONAL SERVICES	
RETURN RECEIPT SERVICE	
SHOW TO WHOM AND DATE DELIVERED	€
SHOW TO WHOM, DATE AND ADDRESS OF DELIVERY	€
SHOW TO WHOM AND DATE DELIVERED WITH RESTRICTED DELIVERY	€
SHOW TO WHOM, DATE AND ADDRESS OF DELIVERY WITH RESTRICTED DELIVERY	€
TOTAL POSTAGE AND FEES	\$
POSTMARK OR DATE	

U.S. Form 3800, Apr. 1976

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SEP 2 5 1980

Steven D. Leipzig  
Assistant Attorney General  
Environmental Protection Bureau  
Two World Trade Center  
Room 4774  
New York, New York 10047

Dear Mr. Leipzig:

Please accept the enclosed documents in response to your Freedom of Information Act (FOIA) request dated June 13, 1980.

In my previous response to you, dated August 29, 1980, I indicated that additional documents were yet to be declassified. This effort is now complete and the enclosed documents represent the remaining portion of documents responsive to your request. My previous transmittal indicated that this information amounted to about one box. Apparently this is not the case; but, rather, the responsive information was intermingled in one box of additional nonresponsive classified documents.

As the information being provided to you has been requested by the Special Counsel to the New York State Assembly Task Force on Toxic Substances, a copy will also be released to the Special Counsel.

**CERTIFIED MAIL:**  
**RETURN RECEIPT REQUESTED**

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Steven D. Leipsig

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SEP 25 1980

In accordance with the Department's determination to waive fees associated with the processing of your request, there is no charge for the transmitted information.

Sincerely,

Original Signed By  
W. R. McCauley, Jr.

W. R. McCauley, Jr.  
Authorizing Official

CC-10:DGD

Enclosures:  
As stated

cc w/enclosures:  
Michael P. Sweig  
Special Counsel  
New York State Standing Committee  
on Environmental Conservation  
New York State Office Building  
270 Broadway, Room 1514  
New York, New York 10007

cc w/o enclosures:  
Milton Jordan, HQ FOI  
(Ref. #06108006N)

bcc w/o enclosures:  
F. O. Christie, AMA  
C. A. Keller, AMM&S  
Wayne Range, PIO  
J. L. Foutch, OCC  
Dr. William E. Mott, EV-13, GTN

CC-10:DGDarugh:klc:6-1213:9/25/80

CONCURRENCE	
RTG. SYMBOL	CC-10
INITIALS/SIG.	Darugh
DATE	9/25/8
RTG. SYMBOL	M-3
INITIALS/SIG.	
DATE	9/25/8
RTG. SYMBOL	
INITIALS/SIG.	
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INITIALS/SIG.	
DATE	

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SEP 15 1980

AD-44

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9/ 1/80

Mr. Steven D. Leipzig  
Environmental Protection Bureau  
State of New York, Department of Law  
Two World Trade Center  
New York, NY 10047

Re: G61080066

Dear Mr. Leipzig:

In partial response to your Freedom of Information request dated June 3, 1980, we have located several documents, including four copies of a report issued by the Environmental Protection Agency, and other documents in response to your request. These documents are listed in Enclosure A. We are also providing copies of these documents to the Special Counsel, New York State Assembly, and the New York State Environmental Conservation Council, in response to your request for information.

Documents that have been located and have been referred to in the course of classification for declassification review. These documents are the minutes of Information Meeting, 1/75 (November 13, 1975) and Information Meeting, 1/76 (November 4, 1976).

We are searching for responsive documents in connection to several additional New York State offices. We will furnish you with additional responsive documents as they are located. Meanwhile, if we can be of further assistance, please contact me or my assistant, at (212) 312-1000.

Sincerely,

Original signed by Joseph Harris

Milton J. Harris, Director  
Division of Public Privacy  
Acts Activities

Enclosures

cc: AD-40

AD-44

Official File (RP)

Case File

Jack Holl, Chief Historian, D/OSE

David Darugh, ORO

AD-44:gelband:jop:252-6025:FOIR:54-132:9/10/80:Case No. 061080066

PERSONNEL - 1  
FOIA

L.M.M.

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Enclosure A

1. Extract from General Manager's Report 173 dated June 1, 1971, and filed in 62-50, 5 Information Report, entitled "Lake Ontario Ordnance Works Development." (1 page)
2. Letter dated January 17, 1972, from Andrew C. Fleck, First Deputy Commissioner, New York State Department of Health, to James R. Schlesinger, Chairman, U.S. Atomic Energy Commission (AEC), re: restrictions on land development in Niagara County pending decontamination. (1 page)
3. Routing slip dated May 24, 1972, from Bertha M. Robinson, Chief, Waste Management Branch, Oak Ridge Operations, with attached letter dated May 16, 1972, from Neal L. Novlan, Chairman, New York State Atomic Energy Council, to R. J. Hart, Manager, Oak Ridge Operations, AEC, re: state regulatory exemption for contractors conducting decontamination of private property under AEC supervision. (2 pages)
4. Extract from AEC Report 4148 - SECY 2741, dated October 13, 1970, entitled 0576 - General Manager's Information Report: Decontamination of Private Property - Lake Ontario Ordnance Works Development. (1 page)
5. SECY 24-1 General Manager's Information Report 24-1, dated July 2, 1970, filed in 62-50 - General Manager's Information Reports, entitled: "Decontamination of Private Property - Lake Ontario Ordnance Works Development." (2 pages)
6. Report on the progress on inventory of decontaminated property at AEC Field Office, West, dated May 2, 1970; meeting held April 25, 1970, at Niagara Falls Conference Room, Tonawanda, New York. (4 pages)
7. Memorandum dated November 25, 1970, from John A. Hollingsworth, Assistant General Manager, Oak Ridge Operations, to the Commissioners, re: Lake Ontario Ordnance Works Meeting of November 17, 1970; with attached articles from Buffalo Courier Express, dated November 12, 1970, and Niagara Falls Gazette, dated November 18, 1970. (4 pages)
8. Letter dated November 17, 1970, from E. J. Hollingsworth, General Manager, AEC, to the Commissioners, re: Lake Ontario Ordnance Works Meeting of November 17, 1970; subject of the letter dated, re: local radioactivity in part of Ontario Ordnance Works property; with attached public announcement to be made following November 17 meeting with property owners. (1 page)
9. Memorandum to the File dated November 16, 1970, from W. S. McCool, Secretary of the Commission, re: Commission approval of agenda at Information Meeting 1970, November 13, 1970. (1 page)
10. Memorandum to the File dated November 10, 1970, from W. S. McCool, re: Commission request at Information Meeting 1970, on November 6, 1970, to proceed with discussions with New York state officials and property owners. (1 page)

|||||

11. Memorandum dated January 19, 1971, from John A. Harris, Director, Division of Public Information, to the Commissioners, re: proposed public announcement on AEC plans to decontaminate property near Leaviston, New York; with attached copy of proposed announcement. (3 pages)
12. Memorandum dated February 11, 1971, from Henry A. Nowak, Director, Division of Waste and Scrap Management, to the Commissioners, re: discussions with New York state officials on course of action for cleanup of low-level radioactivity. (2 pages)
13. Information Meeting Item November 9, 1970, entitled "Niagara Falls Site; Note by the Secretary"; with attached memorandum dated November 12, 1970, from John A. Erlowine to the Commissioners, re: arrangements for discussion of radioactive contamination problem at Niagara Falls site with New York state officials, and enclosed Notification Schedule and draft press release. (4 pages)
14. Information Item of November 5, 1970, entitled "Niagara Falls Site; Note by the Secretary"; with enclosed memorandum dated October 28, 1970, from S. A. Sapiro, Manager, Oak Ridge Operations, to John A. Erlowine, Assistant Manager, Oak Ridge Operations, re: radioactive contamination at Niagara Falls site, with (a) attached paper entitled "Background and Contamination of the AEC Niagara Falls Site", and (b) attached memorandum dated October 26, 1970, from William T. Thompson, Chief, Health and Nuclear Safety Branch, to Wiley A. Johnson, Chief, Health and Nuclear Safety Branch, re: October 1970 radiation survey of former Lake Ontario property at site, with attached copy of notes on radiation survey and one page outlining location of contaminated areas as surveyed. (13 pages)

SEP 15 1980

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Mr. Michael P. Zweig  
New York State Assembly Standing  
Committee on Environmental Conservation  
270 Broadway, Room 1514  
New York, NY 10007

Re: 07258007P

Dear Mr. Zweig:

In partial response to your Freedom of Information request dated July 21, 1980, and received in this office on July 27, 1980, we are enclosing fourteen documents located by the Chief Historian's Office, and which are responsive to your request. These documents are listed in Enclosure A. We are also providing copies of these documents to the Assistant Attorney General of New York, Environmental Protection Bureau, in response to a similar request for information.

Two of the enclosed documents have been located and have been referred to the appropriate jurisdiction for Federalistic review. These documents are the minutes of Information Meeting, 1977 (November 13, 1977) and Information Meeting, 1977 (November 2, 1977).

A search for responsive documents is continuing in several additional headquarters offices. We will furnish you with additional responsive documents as they are located. Meanwhile, if we can be of further assistance, please contact me or Spencer Adams, of my staff, on (202) 752-6015.

Sincerely,

Respectfully,  
J. Edgar Hoover

William Jordan, Director  
Division of FOI and Privacy  
Act Activities

Enclosures

- bcc: AD-40
- AD-44
- Official File (RF)
- Case File
- Jack Holl, Chief Historian, D/OSF
- David Darugh, ORO

AD-44:Gelband:jcp:252-6025:FOIR:5B-135:9/10/80:Case No. 07258007P

1117113

Enclosure A

1. Extract from General Manager's Report #75 dated March 28, 1972, and filed in 69-6, General Information Report, entitled "Lake Ontario Ordnance Works Development." (1 page)
2. Letter dated January 17, 1972, from Andrew C. Fleck, First Deputy Commissioner, New York State Department of Health, to James R. Schlessinger, Chairman, U.S. Atomic Energy Commission (AEC), re: restrictions on land development in Niagara County pending decontamination. (1 page)
3. Routing slip dated May 24, 1972, from Berwyn W. Robinson, Chief, Waste Management Branch, Oak Ridge Operations, with attached letter dated May 16, 1972, from Neal L. Moylan, Chairman, New York State Atomic Energy Council, to R. J. Hart, Manager, Oak Ridge Operations, AEC, re: state regulatory exemption for contractors conducting decontamination of private property under AEC supervision. (2 pages)
4. Extract from GM Report #148 - SECY 2741, dated October 13, 1972, entitled "69-6 - General Manager's Information Reports; Decontamination of Private Property - Lake Ontario Ordnance Works Development." (1 page)
5. SECY 74-1 General Manager's Information Report 74-1, dated July 2, 1972, filed in 69-6 - General Manager's Information Reports, entitled "Decontamination of Private Property - Lake Ontario Ordnance Works." (2 pages)
6. Summary Notes of Briefing on Inventory of Contaminated Buildings on the Site of the Ordnance Works, dated March 2, 1970; see also April 24, 1970, Commissioner's Conference Room, Germantown, Maryland. (4 pages)
7. Memorandum dated November 25, 1970, from John A. Erlwine, Assistant General Manager for Operations, to the Commissioners, re: Lake Ontario Ordnance Works meeting of November 17, 1970; with attached articles from Buffalo Courier Express, dated November 19, 1970, and Niagara Falls Gazette, dated November 18, 1970. (4 pages)
8. Letter dated November 17, 1970, from J. E. Hollingsworth, General Manager, AEC, to Edward J. Cullen, Executive Director, United States Atomic Energy Commission, re: low level radioactivity on part of Ontario Ordnance Works property; with attached public announcement to be made following November 19 meeting with property owners. (3 pages)
9. Memorandum to the File dated November 16, 1970, from W. B. McCool, Secretary of the Commission, re: Commission approval of paper at Information Meeting 1076, November 13, 1970. (1 page)
10. Memorandum to the File dated November 10, 1970, from W. B. McCool, re: Commission request at Information Meeting 1077, on November 9, 1970, to proceed with discussions with New York state officials and property owners. (1 page)

11. Memorandum dated January 19, 1971, from John A. Morris, Director, Division of Public Information, to the Commissioners, re: planned public announcement on AEC plans to decontaminate property near Lewiston, New York; with attached copy of proposed announcement. (3 pages)
12. Memorandum dated February 11, 1971, from Henry A. Fowles, Director, Division of Waste and Scrap Management, to the Commissioners, re: discussions with New York state officials on course of action for cleanup of low-level radioactivity. (2 pages)
13. Information Meeting Item November 9, 1970, entitled "Niagara Falls Site; Note by the Secretary"; with attached memorandum dated November 12, 1970, from John A. Eriewine to the Commissioners, re: arrangements for discussion of radioactive contamination problem at Niagara Falls site with New York state officials, and enclosed Notification Schedule and draft press release. (4 pages)
14. Information Item of November 5, 1970, entitled "Niagara Falls Site; Note by the Secretary"; with enclosed memorandum dated October 28, 1970, from S. A. Sapirle, Manager, Oak Ridge Operations, to John A. Eriewine, Assistant General Manager for Operations, re: radioactive contamination at Niagara Falls site, with (a) attached paper entitled "Background and Contamination of the AEC Niagara Falls Site", and (b) attached memorandum dated October 26, 1970, from W. A. Johnson, Chief, Health and Nuclear Safety Branch, re: October 1970 radiation survey of former Lake Ontario Ordnance Works site, with attached 3 pages of notes on Radiation Survey and one page outlining location of contaminated areas as surveyed. (13 pages)

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*AD-44*

September 8, 1980

A-44.

Coordination of FOIA Requests Re: Love Canal

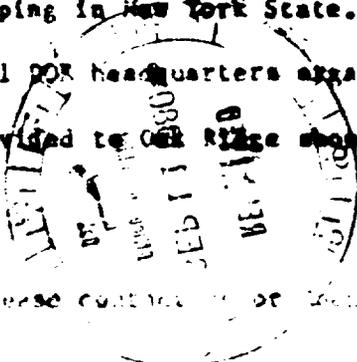
AD-44

Chief Historian (Acting), O/OSB

Gelhan

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This is to confirm the telephone conversation between Roger Anders and Spencer Gelband of my staff concerning the coordination of two FOIA requests concerning chemical waste dumping in New York State. This office will now coordinate a response from all DOE Headquarters organizations. Documents previously intended to be provided to Oak Ridge should now be provided to this office instead.



If you have any questions, please contact me or Spencer Gelband of my staff on 252-6025.

Original signed by Joseph Harris

Milton Jordan, Director  
Division of FOI and Privacy  
Acts Activities

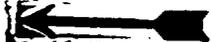
bcc: AD-40

AD-44

Official File (RF)

Case File

David Sarugh, Oak Ridge operations



AD-44:Gelband:jcp:252-6025:FOIR:58-138:9/5/80

PERSONNEL -  
FOIA

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July 24, 1980

If you have any questions regarding this request, please telephone the undersigned at (212) 488-7697. All written communications, and responses of documents, should be sent to the address indicated below. The Committee is prepared to undertake any reasonable measures to make compliance with this request as efficient and as economical as possible. If a substantial number of records are determined to be responsive to the request, review of the records by a representative of the Committee, prior to duplication, could be mutually arranged.

As provided in the FOIA, we expect to receive a response to this request within ten (10) working days.

Very truly yours,

*Michael P. Zweig*

Michael P. Zweig  
Special Counsel  
New York State Standing Committee  
on Environmental Conservation

New York State Office Building  
270 Broadway - Room 1514  
New York, New York 10007

MPZ:nw  
Enclosure

6-1043

FREEDOM OF  
INFORMATION OFFICE  
USDOE DHO

'80 JUL 29 PM 1:40

DEFINITIONS

1. "Record" means any written, typewritten, recorded, transcribed, printed, taped, photographic or graphic matter, whether sent or received or neither, including but not limited to notes, letters, memoranda, reports, drafts, files, notices, instructions, charts, telegrams, cables, telex messages, communications of any kind, graphs, maps, surveys, studies, diaries, photographs, diagrams, microfilm, microfiche, recordings, transcriptions, books, pamphlets, articles, handbooks, manuals, and periodicals.

2. "U.S. Government" means any past or present agency, department, armed services branch, quasi-public corporation, or any divisions and sub-divisions thereof, of the United States Government, including but not limited to the Departments of Agriculture, Defense, Energy, Justice, Army, Navy, Air Force, Reconstruction Finance Corporation, War Assets Administration, Metals Reserve Corporation, Defense Plants Corporation, Smaller War Plants Corporation, War Production Board, Army-Navy Munitions Board, Manhattan Engineer District ("MED"), Atomic Energy Commission ("AEC"), Energy Research and Development Administration, Nuclear Regulatory Commission, General Services Administration, and Environmental Protection Agency.

3. "Niagara Frontier Region" includes Niagara and Erie Counties.

4. "may include, among others," as used herein, should be read as indicating that to facilitate the initial record search, certain names and other information have been specified in the request; however, the record search should be inclusive and not limited to the items specifically described.

1117119

RECORDS REQUESTED

1. Contracts--All records constituting, relating or referring in any way to contracts, agreements, understandings or arrangements between the U.S. Government and any private corporation, concern or individual, relating to the manufacture, processing, transportation, storage or disposal of munitions, metals, gases, chemicals, toxic or hazardous substances, radioactive materials, wastes or residues in the Niagara Frontier Region in the period 1940-1960.

a) The above-mentioned private corporations or concerns may include, among others, the following:

1. African Metals Corp.
2. Bell Aerospace Co.
3. Carborundum Corp.
4. E.I. Dupont Co.
5. Durez Plastics and Chemicals Corp.
6. Electromet Corp. (Electrometallurgical-Union Carbide)
7. Hooker Electrochemical Co. (and its successor companies)
8. Knolls Atomic Power Laboratory, Schenectady, N.Y.
9. Massachusetts Institute of Technology
10. Oldbury Electrochemical Co.
11. Olin Corp. (and its predecessor and successor companies)
12. Stauffer Chemical Co.
13. Titanium Corp; Titanium Alloy Mfg. Co.; NL Industries
14. University of Rochester
15. Vanadium Corp.
16. National Lead of Ohio
17. Mathieson Alkali
18. Niagara Alkali
19. General Chemical Co.
20. Linde Air Products

b) The above-mentioned contracts, agreements, etc., may include, among others, the following:

- 1) All contracts between the Chemical Warfare Service War Production Board, U.S. Army, Manhattan Engineer District ("MED") or the Atomic Energy Commission ("AEC") and any of the companies listed in paragraph 1 (a) of this request.
- 2) All contracts between the AEC or MED or other U.S. Government agencies and the Knolls Atomic Power Laboratory relating to the "Chart of the Nuclides".

3) All contracts between the AEC or MED or other U.S. Government agencies relating to gaseous diffusion, or the production or processing of uranium hexafluoride or uranium tetrafluoride.

c) The above-mentioned contracts, agreements, etc., may include among others, the following:

1. Contract No. W 7405 Eng. 26
2. " " W 7405 Eng. 28 - *di*
3. " " W 7405 Eng. 280 *di*
4. " " W 7405 Eng. 94 - *di* *Mo*
5. " " W 7405 Eng. 75
6. " " W 7405 Eng. 76
7. " " W 7405 Eng. 14
8. " " W 7401 Eng. 14 - *Linde*
9. " " W 7405 Eng. 260
10. " " W 7405 Eng. 258 - *di*
11. " " W 7401 Eng. 49 *U of I*
12. Lease Contract No. W-2288-Eng-551 (Army Air Force)
13. Contract No. A-53-120-C (U.S. Navy)
14. Contract No. AF33(600) - 33060 (Air Force)
15. Contract No. DA-18-108-CML-5293 (Army Chemical Center-Olin)
16. Contract No. W-285-CWS-4848 (Hooker Electrochemical)
17. Contract No. W-18-103-CM-609 (Hooker Electrochemical)
18. Contract No. DA-30-070-CML-23 (Hooker Electrochemical)
19. Contract No. DA-30-115-ORD-PO-263 (Hooker Electrochemical)
20. Contract No. DA-30-115-ORD-841 (Hooker Electrochemical)
21. Contract No. OEM<sup>SR</sup> 696
22. Contract No. OEM<sup>SR</sup> 811

d) The above-mentioned contracts, agreements, etc., may relate to the production, processing or refining of, among others, the following substances:

1. arsenic trichloride
2. hexachloroethane
3. chlorinated benzene
4. Phosgene (carbonyl chloride)
5. thionyl chloride
6. Hexafluoroxylyene
7. polymeric trifluorochloroethylene
8. chloronaphthalene
9. defoliants
10. trinitrotoluene
11. lithium, lithium chloride
12. Boron X

*U-235, U-238 - ...*

2. Production and Disposal Records--All records constituting, relating or referring in any way to the manufacture, processing, transportation, storage or disposal of munitions, metals, gases, chemicals, toxic, hazardous or contaminated substances, radioactive substances, or wastes or residues (collectively "materials") in the Niagara Frontier Region in 1940-1960 by the U. S. Government, or any of its private contractors.

a) The above-mentioned records may include, among others, the following:

- 1) records reflecting the quantities of materials manufactured, processed, transported, stored or disposed of;
- 2) records reflecting the end uses or functions of these materials;
- 3) records reflecting the methods of waste disposal employed;
- 4) records reflecting the methods of transportation of these materials, including any U.S. Government manuals or regulations pertaining to the movement and transportation of toxic and hazardous wastes;
- 5) records reflecting the location of disposal sites, and the dates of disposal;
- 6) records reflecting the individual names and addresses of the U.S. Government and private personnel who were involved in the manufacture, processing, transportation, storage or disposal of these materials, including but not limited to, personnel at:
  - a) the private concerns identified in paragraph 1(a) above.
  - b) 71st Chemical Smoke Generator Company.
  - c) 190th Chemical Depot Company.
  - d) 40th Explosive Ordnance Disposal Unit.
  - e) all service commands units located in Niagara Falls, N.Y. during 1940-1960. (1202nd, 1206th, 1203th, 1217th, 3218th, 4206th, 4220th).

