

FactPack - P007





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Love Canal Chronology

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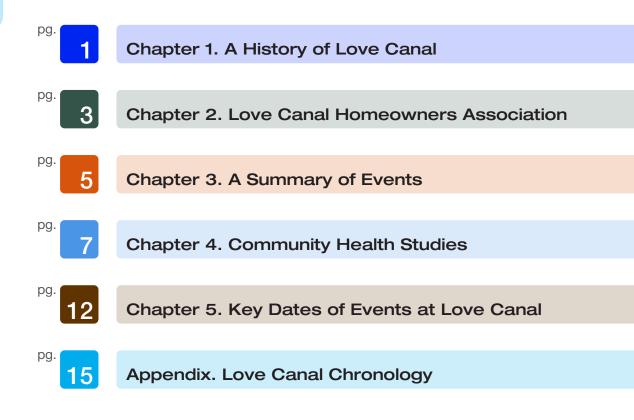
Mentoring a Movement Empowering People Preventing Harm

About the Center for Health, Environment & Justice

CHEJ mentors the movement to build healthier communities by empowering people to prevent the harm caused by chemical and toxic threats. We accomplish our work by connecting local community groups to national initiatives and corporate campaigns. CHEJ works with communities to empower groups by providing the tools, strategic vision, and encouragement they need to advocate for human health and the prevention of harm.

Following her successful effort to prevent further harm for families living in contaminated Love Canal, Lois Gibbs founded CHEJ in 1981 to continue the journey. To date, CHEJ has assisted over 10,000 groups nationwide. Details on CHEJ's efforts to help families and communities prevent harm can be found on www.chej.org.

Table of Contents



Chapter 1 History of Love Canal

The history of Love Canal began in 1892 when William T. Love proposed connecting the upper and lower Niagara River by digging a canal six to seven miles long. By doing this, Love hoped to harness the water of the upper Niagara River into a navigable channel, which would create a man-made waterfall with a 280-foot drop into the lower Niagara River, providing cheap power.

However, the country fell into an economic depression and financial backing for the project slipped away. Love then abandoned the project, leaving behind a partially dug section of the canal, sixty feet wide and three thousand feet long. In 1920, the land was sold at public auction and became a municipal and chemical disposal site until 1953. The principal company that dumped waste in the canal was Hooker Chemical Corporation, a subsidiary of Occidental Petroleum. The City of Niagara and the United States Army used the site as well, with the city dumping garbage and the Army possibly dumping parts of the Manhattan Project and other chemical warfare material.

In 1953, after filling the canal and covering it with dirt, Hooker sold the land to the Board of Education

for one dollar. Hooker included in the deed transfer a "warning" of the chemical wastes buried on the property and a disclaimer absolving Hooker of any future liability.

Perhaps because they didn't understand the potential risks associated with Hooker's chemical wastes, the Board of Education began in 1954 to construct an elementary school on the canal property. The 99th Street School was completed by 1955, opening its doors to about 400 students each year.

Homebuilding around the old canal also began in the 1950's. However, homeowners were never given any warning or information that would indicate that the property was located near a chemical waste dump. Most families who moved into the area were unaware of the old landfill and its poisons. The one-time canal looked very innocent, like any field anywhere. It certainly did not appear to be a chemical dump with 20,000 tons of toxic wastes buried beneath it.

In 1978, there were approximately 800 private single-family homes and 240 lowincome apartments built around the canal. The elementary school was located near the center of the landfill. The Niagara

River, to the south and a creek to the north of the landfill formed natural boundaries for the area affected by the migrating chemicals.

From the late 1950's through the 1970's, people repeatedly complained of odors and substances surfacing near or in their yards and on the school playground. The city, responding to these complaints, visited the area and covered the "substances" with dirt or clay.

After years of complaints, the city and county hired a consultant to investigate. In 1976, the Calspan Corporation completed a study of the canal area and found toxic chemical residues in the air and sump pumps of a high percentage of homes at the southern end of the canal. They also found drums just beneath or on the surface, and high levels of PCB's in the storm sewer system. Calspan recommended that the canal be covered with clay, home sump pumps be sealed off and a tile drainage system be installed to control the migration of wastes.

However, nothing was done by the city with the exception of placing window fans in a few homes found to contain high levels of chemical residues.

In March of 1978, the New York State Department of Health (NYSDOH) began collecting air and soil tests in basements and conducting a health study of the 239 families that immediately encircled the canal. The Health Department found an increase in reproductive problems among women and high levels of chemical contaminants in soil and air.

Chapter 2 **Love Canal Homeowners Association**

Love Canal Homeowners Association (LCHA) was established in August of 1978 to give the community a voice in the decisions made during the Love Canal environmental crisis. LCHA membership consisted of approximately 500 families living within a 10-block area surrounding the Love Canal landfill. The community consisted of bluecollar workers with an average annual income of \$10,000-\$25,000. The majority of people worked in local industries which were largely chemical.

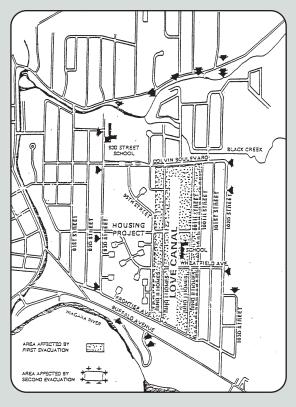
The Love Canal Homeowners Association grew out of another group established in June 1978, the Love Canal Parents Movement. The Parents Movement was started by Lois Gibbs, who lived in the neighborhood and whose children attended the 99th Street School. Ms. Gibbs, unaware of the dump, was alerted first by newspaper articles describing the landfill, its wastes, and proximity to the 99th StreetSchool. Having a small sickly child attending the school, Gibbs became very concerned about the danger the landfill posed to the school. She also realized that the school being built so close to the landfill might have something to do with her son's poor health.

Gibbs first approached the School Board armed with notes from two physicians recommending the transfer of her child to another public school. But the Board refused to transfer her child stating that if it was unsafe for her son, then it would be unsafe for all children and they were not going to close the school because of one concerned mother with a sickly child. Gibbs was angered and began talking with other parents in the neighborhood to see if they were having problems with their children's health. After speaking with hundreds of people, she realized that the entire community was affected.

On August 2, 1978, the New York State Department of Health (NYSDOH) issued a health order. The health order recommended that the 99th Street School be closed (a victory), that pregnant women and children under the age of two be evacuated, that residents not eat out of their home gardens and that they spend limited time in their basements. A few days later, the state agreed to purchase all 239 homes in the first two rings of homes closest to the canal.

These unprecedented actions served to bring the residents together to form a strong united citizens organization, and served as the stepping stone to the establishment of the Love Canal Homeowners Association. Within a week of the health order, the residents held a public meeting, elected officers and set goals for the newly formed organization. All goals set at that time were ultimately reached.

The Love Canal and the Surrounding Neighborhood





At the time of the first evacuation order in August of 1978, the state established the Love Canal Interagency Task Force to coordinate the many activities undertaken at the canal. The task force had three major responsibilities: the relocation of evacuated families, the continuation of health and environmental studies and the construction of a drainage system to prevent further migration of toxic chemicals.

Remedial Construction

A cross-sectional diagram of the Love Canal landfill is shown below. Because of the close proximity to the Niagara River, the water table in the canal would rise and fall substantially. As this occurred, water would mix with chemicals in the landfill and move out into the community as "leachate." As the water table rose, so did the leachate which moved out through the topsoil to homes built nearby. There was also an old stream bed that crossed the canal and underground sand layers that carried this overflow into the basements of adjacent homes and throughout the community.

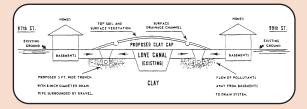
The cleanup plan consisted of a tile drain collection

system designed to "contain" the waste and prevent any outward migration of chemical leachate. A graded trench system was dug around the canal to intercept migrating leachate and create a barrier drain system. The containment system is shown below.

The leachate collected from the drain system is pumped to an on-site treatment plant that uses a series of filters, most importantly, activated charcoal, to remove chemicals from the waste stream. The remaining "clean" water is then flushed down the sanitary sewer system. Chemicals such as mercury and other heavy metals are not removed by this treatment system.

A clay cap was placed over the canal as a cover to minimize rainwater entering the canal surface, to

Love Canal Remedial Construction Plan



prevent chemicals from vaporizing into the air and to prevent direct contact with contaminated soil. The 20,000 tons of wastes are still buried in the center of this community.

Although this system cost the state millions of dollars, a monitoring system to determine its effectiveness was not established until 5 years had passed.

Thus, there was no baseline data on contaminant levels in the groundwater. Once the state began to monitor the wells, they did find chemicals leaking into the river. This was not surprising since there was no bottom to the "containment" sytem. Other data indicated that some contaminants were increasing in the monitoring wells outside the canal. The state ignored these data and pointed to other data that indicated that the system was working.

Outside the Fence

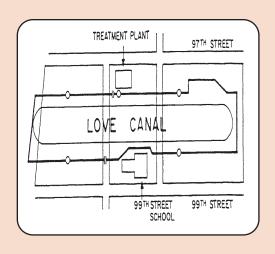
Once the state had evacuated 239 families and began the cleanup, they arbitrarily defined the affected area and erected a 10- foot fence around the evacuated area. This decision was arbitrary because at the time nobody knew how far the chemicals had gone or how many people were affected. At this same time, the state began to make public statements that there was no evidence of abnormal health problems outside the fenced area. Consequently, the families in the outer community became angry and began to look

at the fence as though it fenced them in. The residents knew there were health problems outside the first 239 homes because of a health survey that LCHA had conducted.

The community quickly began to express their anger and concerns. Even quiet and retiring residents suddenly found themselves raising their voices in public protest. The protests included mothers and fathers with their babies and seniors who were ready for retirement. They marched into the streets on Mother's Day, carried symbolic coffins to the state capitol, and held prayer vigils.

The residents also picketed at the canal every day for weeks in the dead of winter, hoping someone would hear them and someone would help. Their children were sick, their homes were worthless and they were innocent victims.

Because of the pressure created by the protests and the persistence of the community, the state was forced to address the community's concerns. They gave the residents "concessions" such as an extensive safety plan, a scientist-consultant of their choosing whose salary was paid by the state, and a \$200,000 Human Services Fund to pay some of the residents' medical expenses. But, residents did not want concessions. They wanted and needed to be evacuated as the first 239 families were.



Chapter 4 Community **Health Studies**

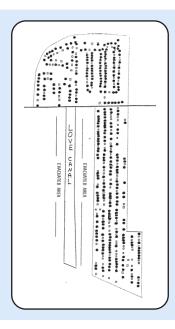
With the help of a dedicated volunteer scientist, LCHA began to interview families. Once the data was collected, they plotted the results on a map and immediately noticed a clustering of diseases in certain areas of the neighborhood. Elderly residents suggested that the clusters seemed to follow the path of old stream beds that had crossed the canal many years ago. LCHA looked at old aerial photographs, geological survey maps and personal photographs that residents brought forth. One of these photographs showed an old stream bed which appeared to be 10feet deep and more than 20-feet wide. These stream beds crossed the canal carrying water to and from the Niagara River. When the area was developed, the stream beds were filled with dirt and building rubble through which water flowed easily. Even though there was no surface evidence of these stream beds, they provided an easy pathway for chemicals to flow out of the canal.

The scientist who helped the residents with their health study was Dr. Beverly Paigen, a cancer research scientist at Roswell Memorial Institute in Buffalo, New York. The data was collected by interviewing each family using a questionnaire. More than 75% of

the homes outside the fenced area were included in the study. The 239 families who lived closest to the canal were not included because they were already evacuated.

Thus, the results were an underestimate of the total health damages in the community. The study was completed in February, 1979.

Study Area



Findings

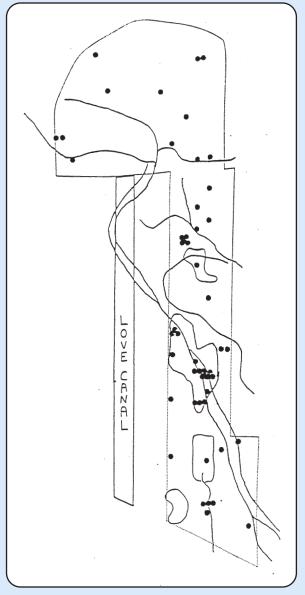
The LCHA's study found increases in miscarriages, still births, crib deaths, nervous breakdowns, hyperactivity, epilepsy, and urinary tract disorders. Each of these disorders were plotted on a map using dots to represent each case. Many of the dots clustered around the old stream beds or "historically wet" areas. On the following maps, homes and streets have been removed so that no family would be identified. The "wiggly" lines are the underground streambeds and the closed shapes are the ponds or wet areas.

Miscarriages & Crib Deaths

The first map (Map 1) shows the miscarriages that occured at Love Canal. Each black dot represents one miscarriage. As can be seen, the families located in the ponded area had multiple miscarriages. Also, the majority of these miscarriages occurred on or near a "wet" area.

When the observed miscarriages were compared to the number of miscarriages that occurred in the same women before they moved to the Love Canal, miscarriages were found to have increased 300%. Most of these miscarriages occurred in women who lived in the historically wet areas.

LCHA also examined the pregnancies that occurred between January 1979 and February 1980, the construction period. This study found that out of 22 pregnancies occurring among Love Canal women, only four normal babies were born. The rest of the pregnancies ended in a miscarriage, stillbirth or a birthdefected child.



Map 1

	Pregnancies	Miscarriages	Percentage
Before moving to Love Canal	714	61	8.5%
After moving to Love Canal	155	39	25.2%

Birth Defects

The LCHA also investigated the number of birth defects in the Love Canal community. Map 2 shows the homes where birth defects were found.

When comparing the number of birth defects in historically wet areas with homes outside these areas, there were almost three times as many birth defects.

Importantly, no birth defects were found in homes located on the stream bed that did not cross the canal. The study also showed that during the 5-year period from 1974 to 1978, 56% of the children in the Love Canal neighborhood were born with a birth defect (9 birth defects among

16 children born) that included three ears, double row of teeth, and mental retardation.

Nervous Breakdowns

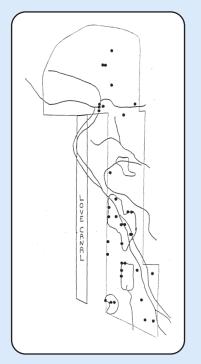
Another condition that was increased in Love Canal residents was nervous breakdowns including suicide attempts and admissions to a mental hospital. The table below shows that people lving in historically wet areas were six times more likely to have nervous breakdowns as those living in dry areas.

The black dots shown on Map 3 represent either a nervous breakdown, suicide attempt, or an admission to a mental hospital. No one was included that reported only a 'nervous condition'.

Birth Defects in Children Born During 1974-1978 in Wet Areas

Children born 16 No. of Birth Defects 9

Percentage 56%

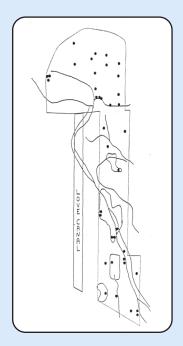


Map 2

Nervous Breakdowns

Living in	Adults	Breakdowns	%
Wet Areas	149	13	8.7
Dry Areas (South)	226	5	2.2
Dry Areas (North)	286	2	0.7

Relative Risk = 6.3 wet vs. all dry areast

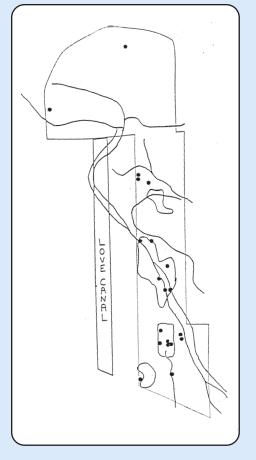


Мар 3

Kidney and Urinary Systems

Many of the chemicals in Love Canal are also known to affect the kidneys and the urinary system. Map 4 and the table show an increase of almost 300% in urinary tract disorders. LCHA found a great number of the canal children to have urinary tract disorders. The study showed more disease on the streambeds that intercepted the canal when compared to the streambed that did not cross the canal.

Urinary Tract Disorders			
Living in	Adults	Disorders	%
Wet Areas Dry Areas	314 826	22 21	7.0 2.5
Relative Risk = 2.8			



Map 4

Combined Health Disorders

Map 5 shows all the diseases combined. Remember that this data represents an underestimate of the health damages at Love Canal, since it does not include the 239 families who recieved the highest exposures and who were evacuated.

LCHA presented these findings to the state health authorities who quickly dismissed the study calling it "useless housewife data," saying residents' illnesses were all in their heads, the birth defects were genetic, and the urinary disease the result of sexual activity (in a five-year-old boy??).

So, the community went back to the streets and explained their problems to the public in order to gain the public support needed. Thousands of people soon began to write letters and send telegrams to the Governor, to legislators and to the President of our country. Residents created so much pressure and public outcry that the health authorities were forced to investigate their claims.

On February 8, 1979, after the health department looked at the reproductive problems in the outer community, they confirmed the homeowners' findings and issued a second evacuation order for pregnant women and children under the age of two. This evacuation was a step in the right direction, but it was still not enough. It was not until October of 1980 that a total evacuation of the community was ordered by President Jimmy Carter. Everyone who lived at the Love Canal had the option of moving away, with the government purchasing their homes at fair market value.

It is unfortunate that everything done at Love Canal, from the health studies to evacuation, was done for political reasons. None of the decisions were based on scientific evidence. LCHA truly believes that if it had not been for the large, strong citizen organization, families would still be living at Love Canal with the health authorities saying there were no health problems.

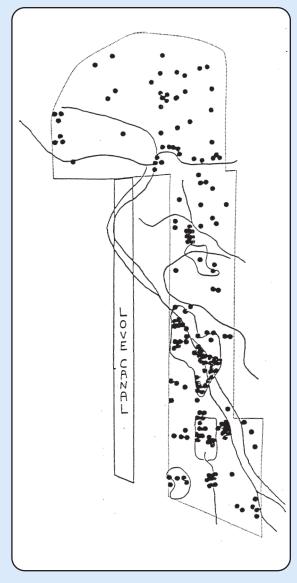
For these same reasons, in September, 1988, portions of the Love Canal area were declared "habitable," by

the NY State Department of Health. But the state never declared that these areas were "safe." The 239 homes closest to the canal have been demolished and the remaining homes may be sold to new families. The homes that will be reinhabited are still contaminated, still unsafe. There have been no cleanup measures taken around the homes, which were found to have several toxic chemicals in their yards. Only the creek and sewer systems were cleaned.