- 7) records reflecting the types of barrels and containers used for the transportation, or disposal of materials by the U.S. Government or by any of its private contractors.
  - 8) All regulations, policy manuals and statements governing, or relating to U.S. Government contracts with private contractors for the production and processing of the materials described above, including but not limited to the operation of government-owned, contractor-operated ("GOCO") plants.
- b) The above-mentioned records may include, among others, the following:
- 1) the New York Chemical Procurement District History (three volumes)
  - 2) the History of the Northeast Chemical Warfare Depot
  - 3) History of New York Chemical Warfare Procurement; production reports and weekly war letters
  - 4) History of the Niagara Falls Army Chemical Plant, and monthly reports
  - 5) Records of the New York Ordnance District
  - 6) Records of the Buffalo and/or Tonawanda District Engineers
  - 7) Records of the New York District Corps of Engineers
  - 8) War Department Technical Bulletin T B Eng-57
  - 9) War Assets Administration Manual of Operations 4-3, Part IX
  - 10) Madison Square Records of the "MED" (as to uranium waste inventory and storage locations)
  - 11) Manual of Operations, WD Form SB-5-52
  - 12) Manual W4-3, Memorandum of Understanding, Exhibit 10-1, Appendix A
  - 13) Activities of the Metals Reserve Corporation in Niagara Falls, N.Y.
  - 14) "P-45" facility located on Hooker Electrochemical site in Niagara Falls, N.Y. and sold to Hooker by U.S. in 1947

3. Contamination Records--All records constituting, relating or referring in any way to the chemical or radioactive contamination of any areas located within New York State, arising out of, or caused by the

transportation, manufacture, processing, storage or disposal of any of the materials described in paragraph 2.

a) The areas in New York State which may have been contaminated by chemicals, radiation or other toxic or hazardous substances may include, among others, the following:

- 1) "Love Canal," Niagara Falls, N.Y.
- 2) "Love Canal," Lewiston, N.Y.
- 3) Lake Ontario Ordnance Works
- 4) New York Ordnance Works
- 5) Seneca Ordnance Works
- 6) Areas surrounding plancors in Farmingdale and Syosset, Long Island, N.Y.
- 7) Air Force Plants 38 and 68, Lewiston, N.Y.
- 8) Aircraft Modification Center No. 7, Niagara Falls, N.Y.
- 9) 102nd Street (River Run) Dump, Niagara Falls, N.Y.
- 10) 66th Street School, Niagara Falls, N.Y.
- 11) Pine Avenue Bowling Alley and nearby commercial locations, Niagara Falls, N.Y.
- 12) Youngstown Test Annex, Youngstown, N.Y.
- 13) Hooker Chemical Corp., Niagara Falls, N.Y.
- 14) Niagara Falls Army Chemical Plant
- 15) Necco Park (duPont)
- 16) Somerset Group, Inc. - Industrial Park
- 17) Services Corp. of America (SCA) (formerly Chem-trol, Inc.)-disposal site, Lewiston, N.Y.

b) The above-mentioned records may include, among others, the following:

1. inspection or real property disposal reports or reports of excess property prepared by U.S. Government departments or agencies such as the Army Corps of Engineers, the War Assets Administration the Department of Agriculture, the Atomic Energy Commission, the General Services Administration, the Department of Energy, the Environmental Protection Agency, or private or independent contractors;
2. maps and photographs reflecting the areas of contamination;
3. decontamination certificates, inspection and other reports or records;
4. documents reflecting the methods used for decontamination, the costs of such efforts, and the results achieved;

5. any U.S. Government manuals or regulations pertaining to the standards and procedures used for decontamination by the U.S. Government or any private or independent contractors;
6. any records relating in any way to the storage, disposal and/or burial of lithium, lithium chloride, or potassium chloride at former Air Force Plant 68 in Lewiston, N.Y.;
7. any records relating in any way to the existence of cesium on the grounds of the former Lake Ontario Ordnance ("LOOW") site, or at Love Canal in Niagara Falls, N.Y.;
8. any records relating in any way to chemical or radioactive contamination of lands which were formerly part of the LOOW site, and were subsequently sold to private owners;
9. all reports prepared by the Industrial Research Corp. for the War Assets Administration, pursuant to Contract No. WS (p) - 402, dated October 16, 1947, concerning an industrial survey and appraisal of eleven surplus U.S. Army Ordnance Works locations at:
  - a) Badger Ordnance Works, Baraboo, Wisconsin
  - b) Gopher Ordnance Works, Rosemount, Minnesota
  - c) Keystone Ordnance Works, Meadville, Pa.
  - d) Kentucky Ordnance Works, Paducah, Kentucky
  - e) Oklahoma Ordnance Works, Pryor, Oklahoma
  - f) Plum Brook Ordnance Works, Sandusky, Ohio
  - g) New York Ordnance Works, Baldwinsville, N.Y.
  - h) Weldon Springs Ordnance Works, Weldon Springs, Mo.
  - i) West Virginia Ordnance Works, Point Pleasant, W. Va.
  - j) Lake Ontario Ordnance Works, Lewiston, N.Y.
10. any records relating in any way to animal experiments conducted at the University of Rochester involving biological uptake of radioactive isotopes, or the disposal of radioactive wastes from the University of Rochester at the Lake Ontario Ordnance Works or other locations in New York State.

## HISTORY OF AREA OFFICES - Reporting to New York

- LINDY
- HOOKER - P-45 production
- Roy Anderson and Lt accountability 'production officer. 1943 ENGINEER
- Berwin Robinson 1944 - CHEMIST

ELECTROMET - branch of UCC. reduction of UF<sub>4</sub> to metal

- Deepwater dyeworks - processing Uranium in N.J.
- Blue products area - P-45 ended-up.
- residues - distillate bottoms  
& fractions too light.

ELECTROMET, AMES IOWA, MALINKROOT - Deepwater - all made uranium metal.

Pyroforic - self inflammable.

### Reese Langley

- LOW - site transfer documents -
- restrictive covenants - uranium.
- prohibitions on use - garbage, refuse

## THE ROCHESTER STORY

### EARLY HISTORY

In March 1943, President Valentine summoned Dr. Stafford L. Warren to a luncheon conference for an undisclosed purpose. There Dr. Warren met Major General Leslie R. Groves and Colonel J. C. Marshall of the Manhattan Engineer District, and as a result of this meeting, Dr. Warren was appointed a Consultant to the Manhattan Engineer District on April 5, 1943. This appointment was later changed to Chief of the Medical Section.

At this meeting, it was decided that Dr. Warren would be responsible for the medical care and protection against health hazards of all the individuals who were to be working for the Manhattan Engineer District, whose secret goal was the development and production of the atomic bomb. The choice was an appropriate one, since Dr. Warren's research and published findings had all been in the general field of the effects on the human body of all types of radiation. Since 1925 he had been chief of the Department of Radiology of the University of Rochester School of Medicine and Dentistry and the Strong Memorial Hospital.

The two initial problems which faced Dr. Warren were: (1) to outline in detail a medical program for the Manhattan Engineer District and (2) to design and erect a building at Rochester in which could be organized a research group to investigate heretofore unexplored fields in medical research on the effects of radiation and other problems relating to the development and production of the atomic bomb.

### BUILDING, EQUIPPING, AND STAFFING THE "MEDICAL SCHOOL ANNEX" AT ROCHESTER

The first plans for the building were drawn in May, 1943 by Mr. Leonard Waasdorp, of Kaelber and Waasdorp. Urgency demanded that the

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building be ready for occupancy on September 1, 1943. The design required flexibility both as to the number of personnel to be housed and the type of work to be carried out.

Under the direction of Dr. Warren, the University of Rochester had recently (January, 1943) completed on Elmwood Avenue a two-story building for a new Million Volt X-ray machine which was purchased by Rochester industries to discover by means of X-rays defects in castings of gun mounts and other equipment being manufactured for the war effort. It was decided to utilize the presence of that building by constructing the new building adjacent to it. Ground was broken on June 2, 1943 and under the supervision of Mr. Chester Wallace, of the A. W. Hopeman & Sons Company, the new structure sprang into being and was ready for occupancy on the morning of September 1, 1943.

During the five month period of preparation and building, "Manhattan Department" personnel increased rapidly. The original staff consisted of Dr. Stafford L. Warren, Dr. William F. Bale, Dr. Andrew H. Dondy, Dr. Harold C. Hodge, Dr. Luville T. Steadman, Mr. Francis W. Bishop, and Miss Susan H. Glover. An accountant was soon added, then a clerk to handle clearance data for Army Intelligence, a purchasing assistant, and another secretary. For two months the office group was housed in one of the two rooms of Dr. Warren's quarters in the Medical School. Numerous conferences were held in his office, often continuing into the night. Meanwhile, in the outer room, the office force labored with unfamiliar Army procedure, employment regulations, Intelligence "screening," questions arising from the construction of the building, the budget; arranged interviews for new personnel; and in general cared for the numerous details involved in setting up the new organization. Within four months, the original small group grew to fifty or more, many working temporarily in offices and laboratories throughout the Medical School.

On the first of September, 1943, as planned, these new associates

consisting of guards, animal caretakers, laboratory technicians, a telephone operator, office workers and research staff, took possession of the new building, in which electricians, masons and carpenters were hastening to give the finishing touches. Furniture had been delivered but not placed, and some rooms and corridors still bore traces of construction dust, so the entire force, most of whom were meeting for the first time, took up brooms and dust cloths and cleaned, moved furniture and got reasonably well settled that first day. Many of the lines of the telephone switchboard had not been installed and the new operator placed the first calls while telephone men worked around her with cord and wire, completing the board. Gradually the construction men withdrew, the "Manhattan Department" established itself, and the new Medical School Annex was "open for business."

This building now houses 350 persons.

At the time the Manhattan Department at Rochester was created, most of the city's industries were well advanced in war work. The labor market for both trained and untrained help was therefore greatly depleted, and the problem of finding a sufficient number of personnel was a serious one. Nevertheless, a capable staff was recruited from many sources and localities: from universities, including the University of Rochester, from industry; from Rochester and surrounding communities, as well as from many states in the Union (viz., New York, Missouri, Minnesota, Tennessee, Pennsylvania, New Jersey, Wisconsin, New Mexico, Virginia, New Hampshire, Vermont, Illinois, Maine, Iowa, Oregon, Texas, Michigan, Indiana, Massachusetts, Florida, Washington, Connecticut, North Carolina, Alabama, Kentucky, West Virginia, Montana, California, Ohio, Georgia, and Nebraska.) In addition, many persons employed had been born in Canada, England, Scotland, Russia, Hungary, Denmark, Switzerland, China, and Germany. All of these individuals had to be carefully investigated, of course, to be certain that they were loyal American citizens, that they were discreet, and that they could be depended upon to keep secret work which contributed toward the development and production of the atomic bomb. Due to the shortage of trained personnel in some fields, however, certain

## Rochester Story

highly skilled and specialist Army personnel were assigned to participate in the Rochester program and they took an active part in planning and carrying out certain phases of the research.

Along with building and hiring, another problem of primary importance was to find the necessary scientific equipment, since the new Medical School Annex was to house numerous laboratories, all requiring precision instruments which were difficult to obtain. Part of this equipment was loaned by the Medical School and by Rochester industries. A considerable portion of it was transferred from Dr. Warren's peace-time laboratory. The remainder was purchased after much searching and often only with a high priority rating. First to be completed was the Hematology Laboratory, set up to "count" the red and white cells and the hemoglobin of the blood. This laboratory now employs 25 technicians, each doing 8 counts per day, or a total daily output of 200 counts, 6 days per week, or some 60,000 counts per year.

### PURPOSE OF THE ROCHESTER PROJECT

The program of the research to be carried out at Rochester was four-fold:

- (1) to analyze data of pre-employment physical examinations and of frequent re-examinations of personnel employed by the many atomic bomb plants all over the country, wherever these personnel were exposed to possible occupational hazards.
- (2) to advise these plants how to protect their personnel from exposure to radiation by (a) determining "tolerance standards" for doses of radiation; (b) developing instruments to measure the exposure which these workers received; (c) determining by measurement which areas in the plants showed the greatest intensity of radiation; (d) determining the amount of contamination of workers' clothing with radioactive materials, and (e) advising what precautions should be taken to safeguard the workers.
- (3) to determine how much uranium dust was inhaled or swallowed by the workers and thus possibly absorbed by the body.
- (4) to investigate, by research, the effects of exposure to radiation when received directly.

*Car. for day*

All this work was done in cooperation with an officer of the Army Medical Section of the Manhattan District, who travelled to the plants and to the research project at Rochester, thus keeping both groups, industrial and research, in touch with each other's work. Captain Joe W. Howland, of the Army Medical Corps, on leave from the staff of the Strong Memorial Hospital, was one of these liaison officers.

The work of the Rochester Project was coordinated with that of other university laboratories (Chicago, California, and Columbia) which were also working under the Manhattan Engineer District on special problems of their own.

Concurrent with Dr. Warren's problem of creating the research project at Rochester was his responsibility for the health of the thousands of employees going to Oak Ridge, Tennessee and to other atomic bomb plants. From cities throughout the country, including Rochester, he and his staff recruited doctors and nurses for the hospital at Oak Ridge. As the Medical Section grew and Dr. Warren's responsibilities to plant personnel increased, it became necessary for him to move his office to Oak Ridge which had become by this time the main headquarters of the Manhattan Engineer District under Colonel Kenneth D. Nichols, District Engineer. On November 2, 1943, Dr. Warren was commissioned a Colonel in the Army Medical Corps and left Rochester to be stationed at Oak Ridge, Tennessee, as Chief of the Medical Section of the Manhattan Engineer District.

ADMINISTRATION OF THE ROCHESTER PROJECT

The responsibility of administering the Manhattan Project at Rochester was entrusted to Dr. Andrew H. Dowdy, Associate Professor of Radiology at the University of Rochester School of Medicine and Dentistry. Under his direction fell all aspects of the research program at Rochester, as well as the administration of such general services to the Project as Employment, Army Intelligence clearance and security, Accounting, Purchasing, a Project Library, Photographic facilities, Project Health, and Building maintenance. In both these responsibilities he was assisted by Mr. Morey J. Wantman, Assistant Professor of Education, University of Rochester. The administrative services mentioned were under the direct responsibility of Miss Susan H. Glover, Mr. William E. Weller, Jr., Mrs. Delva Bryan and Mr. Leo Krejci, Miss Wilma Kujawski, Dr. George M. Suter, Miss Virginia Shannon and Mrs. Thelma I. Sprague, and Mr. Norman Oakes.

THE RESEARCH PROGRAM

The research project was organized by Divisions, each division being responsible for a different aspect of the program. Of the ten Division Heads, eight were formerly associated with the University of Rochester.

I. DIVISION OF SPECIAL PROBLEMS: Dr. William F. Bale, Associate in Radiology,  
The University of Rochester School of Medicine  
and Dentistry

The Division of Special Problems was concerned primarily with devising and developing electronic instruments to measure the amount of radiation exposure in plants engaged on atomic bomb work. The members of this Division worked with the Eastman Kodak Company and other Rochester industries to obtain materials and parts with which to build these instruments.

Much has appeared in the newspapers about the measurements which were made at Santa Fe and later at Hiroshima and Nagasaki, to discover if radioactivity were present in the ground following the dropping of atomic bombs. Some of the instruments used were designed and made at the Rochester Project. The Division of Special Problems sent personnel and instruments by air to accompany ~~Major~~ Major General Farrell and his group to Japan.

This Division also worked in daily contact with the many industrial plants all over the country who were working for the Manhattan Engineer District, shipping to these plants and receiving from them "film badges" and "breath samples" from their employees. By measuring the amount of radiation exposure, as indicated by the density of the films, or by the degree of saturation of the samples taken from workers' breath, the Rochester group was able to assure the plants that their employees were not working under undue hazards. In addition, the researchers studied the indirect effects of radiation by discovering how much, if any, was being "scattered" throughout the plant. This was accomplished by having workers wear, on their clothing, "dental film" obtained through Mr. Rex Wilsey of the Eastman Kodak Company. The films were then developed and if they remained clear, no radiation had reached the individual. If the film was clouded, some radiation had reached the individual. This information aided plant managers in deciding when and where employees needed to wear lead rubber gloves, lead rubber aprons, and other protective devices against radiation.

Furthermore, instruments were developed by Dr. Bale's group to "prospect" for radium and uranium which occur together in nature. Still other instruments developed at Rochester were used in the separating process to make sure that no valuable radium or other radioactive substances were lost.

## (I. Div. of Special Problems, cont.)

A. Physics Section: Dr. Gerhard Dessauer, Assistant Professor of Physics,  
University of Rochester

In addition to the Million Volt and other X-ray machines and the ultra-violet spectrograph, the University of Rochester's Cyclotron was employed on the work of the Project. Housed in the basement of the Bausch and Lomb Building on the River Campus, suitable precautions were taken so that only Manhattan personnel had access to the instrument while it was being used for Project work. An extensive program, allied with that of the Division of Special Problems, was undertaken by a group headed by Dr. Gerhard Dessauer, Assistant Professor of Physics. Among other things, the cyclotron was used by the Division to generate neutrons for the calibration of ionization chambers, and instruments were developed for the detection and measurement of neutrons and gamma radiation.

It is fitting that Dr. Dessauer should have had a part in the atomic bomb project. Born and educated in Germany, he is the son of a renowned radiologist who, at the time of the Nazis' rise to power, was a member of the political party which had tried to establish a democratic government. Because of their anti-Nazi sympathies, the Dessauer home was razed, Gerhard's mother and father fled to Switzerland, while he came to this country. He has been associated with the University of Rochester since 1939 and with the Manhattan Project since the fall of 1943.

II. DIVISION OF PHARMACOLOGY: Dr. Harold C. Hodge, Associate Professor of Biochemistry and Pharmacology, University of Rochester School of Medicine and Dentistry

This large Division was given the task of determining the toxicology and pharmacology of uranium compounds and of establishing criteria for tolerance levels. It was divided into five major sections:

A. Section on Inhalation: Dr. Herbert E. Stokinger, Research Associate in Bacteriology, University of Rochester School of Medicine and Dentistry

This group built large "chambers" into which were blown known amounts of various radioactive dusts. By placing different species of animals in these chambers, tests could be made to determine how much dust an animal could inhale safely. The Engineering Section worked in close cooperation with this group since the chambers presented many difficult engineering problems and many instruments had to be devised to blow the dust into the chambers in known concentrations. (This type of study is commonly carried out by large industrial concerns, and comes under the classification of experimental industrial hygiene.) The chambers were similar to those used at the National Institute of Health at Bethesda and at the Federal Government's Bureau of Mines at Pittsburgh.

B. Section on Pharmacology: Dr. Frances L. Haven, Associate in Biochemistry, University of Rochester School of Medicine and Dentistry

The research staff of this group devised methods of analyzing the urine of employees in the bomb plants to determine the extent of exposure. Their methods enabled them to detect as little as 1/5,000,000,000 of a gram of uranium in the urine. The 25,000 rats, bred for this laboratory in the

Project's rat colony, were fed various uranium compounds used in the manufacture of the atomic bomb. Tissues of these animals were studied to detect possible changes.

This group also studied the relative merits of different methods and agents to be used in washing the work clothes of employees in the plants in order to find a satisfactory laundry process which would eliminate all residue of radioactive material.

C. Analytical Chemistry Section: Dr. John F. Flagg, Assistant Professor of Chemistry, University of Rochester

The Smyth Report has discussed the recovery of processed uranium compounds from the separation units. The Analytical Chemistry laboratory at Rochester devised methods for recovering small amounts of uranium from solutions containing large amounts of contaminating substances, introduced when the separation units were cleaned out. Since uranium is very valuable it was important to recover as little as one ten-millionth of an ounce from each gallon of solution used to clean out the separation units.

Uranium and radium are always found together in nature. Hence when an ore is processed for uranium, care must be taken to avoid loss of the valuable radium. This laboratory studied methods for making rapid and complete separation of the radium from the uranium. Methods were also developed for determining the amounts of radium present in ores and other materials containing as little as a few billionths of an ounce of radium.

D. Mechanism Section: Dr. Alexander Dounce, Instructor in Biochemistry,  
University of Rochester School of Medicine and Dentistry

This group developed methods for the detection of the earliest signs of uranium toxicity. The most modern analytical tools (such as the polarigraph) were used on these problems.

E. Engineering Section: Captain Geoffrey Goring and Sgt. Neil Murphy, *Army*,  
Corps of Engineers

This group, composed of Army Engineers, designed many unique types of dust chambers and was responsible for the operation, maintenance, and safety of these chambers. Safety features comparable to those used in industrial plants were included in the design of the chambers on the Rochester Project.

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Various other problems were of interest to the Division of Pharmacology: analyses of teeth to detect radiation effects; analysis of drinking water near plant sites to discover the content, if any, of radioactive material; effects of different diets upon animals exposed to the inhalation of uranium dusts.

III. RADIOLOGY DIVISION: Dr. Robert D. Roche (on leave of absence from the University of Pennsylvania, who was engaged during peacetime in investigations on cell physiology and the mechanism of radiation effects. Before coming to Rochester, he also worked on medical research for the Office of Scientific Research and Development.

By using a General Electric Million Volt X-ray machine and other radiation therapy machines built by the Picker X-ray Corporation, various species of animals were given known amounts of daily radiation over long periods of time to determine what physiological changes occurred in the body as a result of exposure to varying amounts of radiation. The purpose of this study was to enable the investigators to make an estimate of the amount of radiation exposure which could be safely tolerated by human beings.

In addition, series of animals were exposed to single large doses of radiation to determine what amounts of acute radiation could be tolerated by a population in the event of accident or enemy action.

A program similar to that for high voltage x-radiation was carried out by using neutron radiation produced by a cyclotron.

A large series of experiments was carried out to determine the most efficient means of combatting the physiological effects of chronic and acute radiation. Very extensive data were obtained on animals with regard to chemical changes taking place in the blood, tissue, and urine.

A series of physiological investigations was carried out, designed to throw light on the mechanism of intoxication observed after acute radiation exposure, and these results may have an important bearing upon the treatment of shock encountered in ordinary medical practice.

It was also important to learn what effect, if any, the handling of radioactive material had upon the skin. Mr. Francis W. Bishop, Associate in Radiology, the University of Rochester School of Medicine and Dentistry, conducted a study of the effects on the skin of very soft x-radiation and beta radiation from radioactive sources. Dr. Roger Harvey, Assistant Professor of

Radiology, the University of Rochester School of Medicine and Dentistry, worked out a method of taking finger impressions in wax. As a background for his data he obtained such impressions first from doctors and dentists throughout the country who had been handling radium or operating x-ray and therapy machines during various years of practice. As a result of this study, and by obtaining finger impressions on employees handling radioactive materials in bomb plants, he was able to discover when, if at all, these employees were beginning to show changes in the skin of their hands as a result of contact with such materials.

Finally, experiments were carried out which involved irradiating the fingers of monkeys to determine the relation between dosage and degree of change and the extent to which these changes might be detected before damage occurred.

UNIVERSITY OF ROCHESTER  
University of Rochester

Dr. Curt Stern, Professor of Experimental Zoölogy,  
University of Rochester (Consultant)

and Dr. Warren P. Spencer, Professor of Biology, Wooster  
College (on leave), and Research Associate in Zoölogy,  
University of Rochester

Studies were undertaken by this Division to investigate what effects, if any, were produced on offspring whose parents had been exposed to radiation.

Dr. Charles' laboratory bred and studied 277,400 mice and the laboratory of Drs. Stern and Spencer studied some 50 million fruit-flies, Drosophila melanogaster.

Rochester Story

V. HEMATOLOGY: Dr. George M. Suter, Instructor in Medicine and Assistant Physician, The University of Rochester School of Medicine and Dentistry and Strong Memorial Hospital and (formerly) ~~xxx~~/ Fred Capt. Army Medical Corps A. Bryan, also of the staff of the Medical School and Hospital (on leave).

In conjunction with the work done by the Divisions of Pharmacology, Radiology, and Special Problems, the Hematology Division studied the effects of analyses on the blood which had to be done on large groups of animals, and a laboratory was set up for "mass production." This laboratory carried out over 100,000 complete analyses, which included a study of red and white blood cells and other important formed elements of the blood. The object of these studies was to establish safety levels for workers in the plants.

Periodic blood counts were also taken of the personnel working on the Rochester Project.

VI. BACTERIOLOGY: Captain Roger G. Matcok, Army Medical Corps

Representative experimental animals of various species were autopsied and their organs were examined grossly and microscopically. From these findings an estimation was made of the type and extent of the injury to body tissues as a result of various methods of exposure. This work was correlated with other experimental data as a means of setting safe levels of industrial exposure.

VII. INSTRUMENTS: Mr. Francis W. Bishop, Associate in Radiology, University of Rochester School of Medicine and Dentistry and Mr. Norman G. Oakes

Many of the divisions required special instruments for a specific purpose which either were unobtainable or had not yet been designed. The Instrument Division aided in the design and construction of such instruments and apparatus.

VIII. SPECTROCHEMISTRY: Dr. Luville T. Steadman, Associate in Radiology,  
The University of Rochester School of Medicine and Dentistry

This Division worked in close coöperation with the Pharmacology Division. Through the use of an ultra-violet spectrograph and other specially designed equipment, Dr. Steadman, with the assistance of Dr. Herbert E. Thompson, Jr. and others, determined to what extent, if any, heavy metals were appearing in the urine of employees in the bomb plants, or in the tissues of experimental animals. Prior to the war, Dr. Steadman had used the ultra-violet spectrograph at the Medical School to determine evidence of lead poisoning, arsenic poisoning, and other pathological conditions sometimes present in industrial workers as a result of long and continued handling of metals.

IX. VETERINARY: Dr. Donn E. Bacon, Veterinarian  
and Dr. L. J. Dason, Veterinarian Consultant

It is essential, of course, that laboratory animals be properly cared for with respect to housing, cleanliness, feeding and general state of health, both for the well-being of the animals themselves and to prevent the introduction of extraneous factors which might affect the validity of the experimental results. Dr. Donn E. Bacon, Veterinarian, was responsible for maintaining high standards of health and general care in the Project's animal colonies. Also available, on call as a consultant, was Dr. L. J. Dason, local Veterinarian.

X. STATISTICS: Mr. Morey J. Wantman, Assistant Professor of Education, University of Rochester, and Mr. David V. Tiedeman, formerly Head of the Test Construction Department, College Entrance Examination Board

Experimental data collected by the various Divisions were here subjected to statistical analysis. This insured uniformity of treatment of all data and facilitated the coördination of results in determining the effects of irradiation and uranium on several species of animals. In addition, this

Division was able to evaluate the accuracy of some of the indicators used in the experimental procedures. More than 400 different groups of data were studied.

With the aid of International Business Machines' electrical tabulating equipment, data on case histories of employees working in atomic bomb plants were periodically examined to insure against health hazards.

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The success of the work ~~at Rochester~~ throughout the country, depended almost entirely upon cooperation. Many scientists participated, many industries were involved, many University facilities were being used, but without the inter-relationship of all of those in the Manhattan Engineer District program, on a cooperative basis, the atomic bomb project would undoubtedly have failed. So too, within the organization at Rochester, the production of reports and the contribution of data to the project depended upon the 'teamwork' of the various divisions. It was the combination of radiologists, physicians, chemists, biochemists, physicists, biologists, geneticists, statisticians, engineers, instrument makers, specialist Army personnel, technicians and secretaries - all planning and working together - that resulted in successful accomplishment. This joint effort may be illustrated by the way in which a single experiment or group of experiments was planned and carried out. A 'planning conference' was held, attended by a representative of each division which was to participate in the work. An idea was outlined and discussed, then the group decided the course of the experiment: what work was to be done, the number of personnel in various divisions to be assigned, the schedule to be followed. In this way the resources available were used to best advantage and as a result the industrial plants received answers to their problems with a minimum of delay.

AREA ENGINEER

The Manhattan Engineer District assigned a young engineer, Lt. Ray C. Armstrong, formerly attached to the Engineer District at Syracuse, as Area Engineer. He supervised the design and construction of the building. When, early in 1944, it was found that the building was too small, the 'grey tail' was added, again under his general guidance in cooperation with the same architect and builder. After some fourteen months of service at Rochester, Lt. Armstrong was transferred to Oak Ridge.

He was replaced at Rochester by Major Samuel S. Baxter, who before the war had been associated with the engineering department and public works department of the City of Philadelphia. In the Army Engineer Corps, Major Baxter was the first town manager of Oak Ridge, Tennessee, and later supervised the design of a large portion of the town.

There is an amusing story of an incident which occurred at the height of the publicity on the dropping of the atomic bombs. When the secret was first released, the newspapers had attempted to interview Major Baxter, the Area Engineer of the Rochester Project. However, he was under strict orders to divulge neither the part played by Rochester nor his own part in it, and could tell the papers nothing. One day Major Baxter went shopping downtown. As he stood before a store window, a young woman tapped him on the arm and said, "Major, I represent the DEMOCRAT AND CHRONICLE. Have you any opinion you would like to express about the atomic bomb?" Little did the reporter realize whom she had questioned when the Major stammered that he had no opinion and hastened into the store.

## MISCELLANEOUS

Several species of animals were studied: 200 monkeys, 675 dogs, 20,000 rats, 277,400 mice, 100 hamsters, and 1200 rabbits. Much care was taken to assure proper housing and feeding, cleanliness, and high standards of health.

Despite such concern for their well-being, occasionally the monkeys, true to their nature, became curious about the outside world, and one fall day one of them succeeded in escaping from his roof-top home. The chase, which ranged from the Power House roof, to Genesee Valley Park, in and out of residential sections, to the River Campus where he even attended a football game, caused a good deal of merriment and conjecture in the newspapers. He was finally lured by an apple into an ingenious box 'trap' whose door closed when he investigated the 'bait.' Upon his return home, it was found that during the two weeks in which he was eating where and what he chose, he had gained some two pounds, a considerable weight gain for a monkey. Contrary to popular belief, this monkey was a healthy 'control' whose chief value to the Project lay in his ability to live a carefree life to a 'ripe old age' under conditions of ease.

Although it is rare in captivity, one of the female monkeys gave birth to a baby monkey which the Project named "Martini." Martini accompanied her mother wherever she went and protested loudly against any curious personnel who came to stare at her.

THE KELLEX CORPORATION

25

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BARCLAY 7-4000

WOOLWORTH BUILDING  
233 BROADWAY  
NEW YORK, N. Y.

ADDRESS REPLY TO

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~~SECRET~~

April 23, 1943

Mr. J. H. Babcock  
Hooker Electrochemical Co.  
Niagara Falls, N.Y.

Dear Mr. Babcock:

It appears that I neglected to notify you of the meeting held at duPont on April 21 to discuss specifications on fluorocarbons and particularly on hexafluorxylene. I had assumed that Dr. Wojcik knew about the date of this meeting and I want to apologize for my error.

Another meeting of the group to discuss specifications will be held on May 5, 1943 at 9 A.M. in Dr. Elley's office. It will be desirable to have either you or Dr. Wojcik, or both of you, present at this meeting to adopt specifications on hexafluorxylene. It will not be necessary for you to attend the entire meeting, so that if you can arrange to be there part of the meeting, we can schedule the discussion of hexafluorxylene specifications at the time that you will be present.

In connection with these specifications on hexafluorxylene, I mentioned to Mr. Murray by telephone that it was agreed at the meeting on the 21st to arrange for Dr. Henne to fractionate a sample representing a satisfactory commercial product in order that he may obtain high purity hexafluorxylene for standardization purposes in connection with the determination of benzotrifluoride content. I suggested to Mr. Murray that a quart sample for this purpose be sent to Dr. A. L. Henne, Ohio State University, Columbus, Ohio. I also told Mr. Murray that Dr. Barnes has informed me that he will require only 15 cc samples for his analytical work and the larger samples are not at present required.

~~SECRET~~  
~~FINAL INFORMATION~~  
~~UNCLASSIFIED~~

Very truly yours,

By:

RR:GT Date:

RAPHAEL ROSEN

*P.F. Brown 10-6-80*

BCC: Dr. W. E. Miller  
Dr. H. T. Wensel  
Mr. J. H. Arnold

~~THIS DOCUMENT CONTAINS INFORMATION AFFECTING THE NATIONAL DEFENSE OF THE UNITED STATES WITHIN THE MEANING OF THE ESPIONAGE ACT, 50 U.S.C. 31 AND 32, THE DISCUSSION OR THE REVELATION OF ITS CONTENTS IN ANY MANNER TO AN UNAUTHORIZED PERSON IS PROHIBITED BY LAW.~~

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BY AUTHORITY OF *ROC*  
BY *Kell* DATE *10/6/80*

1117145

SURVEY OF WASTE DISPOSAL SITES FOR CERAMICS PLANT

In view of the fact that the recovery obtained from domestic concentrates with the present process has averaged around 87%, the Army has felt that the waste materials from the Ceramics Plant should be stored on a site so that they can rework it at a later date if a suitable process is developed. No definite figure for the extractions has been given, but it appears that if 40 pounds per ton of dried cake (98% extraction) can be achieved, the waste material could be completely discarded. During the time that a suitable process for attaining this increased recovery is being developed, a temporary waste disposal site must be found.

In the selection of a site for storage, many factors must be considered:

1. Mileage for trucking.
2. Hard surfaced roads maintained throughout the year.
3. Safety precautions, such as a fence and guards.
4. Health precautions, such as dikes, drainage, and possibly a sprinkler system to prevent dust.
5. Roadways on the property.

With these items in mind, Mr. E. J. Dempsey of the New York Office surveyed the adjacent locality to the Ceramics Plant and developed several properties that might serve the intended purpose. Each of these properties will be discussed in detail and an overall cost survey for the disposal operation estimated.

1. The New York Central Property - at the foot of Woodward Avenue, entrance by way of Kenmore Avenue.

This site consists of 10 acres with a rental value of \$1,535 per annum subject to cancellation by us in 30 days. An additional \$200 will be required to displace the present tenant.

The accessories required to make this property operable are:

- |  |         |
|--|---------|
| a. Fence - estimated 3,000 ft. at \$2.50 per running foot                              | \$7,500 |
| b. Guards - there is a possibility that guards will be required on this property       | ?       |
| c. Sprinkler system - assuming sprinklers on 20 foot centers, 1,000 heads are required | \$4,500 |

d. Roads - by way of Kanmore Avenue 1,000 feet of roadway with improved roadway are required to enter the property. In addition, topping for this low, undrained land at \$400 per day.	\$10,000
e. Dikes - 3,000 feet, 4 feet high	\$ 8,000
f. Drainage - will be required but it is doubtful if suitable drainage can be obtained on this property.	?
g. Mileage - 1.6 miles or \$3.84 per truck per day	_____
	\$31,535

2. Erie County Property - either north or south off Zimmerman near junction with Sheridan Drive extension.

This site consists of 10 acres with an estimated rental of \$ 250 per annum.

a. Fence - 3,000 feet at \$2.50 per running foot	\$7,500
b. Guards - not required	
c. Sprinkler system - not required	
d. Roads - 500 feet entrance Topping - \$400 per day	\$5,000
e. Dikes - 3,000 feet, 4 feet high	\$8,000
f. Drainage	?
g. Mileage - 1.8 miles or \$4.32 per truck per day	_____
	\$20,750

3. Decker Property - by way of River Road.

This site consists of 25 acres obtainable on a rental basis at \$3,000 per annum.

a. Fence - 3,000 feet at \$2.50 per running foot	\$7,500
b. Guards - not required	
c. Sprinkler system - not required	

d. Roads - 1,000 feet	\$10,000
Topping - \$400 per day	
Grading - ?	
e. Dikes	!
f. Drainage	!
g. Mileage - 3.9 miles or \$9.36 per truck per day	
	<hr/> \$20,500

4. Haist Property - by way of River Road or by way of Sheridan Drive extension and an easement from the New York Central to the back half of the property.

The back half of this site consists of approximately 20 acres which can be obtained for an annual rental of \$4,000 guaranteed for a three-year period. Sale price \$10,000  
 An easement will be granted over the front half of the property revokable on 60 days' notice by the lessee. An easement from the New York Central to cross the spur to Frontier Fuel Oil Company estimated at \$20 to \$30 per annum.

a. Fence - not required	
b. Guards - not required	
c. Sprinkler system - not required	
d. Roads - (1) by way of River Road bridge only at \$300	
(2) by way of New York Central Property	
500 feet at \$10 a foot	\$5,000
Topping - doubtful      \$250 per day	
e. Dikes - not required	
f. Drainage - not required	
g. Mileage - 3.6 miles by way of River Road	
\$5.64 per truck per day	
2.0 miles by way of New York Central	
\$4.80 per truck per day	
	<hr/> \$15,000

5. Linde Property

The area now leased to the U. S. Army and is not occupied by buildings consists roughly of a site 400 by 200 feet with 5,000 cu. ft. per day of waste material to be disposed. This area will be filled to a depth of one foot in 16 days.

This area may also be valuable for (1) lead vanadate cake storage, (2) storage for African ore, and (3) expansion for Step I to improve the recovery if this course is further necessary. This site is inadequate for the needs for even one month.

Recapitulation

From the survey of the above sites and from the figures given in the cost estimates above, it appears that the most feasible proposition is the Haist Property.

It may be possible to buy outright only the back quarter of the Haist Property which would still further reduce the cost for this site.

It is our recommendation that the Haist Property be either bought or leased for the waste disposal from the Ceramics Plant. If possible, only the back quarter of the property might be obtained. Due to the revokable easement on the front portion of the property, it is felt that the 500 foot road across the New York Central right of way should be built.

---

EJCelmer:DBB

Ceramics Plant  
Tonawanda, New York

June 16, 1943

MEMO ROUTE SLIP Form AIC-91 (Rev. May 14, 1947) AICM 4-40		See me about this. Note and return	For concu... For signat...	For action. For information.
TO (Name and unit) Joe Lenhard Safety Div.	INITIALS  DATE	REMARKS This report may be of interest due to current and concern on environment		
TO (Name and unit) (1) W. Johnson	INITIALS  DATE	REMARKS followed It's our only copy		
TO (Name and unit)	INITIALS  DATE	REMARKS BMR Would it make a copy?		
FROM (Name and unit) B M Roberts	REMARKS	See Log no 862  8-437-1000		
PHONE NO.	DATE			

USE OTHER SIDE FOR ADDITIONAL REMARKS

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UNITED STATES  
ATOMIC ENERGY COMMISSION

OAK RIDGE OPERATIONS  
P.O. BOX E  
OAK RIDGE, TENNESSEE 37830

AREA 1-201, 615  
TEL. (615) 484-4611

May 7, 1970

3198

B. M. Robinson  
Production Division

DECLASSIFICATION REVIEW

The May 7 review of "Ground-Water Condition in the Buffalo Area, New York in Relation to Radioactive-Waste Disposal by the Atomic Energy Commission" by Theodore Arnow revealed that it contains no information classified under current guidance.

The "Restricted" markings have been canceled; this memo is your authority to cancel the markings on all copies in your possession and to notify all holders.

*Dewey E. Large*

Dewey E. Large  
Asst. ORO Classification Officer

O:DEL

Enclosure:  
Document

cc: J. A. Lenhard  
J. H. Kahn, HQ

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3192

Ground-water Condition in the Buffalo Area, New York  
in Relation to Radioactive-Waste Disposal  
by the Atomic Energy Commission

By

Theodore Arnow

CLASSIFICATION CANCELLED  
DATE 5-7-76  
For The Atomic Energy Commission  
*L. R. Mickner*  
Classification Officer, ORO

U. S. Department of the Interior  
Geological Survey

Albany, New York

March 1, 1949

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Ground-Water Conditions in the Buffalo Area, New York,  
in Relation to Radioactive-Waste Disposal

by the Atomic Energy Commission

By Theodore Arnow

\*\*\*\*\*

Introduction

In the course of its work in the Buffalo area, New York, the Atomic Energy Commission has found it necessary to dispose of substantial quantities of liquid radioactive wastes. These liquids have been dumped on the ground at two separate, relatively isolated areas. One is a fenced area located within the boundaries of the Lake Ontario Ordnance Depot (fig. 1); the other site is a small fenced enclosure, called the Waste area, which is approximately 2.5 miles southwest of the city of Tonawanda (fig. 2).

It was originally thought that the radioactive liquids would seep into the ground, and by gradual dispersion and finally by fixation (absorption or adsorption) to the soil particles and ultimate decay of radioactivity would be rendered harmless. The question arose, however, of the possibility of the liquids percolating to the water table, and while still highly radioactive move to areas where ground water was being withdrawn by wells for domestic, industrial, or other use; or eventually seep into nearby streams and contaminate supplies withdrawn from them. With this problem in mind, the Atomic Energy Commission requested the U. S. Geological Survey to make a brief investigation to determine ground-water conditions in the disposal areas. About 10 days was spent in the field by personnel of the U. S. Geological Survey to obtain the necessary data. The present report is based upon this field work and on

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previous reports by Grabau 1/ and Goldring 2/ covering the geology of the region.