In the case of Love Canal, history will most likely repeat itself. The deeds contain a clause stating that if the new owners become sick, harmed, or die due to the Love Canal wastes, the city, state or federal governments will not be responsible. This clause is similar to the "Hooker Clause" in the earlier land transfer in 1950.

In conclusion, it is important to add that canal families didn't know that they were being exposed to poisonous chemicals, nor were they aware that chemical wastes were being dumped in our rivers, soil, and air. Love Canal awoke a community to the unpleasant and unfortunate realization of how toxic wastes affect our lives, and destroy our environment. Residents at Love Canal always believed that the government would automatically protect them. They were wrong; in some cases dead wrong!

Residents learned at Love Canal that even low levels of chemical exposure have an effect on the human body, and that the government will protect you from this only when you force them to. If you think you're safe, think again. We can count only on ourselves to safeguard our families' health through vigilance, knowledge and collective action.



Map 5

Chapter 5 **Key Dates and Events at Love Canal**

April, 1978 - Niagara Gazette Newspaper reporter Michael Brown writes a series on hazardous waste problems in Niagara Falls, NY including the Love Canal dumpsite.

April, 1978 - Residents of area, become concerned about health risks from Love Canal after reading Brown's articles and called local and state health authorities for answers.

April 25, 1978 - New York State Health Commissioner, confirms that a public health hazard exists in the Love Canal community. Commissioner orders the Niagara County Health Department to remove exposed chemicals from the site and install a fence around the area.

April, 1978 - Lois Gibbs, resident and mother of two children, begins to canvass the neighborhood with a petition to close the 99th Street School located near the center of the dumpsite. Gibbs' five year old son attended kindergarten in that school.

May 19, 1978 - New York State Health Department meets with residents for the first time to explain potential hazards of exposure to toxic chemicals in and around homes.

August 2, 1978 - A small group of residents drives to Albany, NY to present their petition to close the 99th Street School to the NYS Health Department.

August 2, 1978 - The New York State Commissioner of Health declares a State of Emergency at Love Canal and orders the 99th Street School closed and a clean up plan to be undertaken immediately. He also recommends that pregnant women and children under two who live in the area immediately surrounding the Love Canal landfill should move.

August 7, 1978 - The President of the United States declares the Love Canal neighborhood an emergency and provides funds to permanently relocate the 239 families who live in the first two rows of homes that encircled the landfill site. Families that lived in the remaining 10-block area, including Lois Gibbs' family, were told they were not at risk.

February 8, 1979 - A second evacuation order was issued by the New York State Department of Health. This order recommended that pregnant women and children under the age of two who lived in the 10 block area outside the first evacuation zone of 239 homes should leave. In this case, once the child

turned two years of age or the pregnancy terminated, the family was to move back into the contaminated neighborhood.

September 8, 1979 - 300 additional families who lived within the 10 block neighborhood were temporarily relocated as a result of health problems caused by chemical exposures from the clean up activities.

May 17, 1980 - Environmental Protection Agency (EPA) announces the result of blood tests that showed chromosome damage in Love Canal residents. Residents were told that this meant they were at increased risk of cancer, reproductive problems and genetic damage.

May 19, 1980 - Love Canal residents, frightened by the news of chromosome damage and angered by the lack of government action to relocate their families from the serious public health risks of living near Love Canal, "detained" (held hostage) two Environmental Protection Agency representatives. Love Canal families challenged the White House to relocate all families by Wednesday (May 21st) at noon or "What we've done here today, will look like a Sesame Street picnic compared to what we'll do then," said Lois Gibbs, President of the Love Canal Homeowners Association.

May 21, 1980 - White House agrees to evacuate all Love Canal families temporarily until permanent relocation funds could be secured.

October 1, 1980 - President Carter visits Niagara Falls signs the appropriation bill that provided the funding for permanent relocation for all 900 families who wished to leave.

December 20, 1983 - Lawsuit filed by 1328 Love Canal residents was settled for just under \$20 million dollars with Occidental Chemical Corporation, a subsidiary of Occidental Petroleum. One million dollars was set aside for a Medical Trust Fund.

September 1988 - New York State Department of Health (NYSDOH) completes a five year Habitability Study and concludes that portions of the Love Canal neighborhood were "as habitable as other areas of Niagara Falls." NYSDOH refused to declare these areas safe.

September 15, 1989 - People from across the country joins former Love Canal residents in Albany, New York at the capitol, to protest the decision to move new families back into the Canal.

January 19, 1990 - Lois Gibbs and others meet with E.P.A. Administrator William Reilly in an attempt to block the resettlement of the northern portion of Love Canal.

April 1, 1990 - Community leaders from across the state and nation came together with the one-time residents of Love Canal and held a major rally in Niagara Falls to protest the resettlement.

August 15, 1990 - Love Canal Revitalization Agency renames a portion of Love Canal, Black Creek Village, and announces that 9 homes were available for sale to the general public.

November 28, 1990 - The first new family moves into Love Canal, but further efforts to sell homes moved slowly. Regional banks were unwilling to accept mortgages for Love Canal homes.

April, 1992 - Federal Housing Administration agrees to provide mortgage insurance to families who wished to purchase Love Canal homes.

September, 1992 - the 93rd Street School building was demolished.

June 22, 1994 - Occidental Petroleum agrees to pay \$98 million to cover New York State's cleanup costs.

January 5, 1995 - Occidental Chemical, a subsidiary of Occidental Petroleum, takes over full operations and maintenance of the chemical waste treatment plant at Love Canal.

December 22, 1995 - Occidental Petroleum agrees to pay \$129 million to cover the federal government's cleanup costs at Love Canal.

August, 1997 - The New York State Department of

Health, was awarded a \$3 million federal grant to conduct a follow-up health study of the families who lived near Love Canal before 1979.

July 24, 1998 -- Congressman John J. LaFalce (D-Tn. of Tonawanda) announces that the Environmental Protection Agency (EPA) has agreed to request the City of Niagara Falls that the agency demolish the 63 remaining homes in the portion of the Love Canal Emergency Declaration Area (EDA) deemed unsuitable for residential use.

August, 1998 - A playground was built on the southern section (not habitable) section area of the neighborhood.

Appendix Love Canal Chrnology

April 13		Commissioner Whalen, New York State Health Department, and Commissioner Berle, New York State Department of Environmental Conservation, personally inspected the Love Canal site in response to the findings of the New York State Health Department that a health hazard may exist.
April 25		Commissioner, New York State Health Department, determined that a public health hazard existed in the Love Canal area. He ordered the Niagara County Health Department to remove exposed chemicals from the site and to install a fence around the area in an effort to restrict access by residents to the area. He ordered immediate health studies initiated on residents (not done until August) living adjacent to the canal and any other measures needed to protect the health of the residents.
April 26		Public officials from NYSDEC, NYSHD, and the United States Environmental Protection Agency, met to formulate a plan of action for solving the Love Canal problems, including protecting public health, and safety and removing environmental hazards.
May 11	9	Commissioners Whalen and Berle met with various State elected officials (including State Legislature) to propose possible legislation helpful to the Love Canal problems.
May 15	÷	The United States Environmental Protection Agency announces that air samples taken from the basements of homes located adjacent to the Love Canal, contained high levels of toxic vapors, suggesting a serious health threat to people living within these homes.
May 19	-	NYSHD met with residents to explain potential hazards of exposure to toxic chemicals.
May 21	-	NYSHD reveals plans to conduct short and long term epidemiology studies on Love Canal residents.
June 13		State officials met with residents and local officials to discuss Conestoga Rovers engineering plans for corrective measures on the canal. Officials tried to explain issues to residents, but failed to adequately answer questions addressed to them by residents, producing mistrust, and feelings of inadequacy in the engineering plans.
June 25	-	NYSHD began air sampling outside of homes adjacent to the canal.
July 7		NYSHD issues first results of air samples taken in homes (basements, and other rooms) showing high levels of toluene, chloroform, benzene, and chlorotoluene. When issuing results to residents, they gave raw data analysis to residents without any interpretation of what it meant. This caused needless panic and hysterics.

July 19

State officials conducted a public meeting at 99th Street School to discuss State findings and actions to date. Residents at this time asked many questions concerning chemical data pertaining to their homes and possible health effects. They were not answered to any degree of success by State officials, consequently the meeting ultimately turned into an emotionally packed screaming match between distraught residents and State officials.

Example: When residents asked if the school was safe for their children to attend and play in the yard a State official replied, "the air readings in the school were safe and as long as the children stayed on the sidewalks when walking to and from school there should be no problem". Barrels had surfaced in the school yard in the past.

July 20

Governor Carey signs legislation appropriating \$500,000 in state funds to conduct long range health and environmental studies.

July 31

Commissioner Whalen held a meeting at LaGuardia Airport with experts in toxicology, epidemiology, industrial hygiene to present state findings and seek recommendations on further actions to protect public health and correct the environmental problems.