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1/ Grabau, Aradeus W., Guide to the geology and paleontology of Niagara Falls and vicinity; New York State Mus. Bull. 45, 1901.

2/ Goldring, Winifred, Handbook of paleontology for beginners and amateurs, Part 2; The formations; New York State Mus. Handbook 10, 1931.

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#### Lake Ontario Ordnance Depot

The Lake Ontario Ordnance Depot is located in Niagara County, New York, near the mouth and on the eastern side of the Niagara River (fig. 1). When the depot was constructed for the U. S. Army during World War II, a filtration plant was installed to treat water taken from the Niagara River. Sometime after deactivation of the depot, the tanks at the filter plant were put into use for storage of radioactive liquid wastes produced during Atomic Energy Commission operations in the Buffalo area. When these tanks became full, additional liquid wastes were poured out upon the ground in the immediate vicinity. The surficial extent of the area at the depot contaminated by radioactive wastes is shown on figure 1.

When the radioactive liquids sink into the ground they may reach the subsurface drainage system and move laterally in either of two aquifers: (1) the bedrock, and (2) the unconsolidated overburden. The bedrock underlying the Lake Ontario Ordnance Depot consists of the Queenston shale, of Ordovician age. This rock is a bright-red sandy shale of uniform physical character. It is very friable and ultimately weathers into a dense, sticky red clay. This shale has a maximum thickness of about 1,200 feet and dips very gently toward the south. Records of yield for four wells that tap the shale show an average yield of less than 2 gallons per minute, thus indicating

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an aquifer of rather low permeability which would not be conducive to rapid movement of liquids. Records for wells located at the depot indicate that the Queenston shale lies about 40 feet beneath the land surface in the vicinity of the radioactive-waste disposal area.

The unconsolidated materials which overlie bedrock (the Queenston shale) at the depot consist largely of a reddish clayey glacial till. In the north and northeast sections of the depot several lenses of sand and gravel are included in the till, but the overburden in the immediate vicinity of the disposal area consists almost entirely of red and gray clay which in places grades upward into till. (See table 2.) The clay and till are of very low permeability and yield only small quantities of water to dug wells. Movement of liquids through these deposits is extremely slow, and because of this an extensive area underlain by these materials often becomes marshy during and following heavy spring rains. A mechanical analysis made of a sample of soil collected near the waste disposal area shows the following results: 3/

---

3/ Soil survey of Niagara County, N. Y.: U. S. Dept. Agr. Bur. Soils, Field Operations, p. 95, 1906.

---

	<u>Percent by Weight</u>
Clay . . . . .	45.7
Silt . . . . .	48.0
Very fine sand . . . . .	3.5
Fine sand. . . . .	1.2
Medium sand. . . . .	0.4
Coarse sand. . . . .	0.3
Gravel . . . . .	0.0
	<u>99.1</u>

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Considering the lithologic character and thickness of the overburden, it is unlikely that radioactive liquid wastes discharged over the land surface of this area would percolate in comparatively large quantities down to the bedrock. Rather, it is more probable that they would penetrate only the upper quarter of the overburden. Figure 1 shows a contour map of the water table in the depot area based upon measurements made in dug wells penetrating the overburden. The measurements were made during the 4 day period June 15 to 18, 1948, during which time there was no local rainfall. The contours show that the slope of the water table is northward at an approximate rate of 10 feet per mile. Any radioactive liquids that might reach the water-table would, therefore, move northward toward discharge points at springs, streams, or pumped wells.

The water supply at a number of farms and houses in the vicinity of the depot is obtained from wells. Of the 27 wells for which records were collected in the immediate vicinity of the ordnance depot (see table 1), 22 draw ground water from the unconsolidated overburden and 5 tap the bedrock. Twenty of the wells supply water for domestic or farm use, one serves commerce, and six are not in use. Well Ni 4, 0.3 mile to the southwest (see fig. 1), is the nearest well up gradient from the waste-disposal area. This well was not in use when visited, but the owner stated that he intended to start using it for domestic purposes in the near future. The nearest wells on the down gradient side are Ni 22 and Ni 25, 1.1 and 1.3 miles distant, respectively, from the disposal area. Both wells tap the overburden and supply water for farm purposes.

The natural surface drainage of the area embracing the Lake Ontario Ordnance Depot consists of three small streams, Fourmile, Sixmile, and Twelvemile Creeks, which drain north toward Lake Ontario. When the depot was constructed an extensive series of east-west and north-south drainage ditches were installed. All these ditches drain into a central master drainage

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ditch (fig. 1) which follows part of the old course of Sixmile Creek and eventually empties into Fourmile Creek. The master drainage ditch passes within 100 feet of the western boundary of the waste area. Mr. Balcom, owner of well Ni 28, and Mr. Sanderson, owner of well Ni 29, both stated that <sup>their</sup> stock-water supply is obtained from Fourmile Creek downstream from the point where the master drainage ditch discharges into the creek. Mr. Sanderson stated also that several other farmers living downstream from his property water their stock from Fourmile Creek, and that water is taken from the creek for irrigating a nearby golf course.

Water samples for chemical analyses were collected from well Ni 5, up gradient from the disposal area, and wells Ni 22 and Ni 25, down gradient from the disposal area. These wells tap the overburden. A sample was also obtained at well Ni 8 which is due south (down the dip of the bedrock formations) of the disposal area and draws water from bedrock.

In addition, two samples were obtained from Fournail Creek; one upstream and one downstream from the point at which the master drainage ditch discharges into the creek. The sampling points are shown on Figure 1 and the chemical analyses are given in table 3.

#### Conclusions and Recommendations

All the surface drainage from the contaminated area is carried into the master drainage ditch. This ditch lies within 100 feet of the western boundary of the disposal area, and it is entirely possible, therefore, that it also receives seepage directly from the disposal area. This is a factor that should be determined. When the area was visited in June there was no continuous flow in the central drainage ditch from the disposal area to the outlet at Fourmile Creek. Continuous flow does exist during some other seasons of the year, however, and at such times, if radioactive liquids entered the ditch at the

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points at the seasons when there is a continuous flow through the central drainage ditch.

#### The Haste Area

Before disposal was begun at the Lake Ontario Ordnance Depot, the radioactive wastes were discharged upon the ground at the Haste area (see fig. 2). This area consists of a fenced enclosure, containing approximately 6 acres, located near the Grand Island-Tonawanda Bridge, 2.5 miles southwest of the city of Tonawanda. Since disposal of wastes began at the Ordnance Depot approximately <sup>1947</sup> 2 years ago, no additional radioactive wastes have been dumped at the Haste area.

The bedrock underlying the Haste area is the Salina formation, of Silurian age. The Salina in this area consists of a series of more or less gypsiferous shales which average about 365 feet in thickness and dip gently toward the south. Well records collected in the area indicate that yields from this formation average about 35 gallons per minute and range up to 400 gallons per minute, thus indicating a moderately permeable formation.

The unconsolidated material overlying the bedrock at the Haste area is similar to that at the Ordnance Depot. It is a red clayey till of low permeability that provides exceedingly poor drainage. The actual thickness of the till at the Haste area has not been determined, but well E 2, about half a mile northwest, penetrates 97 feet of red clay and pebbles (see table 1).

There is little pumping of ground water in or near the Haste area and the nearest pumped well, E 1, is over half a mile away. The surface drainage at the Haste area consists of several drainage ditches that discharge into two small creeks, that in turn flow northwest and eventually empty into the Niagara River. This point of discharge is just 1 mile upstream from the intakes that supply water for the cities of Tonawanda, North Tonawanda, and

Lockport (see fig. 2).

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Conclusions and Recommendations

The thickness and impermeable nature of the overburden make it doubtful that radioactive wastes deposited on the land surface at the Waste area could percolate to the bedrock, and the relatively distant location of the nearest wells that tap the overburden makes it unlikely that any of these wells would become contaminated.

There is, however, a possibility that radioactive wastes carried off with the surface drainage would pass into the Niagara River and reach the intakes of the public supplies for Tonawanda, North Tonawanda, and Lockport, as well as those of any private supplies developed along the way. This situation is most likely to exist during the rainy seasons when there is sufficient drainage to maintain continuous flow in the drainage ditches and small creeks involved. Consequently, it is recommended that periodic monitoring of the creek water for radioactivity be done just before it discharges into the Niagara River. Should these samples ever show radioactivity, the river water should be checked and the contamination traced as far as it exists by analyses of public and private supplies situated downstream.

*Handwritten signature*

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Table 2. Logs of selected borings

Ni 30. Test boring drilled by William Strassberg for U. S. Government in 1942.

	Thickness (feet)	Depth (feet)
Topsoil. . . . .	0.5	0.5
Red clay, small stones . . . . .	8.5	9.0
Marsh clay . . . . .	7.0	16.0
Marsh clay (dry) . . . . .	5.0	21.0
Marsh clay (no sand or gravel) . . . . .	12.5	33.5
Red clay . . . . .	2.5	36.0

Ni 31. Test boring drilled by William Strassberg for U. S. Government in 1942.

	Thickness (feet)	Depth (feet)
Topsoil. . . . .	2	2
Red clay . . . . .	6	8
Marsh clay, very soft. . . . .	25	33
Red clay . . . . .	2	35

Table 3. Chemical analysis of well and stream water  
 Analysis by U. S. Geological Survey (parts per million)

	Fourmile Crook *	Fourmile Crook**	Well N1 5	Well N1 8	Well N1 22	Well N1 25
Silica (SiO <sub>2</sub> )	5.0	1.8	12	3.0	11	10
Iron (Fe)	0.02	0.02	0.98	1.0	0.79	0.1
Calcium (Ca)	62	41	132	521	124	90
Magnesium (Mg)	31	26	58	65	145	91
Sodium (Na)	19	15	69	2,340	106	151
Potassium (K)	3.0	2.0	41	41	4.2	13
Carbonate (CO <sub>3</sub> )	16	0	22	0	23	16
Bicarbonate (HCO <sub>3</sub> )	186	143	414	9	396	286
Sulfate (SO <sub>4</sub> )	107	83	196	3,620	416	471
Chloride (Cl)	16	24	105	2,100	140	125
Fluoride (F)	0.2	0.2	1.7	1.0	0.2	0.4
Nitrate (NO <sub>3</sub> )	0.5	0.6	23	12	150	8.4
Dissolved solids	364	280	878	8,920	1,390	1,160
Total hardness as CaCO <sub>3</sub>	282	209	568	1,570	906	599
Specific conductance (25° C) microhm-cm	583	467	1,380	11,900	1,990	1,700
pH	8.2	7.8	8.2	5.7	8.2	8.3
Color	6	7	9	3	2	12
Aluminum (Al)	0.4	0.3	0.2	1.0	0.6	0.4
Copper (Cu)	0	0	0	0	0	0
Zinc (Zn)	0	0	0	4.2	0	0
Phosphate (PO <sub>4</sub> )	0	0	0.8	0	0.1	0.3
Date collected	June 17, 1948	June 17, 1948	June 18, 1948	June 19, 1948	June 18, 1948	June 18, 1948

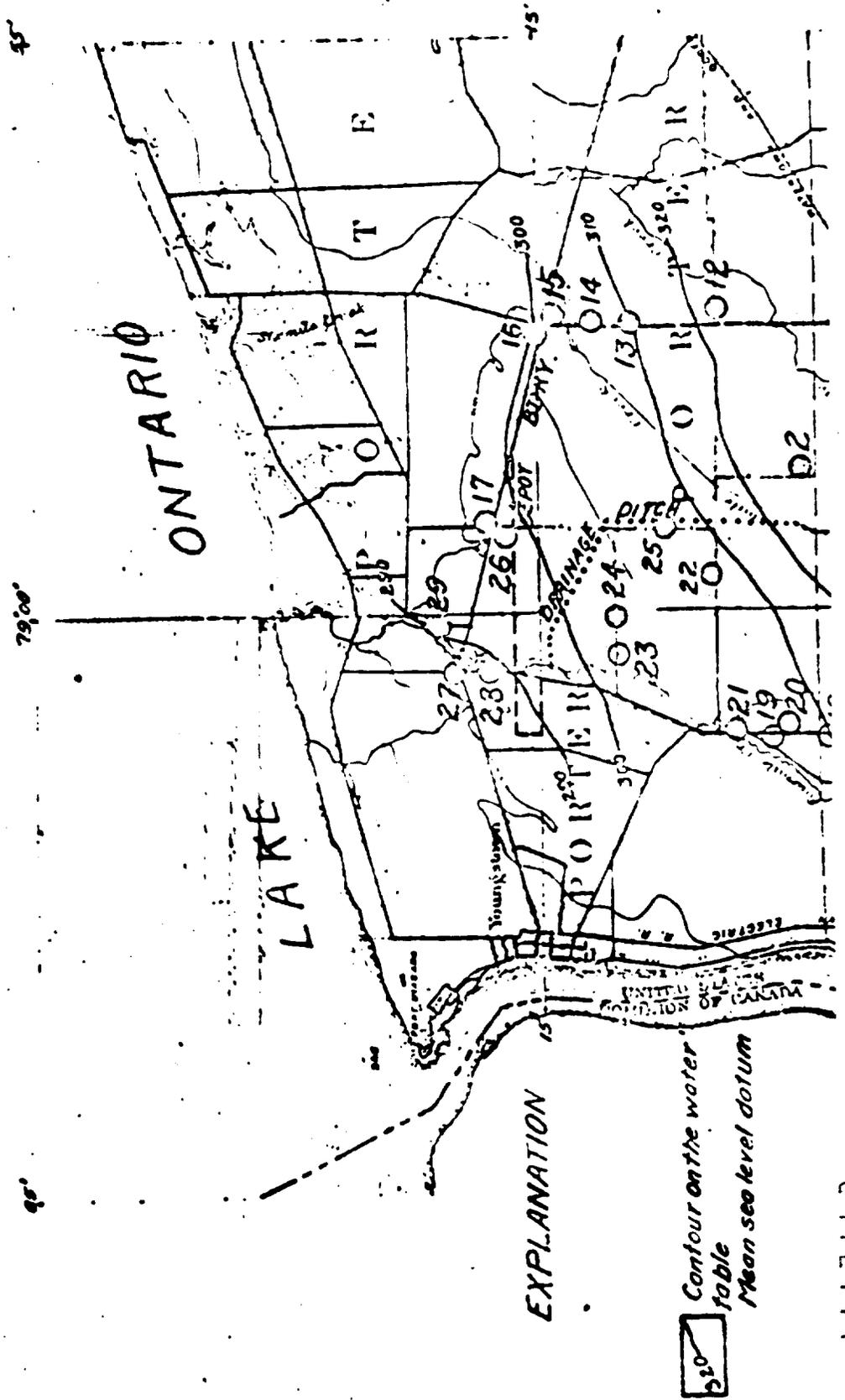
\* At Lockport-Youngstown Road.  
 \*\* At Fletcher Road.

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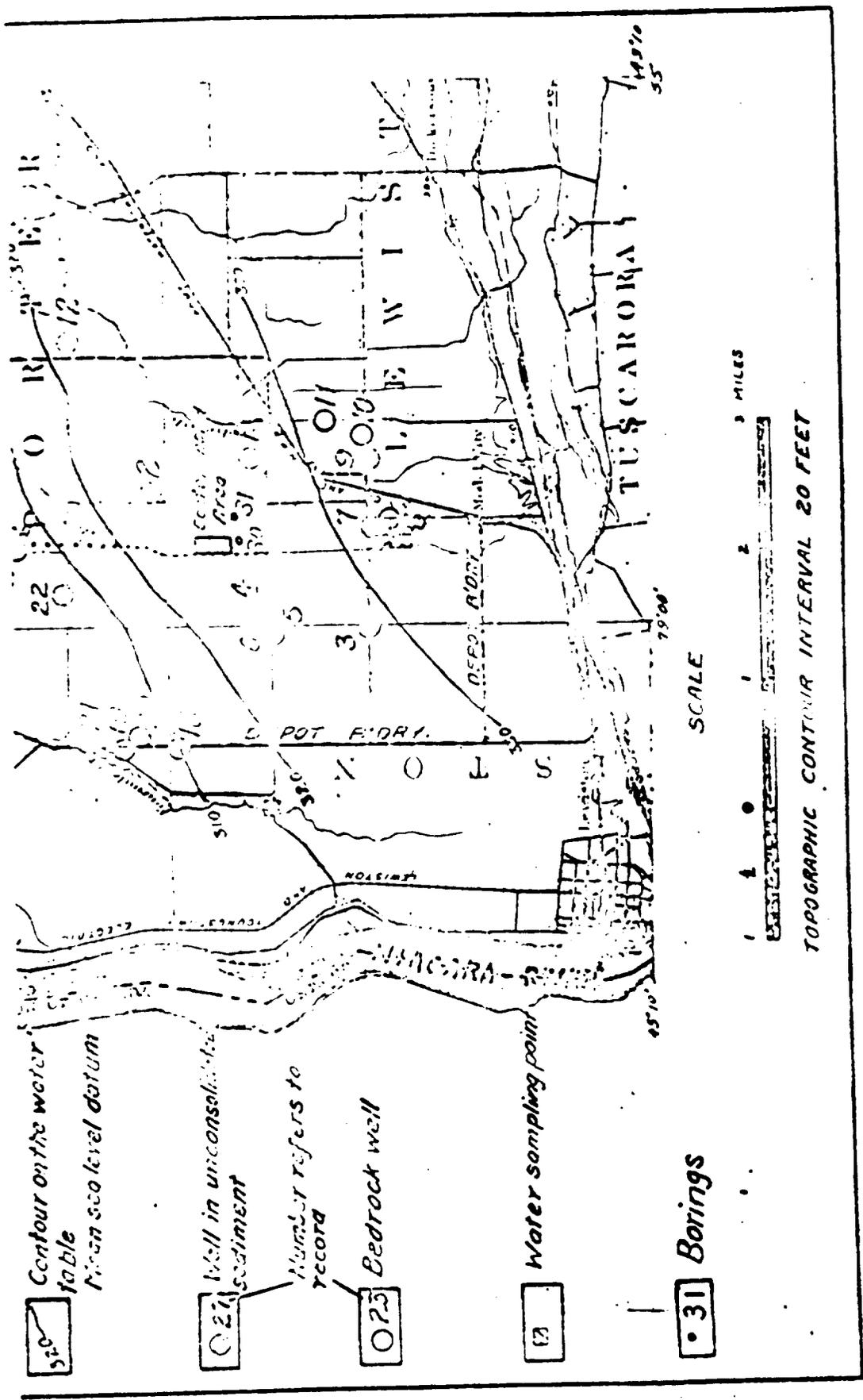
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FIGURE 1.