August 2

Commissioner Whalen declares a State of Emergency at Love Canal and issues orders to Niagara County, City of Niagara Falls, and Niagara Falls School District. The order included closing the 99th Street School pending completion of corrective construction, evacuating pregnant women and children under the age of two from the homes in the first row of houses. The meeting was held in Albany with no one there to answer questions of residents who were panicky and frightened for their lives, and the lives of their children. There was no financial arrangements made for the families and nothing said about the rest of the children or their spouse. The order caused mass hysteria of residents who held a street meeting burning tax payments, and mortgages. People were uncontrolled with a feeling of helplessness. Pregnant women wondered what kind of deformed babies they were carrying and mothers with children over two wanted to know what has already happened to their children.

August 3

Governor Carey requests Federal Aid from President Carter. Public meeting chaired by Thomas Frey, Director of State Operations, Commissioner Whalen, NYSHD, and other State officials announced that the State would pay for temporary relocation of those affected by the August 2nd order with provisions for other members of the family affected. Over 600 residents attended the meeting. It was a very emotional meeting, residents having many fears about the safety of

their families. Questions were again unanswered and residents requested repeatedly that Governor Carey come to the Love Canal and speak with them.

- August 4 Governor Carey's Task Force formed to deal with Love Canal problems opened at 99th Street School.
- August 5 William H. Wilcox, Director of Federal Disaster Assistance
 Administration, tours Love Canal to determine if Love Canal
 qualifies for FDAA disaster aid. He walked the canal bed,
 observed open holes containing what visually appeared and
 smelled to be chemical contamination.
- August 7 Governor Carey visits Love Canal, and announces the State will purchase homes identified by the task force as houses unfit for human habitation. Governor Carey selected a small group of people including State representatives, residents and Love Canal Homeowners Association President to discuss the needs of the residents prior to the public meeting. The Love Canal Homeowners Association expressed the concerns of the residents for permanent relocation of both the first row of homes as well as the second row across the street.
- August 7 Public meeting followed. Governor Carey made many promises at the public meeting giving a lot of hope to the residents. Some of the promises were:
 - 1. The first row of houses would be purchased by New York State.
 - 2. The second row of homes will also be purchased.
 - 3. He was contacting the Federal Government for help and should know soon.
 - 4. Assures residents in homes outside the evacuated area that if there were illnesses and chemicals from Love Canal he would take care of them, i.e., evacuation.
- August 7 President Carter approves emergency financial aid to Love Canal area and promises Federal aid should be forthcoming.
- August 9 State officials met in the White House with the Love Canal Homeowners Association President, a representative of the President and various Federal Agencies to discuss aid for Love Canal. Financial responsibilities were discussed. After meeting, state representative officially announced that Ring II would be purchased by the State at fair market value.
- August 9 Lois Gibbs LCHA President received a draft of the safety plan for construction workers on-site. This plan did not include any provisions for the residents living 'around the construction site.

August 10

Health Department officials met with area physicians to discuss State findings and answer any questions they may have had.

August 15

Governor Carey visited the Love Canal to assure residents that a residential safety plan will be incorporated with citizen input. "The work will not begin until the offsite plan is completed and has citizen approval."

August 15

State Health Department completed two weeks of drawing blood from more than 2,800 people. The blood testing program was never organized to any degree, it was inefficient, and extremely trying for the residents. A general announcement was made for anyone wishing to have their blood drawn and tested for potential disease resulting from chemical contamination to come to the school. Two to four technicians were available to draw the blood samples. Hundreds of people were lined up daily for testing. Consequently, this caused more stress among the residents, standing in lines for undetermined amounts of time (possibly being turned down once reaching the front of the line because of shortage of needles, etc.). The State could have made this procedure better had they used a little thought and planning. They could have taken people by streets, alphabetically, etc.

August 31

Public meeting with State officials from the Health Department and Department of Transportation. State officials presented a safety plan which residents felt was extremely inadequate, because it did not address accidental gas releases or explosions which could release toxic vapors into the air. Residents asked many questions of State officials. Officials indicated that the air would smell terrible but there was no health hazard. The residents refused to accept that asking what would happen to asthmatics? One resident asked State Health Department personnel what he would do if he lived here and there was toxic vapor released into the neighborhood, his reply: "I would not wait for the bus, I would run like hell!"

Residents requested a State Task Force meeting to present a list of immediate needs of the residents. The list consists of:

1. Total evacuation of residents affected.

2. Identify a control group outside of the canal area to base their medical data on.

3. Invite the National Institute of Environmental Health Sciences team to look at the State's accumulated data.

4. Release to Homeowners Consultants results of soil data, air tests, blood tests and medical data, which could be done without revealing anyone's personal information.

5. Release of soil sampling plan.

6. Appropriate funds for medical expenses, blood tests, and diagnostic tests incurred by residents.

Prop up property values in homes outside the immediate evacuation area.

 Contract a monitor on-site to oversee the construction and relay information to the residents.

9. Set up family care center during working hours for residents (senior citizens) who feared staying in the area while construction was in progress.

August 31

United Way provided temporary relocation for residents who did not qualify under State requirements (location) but had illnesses that doctors stated could be aggravated by living in their present location.

September 7

Task Force Meeting (requested by LCHA in August) chaired by William Hennessey, Department of Transportation. The homeowners presented the list of needs to the task force in which everything was approved except relocation of all residents affected in the area. State based the 'no' response on not having enough data to tell where the affected area was. Everything else was forthcoming.

September 12 - State announced

State announced they were taking soil samples across the street from the canal.

September 14

State officials met with consultant Dr. Vincent Ebert to discuss modification of the construction plans. Dr. Ebert made recommendations at this time. (Dr. Vincent Ebert brought in by LCHA to work with State and LCHA to insure construction is done properly.)

September 18

Task Force Meeting to discuss the points brought up at September 7th meeting. All needs that were approved at the September 7th meeting were still forthcoming. Discussion of the three families the United Way evacuated was also brought up. United Way was running out of money and the families did not want to return to their homes on the advice of their family physicians. Health Department officials said they would evaluate the families based on their health problems, location of home, and physician's statement with their expert panel and asked the United Way to be patient a little longer.

September 19

Lois Gibbs, President of LCHA, presented Dr. Nicholas Vianna with a map showing various diseases and old streambeds and explained that she thought there was a correlation between certain health problems and the location of the old streams. Dr. Vianna said he would send his team out and see if it was true. Mrs. Gibbs also gave Dr. Vianna a list of 54 families that had health problems and wanted to be reviewed by the expert panel to see if they would qualify for relocation, based on location and health problems.

October 5 - Task Force Meeting chaired by William Hennessey, DOT.

Residents viewed it as unproductive meeting, everything was still forthcoming, and no news on the three relocated families being reviewed by the Health Department

panel.

October 9 - Evacuation dry run: Residents requested a disaster drill (with resident participation) so in the event of a necessary evacuation residents would know what to do. It took a total of 25 minutes without all resident participating. One mother stood on the corner while six buses passed her by (one driver even waved to her). Residents wanted to know if it would be effective if there was a gas release

into the neighborhood.

October 10 - Construction was to begin today. Turned into a media event with only one shovel full of dirt being removed.

October 11 - NYSHD was supposed to release the results of decision of the Blue Ribbon Panel on the relocation future of three families already moved by United Way, as well as 54 additional families. The LCHA called Commissioner Whalen, NYSHD, for the results. They were told the decision was made, but it was being sent special delivery to the affected families. The three families which had been temporarily relocated had less than 24 hours before being refused further help from the United Way, yet the State would not give them a verbal answer.

October 12 - Lois Gibbs, LCHA, called Commissioner Whalen again concerning the status of the three families and 54 others to no avail. The three families were to be cut off all funds at noon. Minutes later a media person called Health Department officials and received the results! All families were refused based on the construction, not health problems and location of their homes with chemical readings. Residents again felt angered and helpless without any appeal procedures to follow.

October 26 - President Carter and other federal officials made a visit to Buffalo. Residents went to express their problems and ask the President for help, but Carter offered only prayers. Then Senator Moyninan visited the Love Canal and made many promises for help to the residents.

November 1 - Consultants Dr. Beverly Paigen and Steve Lester, a toxicologist, attended a meeting in Albany concerning health effects along streambeds as well as the whole area. LCHA consultants submitted a report showing higher than normal health effects outside the first two rows of homes. Health Department officials commented on LCHA data as not being scientific and not verified, therefore, useless. The Consultants were promised contour maps of air, soil, and sump pump samples at this meeting, but were never received.

November 15

LCHA consultants returned to Albany to further discuss the environmental data with State Health officials. The consultants, however, were asked not to discuss with residents or media the results of this meeting.

November 21

Task Force and public meeting chaired by William Hennessey, DOT, as well as Dr. Glenn Houghie of the Health Department. Dr. Houghie explained the environmental data and health problems in the Love Canal collected to date. He explained the Health Department did find contamination outside the first two rows of homes, and that 29 children, 0 - 9 years of age, may have some type of liver problems, which need further investigation.

November 21

Public Meeting: LCHA repeatedly asked Dr. Houghie to have the scientists who were qualified to answer residents questions available at the public meeting. The scientists did not attend, resulting in angered residents walking out of the meeting when their questions and fears could not be properly answered by Dr. Glenn Houghie.

December 4

Construction: They have discovered that there was not enought leachate flowing into the trenches running north and south of the canal, and would have to install laterals which would run east and west towards the center of the canal. This again put residents into a panic because of coming so close to the canal and the possibility of hitting a drum, which may explode. It also made them wonder about the effectiveness of the drainage system and therefore, their safety in the future.

December 9

New York State Health Department verified the findings of dioxin and issued a statement. LCHA sent a memorandum to the Health Department requesting information on the environmental studies and identity of expert committee (Blue Ribbon Panel).

December 11

Dr. Campbell from the Health Department read a release from Commissioner Whalen concerning the dioxin finding. Dr. Campbell could not answer any of the residents' questions when asked at a small meeting at 99th Street School. Residents were sent into a panic, with no understanding exactly what this meant. Dr. Campbell asked us to submit questions in writing and he would get the answers. LCHA submitted questions in writing about dioxin to New York State Health Department.

Six residents were arrested after forming an informational picket to inform construction workers of possible dangers of working in an area with dioxin findings. They were charged with disorderly conduct.

December 12

Seven more residents (victims) were arrested on the same charges.

Construction workers at Love Canal were taken to the hospital to determine what the cause of rashes appearing on their bodies were.

- December 13
- Fire On-Site: An open flame heater being used to keep the filtration unit from freezing caught fire as the wind whipped the flames against a tarp enclosure. The safety official was not on-site during the fire and made no effort to be there. Instead, he stood back at the 99th Street School and watched.
- December 15
- NYSHD met with the Niagara County Medical Society to discuss the tests needed for the 20 children with possible liver problems. The NYSHD totally neglected to inform the parents of these children. When family physicians called the parents of these children it caused another case of panic, wondering what horrible disease their children may have.
- December 20
- Construction began on the lateral trenches going towards the center of the canal. Residents complained the odors from this stage of construction was unbearable, a few said they had developed respiratory problems because of it.

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- January 11
- Residents met with Commissioner Axelrod in Buffalo, New York. Dr. Axelrod promised a public meeting within two weeks to discuss the update of information on the canal.
- January 15
- Over a month later, Dr. Houghie, NYSHD, sent response LCHA memorandum. The response on the health and environmental data was very evasive, the response was an insult to the Homeowners integrity and intelligence. The LCHA asked about liver abnormalities and for the statistical analysis and were refused. We asked about white blood cell counts and to see the results and were again refused. We asked the identities of the "Expert Committee" and their qualifications and were told we could not have their names, and they had special expertise with regard to specific issues.
- January 25
- Department of Environmental Conservation, Joseph Slack announced in an area paper that when doing the center section of the canal they may have to remove barrels. This is the residents' greatest fear, because disturbing drums could lead to explosions, gas releases, etc.

February 4

LCHA took a survey of the residents who had relocated from the first two rows of homes to find out if their health problems had changed. The results of this study are as follows:

- 101 Homes contacted
- 67 Families said health improved
- 30 Families had no change in their health
- 4 Were not sure

One example of a health change was a child who had almost total hearing loss and after leaving the Love Canal area her hearing returned to 100%. It was the first time the child was ever allowed to participate in swimming activities.

February 5

LCHA attorney, Richard Lippes, sent a letter to request names of the "Blue Ribbon Panel" members. The panel is making decisions on the lives of people and this information should be made available to the public. He also requested the credentials of this panel and what their area of expertise was.

February 8

Commissioner Axelrod announced a new recommendation. Dr. Axelrod recommended temporary relocation of all pregnant women and children under two years of age who lived in a six block area because of the findings of "a small but significant increase in the risk of miscarriages and birth defects". This caused mass hysteria as it did in August and women were afraid for their children over two. Also, women who wanted to have more children now are afraid to because by the time they are certified pregnant, most of the first three months (the most important time during pregnancy) are past and the damage to the fetus is already done! They based their recommendation on the wet areas theory (swales) submitted by the LCHA which was at one time referred to as unscientific - useless.

February 10

The LCHA found when they blocked off the last four years of birth defects there is a 56% birth defect rate which could possibly mean the contaminants are moving or surfacing now more than years before.

February 15

A small group of residents from the Love Canal traveled to Albany with a casket to try to see the Governor, explain LCHA's data and try to impress the severity of the problem. He was not there and LCHA was promised a meeting at a later date (still forthcoming).

February 20

Dr. Paigen attended a LCHA meeting and presented the health effects outside the first two rows of homes to the residents. Dr. Paigen told residents that her results indicate significantly higher rates of miscarriages and birth defects than were reported by the NYSHD on February 8th. Data collected by the LCHA showed the highest rates of birth problems and illnesses occurred among residents living near "wet areas" or swales. Some of the other elevated illnesses are nervous breakdowns, suicide attempts, hyperactivity in children, epilepsy, asthma, and urinary tract problems. Dr. Paigen also recommended that women who were contemplating pregnancy wait at least six months after leaving the area for a margin of safety.

March 9

Leachate running off north end of the canal. It was reported by Lois Gibbs, LCHA President, that there was a substantial flow of leachate running off the north end of the canal, into the city street, and into the storm sewer which empties into the Niagara River. A State official ordered clean up of the area immediately. A hole was dug to contain the leachate and vacuuming began to remove the leachate and treat it on-site. The first day 4,000 gallons of leachate was pumped out and they continued to pump for over 48 hours straight. Residents claimed leachate was running for at least three days before it was even reported. The leachate was black in color and appeared to be oily looking, the odor from it was unbearable, it had the same reaction as ammonia (takes your breath away). The north end of the canal is the end where last summer the State Health Department found the highest concentration of lindane. The residents are very fearful that this is only the beginning and once the spring rains and thaws come, it will become even more of a health hazard.

March 15

Love Canal parents became concerned over the safety of children attending the 93rd Street Elementary School because of radio-active slag discovered on school grounds. A petition was circulated throughout the neighborhood by residents to be presented to the Board of Education.

March 16

Hooker Chemical held press conference in which they stated the Board of Education was given 'plenty and adequate warning' in 1953. Hooker claimed they did not know the harmful effects of exposure to their buried toxic wastes and didn't know about migrations into the neighborhood until 1976. March 22

House Commerce Committee on Oversite and Investigation held hearings on toxic wastes in Washington. The Sub-Committee heard testimony from Dr. Beverly Paigen of Roswell Park Institute, Lois Gibbs of the Love Canal Homeowners Association, Fred Armagost of Bloody Run, William Hennessey of the New York State Department of Transportation. Dr. Paigen and Lois Gibbs accused New York State of underestimating the scope of the health problems and failing to respond in a timely and efficient manner. Dr. Paigen also recommended further evacuations of families who reside on or near wet areas (which are areas where families are likely to be more susceptible to miscarriages and other physical ailments).

March 23

The Sub-Committee heard testimony from Robert Matthews of Niagara Falls, Director of Utilities. During the testimony, Matthews admitted that the "S" area landfill is "highly likely" the source of chemical contamination found in the Niagara Falls City water plant.

March 25

Love Canal woman's physician urged relocation prior to her conception. New York State refused stating: "They have provided women of childbearing age with sufficient information as to the risks before making a conscious and voluntary decision to become pregnant". Women in Love Canal interpreted the State's response as 'New York State is now practicing birth control".

March 29

Two Love Canal residents testified before Senate Environmental and Public Works Sub-Committee in Washington. Residents James Clark and Anne Hillis explained the State's involvement in Love Canal, the health problems their families faced, and the urgent need for further relocation.

April 1

Board of Education records were made public. Records showed board members recommended in August 1953 that "fill from the Love Canal" be hauled to the 95rd Street School. The proposal was approved unanimously in January 1954. 3,000 cubic yards of Love Canal dirt was removed to 95rd Street School.

April 3

- Teachers at 93rd Street are tested for blood and liver problems by New York State Health Department.

April 4

Ralph Nader toured Love Canal, termed the area as
"violence of the worst kind. This is a silent, cumulative hidden kind of violence that is perpetrated by companies that supposedly know what they are doing."

April 6

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Report published by the Interagency Task Force on Hazardous Waste links the Army with dumping at Love Canal. Dangerous chloride compounds which may have been produced for the United States Army were dumped in the Love Canal. April 7

Governor Carey signed into law a bill that gives Love Canal Homeowners a retroactive property tax exemption amounting to 80% of the assessed value of their homes. This will provide gradually declining tax exemptions through 1982 for about 600 homeowners eligible.

April 11

Hooker testifies at Congressional investigation in Washington. The investigation uncovered Hooker memos, one which described how three or four children were burned on the Love Canal property in 1952. If the memos were public, the Love Canal situation could have been avoided. Another memo of March 1968 contained an analysis of residue from Love Canal which was described to be oily and burnt like a Fourth of July sparkler. Other correspondence to Hooker revealed other Hooker dumps creating a health hazard. The 102nd Street dump where children were burnt and drums exploded and Hyde Park Boulevard landfill which was creating "an extremely dangerous condition" for employees at nearby industrial plants and residents who live in the neighborhood.

April 13

Leachate spills off of the Canal and onto the public street. Because of heavy snowfall and warmer weather, water containing leachate began flowing off the canal into the street and then entered the storm sewer system, which empties into the Niagara River. This is the same problem which occurred on March 9th, and the State still was not addressing the problem.

April 13

Love Canal Homeowners who reside in the Town of Wheatfield protest sewer lines to be constructed on their streets until the neighborhood is given a clean bill of health. Residents are concerned about an added health risk once construction begins and contaminated soil, dust, etc., is carried through their neighborhood.