MAP SHOWING WELLS AND WATER TABLE CONTOURS  
IN THE VICINITY OF THE LAKE ONTARIO ORDNANCE DEPOT  
NIAGARA COUNTY, NEW YORK



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Contour on the water table  
 Mean sea level datum

Well in unconsolidated sediment  
 Number refers to record

Bedrock well

Water sampling point

Borings

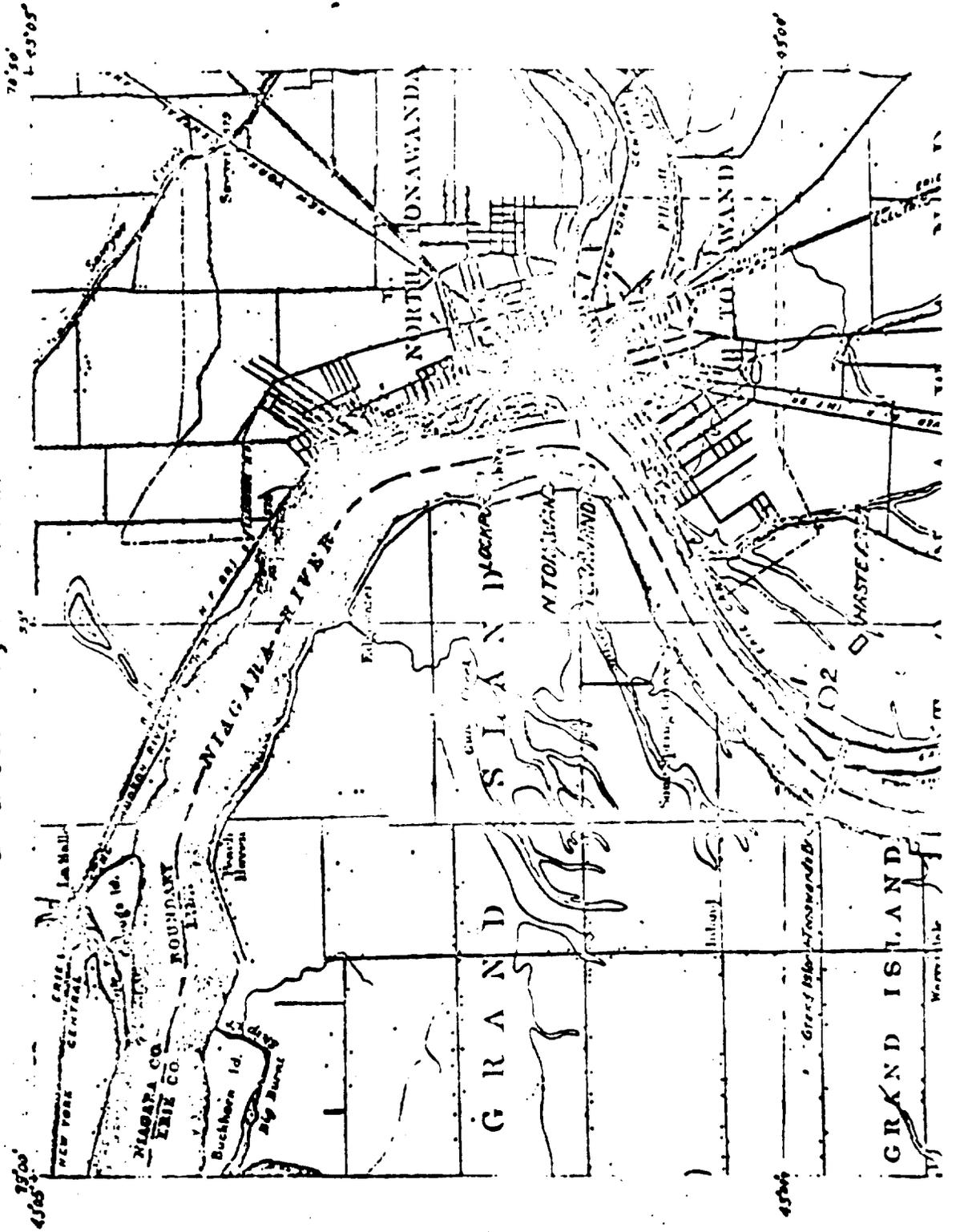
SCALE

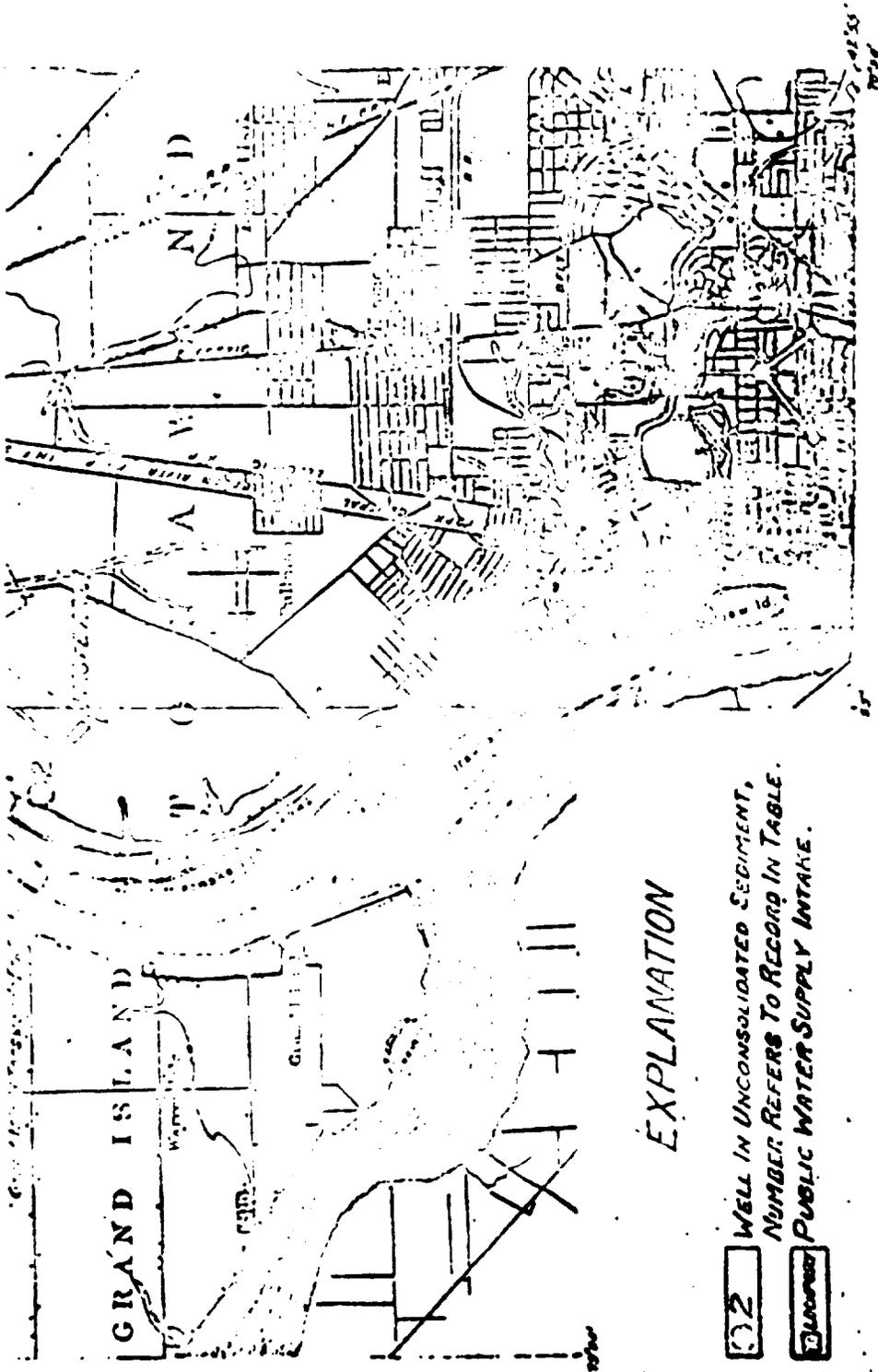


TOPOGRAPHIC CONTOUR INTERVAL 20 FEET

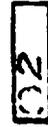
FIGURE 2

MAP SHOWING WELLS AND PUBLIC WATER SUPPLY INTAKES  
ON THE NIAGARA RIVER NEAR WASTE AREA  
ERIE COUNTY, NEW YORK





**EXPLANATION**

-  WELL IN UNCONSOLIDATED SEDIMENT, NUMBER REFERS TO RECORD IN TABLE.
-  PUBLIC WATER SUPPLY INTAKE.

SCALE



TOPOGRAPHIC CONTOUR INTERVAL 20 FEET

LANGLEY

DIARY

WEDNESDAY  
MARCH 24, 1971

Berwyn Robinson advised that Army Chemical Corps personnel had removed the "phosgene cylinders" at LOOW. There were 6 cylinders -- 4 contained water, 1 was empty, and 1 contained hydrogen sulfide. The  $H_2S$  was disposed of and all six cylinders were thrown in the scrap heap.

cc: Official file

1117167

PLANTS, LAES. BUILDING & LAND - 3

UNITED STATES  
ATOMIC ENERGY COMMISSION

OAK RIDGE OPERATIONS  
P O BOX E  
OAK RIDGE, TENNESSEE 37830

January 29, 1971

The Commanding Officer  
Edgewood Arsenal, Maryland 21010

REQUEST FOR ASSISTANCE WITH BURIED PHOSGENE GAS CYLINDERS

Gentlemen:

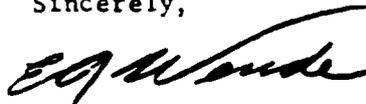
The Atomic Energy Commission is in the process of cleaning and improving a tract of Government-owned land in the vicinity of Model City, New York. This is a portion of property formerly designated as the "Lake Ontario Ordnance Works," prior to AEC acquisition in 1948.

Surveys of the property during recent months, in connection with our current cleanup program, have indicated that some number of phosgene gas cylinders are buried on site. The AEC has no records or historical data relating to such burial and it is assumed that it occurred some time prior to 1948.

In connection with our surveys and cleanup activities at the site, we have kept New York State and Niagara County officials informed of our plans and progress to date. In view of the sensitivity of the public to such situations involving toxic gases and the fact that the AEC may declare a portion of this property excess for disposal in the future, we feel it advisable that the burial site be inspected by qualified personnel and that appropriate recommendations be furnished to us for further exploration and final disposal of any gas cylinders which may be found.

Your advice and assistance in this matter will be greatly appreciated. Details of the exact burial location, names, addresses, and telephone numbers of our representatives will be furnished to your designee upon receipt of your reply.

Sincerely,



S. R. Sapirie  
Manager  
Oak Ridge Operations

API:WJM

CC: E. Gedeon, Niagara County Department  
of Health, Lockport, N. Y. 14094  
H. A. Nowak, HQ  
George Anastas, Atomic Energy Council,  
112 State Street, Albany, N. Y. 12207

BCC: B. M. Robinson  
W. J. Moore  
W. T. Thornton  
J. R. Langley  
H. L. McCracken  
E. D. McCasland

1117168

AUG 29 1980

Steven D. Leipzig  
Assistant Attorney General  
Environmental Protection Bureau  
Two World Trade Center  
Room 4725  
New York, New York 10047

Dear Mr. Leipzig:

Please accept this letter in response to your Freedom of Information Act (FOIA) request dated January 1980, that was accepted by the Department of Energy (DOE) Oak Ridge Operations (ORO) Freedom of Information Officer on July 24, 1980.

An extensive search has been made of active and retired DOE-ORO files for documents responsive to your request. At present, four (4) boxes of documents identified as being responsive to your request are being transmitted under separate cover. The declassification review of the remaining portion of documents responsive to your request (about one hour) has not yet been completed. Once this effort has been completed, the remaining information will be transmitted to you as expeditiously as possible. No responsive documents or portions thereof have been withheld.

An FOIA request for the information being furnished to you has been received by DOE-ORO from the Special Counsel to the New York State Assembly, Standing Committee on Environmental Conservation. Accordingly, a duplicate file of the information transmitted herewith will be simultaneously released to the Special Counsel.

**CERTIFIED MAIL:  
RETURN RECEIPT REQUESTED**

8/29/80

PERSONNEL - 1  
FOIA

DOE F 1325.10  
(7-79)

OFFICIAL FILE COPY

622

1117169



AUG 29 1980

Michael P. Zweig, Esquire  
Special Counsel  
New York State Assembly  
Standing Committee on  
Environmental Conservation  
New York State Office Building  
270 Broadway, Room 1514  
New York, New York 10007

Dear Mr. Zweig:

Please accept this letter in partial response to your Freedom of Information Act (FOIA) request dated July 24, 1980, and accepted by the Department of Energy (DOE) Oak Ridge Operations (ORO) Freedom of Information Officer on August 14, 1980.

Your request seeks, in part, all documents furnished to the New York State Attorney General, Environmental Protection Bureau, pursuant to its FOIA request dated June 3, 1980. An extensive search has been made of active and retired DOE-ORO files for documents responsive to this request. At present, only four (4) boxes of information identified as being responsive to the Attorney General's request are being transmitted to you under separate cover. The declassification review of the remaining portion of documents responsive to his request (about one box) has not yet been completed. Once this effort has been completed, the remaining information will be transmitted to you as expeditiously as possible. No responsive documents or portions thereof have been withheld.

In accordance with the Department's determination to waive fees associated with the processing of your request, there is no charge for the transmitted information. Further effort to identify additional documents responsive to your

**CERTIFIED MAIL!**  
**RETURN RECEIPT REQUESTED**

8/29/80  
PERSONNEL - 1  
FOIA  
0219  
OFFICIAL FILE COPY

Michael P. Zweig, Esq.

- 2 -

AUG 29 1980

request has begun. Information will be released to you in accordance with the agreement set forth in the DOE-ORO letter to you dated August 14, 1980.

Sincerely,

Original Signed By  
W. R. McCauley, JR

W. R. McCauley, Jr.  
Authorizing Official

CC-10:DD

Enclosures: AS stated  
(under separate cover)

cc w/o enclosures:  
Milton Jordan, HQ FOI

bcc w/o enclosures:  
R. J. Hart, Manager  
F. J. Christie, AIA  
C. A. Keller, AMM&S  
W. Range, PIO  
J. L. Foutch, OCC  
E. H. Hardison, Tech. Services Div.  
W. J. Grannen, NLO  
Dr. William E. Mott, EV-13, GTN

CC-10:DGDarugh:klc:6-1213:8/25/80

CONCURRE
RTG. SYMB
CC-10
INITIALS/S:
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DATE
8/26/
RTG. SYMB
M-3
INITIALS/S:
DATE
8/28
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The documents listed on the third page of the list of enclosures do not apply to the request from the Assistant Attorney General of New York State. However, these can be provided to him if you wish. These documents are on the bottom and are separated from the others by a piece of cardboard.

1117173

- 45. FMPC-11 - Production Report on Rolling at Allegheny-Ludlum,  
2/9-10/52 - 3/7/52
- 46. FMPC-13 - Production Report on Rolling at Allegheny-Ludlum,  
3/8/52 - 3/14/52
- 47. FMPC-15 - Production Report on Rolling at Allegheny-Ludlum,  
4/5/52 - 4/14/52
- 48. FMPC-19 - Production Report on Rolling at Allegheny-Ludlum,  
5/2-3/52 - 5/19/52

1117174

AUG 14 1980

Michael P. Zweig  
Special Counsel  
New York State Standing Committee  
On Environmental Conservation  
New York State Office Building  
270 Broadway, Room 1514  
New York, New York 10007

Dear Mr. Zweig:

This letter will confirm the telephone conversation between you and Mr. David G. Darugh of my staff on August 13, 1980, concerning the processing of your Freedom of Information Act (FOIA) request dated July 24, 1980.

As Mr. Darugh explained to you, your request as interpreted by us is seeking release of a massive amount of information. In the DOE-ORO interim response dated August 7, 1980, we indicated that approximately 160 boxes in storage contain information which will need to be reviewed, and, if determined responsive, must also be declassified. A maximum effort by our declassification staff will be necessary to furnish responsive information to you in a timely manner. Your cooperativeness in granting us a reasonable time in which to reply and furnish responsive documents is appreciated. We will make every effort to process your request within the estimated four (4) months. If we are able to complete the task sooner, we will do so.

DOE-ORO will cooperate to the fullest extent and will make monthly interim releases of information to you. Additionally, information being furnished to the Environmental Protection Bureau of the New York State Attorney General's Office in response to an FOIA

**CERTIFIED MAIL:  
RETURN RECEIPT REQUESTED**

*Certified No.  
664136*

**PERSONNEL - 1**  
**FOIA**

DOE F 1325.10  
(7-79)

OFFICIAL FILE COPY

*5852*

1117175

Michael P. Zweig

- 2 -

AUG 14 1980

request will simultaneously be released to you. It is anticipated that this information will be transmitted by August 31, 1980.

Mr. Darugh will follow the processing of your request. He will be in contact with you on a regular basis to keep you informed of our progress.

Sincerely,

Original Signed By  
W. R. McCauley, JR.

W. R. McCauley, JR.  
Authorizing Official

CC-10:DG

bcc: Milton Jordan, HQ FOI  
Wayne Range, PIO  
F. O. Christie, AMA  
C. A. Keller, AMM&S  
W. P. Snyder, OCC  
W. J. Grannen, NLO

CC-10:DG Darugh:klc:6-1213:8/13/80

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Aug 1 1980

Michael P. Zweig  
Special Counsel  
New York State Standing Committee  
on Environmental Conservation  
New York State Office Building  
270 Broadway, Room 1814  
New York, New York 10007

Dear Mr. Zweig:

This is in response to your Freedom of Information Act (FOIA) request dated July 24, 1980, related to Government activities in Niagara County and Erie County beginning in 1940. This letter will also confirm the telephone conversation between Mr. David G. Darugh of our Office of Chief Counsel and Mr. Andrew Roffee of your staff concerning the Department of Energy's (DOE's) need for a time extension within which to respond and other items detailed herein.

We have determined that a waiver of fees is appropriate in connection with this request. We appreciate your agreement to hold DOE's response time in abeyance pending further discussions between you and Mr. Darugh. We have identified information in approximately 160 boxes in storage on-site, which is likely to be responsive to your request.

Nearly all of the documents pertaining to your request are classified. It is unlikely that any of these documents needs to retain classified status today. However, the declassification effort which must be undertaken before the documents can be copied and released to the public is estimated at four months.

**CERTIFIED MAIL:  
RETURN RECEIPT REQUESTED**

PERSONNEL - 1  
ETA

111177





THE ASSEMBLY  
STATE OF NEW YORK  
ALBANY

MAURICE D. HINCHEY  
Chairman  
Environmental Conservation Committee

Room 625  
Legislative Office Building  
Albany, New York 12248  
(518) 455-4436

July 24, 1980

ALEXANDER B. GRANN  
Chairman  
Sub-Committee on Toxic  
And Hazardous Substances

Room 411  
Legislative Office Building  
Albany, New York 12248  
(518) 455-5222

DAVID W. ROY  
Staff Director  
Agency #4 Bldg  
Rockefeller Plaza  
Albany, New York  
(518) 455-3688

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FREEDOM OF INFORMATION ACT  
OFFICE

Mr. Wayne Range  
Freedom of Information Officer  
Dept. of Energy/Oak Ridge Operation  
Post Office Box E  
Oak Ridge Tennessee 37830

Dear Mr. Range:

Pursuant to the Freedom of Information Act ("FOIA"), U.S.C. Section 552 (as amended), and the regulations promulgated thereto, the New York State Assembly Standing Committee on Environmental Conservation ("Committee") hereby requests copies of all of the records listed in the attached enclosure which are in your possession or control. Please include in your search both the central files and the files of any past or present division or regional bureau.

If it is determined that requested portions of a file are exempted from release, the Committee understands that, as the FOIA requires, all non-exempt portions of the file which are reasonably segregable will be provided.

While the Committee is prepared to pay reasonable costs for the location and reproduction of the requested records, we are informed that the FOIA provides for such fees to be waived if the request is deemed in the public interest. Since the requested records are required by the Committee as part of its lawfully constituted legislative investigation, we are certain that the instant request meets the "public interest" criterion. The Committee's inquiry generally concerns the transportation, storage and disposal of toxic and hazardous substances in New York State. An issue being actively explored is the question of possible Government or military involvement in the toxic contamination of areas located within the State, including, although not limited to, the Love Canal region in Niagara County. We believe that only a thorough investigation into the circumstances surrounding Government activities in this area will enable us to accurately assess the problem and to consider the possible solutions to the health dangers caused by improper toxic waste disposal. It is our belief that the information and records that are to be furnished will be of great benefit to the public. Hence, it would be entirely appropriate for all fees to be waived in this instance.

PERSONNEL - 1  
FOIA 5434

1117179

Wayne Range

599-216

July 24, 1980

If you have any questions regarding this request, please telephone the undersigned at (212) 488-7697. All written communications, and responses of documents, should be sent to the address indicated below. The Committee is prepared to undertake any reasonable measures to make compliance with this request as efficient and as economical as possible. If a substantial number of records are determined to be responsive to the request, review of the records by a representative of the Committee, prior to duplication, could be mutually arranged.

As provided in the FOIA, we expect to receive a response to this request within ten (10) working days.

Very truly yours,

*Michael P. Zweig*

Michael P. Zweig  
Special Counsel  
New York State Standing Committee  
on Environmental Conservation

New York State Office Building  
270 Broadway - Room 1514  
New York, New York 10007

MPZ:nw  
Enclosure

*Don Crimini 502 4411  
(5.8) 455-3058*

*APR 1980  
1 Keir 455*

80 JUL 29 PM 1:40

FREEDOM OF  
INFORMATION OFFICE  
USDOE DRO

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DEFINITIONS

1. "Record" means any written, typewritten, recorded, transcribed, printed, taped, photographic or graphic matter, whether sent or received or neither, including but not limited to notes, letters, memoranda, reports, drafts, files, notices, instructions, charts, telegrams, cables, telex messages, communications of any kind, graphs, maps, surveys, studies, diaries, photographs, diagrams, microfilm, microfiche, recordings, transcriptions, books, pamphlets, articles, handbooks, manuals, and periodicals.

2. "U.S. Government" means any past or present agency, department, armed services branch, quasi-public corporation, or any divisions and sub-divisions thereof, of the United States Government, including but not limited to the Departments of Agriculture, Defense, Energy, Justice, Army, Navy, Air Force, Reconstruction Finance Corporation, War Assets Administration, Metals Reserve Corporation, Defense Plants Corporation, Smaller War Plants Corporation, War Production Board, Army-Navy Munitions Board, Manhattan Engineer District ("MED"), Atomic Energy Commission ("AEC"), Energy Research and Development Administration, Nuclear Regulatory Commission, General Services Administration, and Environmental Protection Agency.

3. "Niagara Frontier Region" includes Niagara and Erie Counties.

4. "may include, among others," as used herein, should be read as indicating that to facilitate the initial record search, certain names and other information have been specified in the request; however, the record search should be inclusive and not limited to the items specifically described.

Mr. Paul B. R...  
(for your file)

~~RESTRICTED~~

WAR DEPARTMENT  
UNITED STATES ENGINEER OFFICE  
TONAWANDA AREA OFFICE  
P. O. BOX 8  
KENMORE, N. Y.

*File Ceramic  
(Hurst)*

IN REPLY  
REFER TO

EIDM T-1

1 January 1944



The Electro Metallurgical Co.  
Niagara Falls  
New York

Attention: Mr. J. A. Holladay.