April 14

Increased level of dioxin was found at the canal. A test taken in a backyard of Love Canal home showed a dioxin concentration at 20 parts per billion, much higher than the previous results and the front yard soil test results were 1.3 parts per billion.

April 17

"Operation Bootstrap" an internal Hooker report was released by a former employee. The report, written by internal Hooker engineers and doctors, strongly critized the company's handling of toxic chemicals. The plant condition descriptions include "very disagreeable" and "a very serious potential problem". The report calls C-56, a component of pesticides made at the plant until 1975, "a serious environmental problem, and the building still represents a poor environmental health situation".

April 17	The Love Canal Homeowners Assocation held a protest at the 99th Street School. The protest was held to let the officials know we want health and environmental data and immediate relocation because of the health problems and chemical contamination like dioxin throughout our neighborhood. Residents burnt two effigies representing the Governor and the State Health Commissioner.
April 18	The city and county have put out a "gag order". The city manager's memorandum to all city employees stated, "It is imperative that no employee of this city discuss at any time any facts or opinions relating to the Love Canal". The County Attorney advised county people to "exercise extreme caution" when talking about Love Canal.
April 24	Department of Transportation has put the homes which had been evacuated in August 1978 up for sale. The only thing they have advised to treat the homes so they can be safe for occupancy was to wash and paint the homes before occupancy.
April 24	Test results on the overflow which occurred in March show a total halogenated organics at 48 parts per billion, when the results were questioned by residents, officials admitted the tests were taken just after a rain, which may have caused lowered results.
April 24	Dioxin at 4.6 parts per billion was found in the fish taken from Lake Ontario. The Health Commissioner urged pregnant and nursing women and young children to avoid eating "any fish whatsoever" from Lake Ontario.
April 25	- Safety meeting held by New York State officials. Residents received new safety plan. Residents rejected plan because there were no provisions for dust control, no evacuation buses, safety officer would have a conflict of interest, etc.
April 26	- Accident on-site which leaked several hundred gallons of chemically contaminated leachate into the public street, and down the storm sewer which empties into the Niagara River.
April 26	- Safety meeting held by state officials, meeting was filled with anger, emotion, and fear from Love Canal residents. The meeting did not reveal any new information.
April 27	Governor Carey arrived in Niagara Falls and was met by angry, frustrated residents at the airport. The Governor met privately with Lois Gibbs, Dr. Beverly Paigen, and Jean Hasley to discuss the Love Canal situation. The homeowners representatives pleaded for further evacuations based on severe health problems. Governor Carey repeatedly

1979

said he does not have unlimited resources. The residents (100) picketed outside the Convention Center while the Governor addressed the teachers union.

- April 27 New York State United Teachers Committee backed a resolution. The resolution called for support of the demands which the Homeowners Association have asked for, including health care, monitoring for diseases, complete evacuation of the area.
- April 29 Niagara Frontier Coalition was formed, which is a group of labor, citizens, and environmental groups. Their goal is to support the right to a clean environment, and healthy jobs. Other goals include the safe storage of wastes, removal and neutralizing of toxins from dumps and aid to persons adversely affected by dumping.
- May 2 Interagency Task Force on Hazardous Wastes held three days of public hearings to listen to the public's views on how to deal with Love Canal and 151 other potentially dangerous chemical dumps on the Niagara Frontier.
- May 3 New dioxin findings results were released showing dioxin levels of 6.7 parts per billion in the backyard of a Love Canal home.
- May 4 Hooker testified at Hazardous Waste Hearing. Bruce D.
 Davis, Executive Vice-President, told the Task Force that
 the clean-up job was a difficult one and should not be
 handled in court. He further stated that if state or
 federal authorities were to begin litigation, the most
 likely affect would be to disrupt the on-going efforts of
 the state, the county and Hooker to solve technological
 problems presented by our closed landfills.
- May 4 State Health Department released results of 93rd Street School soil test which showed traces of highly toxic materials on the playground.
- May 6 Three hundred people toured the Love Canal in a Walk of Concern. The walk was led by a religious coalition and the residents of the area.
- May 7 The families who confronted Governor Carey two weeks ago are given new hopes, a health department representative has notified them that they are being reconsidered for relocation on an individual basis.
- May 10 Handicapped persons, some mentally retarded, have been hired by the state to do maintenance work in the immediate Love Canal area. Residents strongly objected to allow the handicapped to work there even with the assurance that the jobs posed no health hazard to workers. Residents felt

1979

the workers would have been unable to recognize the hazards they faced.

May 11 - Residents learned at a public safety meeting that a drainage ditch around the 99th Street School was transporting toxic waste into the storm sewer system. This ditch was constructed when the school was built. (See swale map). Residents demanded the ditch be plugged and samples were taken and analyzed.

May 13 - Mother's Day March - 200 people led by Love Canal residents passed Hooker and other industrial plants to urge industry to stop polluting our environment.

May 14 - Love Canal Task Force meeting - Commissioner Axelrod,
Department of Health, reassured residents seeking relocation that they will be considered. The residents requested data to back up previous health conclusion and press releases made by the State Health Department, but were told once again it was forthcoming. Residents were also told there would be no further permanent relocation.

May 16 - Third Safety meeting held by the Department of Environmental Conservation officials at this meeting told residents that "swales" or old streambeds do not need to be sealed off by clay. State and residents argued over whether the flow coming from the neighborhood to the canal through the "swales" would be worth taking the chance of the trenches filling up during heavy rains or pump shutdowns, and contaminate flowing back out into the neighborhood through the "swales".

May 18 - Board of Education closed Cleveland Avenue School (which replaced 99th Street School when closed by the Health Commissioner Robert Whalen on August 2, 1978) and left 93rd Street School open even though there are many unanswered questions about its safety.

May 18 - Dr. Yuri Dundiev, a specialist in labor hygiene and occupational disease from the Soviet Union, toured Love Canal and other dumps in Niagara County.

May 19
- Senator Daniel Moynihan held a hearing on Hazardous Waste Disposal with the Senate Environment and Public Works Committee. Bruce Davis of Hooker, Dr. Beverly Paigen, and Lois Gibbs, representing the Homeowners testified at the hearing.

May 23 - Niagara Falls city officials announce the existence of toxic chemicals in the city's finished water but state they pose no danger to the citizens who drink it. The city admits some are "highly toxic" and yet there is no need to be alarmed.

May 25		Results on the city's drinking water showed increased levels of two benzene compounds and the presence of twelve other substances.
May 26		State held open bids on the sale of evacuated homes in Love Canal. Love Canal residents protested at the auction stating the homes were unsafe, and the state is selling poisonous homes to unsuspecting families. Eight homes and
		eleven garages received offers with the state only to realize \$18,118.
May 27		Mayor O'Laughlin of Niagara Falls is seriously considering the purchase of Love Canal homes and moving them downtown to the distressed East Side of town.
May 29		Residents at a Homeowners Association meeting voted to seek an injunction to stop the work until the safety of residents is adequately addressed.
June 1	- 1 - 1 - 1	Chemical contamination has by-passed the treatment system and leaked out the southern sector of the canal where tiles have not been placed. Residents believe the chemicals are endangering residents who are still living in the Love Canal neighborhood.
June 5		The Town of Wheatfield's Town Board stated the town would not allow any homes from Love Canal to be moved into their area. They based their decision on a State law which gives the town the authority to restrict anything "contrary to the public health, welfare and safety of the community".
. Jume 6	3	State Supreme Court Justice Norman Stiller signed a show cause order this afternoon directing the city and state to appear in court and explain why the second phase of Love Canal remedial work should not be stopped. The Homeowners are attempting to have the remedial work stopped until an "adequate safety plan" is adopted.
June 12	8	A survey taken by the Love Canal Homeowners Association shows 88 hedges dead or dying and 38 healthy. The owners reported that all were thriving last year and residents believe the dead vegetation is due to airborne contamination like dioxin coming off the canal during construction activities.
Jume 15		Press release from New York State Health Department said the rate of miscarriages north of Colvin Boulevard is significantly lower than the evacuated area. They stated further that the Health Department has found no similarly high levels of miscarriages outside the fenced off area. The residents were outraged saying they have evidence of high miscarriages in 'wet' areas, and wanted the data to back up the department's statements.

June 18 State Supreme Court Justice Norman A. Stiller denied a request to halt the remedial work saying "the danger is there whether the work goes on or whether it doesn't go on" but the judge did agree the state should block off the old streambeds or "swales", and the state should provide a longer term relocation for any resident developing an illness, instead of just the existing 48 hour plan. June 19 YWCA opens their Day Care Center for children who live in the Love Canal neighborhood. A day camp has been set up for children over 5 years of age. The facilities were used to remove the children from their neighborhood during the construction hours. Residents were fearful that the toxic fumes which may be given off during construction would harm their children. June 22 State Attorney General's Office and the Department of Environmental Conservation issued a wide-range subpoena to the Hooker Chemical and Plastics Corporation regarding dumping practices at the Love Canal and other dumpsites owned by the company. June 26 Governor Carey came to Niagara Falls to sign two pieces of legislation, one to provide a \$5 million increase for hazardous landfill clean-up projects and the other to provide a tax exemption for additional families in Love Canal. Residents met the Governor at the airport wanting to speak with the Governor but were refused. The Governor stated, "I've been at Love Canal a dozen times, what do you want me to see that I haven't seen before?" Carey also told Mrs. Gibbs that 'he has spent more time with her than anyone else outside of his own family". July 3 Preliminary soil and water tests show low level chemical contamination in the Town of Wheatfield. Sewer construction has been halted until it is determined if the area has been affected by Love Canal chemicals. July 15 The Ecumenical Task Force, representing churches across Western New York, has hired an executive director to oversee relief work and other task force operations in the Love Canal neighborhood.