Gentlemen:

This will confirm our verbal decision of 28 December to release the N.Y.C.R.P. Company from any agreement regarding the use of their borrow pit located in the Town of Tonawanda as a "sludge dumping area".

Since we understand that this material contains considerable "valuables", it seems desirable that it be stored in such a manner that these may be reclaimed at a later date if required.

Very truly yours,

*E. I. Van Horn*

E. I. VAN HORN,  
Captain, Corps of Engineers,  
Area Engineer.

SPECIAL REREVIEW  
FINAL DETERMINATION  
UNCLASSIFIED

By: *J.F. Brown*

Date: *9-25-80*  
*10/9/80*

1117182

~~RESTRICTED~~

~~This document contains information affecting the National Defense of the United States within the meaning of the Espionage Laws, Title 18, U.S.C. and its transmission or revelation of its contents in any manner to an unauthorized person is prohibited by law.~~

RECORDS REQUESTED

1. Contracts--All records constituting, relating or referring in any way to contracts, agreements, understandings or arrangements between the U.S. Government and any private corporation, concern or individual, relating to the manufacture, processing, transportation, storage or disposal of munitions, metals, gases, chemicals, toxic or hazardous substances, radioactive materials, wastes or residues in the Niagara Frontier Region in the period 1940-1960.

a) The above-mentioned private corporations or concerns may include among others, the following:

1. African Metals Corp.
2. Bell Aerospace Co.
3. Carborundum Corp.
4. E.I. Dupont Co.
5. Durez Plastics and Chemicals Corp.
6. Electromet Corp. (Electrometallurgical-Union Carbide)
7. Hooker Electrochemical Co. (and its successor companies)
8. Knolls Atomic Power Laboratory, Schenectady, N.Y.
9. Massachusetts Institute of Technology
10. Oldbury Electrochemical Co.
11. Olin Corp. (and its predecessor and successor companies)
12. Stauffer Chemical Co.
13. Titanium Corp; Titanium Alloy Mfg. Co.; NL Industries
14. **University of Rochester**
15. Vanadium Corp.
16. National Lead of Ohio
17. Mathieson Alkali
18. Niagara Alkali
19. General Chemical Co.
20. Linde Air Products

b) The above-mentioned contracts, agreements, etc., may include, among others, the following:

- 1) All contracts between the Chemical Warfare Service War Production Board, U.S. Army, Manhattan Engineer District ("MED") or the Atomic Energy Commission ("AEC") and any of the companies listed in paragraph 1 (a) of this request.
- 2) All contracts between the AEC or MED or other U.S. Government agencies and the Knolls Atomic Power Laboratory relating to the "Chart of the Nuclides".

3) All contracts between the AEC or MED or other U.S. Government agencies relating to gaseous diffusion, or the production or processing of uranium hexafluoride or uranium tetrafluoride.

c) The above-mentioned contracts, agreements, etc., may include among others, the following:

1. Contract No. W 7405 Eng. 26
2. " " W 7405 Eng. 28
3. " " W 7405 Eng. 280
4. " " W 7405 Eng. 94
5. " " W 7405 Eng. 75
6. " " W 7405 Eng. 76
7. " " W 7405 Eng. 14
8. " " W 7401 Eng. 14
9. " " W 7405 Eng. 260
10. " " W 7405 Eng. 258
11. " " W 7401 Eng. 49
12. Lease Contract No. W-2288-Eng-551 (Army Air Force)
13. Contract No. A-53-120-C (U.S. Navy)
14. Contract No. AF33(600) - 33060 (Air Force)
15. Contract No. DA-18-108-CML-5293 (Army Chemical Center-Olin)
16. Contract No. W-285-CWS-4848 (Hooker Electrochemical)
17. Contract No. W-18-108-CM-609 (Hooker Electrochemical)
18. Contract No. DA-30-070-CML-23 (Hooker Electrochemical)
19. Contract No. DA-30-115-ORD-PO-263 (Hooker Electrochemical)
20. Contract No. DA-30-115-ORD-841 (Hooker Electrochemical)
21. Contract No. OEM<sup>SR</sup> 696
22. Contract No. OEM<sup>SR</sup> 811

d) The above-mentioned contracts, agreements, etc., may relate to the production, processing or refining of, among others, the following substances:

1. arsenic trichloride
2. hexachloroethane
3. chlorinated benzene
4. Phosgene (carbonyl chloride)
5. thionyl chloride
6. Hexafluoroxylyene
7. polymeric trifluorochloroethylene
8. chloronaphthalene
9. defoliant
10. trinitrotoluene
11. lithium, lithium chloride
12. Boron X

2. Production and Disposal Records--All records constituting, relating or referring in any way to the manufacture, processing, transportation, storage or disposal of munitions, metals, gases, chemicals, toxic, hazardous or contaminated substances, radioactive substances, or wastes or residues (collectively "materials") in the Niagara Frontier Region in 1940-1960 by the U. S. Government, or any of its private contractors.

- a) The above-mentioned records may include, among others, the following:
- 1) records reflecting the quantities of materials manufactured, processed, transported, stored or disposed of;
  - 2) records reflecting the end uses or functions of these materials;
  - 3) records reflecting the methods of waste disposal employed;
  - 4) records reflecting the methods of transportation of these materials, including any U.S. Government manuals or regulations pertaining to the movement and transportation of toxic and hazardous wastes;
  - 5) records **reflecting** the location of disposal sites, and the dates of disposal;
  - 6) records reflecting the individual names and addresses of the U.S. Government and private personnel who were involved in the manufacture, processing, transportation, storage or disposal of these materials, including but not limited to, personnel at:
    - a) the private concerns identified in paragraph 1(a) above.
    - b) 71st Chemical Smoke Generator Company.
    - c) 190th Chemical Depot Company.
    - d) 40th Explosive Ordnance Disposal Unit.
    - e) all service commands units located in Niagara Falls, N.Y. during 1940-1960. (1202nd, 1206th, 1203th, 1217th, 3218th, 4206th, 4220th).

1117185

- 7) records reflecting the types of barrels and containers used for the transportation, or disposal of materials by the U.S. Government or by any of its private contractors.
  - 8) All regulations, policy manuals and statements governing, or relating to U.S. Government contracts with private contractors for the production and processing of the materials described above, including but not limited to the operation of government-owned, contractor-operated ("GOCO") plants.
- b) The above-mentioned records may include, among others, the following:
- 1) the New York Chemical Procurement District History (three volumes)
  - 2) the History of the Northeast Chemical Warfare Depot
  - 3) History of New York Chemical Warfare Procurement; production reports and weekly war letters
  - 4) History of the Niagara Falls Army Chemical Plant, and monthly reports
  - 5) Records of the New York Ordnance District
  - 6) Records of the Buffalo and/or Tonawanda District Engineers
  - 7) Records of the New York District Corps of Engineers
  - 8) War Department Technical Bulletin T B Eng-57
  - 9) War Assets Administration Manual of Operations 4-3, Part IX
  - 10) Madison Square Records of the "MED" (as to uranium waste inventory and storage locations)
  - 11) Manual of Operations, WD Form SB-5-52
  - 12) Manual W4-3, Memorandum of Understanding, Exhibit 10-1, Appendix A
  - 13) Activities of the Metals Reserve Corporation in Niagara Falls, N.Y.
  - 14) "P-45" facility located on Hooker Electrochemical site in Niagara Falls, N.Y. and sold to Hooker by U.S. in 1947

3. Contamination Records--All records constituting, relating or referring in any way to the chemical or radioactive contamination of any areas located within New York State, arising out of, or caused by the

transportation, manufacture, processing, storage or disposal of any of the materials described in paragraph 2.

a) The areas in New York State which may have been contaminated by chemicals, radiation or other toxic or hazardous substances may include, among others, the following:

- 1) "Love Canal," Niagara Falls, N.Y.
- 2) "Love Canal," Lewiston, N.Y.
- 3) Lake Ontario Ordnance Works
- 4) New York Ordnance Works
- 5) Seneca Ordnance Works
- 6) Areas surrounding plancors in Farmingdale and Syosset, Long Island, N.Y.
- 7) Air Force Plants 38 and 68, Lewiston, N.Y.
- 8) Aircraft Modification Center No. 7, Niagara Falls, N.Y.
- 9) 102nd Street (River Run) Dump, Niagara Falls, N.Y.
- 10) 66th Street School, Niagara Falls, N.Y.
- 11) Pine Avenue Bowling Alley and nearby commercial locations, Niagara Falls, N.Y.
- 12) Youngstown Test Annex, Youngstown, N.Y.
- 13) Hooker Chemical Corp., Niagara Falls, N.Y.
- 14) Niagara Falls Army Chemical Plant
- 15) Necco Park (duPont)
- 16) Somerset Group, Inc. - Industrial Park
- 17) Services Corp. of America (SCA) (formerly Chem-trol, Inc.)-disposal site, Lewiston, N.Y.

b) The above-mentioned records may include, among others, the following:

1. inspection or real property disposal reports or reports of excess property prepared by U.S. Government departments or agencies such as the Army Corps of Engineers, the War Assets Administration, the Department of Agriculture, the Atomic Energy Commission, the General Services Administration, the Department of Energy, the Environmental Protection Agency, or private or independent contractors;
2. maps and photographs reflecting the areas of contamination;
3. decontamination certificates, inspection and other reports or records;
4. documents reflecting the methods used for decontamination, the costs of such efforts, and the results achieved;

1117187

5. any U.S. Government manuals or regulations pertaining to the standards and procedures used for decontamination by the U.S. Government or any private or independent contractors;
6. any records relating in any way to the storage, disposal and/or burial of lithium, lithium chloride, or potassium chloride at former Air Force Plant 68 in Lewiston, N.Y.;
7. any records relating in any way to the existence of cesium on the grounds of the former Lake Ontario Ordnance ("LOOW") site, or at Love Canal in Niagara Falls, N.Y.;
8. any records relating in any way to chemical or radioactive contamination of lands which were formerly part of the LOOW site, and were subsequently sold to private owners;
9. all reports prepared by the Industrial Research Corp. for the War Assets Administration, pursuant to Contract No. WS (p) - 402, dated October 16, 1947, concerning an industrial survey and appraisal of eleven surplus U.S. Army Ordnance Works locations at:
  - a) Badger Ordnance Works, Baraboo, Wisconsin
  - b) Gopher Ordnance Works, Rosemount, Minnesota
  - c) Keystone Ordnance Works, Meadville, Pa.
  - d) Kentucky Ordnance Works, Paducah, Kentucky
  - e) Oklahoma Ordnance Works, Pryor, Oklahoma
  - f) Plum Brook Ordnance Works, Sandusky, Ohio
  - g) New York Ordnance Works, Baldwinsville, N.Y.
  - h) Weldon Springs Ordnance Works, Weldon Springs, Mo.
  - i) West Virginia Ordnance Works, Point Pleasant, W. Va.
  - j) Lake Ontario Ordnance Works, Lewiston, N.Y.
10. any records relating in any way to animal experiments conducted at the University of Rochester involving biological uptake of radioactive isotopes, or the disposal of radioactive wastes from the University of Rochester at the Lake Ontario Ordnance Works or other locations in New York State.

1117188

Jerry Quinn (16)  
Mort - 287-5487

JUL 24 1980

Steven D. Leipzig  
Assistant Attorney General  
Environmental Protection Bureau  
Two World Trade Center  
Room 4774  
New York, New York 10047

Dear Mr. Leipzig:

This will confirm your telephone conversation with Messrs. David G. Darugh and James L. Foutch of our Office of Chief Counsel concerning your Freedom of Information Act (FOIA) request dated June 3, 1980, during which you agreed to extend our response time to August 31, 1980.

We have determined that a waiver of fees is appropriate in connection with this request. We appreciate your agreement to narrow the scope of your request and to grant us the additional time within which to respond. As related to me by Mr. Darugh, your request is now focused on:

1. Information on the types and/or nature of materials utilized or present at the sites;
2. Information on procedures of manufacture and processes leading to chemical makeup of materials present or utilized at the sites; and
3. Information on disposal of materials utilized or present at the sites, including the transportation to or from the site of materials present or utilized there, including by-products (which should be interpreted broadly).

CERTIFIED MAIL:  
RETURN RECEIPT REQUESTED

1117189

PERSONNEL - 1  
FOIA  
5315





M-4

CC-10

Foutch

Mr. Steven D. Leipzig  
Assistant Attorney General  
State of New York  
Two World Trade Center  
New York, NY 10047

Dear Mr. Leipzig:

This is in response to your exchange of correspondence with Mr. Milton Jordan, Director of the Division of FOI and Privacy Acts Activities for the Department, concerning your Freedom of Information Act request related to Government activities in Niagara County and Erie County beginning in 1930. Mr. Jordan referred your request to us and the Chicago Operations Office for possible action.

James L. Foutch, Office of Chief Counsel for Oak Ridge Operations, has attempted to contact you for discussion of the extensive scope of your

left a call with your office and you may wish to contact him (615-576-1204) after receipt of this letter if you have not called meanwhile.

We are aware that extensive material is available here possibly relating to your request. We are delaying further search, however, pending your discussions with Mr. Foutch and the resolution of possible waiver of fees. The 10 working days provided by Department regulations for response will not commence until a determination is made on the waiver.

Sincerely,

Wayne Range  
Freedom of Information Officer

bcc: ✓ Office of Chief Counsel, CC-10

Flavin, AD-44  
Case No. 061089061  
Forrestal Bldg.

L. C. Bramley  
Environmental Control Technology Division  
Office of the Environment, MS E-201  
DOE; Washington, DC

PERSONNEL - 1  
FOIA

5070

1117191

U.S. DEPARTMENT OF ENERGY  
**memorandum**

DATE: 6/27/80

REPLY TO: AD-44 / FLAVIN  
ATTN OF:

SUBJECT: Freedom of Information Request # 06108006N

TO: R. J. HAAT - Manager, Oak Ridge OAS OPR  
ATTN: WAYNE RANGE - FOIO

The attached Freedom of Information (FOI) request is being sent to you for action because the records requested appear to be principally within your organization. If so, you are the appropriate FOI office (see DOE 1700, chapter II 1.a.(1)). Should this be incorrect, please let me know immediately to whom you are forwarding the request.

If other divisions or offices or field organizations also have some of the records relevant to the request, you as the appropriate FOI office are responsible for requesting their participation and for coordinating the response. It is important that an appropriate response go out to the requester within 10 working days because failure to act can be deemed a denial.

On the reverse side of this memorandum, a "Reminder of Procedures for Handling FOI Requests" should assist your staff. If you have any questions, I can be reached on FTS 252-6020 or 252-6025.

*Milton Jordan*  
Milton Jordan, Director  
Division of Freedom of Information  
and Privacy Act Activities

Attachment

PLEASE RESPOND DIRECTLY TO REQUESTOR.  
IF YOU DO NOT HOLD REQUESTED  
RECORDS, ADVISE REQUESTOR ACCORDINGLY.

PLEASE FURNISH AD-44 A COPY  
OF YOUR RESPONSE.

PERSONNEL  
FOIA

11/24/80

FREEDOM OF INFORMATION ACT  
U.S. DEPARTMENT OF ENERGY

'80 JUL 2 AM 9:31

1117192

FREEDOM OF  
INFORMATION OFFICE  
USDOJ ORO

'80 JUL 2 AM 9:31

Mr. Steven D. Leipzig  
Assistant Attorney General  
State of New York  
Two World Trade Center  
New York, NY 10047

Dear Mr. Leipzig:

As an interim response to your Freedom of Information request 06108006N, please be advised that a search of the files in this Headquarters' Environmental Control Technology Division and Historians's Office failed to produce the information requested.

In a further attempt to locate the information you desire, we have referred your request to our field operations offices at Chicago and Oak Ridge, Tennessee. I expect these offices will complete their files searches in the near future and respond to you directly on the results thereof.

Should you have any questions in the meantime, please contact:

Lillian Banahan, U.S. Department of Energy, Chicago Operations Office,  
9800 South Cass Avenue, Argonne, IL 60439 (phone 312-972-2002) or  
Wayne Range, U.S. Department of Energy, Oak Ridge Operations Office,  
Room 1012, P.O. Box E, Oak Ridge, TN 37830 (phone 615-576-0888).

Sincerely,

*Milton Jordan*

Milton Jordan, Director  
Division of FOI and Privacy  
Acts Activities

bcc: AD-40  
AD-44 ~~AD-44~~  
Official File (RF)  
Case File  
Jack Holl D/OSE (Hist)  
William E. Mott EV-13  
Abel Lopez GC-41  
Wayne Range - Oak Ridge ←  
Lillian Banahan - Chicago

AD-44:Flavin:jcp:252-6025:FORR:5B-138:6/25/80:Case No. 06108006N

1117193

RTG  
INITIALS  
DATE  
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DATE

Called  
7/7 am  
7/9 am



Received at Headquarters FOI Division

JUN 10 1980

Date

ROBERT ABRAMS  
Attorney General

Environmental  
Protection Bureau

Rm 4774

STATE OF NEW YORK  
DEPARTMENT OF LAW  
TWO WORLD TRADE CENTER  
NEW YORK, N.Y. 10047  
TELEPHONE: (212) 488-7562

Pro. House  
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Proch. documents  
to ACC (proch. 1/25/80)  
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exercise by AGO.  
Linda  
Control  
Early

June 3, 1980

Information Access Officer  
Department of Energy  
Rm. 1221  
12th & Pennsylvania, NW  
Washington, D.C. 20461

Dear Sir:

This is a request under the Freedom of Information Act as amended (5 U.S.C. §552).

This office requests copies of all documents in the possession of your agency relating to the activities and involvement of any agency of the United States government from 1930 through 1960 in nuclear power production, manufacture, transportation and disposal of munitions, chemicals, and other items of chemical and other warfare, including the wastes and byproducts generated by these activities, in Niagara County and Erie County in New York State. This request includes all documents relating to operations conducted by the federal government, its agencies and its proprietary corporations, and those conducted by private industry on behalf or in conjunction with the federal government.

The basis for this request is the "Preliminary Report of New York State Assembly Task Force on Toxic Substances: Inquiry into the Love Canal and Related Matters." A copy of this report is enclosed for your information. Our office is seeking by this request to obtain any documents, records or other material in the possession of your agency which has any bearing on the information contained in that legislative committee report.

In the event that some of the requested documents are exempt, this office requests that the exempt material be described in detail and that the statutory justification for the exemption be specified.

The amended Act permits you to reduce or waive the fees if disclosure would be "in the public interest because furnishing the information can be considered as primarily benefiting the public." This request meets this standard and therefore any fees should be waived. However, we are prepared to pay reasonable costs for locating and reproducing the requested documents.

1117194

FREEDOM OF  
INFORMATION OFFICE  
USDOE ORU

JUL 2 AM 9:31

As provided for in the amended Act, this office expects to receive a reply within ten working days.

Sincerely yours,

*[Signature]*  
STEVEN D. LEIPZIG  
Assistant Attorney General  
Environmental Protection Bureau

SDL:dap

W/in 30 days

*Information*  
*material*  
Type of materials utilized or present at sites.  
Detailed description of materials utilized or present at sites. (Include scope of response for the production of materials utilized or products)  
Additional information

- Aug 31 -

Bill  
100  
Wm  
MCH

100  
Seeds - 6/04/12  
box



July 24, 1980

If you have any questions regarding this request, please telephone the undersigned at (212) 488-7697. All written communications, and responses of documents, should be sent to the address indicated below. The Committee is prepared to undertake any reasonable measures to make compliance with this request as efficient and as economical as possible. If a substantial number of records are determined to be responsive to the request, review of the records by a representative of the Committee, prior to duplication, could be mutually arranged.

As provided in the FOIA, we expect to receive a response to this request within ten (10) working days

Very truly yours,

*Michael P. Zweig*

Michael P. Zweig  
Special Counsel  
New York State Standing Committee  
on Environmental Conservation

New York State Office Building  
270 Broadway - Room 1514  
New York, New York 10007

Enclosure

*Don Cronin 562 4411  
(5.8) 455-3058*

900 JUL 29 PM 1:40

FREEDOM OF  
INFORMATION OFFICE  
USDOE DRO

1117197

DEFINITIONS

1. "Record" means any written, typewritten, recorded, transcribed, printed, taped, photographic or graphic matter, whether sent or received or neither, including but not limited to notes, letters, memoranda, reports, drafts, files, notices, instructions, charts, telegrams, cables, telex messages, communications of any kind, graphs, maps, surveys, studies, diaries, photographs, diagrams, microfilm, microfiche, recordings, transcriptions, books, pamphlets, articles, handbooks, manuals, and periodicals.
2. "U.S. Government" means any past or present agency, department, armed services branch, quasi-public corporation, or any divisions and sub-divisions thereof, of the United States Government, including but not limited to the Departments of Agriculture, Defense, Energy, Justice, Army, Navy, Air Force, Reconstruction Finance Corporation, War Assets Administration, Metals Reserve Corporation, Defense Plants Corporation, Smaller War Plants Corporation, War Production Board, Army-Navy Munitions Board, Manhattan Engineer District ("MED"), Atomic Energy Commission ("AEC"), Energy Research and Development Administration, Nuclear Regulatory Commission, General Services Administration, and Environmental Protection Agency.
3. "Niagara Frontier Region" includes Niagara and Erie Counties.
4. "may include, among others," as used herein, should be read as indicating that to facilitate the initial record search, certain names and other information have been specified in the request; however, the record search should be inclusive and not limited to the items specifically described.

1117198

1. Contracts--All records constituting, relating or referring in any way to contracts, agreements, understandings or arrangements between the U.S. Government and any private corporation, concern or individual, relating to the manufacture, processing, transportation, storage or disposal of munitions, metals, gases, chemicals, toxic or hazardous substances, radioactive materials, wastes or residues in the Niagara Frontier Region in the period 1940-1960.

a) The above-mentioned private corporations or concerns may include among others, the following:

1. African Metals Corp.
2. Bell Aerospace Co.
3. Carborundum Corp.
4. E.I. Dupont Co.
5. Durez Plastics and Chemicals Corp.
6. Electromet Corp. (Electrometallurgical-Union Carbide)
7. Hooker Electrochemical Co. (and its successor companies)
8. Knolls Atomic Power Laboratory, Schenectady, N.Y.
9. Massachusetts Institute of Technology
10. Oldbury Electrochemical Co.
11. ... Corp. (and its predecessor and successor companies)
12. Stauffer Chemical Co.
13. Titanium Corp; Titanium Alloy Mfg. Co.; NL Industries
14. University of Rochester
15. Vanadium Corp.
16. National Lead of Ohio
17. Mathieson Alkali
18. Niagara Alkali
19. General Chemical Co.
20. Linde Air Products

b) The above-mentioned contracts, agreements, etc., may include, among others, the following:

- 1) All contracts between the Chemical Warfare Service War Production Board, U.S. Army, Manhattan Engineer District ("MED") or the Atomic Energy Commission ("AEC") and any of the companies listed in paragraph 1 (a) of this request.
- 2) All contracts between the AEC or MED or other U.S. Government agencies and the Knolls Atomic Power Laboratory relating to the "Chart of the Nuclides".

1117199

- 3) All contracts between the AEC or MED or other U.S. Government agencies relating to gaseous diffusion, or the production or processing of uranium hexafluoride or uranium tetrafluoride.

c) The above-mentioned contracts, agreements, etc., may include among others, the following:

1. Contract No. W 7405 Eng. 26
2. " " W 7405 Eng. 28
3. " " W 7405 Eng. 280
4. " " W 7405 Eng. 94
5. " " W 7405 Eng. 75
6. " " W 7405 Eng. 76
7. " " W 7405 Eng. 14
8. " " W 7401 Eng. 14
9. " " W 7405 Eng. 260
10. " " W 7405 Eng. 258
11. " " W 7401 Eng. 49
12. Lease Contract No. W-2288-Eng-551 (Army Air Force)
13. Contract No. A-53-120-C (U.S. Navy)
14. Contract No. AF33(600) - 33060 (Air Force)
15. Contract No. DA-18-108-CML-5293 (Army Chemical Center-Olin.)
16. Contract No. W-285-CWS-4848 (Hooker Electrochemical)
17. Contract No. W-18-108-CML-5293 (Hooker Electrochemical)
18. Contract No. DA-30-070-CML-23 (Hooker Electrochemical)
19. Contract No. DA-30-115-ORD-PO-263 (Hooker Electrochemical)
20. Contract No. DA-30-115-ORD-841 (Hooker Electrochemical)
21. Contract No. OEM<sup>SR</sup> 696
22. Contract No. OEM<sup>SR</sup> 811

d) The above-mentioned contracts, agreements, etc., may relate to the production, processing or refining of, among others, the following substances:

1. arsenic trichloride
2. hexachloroethane
3. chlorinated benzene
4. Phosgene (carbonyl chloride)
5. thionyl chloride
6. Hexafluoroxylyene
7. polymeric trifluorochloroethylene
8. chloronaphthalene
9. defoliants
10. trionitrotoluene
11. lithium, lithium chloride
12. Boron X

2. Production and Disposal Records--All records constituting, relating or referring in any way to the manufacture, processing, transportation, storage or disposal of munitions, metals, gases, chemicals, toxic, hazardous or contaminated substances, radioactive substances, or wastes or residues (collectively "materials") in the Niagara Frontier Region in 1940-1960 by the U. S. Government, or any of its private contractors.

a) The above-mentioned records may include, among others, the following:

- 1) records reflecting the quantities of materials manufactured, processed, transported, stored or disposed of;
- 2) records reflecting the end uses or functions of these materials;
- 3) records reflecting the methods of waste disposal employed;
- 4) records reflecting the methods of transportation of these materials, including any U.S. Government manuals or regulations pertaining to the movement and transportation of toxic and hazardous materials;
- 5) records reflecting the location of disposal sites, and the dates of disposal;
- 6) records reflecting the individual names and addresses of the U.S. Government and private personnel who were involved in the manufacture, processing, transportation, storage or disposal of these materials, including but not limited to, personnel at:
  - a) the private concerns identified in paragraph 1(a) above.
  - b) 71st Chemical Smoke Generator Company.
  - c) 190th Chemical Depot Company.
  - d) 40th Explosive Ordnance Disposal Unit.
  - e) all service commands units located in Niagara Falls, N.Y. during 1940-1960. (1202nd, 1206th, 1203th, 1217th, 3218th, 4206th, 4220th).

1117201

- 7) records reflecting the types of barrels and containers used for the transportation, or disposal of materials by the U.S. Government or by any of its private contractors.
  - 8) All regulations, policy manuals and statements governing, or relating to U.S. Government contracts with private contractors for the production and processing of the materials described above, including but not limited to the operation of government-owned, contractor-operated ("GOCO") plants.
- b) The above-mentioned records may include, among others, the following:
- 1) the New York Chemical Procurement District History (three volumes)
  - 2) the History of the Northeast Chemical Warfare Depot
  - 3) History of New York Chemical Warfare Procurement; production reports and weekly war letters
  - 4) History of the Niagara Falls Army Chemical Plant, and monthly reports of the New York Ordnance District
  - 6) Records of the Buffalo and/or Tonawanda District Engineers
  - 7) Records of the New York District Corps of Engineers
  - 8) War Department Technical Bulletin T B Eng-57
  - 9) War Assets Administration Manual of Operations 4-3, Part IX
  - 10) Madison Square Records of the "MED" (as to uranium waste inventory and storage locations)
  - 11) Manual of Operations, WD Form SB-5-52
  - 12) Manual W4-3, Memorandum of Understanding, Exhibit 10-1, Appendix A
  - 13) Activities of the Metals Reserve Corporation in Niagara Falls, N.Y.
  - 14) "P-45" facility located on Hooker Electrochemical site in Niagara Falls, N.Y. and sold to Hooker by U.S. in 1947

3. Contamination Records--All records constituting, relating or referring in any way to the chemical or radioactive contamination of any areas located within New York State, arising out of, or caused by the

1117202

transportation, manufacture, processing, storage or disposal of any of the materials described in paragraph 2.

a) The areas in New York State which may have been contaminated by chemicals, radiation or other toxic or hazardous substances may include, among others, the following:

- 1) "Love Canal," Niagara Falls, N.Y.
- 2) "Love Canal," Lewiston, N.Y.
- 3) Lake Ontario Ordnance Works
- 4) New York Ordnance Works
- 5) Seneca Ordnance Works
- 6) Areas surrounding plancors in Farmingdale and Syosset, Long Island, N.Y.
- 7) Air Force Plants 38 and 68, Lewiston, N.Y.
- 8) Aircraft Modification Center No. 7, Niagara Falls, N.Y.
- 9) 102nd Street (River Run) Dump, Niagara Falls, N.Y.
- 10) 66th Street School, Niagara Falls, N.Y.
- 11) Pine Avenue Bowling Alley and nearby commercial locations, Niagara Falls, N.Y.
- 12) Youngstown Test Annex, Youngstown, N.Y.
- 13) Hooker Chemical Corp., Niagara Falls, N.Y.
- 14) Niagara Falls Army Chemical Plant
- 15) Necco Park (duPont)
- 16) Somerset Group, Inc. - Industrial Park
- 17) Services Corp. of America (SCA) (formerly Chem-trol, Inc.)  
Lewiston, N.Y.

b) The above-mentioned records may include, among others, the following:

1. inspection or real property disposal reports or reports of excess property prepared by U.S. Government departments or agencies such as the Army Corps of Engineers, the War Assets Administration, the Department of Agriculture, the Atomic Energy Commission, the General Services Administration, the Department of Energy, the Environmental Protection Agency, or private or independent contractors;
2. maps and photographs reflecting the areas of contamination;
3. decontamination certificates, inspection and other reports or records;
4. documents reflecting the methods used for decontamination, the costs of such efforts, and the results achieved;

1117203

5. any U.S. Government manuals or regulations pertaining to the standards and procedures used for decontamination by the U.S. Government or any private or independent contractors;
6. any records relating in any way to the storage, disposal and/or burial of lithium, lithium chloride, or potassium chloride at former Air Force Plant 68 in Lewiston, N.Y.;
7. any records relating in any way to the existence of cesium on the grounds of the former Lake Ontario Ordnance ("LOOW") site, or at Love Canal in Niagara Falls, N.Y.;
8. any records relating in any way to chemical or radioactive contamination of lands which were formerly part of the LOOW site, and were subsequently sold to private owners;
9. all reports prepared by the Industrial Research Corp. for the War Assets Administration, pursuant to Contract No. WS (p) - 402, dated October 16, 1947, concerning an industrial survey and appraisal of eleven surplus U.S. Army Ordnance Works locations at:
  - a) Badger Ordnance Works, Baraboo, Wisconsin
  - b) Gopher Ordnance Works, Rosemount, Minnesota
  - c) Keystone Ordnance Works, Meadville, Pa.
  - d) Kentucky Ordnance Works, Paducah, Kentucky
  - e) Oklahoma Ordnance Works, Pryor, Oklahoma
  - f) Plum Brook Ordnance Works, Sandusky, Ohio
  - g) New York Ordnance Works, Baldwinsville, N.Y.
  - h) Weldon Springs Ordnance Works, Weldon Springs, Mo.
  - i) West Virginia Ordnance Works, Point Pleasant, W. Va.
  - j) Lake Ontario Ordnance Works, Lewiston, N.Y.
10. any records relating in any way to animal experiments conducted at the University of Rochester involving biological uptake of radioactive isotopes, or the disposal of radioactive wastes from the University of Rochester at the Lake Ontario Ordnance Works or other locations in New York State.

1117204

U.S. DEPARTMENT OF ENERGY  
**memorandum**

DATE: 6/27/80

REPLY TO: AD-44 / FLAVIN  
ATTN OF:

SUBJECT: Freedom of Information Request # 06108006N

TO: R.J. HAAT - Manager, Oak Ridge OAS OPR  
ATTN: WAYNE RANGE - FOIO

The attached Freedom of Information (FOI) request is being sent to you for action because the records requested appear to be principally within your organization. If so, you are the appropriate FOI office (see DOE 1700, chapter II 1.a.(1)). Should this be incorrect, please let me know immediately to whom you are forwarding the request.

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*Milton Jordan*  
Milton Jordan, Director  
Division of Freedom of Information  
and Privacy Act Activities

Attachment

PLEASE RESPOND DIRECTLY TO REQUESTOR.  
IF YOU DO NOT HOLD REQUESTED  
RECORDS, ADVISE REQUESTOR ACCORDINGLY.

PLEASE FURNISH AD-44 A COPY  
OF YOUR RESPONSE.

FREEDOM OF  
INFORMATION OFFICE  
USDOE ORO

13 JUL 2 AM 9:31 '80

1117205

118211



Call  
7/7  
7/9



Received : Headquarters FBI Division

JUN 10 1980

Date

ROBERT ABRAMS  
Attorney General

Environmental  
Protection Bureau

STATE OF NEW YORK  
DEPARTMENT OF LAW  
TWO WORLD TRADE CENTER  
NEW YORK, N.Y. 10047  
TELEPHONE: (212) 488-7562

Rm 4774

10 yrs  
11 party  
to HRC  
20-113  
Linda  
Coulter  
Sandy

June 3, 1980

80 JUL 2 AM 9:31

FREEDOM OF  
INFORMATION OFFICE  
USDOJ GPO

Information Access Officer  
Department of Energy  
Rm. 1221  
12th & Pennsylvania, NW  
Washington, D.C. 20461

Dear Sir:

This is a request under the Freedom of Information Act as amended (5 U.S.C. §552).

This office requests copies of all documents in the possession of your agency relating to the activities and involvement of any agency of the United States government from 1930 through 1960 in nuclear chemical engineering and in the manufacture, transportation and disposal of munitions, chemicals, and other items of chemical and other warfare, including the wastes and byproducts generated by these activities, in Niagara County and Erie County in New York State. This request includes all documents relating to operations conducted by the federal government, its agencies and its proprietary corporations, and those conducted by private industry on behalf or in conjunction with the federal government.

The basis for this request is the "Preliminary Report of New York State Assembly Task Force on Toxic Substances: Inquiry into the Love Canal and Related Matters." A copy of this report is enclosed for your information. Our office is seeking by this request to obtain any documents, records or other material in the possession of your agency which has any bearing on the information contained in that legislative committee report.

In the event that some of the requested documents are exempt, this office requests that the exempt material be described in detail and that the statutory justification for the exemption be specified.

The amended Act permits you to reduce or waive the fees if disclosure would be "in the public interest because furnishing the information can be considered as primarily benefiting the public." This request meets this standard and therefore any fees should be waived. However, we are prepared to pay reasonable costs for locating and reproducing the requested documents.

1117207

As provided for in the amended Act, this office expects to receive a reply within ten working days.

Sincerely yours,

*[Signature]*  
STEVEN D. LEIPZIG  
Assistant Attorney General  
Environmental Protection Bureau

SDL:dap

W/in 30 days

- 1) <sup>or nature</sup> Types of materials utilized or present at sites.
- 2) Procedures or rules (related to chemical analysis)
- 3) Disposal of materials utilized or present at sites. Broadest scope of response (include details of materials utilized or products)

- Aug 31 -

Bill Warner  
Mr. Hardison  
Dr. Mott - HQ

Floyd  
3000 - 6/04/77 20 boxes  
Bill Warner



11-4

Mr. Steven D. Leipzig  
Assistant Attorney General  
State of New York  
Two World Trade Center  
New York, NY 10047

CC-10  
Foutch

Dear Mr. Leipzig:

This is in response to your exchange of correspondence with Mr. Milton Jordan, Director of the Division of FOI and Privacy Acts Activities for the Department, concerning your Freedom of Information Act request related to Government activities in Niagara County and Erie County beginning in 1930. Mr. Jordan referred your request to us and the Chicago Operations Office for possible action.

James L. Foutch, Office of Chief Counsel for Oak Ridge Operations, has attempted to contact you for discussion of the extensive scope of your request and your assertion that fees should be waived. Mr. Foutch has left a call with your office and you may wish to contact him (615-576-1204) after receipt of this letter if you have not called meanwhile.

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Sincerely,

Wayne Range  
Freedom of Information Officer

bcc: Office of Chief Counsel, CC-10

Flavin, AD-44  
Case No. 00100000  
Forrestal Bldg.

L. C. Brazley  
Environmental Control Technology Division  
Office of the Environment, MS E-201  
DOE; Washington, DC

1117209

5000

Received in Headquarters FOI Division

JUN 10 1980

Date



Called  
7/7 am  
7/9 am

ROBERT ABRAMS  
Attorney General

Environmental  
Protection Bureau

Rm 4774

STATE OF NEW YORK  
DEPARTMENT OF LAW  
TWO WORLD TRADE CENTER  
NEW YORK, N.Y. 10047  
TELEPHONE: (212) 488-7562

From Name -  
10 yrs -  
Property documents  
to AER (pro use).  
20 yrs ago, returning  
checked by me.

June 3, 1980

DAVE DARUGH 6-1213  
KATHY COX 6-1205  
KIM GILL 6-1208

80 JUL 2 AM 9:31

FREEDOM OF  
INFORMATION OFFICE  
USDOE ORU

Information Access Officer  
Department of Energy  
Rm. 1221  
12th & Pennsylvania, NW  
Washington, D.C. 20461

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1117210

As provided for in the amended Act, this office expects to receive a reply within ten working days.

Sincerely yours,

*[Signature]*  
STEVEN D. LEIPZIG  
Assistant Attorney General  
Environmental Protection Bureau

SDL:dap

W/in 30 days

*edit*  
1) *type of materials* utilized or present at sites.  
2) Disposal of materials utilized or present at sites. Broadest scope of response.  
*(the transportation of materials utilized by products)*  
3) *Process of ... including product information*

- Aug 31 -

1117211

*2/11/74  
100  
100  
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100*

*11041 20 boxes*

No. 664138

SENT TO <u>ST</u> <u>W.D. Leipzig</u>		POSTAGE ON DATE
STREET AND NO. <u>Assistant Attorney General</u>		
<u>Environmental Protection Bureau</u>		
<u>Two World Trade Center</u>		
P.O., STATE AND ZIP CODE <u>Room 4774</u>		
<u>New York New York 10047</u>		
OPTIONAL SERVICES FOR ADDITIONAL FEES		
RETURN RECEIPT SERVICES	1. Shows to whom and date delivered With delivery to addressee only	15¢ 05¢
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JUL 24 1980

Steven D. Leipzig  
 Assistant Attorney General  
 Environmental Protection Bureau  
 Two World Trade Center  
 Room 4774  
 New York, New York 10047

WAYNE RANGE

Freedom of Information Act

Dear Mr. Leipzig:

This will confirm your telephone conversation with Messrs. David H. Darugh and John L. Foutch of our Office of Chief Counsel concerning your Freedom of Information Act (FOIA) request dated June 3, 1980, during which you agreed to extend our response time to August 31, 1980.

We have determined that a waiver of fees is appropriate in connection with this request. We appreciate your agreement to narrow the scope of your request and to grant us the additional time within which to respond. As related to me by Mr. Darugh, your request is now focused on:

1. Information on the types and/or nature of materials utilized or present at the sites;
2. Information on procedures of manufacture and processes leading to chemical makeup of materials present or utilized at the sites; and
3. Information on disposal of materials utilized or present at the sites, including the transportation to or from the site of materials present or utilized there, including by-products (which should be interpreted broadly).

CERTIFIED MAIL:  
 RETURN RECEIPT REQUESTED

1117212

5315

Steven D. Leipzig

-2-

JUL 24 1980

Please be assured that your request is being expeditiously processed. If we are able to respond prior to August 31, 1980, we will do so.

Sincerely,

S/ WAYNE RANGE

Wayne Range  
Freedom of Information Officer

CC-10:DGD

cc: Milton Jordan, HQ FOI  
(Ref. # 06108006N)

bcc: W. H. Travis, S&EC Div.  
E. H. Hardison, Technical Services Div.  
Dr. William E. Mott, EV-13, GTN

W. J. Grannen, Esq.  
National Lead Company of Ohio  
P. O. Box 39158  
Cincinnati, Ohio 45239

CC-10:DGDarugh:klc:6-1213:7/23/80

(The above bcc's rec'd. a copy of the subject FOIA request and correspondence relating to the request for their info.)

RTS. SYMBOL	CCOYO
INITIALS/SIG.	Darugh
DATE	7/23/80
RTS. SYMBOL	
INITIALS/SIG.	
DATE	7/24/80
RTS. SYMBOL	
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DATE	
RTS. SYMBOL	
INITIALS/SIG.	
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RTS. SYMBOL	
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RTS. SYMBOL	
INITIALS/SIG.	
DATE	

1117213

Called  
7/7  
7/9



Received in Headquarters FOI Division

JUN 10 1980

Date

ROBERT ABRAMS  
Attorney General

Environmental  
Protection Bureau

STATE OF NEW YORK  
DEPARTMENT OF LAW  
TWO WORLD TRADE CENTER  
NEW YORK, N.Y. 10047  
TELEPHONE: (212) 488-7562

Rm 4774

From Name -  
10 yrs -  
Property documents  
to AEC (produce).  
20 yrs into 1980  
checked by me.  
80 JUL 2 AM 9:31  
Linda  
Controlled  
Early

FREEDOM OF  
INFORMATION OFFICE  
USDOE ORU

June 3, 1980

DAVE DAROSH 6-1213  
KATHY COX 6-1205  
KIM GILL 6-1208

Information Access Officer  
Department of Energy  
Rm. 1221  
12th & Pennsylvania, NW  
Washington, D.C. 20461

Dear Sir:

This is a request under the Freedom of Information Act as amended (5 U.S.C. §552).

This office requests copies of all documents in the possession of your agency relating to the activities and involvement of any agency of the United States government from 1930 through 1960 in nuclear chemical engineering and in the manufacture, transportation and disposal of munitions, chemicals, and other items of chemical and other warfare, including the wastes and byproducts generated by these activities, in Niagara County and Erie County in New York State. This request includes all documents relating to operations conducted by the federal government, its agencies and its proprietary corporations, and those conducted by private industry on behalf or in conjunction with the federal government.

The basis for this request is the "Preliminary Report of New York State Assembly Task Force on Toxic Substances: Inquiry into the Love Canal and Related Matters." A copy of this report is enclosed for your information. Our office is seeking by this request to obtain any documents, records or other material in the possession of your agency which has any bearing on the information contained in that legislative committee report.