July 18

- State Health Commissioner David Axelrod promised area residents further soil and air testing will be conducted North of Colvin Blvd. and on 93rd Street.

July 18

Governor Carey gave final approval to bills giving partial property tax exemptions to approximately 600 families at a cost of about \$650,000 over a four-year period.

1979

Love Canal Homeowners Association begins a control group July 22 health study to compare statistics of their Love Canal neighborhood study. July 24 Construction pipes (three) were blocked with stone. The pipes had to be retrenched and cleared to allow leachate to flow freely. July 26 Panel of Federal experts including Health, Education, and Welfare (HEW) and the Environmental Protection Agency (EPA) concluded that "the population in the Love Canal area has suffered certain adverse health effects as a consequence of exposure to a chemical contaminated environment." They also stated the data suggests a gradient of health effects, with the most severe occurring in residents of houses immediately adjacent to the canal and in "wet" areas. August 2 Love Canal anniversary one year. One year ago today, Commissioner Whalen issued the first health order to evacuate pregnant women and children under two. Workmen digging the chemical collection trenches outside August 2 the Love Canal encountered a highly contaminated streambed forcing them to adjust the route of the drain system and to seriously question the extent of dumping in the area. The old streambed contained rubbish, bottles, paper, and a drum, as well as gross contamination. August 9 Tile work around the canal is delayed because of the discovery of another blockage in the pipes. August 15 Parents of Love Canal children met with Board of Education members to urge the closing of 93rd Street School. A letter sent to the Board from the Health Department said, "Based upon the data currently available to us, we cannot identify any significant health risks to children specifically associated with their attendance at the 95rd Street School". But in the final paragraph, Dr. Houghie wrote "to minimize any further or potential risks from environmental factors in the vicinity of the 93rd Street School, you may wish to consider various steps to limit exposures and or access". The Love Canal Homeowners Association held a candlelight August 18 service to commemorate the first anniversary of the health emergency there. It was a sermon of hope, but those who came were in mourning for victims of Love Canal past, present and future. August 21 Health Department confirmed the presence of dioxin in the southern sector of the canal. The results showed a level of 5.3 parts per billion in a soil sample and 176 parts

per billion in the holding tank on-site. Residents began

to panic after hearing the new results.

August 21

State Task Force meeting at Love Canal. Dr. David Axelrod announced the chances of a woman suffering a miscarriage are 30 to 45% or two to three times the normal. Axelrod said the state's policy on relocation remains unchanged, women who were contemplating pregnancy cannot be temporarily relocated, until you become pregnant and are certified by their physician.

August 25

Approximately 25 Love Canal residents have temporarily left their homes after chemical fumes in the area caused many of them to become violently ill.

August 26

Day Care Center has a much higher absentee rate of Love Canal children than any ordinary group of children. After checking the absentee rate the LCHA discovered over 50% of Love Canal children were absent with the same symptoms while the other children who attend the same center and are not separated in any way have only 2 out of 20 children absent.

August 29

Dr. James Dunlop, the school physician, recommended that 95rd Street School be closed as a precautionary measure. He had received word from the Health Department sources that Black Creek, which is behind the school, is contaminated with dioxin.

August 29

Robert Flacke, Commissioner of the State Department of Environmental Conservation (DEC) met with Love Canal residents to discuss problems with the remedial construction work. Residents complained about the construction and safety plan, accusing the state of not following the safety plan, having too many trenches open at a time, making it impossible to accurately monitor emissions of fumes in the area. The meeting then became an emotional scene when area residents, who became ill and were living in a school dormitory, demanded some type of permanent relocation more suitable for family living.

August 30

Niagara Falls Board of Education voted unanimously to close 93rd Street School. 450 children are transferred downtown. The Board based its decision on recommendations from the superintendent and school physician, that the school be closed for at least a year, until further testing of toxic contamination can be evaluated. Although the school may be unsafe for children to attend, the Health Department is allowing children to live across the street from that same area.

September 1

Board of Education agreed to bus children to four other elementary schools because of the 93rd Street School closing this year.

September 1

The State Attorney General's office requested information

from the Health Department on data collected in the 3,000 health questionnaires submitted by past and present residents of Love Canal.

September 1

The tile drainage system was uncovered on 101st Street and Wheatfield where residents told the state they would find it. The pipes had been placed in the ground years ago and long-time residents say the pipes follow the swales and connect to the canal. The State has never fully investigated the pipes, where they go, what they contain, and if they do transport contaminates from the canal.

September 1

Twenty-three families are now temporarily relocated in local hotels. The families have been told they must leave the hotel because of full bookings with the Labor Day weekend. Residents became very fearful with the thought they may have to return home, the place they just fled from because of illnesses.

September 2

Senator John Daly and Assemblyman Matthew Murphy wrote a letter to the Governor urging that the state purchase at fair market value the home of any resident wishing to leave. Their letter also blasted the Federal Government for their callous disregard for residents and pointed to its active involvement in relief efforts during the "Blizzard of 77". The letter also asked the Federal Government to relocate residents of LaSalle Development, a Federal Housing project in the neighborhood.

September 3

Over 120 people have now left Love Canal because of illnesses believed to be connected to the construction activities which have caused odors, dust, etc. The residents have moved from the hotels to Stella Niagara Education Center dormitories.

September 4

There are now 231 persons who have evacuated to Stella Niagara for temporary housing. Residents will soon have to leave because of students who will soon be arriving.

September 6 -

The State Love Canal relocation officials told residents who were temporarily relocated that they must have a medical certification before they can be put in long term housing. The certification must state the individual is acutely ill, coincidental in time and causally related to the construction.

September 6

Lois Gibbs went to Washington, DC to seek Federal assistance for residents of Love Canal. In her one week visit, she met with Congressman John LaFalce, Senator Daniel Moynihan, R.D. Folsom, a policy staffer from the White House, Dr. David Rall, National Institute of Environmental Health Sciences, Douglas Costle from the

Environmental Protection Agency (EPA), Shelly Williamson from Toxic Effects EPA, Dave Huber from Solid Wastes EPA. Dan Dozier and Ronald Copeland from Health, Education and Welfare and representatives of Federal Disaster Assistance Administration. She also met with Joseph Highland from the Environmental Defense Fund.

- September 8
- Lois Gibbs reported after returning home that the meetings were very frustrating. Everyone stated there is no policy which the Love Canal situation fits, or we must receive a request for assistance from the State Governor or Health Department. The Federal government did say they would send physicians to Niagara Falls to help with the certification of residents to enable them to relocate.
- September 8
- More than 300 residents are now temporarily relocated, moved from Stella Niagara to area hotels and motels.
- September 12
- Love Canal Homeowners Association went to court with a show cause order seeking to force the State to continue paying relocation expenses for at least one more week. Justice Stiller announced pending the hearing he would allow all residents who are aged or seriously ill may move back to a hotel at State expense and those presently in hotels may stay.
- September 12
- Residents were furious at the state's decision to send them home. The residents refused to return home, formed a motorcade, then drove to St. Paul's Methodist Church, which was equipped with cots and food. Residents received help from the Red Cross and the Ecumenical Task Force.
- September 13
- State Supreme Court Justice Norman Stiller, Love Canal Homeowners Association Attorney Richard Lippes, and the Association President Lois Gibbs toured the Love Canal neighborhood to help the Judge better understand the problems the residents have been experiencing.
- September 13
- There are now 138 Love Canal families temporarily relocated bacause of illnesses.
- September 13
- Forty-eight families obtained medical certification, making them eligible to receive extended temporary relocation at the state expense. The certifications were given following examinations at a temporary clinic, with six Erie County physicians located by the Love Canal Homeowners Association.
- September 14
- State Supreme Court Justice gave Love Canal refugees a five day reprieve to obtain doctors certificates stating their physical ailments may be related to the canal remedial work.
- September 15 Heavy rains at Love Canal quickly filled the two 55,000 gallon leachate storage tanks and the streets around the

canal flooded possibly containing chemicals which were washed off the canal surface.

September 15

Heavy rains shut down work at the canal, and averted another confrontation. Residents were ready to protest the construction work if the State continued during the weekend as intended. If work continued through the weekend, children, etc. would be exposed to noxious odors because the daycare center is not available. There are presently 130 families temporarily relocated in area hotels and motels.

September 16

Love Canal Homeowners Association are now investigating the possibility of going back to court for women who are contemplating pregnancy. The association and their scientists believe those women should be relocated six months before concieving to rid their bodies of the toxic compounds they have been exposed to.

September 16

Officials at the Niagara Falls Water Treatment Plant have found a "weep hole" in the main intake tunnel about 200 to 300 feet from shore shaft. They believe this hole is responsible for allowing contamination from Hooker's "S" dump into the city water supply. The contaminated water supply affects more than 100,000 residents.

September 17

Homeowners Association asked Federal authorities to investigate faulty construction of tile drainage system. There have been many blockages on both sides of the parallel lines and the contractor has been patching the pipes. The Homeowners want an investigation to be sure the system will work as intended before the contractor and State walk away from Love Canal.