In the event that some of the requested documents are exempt, this office requests that the exempt material be described in detail and that the statutory justification for the exemption be specified.

The amended Act permits you to reduce or waive the fees if disclosure would be "in the public interest because furnishing the information can be considered as primarily benefiting the public." This request meets this standard and therefore any fees should be waived. However, we are prepared to pay reasonable costs for locating and reproducing the requested documents.

1117214

As provided for in the amended Act, this office expects to receive a reply within ten working days.

Sincerely yours,

*[Signature]*  
STEVEN D. LEIPZIG  
Assistant Attorney General  
Environmental Protection Bureau

SDL:dap

W/in 30 days

- 1) <sup>nature</sup> Types of materials utilized or present at sites.
- 2) Disposal of materials utilized or present at sites. Broadest scope of response.  
*(inc. identification of materials utilized & byproducts)*
- 3) Procedures of info (leading to chemical makeup)  
Processes & ... including byproducts information

- Aug 31 -

*[Faint handwritten notes]*

*[Handwritten notes: 6/10/41 20 boxes]*

1117215

No. 664138

SENT TO <u>Steven D. Leipzig</u>		POSTMARK OR DATE
<u>Assistant Attorney General</u>		
STREET AND NO. <u>Environmental Protection Bureau</u>		
<u>Two World Trade Center</u>		
P.O., STATE AND ZIP CODE <u>Rm. 4774</u>		
<u>New York, New York 10047</u>		
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JUL 24 1980

Steven D. Leipzig  
 Assistant Attorney General  
 Environmental Protection Bureau  
 Two World Trade Center  
 Room 4774  
 New York, New York 10047

WASH. FIELD  
 Freedom of Information Act

Dear Mr. Leipzig: (108005N)

This will confirm your telephone conversation with Messrs. David S. Darugh and James L. Foutch of our Office of Chief Counsel concerning your Freedom of Information Act (FOIA) request dated June 3, 1980, during which you agreed to extend our response time to August 31, 1980.

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3. Information on disposal of materials utilized or present at the sites, including the transportation to or from the site of materials present or utilized there, including by-products (which should be interpreted broadly).

CERTIFIED MAIL:  
 RETURN RECEIPT REQUESTED

1117216

Steven D. Leipzig

-2-

JUL 24 1980

Please be assured that your request is being expeditiously processed. If we are able to respond prior to August 31, 1980, we will do so.

Sincerely,

*S*/WAYNE RANGE

Wayne Range  
Freedom of Information Officer

CC-10:DGD

cc: Milton Jordan, HQ FOI  
(Ref. # 06108006N)

bcc: W. H. Travis, S&EC Div.  
E. H. Hardison, Technical Services Div.  
Dr. William E. Mott, EV-13, GTN

w. J. Grannen, Esq.  
National Lead Company of Ohio  
P. O. Box 39158  
Cincinnati, Ohio 45239

CC-10:DGDarugh:klc:6-1213:7/23/80

(The above bcc's rec'd. a copy of the subject FOIA request and correspondence relating to the request for their info.)

NO. SYMBOL	CC 070
INITIALS/SIG	<i>DR</i> Darugh
DATE	7/23/80
NO. SYMBOL	M-4
INITIALS/SIG	<i>WR</i>
DATE	7/24/80
NO. SYMBOL	
INITIALS/SIG	
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NO. SYMBOL	
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NO. SYMBOL	
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NO. SYMBOL	
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DATE	

1117217

TOM CARBERG  
ROY ANDERSON  
BERNARD ROBINSON

Dave Dorough

Dick Heatherton - NLD - forwarding documents dealing with Bethlehem Steel at Leekawanna and Simonds Saw + Steel in Lockport. Heatherton was at Lunde during W.W. II

Joe Dykstra of K-25 at Hooker during W.W. II

\* Faye Horn - TIC - 6-1304  
Has M-333 Masters - 3 of 4 volumes should be reproduced - requires authorization  
M-333 is ~~the~~ completion report on Lunde Air Products at Tonawanda

Env Hardism - 6-0956

Contracts not included

Titanium Alloys - Nat'l Lead - Zirconium

Charles St. Agents - still secret  
Box 49-50 & 51 Charles  
Sylvania - Bayside - Hicksville

\* AT-(30-1)-1524 Hooker  
Olin Mathieson had some involvement in 1955 - classified office in city of Niagara Falls. Navy center

1117218

- x Singmaster & Breyer - AT - (30-1) - 1523
- x Simons Saw & Steel - AT - (30-1) GEU 339
- Union Carbide AT - 30-1 - GEU - 165
- AVI - Brookhaven AT - (30-2) - GEU - 16
- U. of Rochester W-7401 - ENG 49.
- + Linde (char. st Plant) W-26-021 - eng 44
- + Linde W-7401 Eng 12
- + Hoover W-7405 eng 28
- + Linde AT (30-1) - GEU - 165
- + Hooker W 7405 - eng 75  
W 7405 - eng 76
- + ~~W 7405~~ Electromet W 7405 - eng 14
- + Hooker A T (30-1) - 1524

FRANCO  
INFO  
US

August 19, 1980

1980 AUG 19 11 41 AM

AD-44

FOIA Requests Re: Love Canal

AD-44

Jack M. Holl, Chief Historian (Acting), D/OSR

Gelband

8/ /

This is to confirm the telephone conversation between Roger Anders and Spencer Gelband of my staff concerning two FOIA requests from the New York Attorney General and the New York State Assembly on federal involvement in chemical waste dumping at Love Canal. We understand that your office is effecting coordination with Oak Ridge on the Attorney-General request. Attached is a copy of the New York State Assembly request, which may be of assistance in your search. As you are already coordinating with ORNL on the earlier request, please continue to coordinate with them on the State Assembly request.

If you have any questions, please contact me or Spencer Gelband of my staff on 252-6025.

Original Signed by  
Zeller

Division of FOI and Privacy  
Acta Activities

Attachment

cc: AD-40

AD-44

Official File

Case File

Wayne Range, Oak Ridge Operations

AD-44:Gelband:sjb:FORN:GD-145:252-6025: /11/20/80 Case Number: 14250022X

PERSONNEL

FOIA

609

1117220

FEDERAL BUREAU OF INVESTIGATION

August 19, 1980

100 AUG 23 1980

AD-44

FOIA Requests Re: Love Canal

AD-44

Jack M. Holl, Chief Historian (Action), O/OSR

Gelba

8/ /

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If you have any questions, please contact me or Spencer Gelband of my staff on 252-6025.

Original Signed by  
 [Signature]

Special Agent in Charge  
 Division of FOI and Privacy  
 Note Activities

Attachment

cc: AD-40

AD-44

Official File

Case File

Wayne Range, Oak Ridge Operations

AD-44:Gelband:sjb:FORR:GB-145:252-6025: 7/17/80:Case Number 82258022X

1117221

PRELIMINARY REPORT OF  
NEW YORK STATE ASSEMBLY  
COMMISSION ON TOXIC SUBSTANCES:  
DISCHARGE INTO THE LOVE CANAL  
AND RELATED MATTERS

80 JUL 2 AM 9:31

FREEDOM OF  
INFORMATION OFFICE  
UCIDOE 0810

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

Maurice Winchey  
Alexander B. Grannis  
Matthew J. Murphy  
Joseph T. Pillittere

1117222

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.<sup>1</sup> Both sites are

located in the County of Niagara.

In 1970, the population of Niagara Falls was approximately 86,000 and the population of Lewiston approximated 16,000.<sup>2</sup> 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.

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

<sup>2</sup>United States Census Figures, 1970

1117223

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.

1117224

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, 1980, the New York State Assembly's Majority Floor 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 significant contributor to the industrial production effort during both these conflicts.

"During World War II, the Department of the Army ~~utilized~~ 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 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 materials during World War II (MED and AEC related activities have since been consolidated under the aegis 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 production (full scale and pilot plant testing) of nuclear reactor fuel rods. Nuclear fuel processing in the Erie-Niagara area was gradually phased out and finally discontinued in 1956.

"Current DOE involvement continues in the area in connection with the storage of radioactive materials at the Lake Ontario Ordnance Works in Lewiston and Porter. 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."<sup>3</sup>

#### Congressional Inquiry - Army Investigation

The Department of Defense 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

<sup>3</sup>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 LaFalce 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."<sup>4</sup>

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.<sup>5</sup>

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.<sup>6</sup>

---

<sup>4</sup>The Report on Army Investigation, etc. Aug. 14, 1978

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

<sup>6</sup>IBID, 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 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.<sup>7</sup>

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.

---

<sup>7</sup>Statement of Michael Farina, Assistant Assessor, City of Niagara Falls, May 15, 1979

<sup>8</sup>A letter to John P. 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."

DIRECTORIAL 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 deNemours 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.<sup>9</sup>

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. [REDACTED] 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

<sup>9</sup>The Chemical Corps Journal, Official publication of the Chemical Corps Assoc., dated April, 1948, published from Room 523, 1129 Vermont Ave., Wash. D. C. by Colonel Harold Rodier, Chemical Corps, Retired.

1117233

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 sidarm. 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.

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.<sup>10</sup>

<sup>10</sup>Department 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 same 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.<sup>11</sup> 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.<sup>12</sup> One particular container in the catalog which is described with diagrams appears to be identical to that described by [REDACTED].

The catalog description was given to [REDACTED], 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, RH-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.<sup>13</sup>

<sup>11</sup> Investigator interview with Mr. Dudley Barton, dated 12/3/79

<sup>12</sup> Catalog of the products made by Haveg Corporation during the World War

<sup>13</sup> Interview with Investigator 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.<sup>14</sup> 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

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<sup>14</sup> Phosgene 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  
Plant. <sup>15</sup>

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 Plant 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. <sup>16</sup>

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<sup>15</sup>Memorandum to Mr. R.G. Ruark, War Production Board, from Walter  
Runge, Chief Intermediate Unit, dated April 18, 1944, with pro-  
duction report on Phosgene by War Production Board for years 1943,  
1944, 1945.

<sup>16</sup>A 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, ROLL-3-V42342, National Archives, WB-5  
Record Group No. 373. Canadian Archives, CAN 3A921. Agriculture Dept.  
stabilization photograph dated October, 1951. APP-511-215.

On April 23, 1947, 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.<sup>17</sup> The deed contains no warning pertaining to fissionable materials in the property as set forth under Executive Order 9908.

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 Franklin Boulevard, which is in direct line running north of Griffin Manor, we find a warning 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.<sup>18</sup>

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, an area within the Townships of Porter and Lewiston. These lands were owned

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<sup>17</sup>Quitclaim 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.

<sup>18</sup>Quitclaim 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.<sup>19</sup> These Townships, which were farmlands 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 chemical productions were intertwined. All the Planters 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."<sup>20</sup>

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

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

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

In a section titled "Type of facility and physical characteristics" it describes the central area, Reference 3 and 4, as highly contaminated. "The soil 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."<sup>21</sup> Further documentation suggests that the U.S. government was involved in nuclear chemical engineering in this area during the 1940s<sup>22</sup>.

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 areas apparently under the control of the Atomic Energy Commission, including a potable water line.<sup>23</sup>

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

<sup>22</sup>War 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 Filens, 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 not complied with numerous requests that such decontamination be completed; similarly, follow-up letter dated July 11, 1947, and others in the same vein.

<sup>23</sup>op.cit. G.S.A. Real Property Transaction Advice #215491, dated August 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 complaint from residents who own homes in the Lewiston encampment 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, were the same chemicals used in the development of the Atomic Bomb and nuclear chemical engineering.<sup>24</sup>

On June 1, 1946, 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.

The leased property was designated for surface agricultural use. Subsequently, a seminary was built on this property.

Clause 16 of the lease alludes to the possibility that below the surface of this property were uranium, thorium, and other materials covered by the 1946 Atomic Energy Act.

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<sup>24</sup> 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.

Public Funding Administration, recorded to the School District, Board of Education, of Niagara Falls property known as the 93rd Street School for educational purposes. The deed included the statement, "All munitions, explosives 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."<sup>25</sup>

Additional documentation of the toxic pollution of the area has been obtained by the Task Force and is attached.<sup>26</sup>

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.<sup>27</sup>

#### 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.

<sup>25</sup> Lease to the Buffalo Academy of the Sacred Heart, Stella Niagara, from the United States Army, Corps of Engineers, Contract Number W30-075/eng3571 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.

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

<sup>27</sup> 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.

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

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FREEDOM OF  
INFORMATION OFFICE  
UCDDOE 0710

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

Maurice Hinchey  
Alexander B. Grannis  
Matthew J. Murphy  
Joseph T. Pillittere

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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.<sup>1</sup> Both sites are within the limits of the County of Niagara.

In 1970, the population of Niagara Falls was approximately 86,000 and the population of Lewiston approximated 16,000.<sup>2</sup> 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.

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

<sup>2</sup> United States Census Figures, 1970

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 amibus 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, the 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

intended. The findings and backup documentation included 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 materials during World War II (MED and AEC related activities have since been consolidated under the aegis 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 production (full scale and pilot plant testing) of nuclear reactor fuel rods. Nuclear fuel processing in the Erie-Niagara area was gradually phased out and finally discontinued in 1956.

"Current DOE involvement continues in the area in connection with the storage of radioactive materials at the Lake Ontario Ordnance Works in Lewiston and Porter. 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."<sup>3</sup>

#### 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

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<sup>3</sup>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 LaFalce 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."<sup>4</sup>

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 they 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.<sup>5</sup>

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.<sup>6</sup>

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<sup>4</sup>The Report on Army Investigation, etc. Aug. 14, 1978

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

<sup>6</sup>IBID, Incorporated on June 29, 1940

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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 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.<sup>7</sup>

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.<sup>8</sup>

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<sup>7</sup>Statement of Michael Farina, Assistant Assessor, City of Niagara Falls, May 15, 1979

<sup>8</sup>A letter to John P. 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."

CONFIDENTIAL OF IMPROVEMENT

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 deNemours 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 tetrachloroethane.

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

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, [REDACTED], 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

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

effect. Then the drums were pushed into the water with a bulldozer by itself. 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.<sup>10</sup>

<sup>10</sup>Department 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

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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.<sup>11</sup> 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.<sup>12</sup> One particular container in the catalog which is described with diagrams appears to be identical to that described by [REDACTED]

The catalog description was given to [REDACTED], 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.

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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 1951, a time period coinciding with the effort by the United  
States government to foster chemical production in this region. <sup>16</sup>

<sup>15</sup> Memorandum to Mr. R.G. Kuark, War Production Board, from Walter  
Runge, Chief Intermediates Unit, dated April 18, 1944, with pro-  
duction report on Phosgene by War Production Board for years 1943,  
1944, 1945.

<sup>16</sup> A 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, ROLL-3-V42342, National Archives, WB-5  
Record Group No. 373. Canadian Archives, CAN 3A921. Agriculture Dept.  
stabilization photograph dated October, 1951. APP-511-215.

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17quitclaim deed by and between the Public Housing Administration of the United States Government and the Niagara Falls Housing Authority as recorded in LHR 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 LHR 987 page 26.

in the Townships of Porter and Lewiston. These lands were owned large tracts of land on the northern end of Love Canal, an area with Lake Ontario drainage works. The Lake Ontario drainage works occupied Another site of United States Government involvement was the

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

Act of 1946 and in accordance with Executive Order 9908.18 all other materials pursuant to Section 5(b)(1) of the Atomic Energy north of Griffin Manor, we find a warning pertaining to Uranium and the area north of Griffin Boulevard, which is in direct line running the Board of Education of the School District of Niagara Falls for However, in the quitclaim deed between the United States and as set forth under Executive Order 9908.

lains no warning pertaining to fissionable materials in the property was deduced to the City of Niagara Falls for housing.17 The deed con- Reconstruction Finance Corporation. After World War II Griffin Manor

estation. The Defense Homes Corporation was organized under the workers in cooperation with the office of the National Housing Admin- lished on October 23, 1940 to alleviate a housing shortage for defense

Manor was built by the Defense Homes Corporation, which was estab- westerly from Love Canal towards the line of Great Lot 60. Griffin style housing facility called Griffin Manor in the Love Canal area States government to several photos which include a large military- on April 23, 1941, as part of the Defense Program, the United

by the United States Army.<sup>19</sup> These Townships, which were farmlands 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 chemical productions were intertwined. All the planters 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."**<sup>20</sup>

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

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

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. "The soil 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."<sup>21</sup> Further documentation suggests that the U.S. government was involved in **nuclear chemical** engineering in this area during the 1940s<sup>22</sup>.

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 areas apparently under the control of the Atomic Energy Commission, including a potable water line.<sup>23</sup>

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

<sup>22</sup>War Assets Administration, Z1-PMD, Report Control Number RP-F-13; letter dated July 11, 1947 to Mr. Thomas E. Drumma, Deputy Administrator, Office of Real Property Disposal, Washington, D.C. from Harry Filens, 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 not complied with numerous requests that such decontamination be completed; similarly, follow-up letter dated July 11, 1947, and others in the same vein.

<sup>23</sup>op.cit. G.S.A. Real Property Transaction Advice #215491, dated August 1963.

As of the end of March, 1944, certain structures had been dismantled, including a power plant, 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 development 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, were the same chemicals used in the development of the Atomic Bomb and nuclear chemical engineering.<sup>24</sup>

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.

The leased property was designated for surface agricultural use. Subsequently, a seminary was built on this property.

Clause 16 of the lease alludes to the possibility that below the surface of this property were uranium, thorium, and other materials covered by the 1946 Atomic Energy Act.

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<sup>24</sup> 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.

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, "All 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."<sup>25</sup>

Additional documentation of the toxic pollution of the area has been obtained by the Task Force and is attached.<sup>26</sup>

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.<sup>27</sup>

#### 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 abundant wastes from these projects; and that the government knowingly transferred contaminated uranium to private concerns without decontaminating them and without regard for the health and safety of the people of the Love Canal region.

to the Buffalo Academy of the Sacred Heart, Stella Niagara, for the United States Army, Corps of Engineers, Contract Number W30-075/ENG3571 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, 1972.

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.

December 27, 1978

William E. Mott, Director, Division of Environmental Control Technology,  
DOE-HQ, Germantown, Maryland, MS E-201

**REQUEST FROM EPA TO PROVIDE INFORMATION ON HAZARDOUS WASTES IN WESTERN  
NEW YORK STATE**

This is in response to your memorandum of November 28, 1978 on the above subject.

After considerable review of this matter including review of documents in our possession and discussion with "Old Timers" we are not able to contribute much of value regarding hazardous waste disposal site locations during the past 50 years in Erie and Niagara counties. For whatever use it might serve (perhaps for tracking purposes) we have outlined below some pertinent data regarding Federal Government operations with which ORG had some association in the past.

- 1) Operator: Linde Air Products Division of Union Carbide,  
Tonawanda, New York  
Period: 1940-1948  
Process: Separation of UO<sub>2</sub> from Uranium Ores and Conversion of UO<sub>2</sub> to UF<sub>4</sub>  
U Residues: Shipped to LOOW site for storage. Some stored on adjoining Haist property and later shipped to LOOW.  
Hazardous Materials: Some unknown quantity of liquid residues pumped into wells on site  
Note: Some uranium processing was carried out in this plant for private use prior to work for the Government.
  
- 2) Operator: Electromet, Niagara Falls, New York  
Period: 1948-1949  
Process: Uranium reduction and casting operations  
Recycle Material: Reduction bomb liner (C-slag) and broken graphite crucibles from casting operation. Shipped to LOOW site for interim storage later shipped to Y-12 Oak Ridge for Uranium recovery.  
Hazardous Material: None expected.

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Operator: Simon Saw and Steel, Lockport, New York  
 Period: 1950-1952  
 Process: Rolling of uranium billets to rod form. Possibly some sawing of rods to length.  
 Recycle Material: Uranium Oxide, U dust and U saw dust. Returned to NLO (Ohio) or Mallinrodt (St. Louis) for reprocessing. Perhaps some interim storage at LOOW.  
 Hazardous Material: None expected.

Operator: Beth  
 Period: 1950-1952  
 Process: Experimental rolling work - Uranium billets to rods.  
 Recycle Material: U dust and metal oxides returned to NLO for reprocessing.  
 Hazardous Material: None expected

Facility: Boron Isotope Separation Plant at LOOW  
 Operators: (1) Hooker Chemical Company, Niagara Falls, New York  
 (2) Nuclear Materials & Equipment Corporation, Leiviston, New York  
 (Home Office - Apollo, PA.)  
 Periods: (1) 1954-1958 (2) 1964-1971  
 Process: Separation of boron isotopes by the dimethyl ether (association - dissociation) process  
 Hazardous Material: None  
 Note: No radioactive materials were associated with this operation.

If you are thoroughly familiar with the uranium residue storage/disposal situation at LOOW, the Hafst property and Seaway Industrial Park we have any discussion of these.

Please advise if you have any questions on the above.

APPROVED BY  
 E. L. KELLER  
 Elmer L. Keller, Director  
 Technical Services Division

cc: A. Keller

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