September 17 -

The first of many homes vacated has been burglarized. There was no additional security given in the neighborhood to protect the homes and possessions of the 138 families who evacuated temporarily to area motels.

September 18

State will demolish all 100 homes around Love Canal because no one wanted them and those who made an offer found that the town they would be moving the home to would not allow a Love Canal home in their community.

September 20 -

A Federal team of doctors ready to be flown in to Love Canal to certify residents were refused permission by New York State Health Commissioner David Axelrod. Lois Gibbs was told by Axelrod that he would not accept a certification signed by a physician from outside New York State. In a statement made to Congressman John LaFalce Axelrod said, "If the Federal government is not willing to do the whole thing, he was unwilling to have them come in for anything".

September 22 - State and Federal officials discussed the need for additional work on Love Canal. Both admit the tile and trench collection system and clay cap is not the total answer to the problem, such as the swales or old streambeds.

September 22 - State announced it is costing \$7,500 daily to house the Love Canal residents in area motels. Total cost as of September 11, 1979 was \$57,000.

Lois Gibbs met with Health Commissioner David Axelrod in Albany. Lois Gibbs characterized the meeting as very unproductive. She only received a promise that her complaints would be looked into and the health information she requested would be given to her when it became available. The same story she received in August 1978.

''Nova'', the science documentary, aired a nation-wide show,
''A Plague on Our Children'' which included a segment on
Love Canal.

About 900 claims, seeking a total of \$2.4 billion, have been filed against the city, county, and school board. The Association attorney Richard Lippes asked the court to extend the time for filing notices of claim or to rule that the claims already filed were timely. The judge ruled the request would be decided during case trials.

Jane Fonda and Tom Hayden visited Love Canal and pledged to join the fight of Love Canal residents for permanent relocation. Jane blamed corporate greed for the Love Canal situation and Tom said "corporate law breakers" such as Hooker should be responsible for cleaning up situations like Love Canal. They pledged to carry our plight nation-wide beginning with Albany tomorrow.

Four Republican members of the State Assembly toured the Love Canal area. All expressed shock at what they saw. They said they would work harder to bring aid to the area and believed the families had a legitimate complaint.

The anniversary of a seven year-old child who died one year ago today. We believe his death was due to chemical exposure and could have been avoided.

Senator Daly and Assemblyman Matthew Murphy met with the Governor to seek relocation for residents. Governor Carey responded by stating that they do not have the money, that the state does not have unlimited resources.

Health Department announced the findings of resistant mosquitoes at Love Canal. Because mosquitoes that breed in Love Canal have a continual exposure to pesticides, they may have a resistance to conventional pesticides.

October 2

September 25

October 2

October 4

October 3

October 4

October 4

October 6

- October 8 Love Canal Homeowners Association plans a march on Albany for November.
- October 10 One year later from the first ceremonial hole, the south end remedial construction is completed. Now who will maintain it? The fight between the city and state has already begun.
- October 11 The town of Wheatfield insists on installing sanitary sewers in their part of the Love Canal neighborhood even though the homes are worthless and unsafe to live in because of canal contamination.
- October 12 Dr. Janette Sherman, a specialist in occupational health and serves as a member of Toxic Substances Advisory Committee, EPA, "Strongly urged the relocation of Love Canal residents as soon as possible" in a letter to EPA administrator Steven Jellinek. She also urged an immediate halt to all construction, thorough monitoring, re-evaluation of the engineering and public health measures, and more.
- October 14 The House Commerce Sub-Committee on Oversight and Investigation Report was highly critical of New York State's response to the canal disaster, and that another 140 families be removed from the area. It further stated that Dr. Paigen's study was "of sufficient merit to deserve serious public comment by state officials". It further stated that the Health Department has not provided anyone with a credible refutation of the Paigen Study.
- October 15 Dr. Beverly Paigen and Lois Gibbs appeared before a Department of Health, Education, and Welfare Sub-Committee in Washington. Both told the panel the residents should be evacuated until experts can agree on the dangers. They also told the committee another health study should be done by a group who does not have a vested interest in the outcome.
- October 16 Governor Carey, while in Buffalo, agrees to purchase additional Love Canal homes.
- October 16 Students of the University of Buffalo picket Hooker officials recruiting job applicants on campus in support of the Love Canal families.
- October 18 Love Canal Homeowners put a full page ad in the local newspaper to explain their plight. It listed reasons why families could not return to their homes, they cannot go in their basements, play in their yards, eat out of gardens, attend a school in the area, the miscarriage and birth defects being above normal, etc.

1 9 7 9

November 8 The motel obtained a court order, requiring the families to show cause why they should not be evicted. Hotel officials and Love Canal Homeowners Association attorney Richard Lippes met in court and agreed on a settlement. November 9 Residents put out public plea for temporary housing on TV, radio, and through the local papers. Some families as a result of the plea and with the assistance of the Ecumenical Task Force found housing, but many were forced to return home. November 10 Concentrations of dioxin has been found in Bergholtz Creek, the northern most boundary of the Love Canal neighborhood. It abutts the 93rd Street School property. Dioxin was found at 31 parts per billion in sediment samples and 3 parts per billion in a cray fish sample taken downstream. A Health Department official said the health hazard posed by the findings are impossible to determine, yet the Health Commissioner stated no exposure to dioxin is safe. November 11 Congressman John LaFalce wrote a letter to President Carter stating he 'has reached the limits of his endurance' in trying to deal with Federal bureaucracy, he added that "approximately 500 families have suffered needlessly over the last several years because the Federal government has not responded adequately". The Congressman asked the President for his direct intervention and forceful leadership. November 14 The Federal Environmental Protection Agency sent a team of scientists to Love Canal to begin air sampling in the neighborhood. This will be a preliminary study. Air tests will be taken in only a few homes. November 14 The Ecumenical Task Force has moved their office out of the Love Canal neighborhood because of the potential health threat to staff and volunteers. Governor Carey named Mayor Michael O'Laughlin to head the new task force handling the Love Canal situation. He also named other bureaucrats to the task force and did not include any community representatives.

November 17

November 27

The Town of Wheatfield will install sewer lines in their portion of the Love Canal neighborhood, even though most families have applied for the State to purchase their homes and the board is willing to take the risks of encountering dioxin and other compounds during the construction.

November 28

The team of scientists from the Environmental Protection Agency returned to re-sample homes to insure what they found in the first air samples were normal.

- November 29 Cost of the Love Canal clean up project has now passed the \$40 million mark and experts say it may only be a temporary solution.
- November 30 The new Task Force met, whose goal is to "revitalize" the Love Canal neighborhood. Nothing was accomplished. Residents attended to ask for a community representative to be put on the Task Force.
- December 1 "Revitalization Committee" met for the first time to set up legal entity which would provide a vehicle to funnel money to purchase homes and "stablize" the area. The "Revitalization Committee" plans on reselling the contaminated homes after residents move out.
- December 2 Senatory Daly and Assemblyman Murphy asked Governor Carey to expand the "revitalization" task force to include a homeowner and a tenant. They felt it was unsatisfactory to have only politicians and bureaucrats serve on the committee as is the case now.
- December 4 Construction began on the sewer project in the Town of Wheatfield, the east side of the Love Canal neighborhood. Town agreed to test soil, air, and water daily, because of residents fear of toxic chemicals could be released into the environment further endangering their families.
- December 13 The appraisals of canal homes are delayed until the second week in January 1980. Residents worried about their families' health and thus became upset over the new delay.
- December 13 EPA postponed releasing the results of recent air tests they took in the canal neighborhood. The individuals whose homes were tested became upset, not knowing what their results were.
- December 19 The Homeowners Association conducted an update survey on the pregnancies during the past year of Love Canal women. The results showed out of 22 pregnancies only 4 children were born normal. The remainder ended in a miscarriage, birth defect, stillborn, or child with medical problems.
- December 20 In a memo from DEC to the Health Department which stated that "winter kill" and not airborne contaminants were responsible for vegetation damage in Love Canal. It also said DEC had been unable to locate a plant expert who could establish that toxics "could have enhanced the susceptibility to "winter kill". Residents refused to accept that knowing some hedges grew back and died again during the summer months when temperatures never reached the freezing level.

December 20

Hooker Chemical and Plastics Corporation was again named in another suit filed by the U.S. Department of Justice seeking more than \$107.5 million to clean up company owned or operated toxic chemical dumpsites in and around Niagara Falls, New York.

1980

January 6

Governor Carey sent a letter to President Carter asking him to provide funding for past and present programs now being carried out by the State agencies. This includes participation in programs to stablize the Love Canal area.

January 9

Revitalization Committee met at the mayor's office in a closed door meeting to discuss the plans for home appraisals. About 80 angry people confronted the Mayor, asking him to allow a representative into the closed meeting so that their interest could be looked out for and to pressure the committee to move quicker so that families could move to a safe environment to protect their children at an earlier date.

January 22

Construction of the 17.6 million dollar Hooker Chemical Corporation office building in downtown Niagara Falls will soon begin. The project was shaky when the State Comptroller said he may not approve the loan to be drawn from state pension funds, because of complaints about Hooker's "social responsibility" in connection with the disposal of toxic wastes.

January 23

Dr. Beverly Paigen is being harassed by Roswell administrators and the New York State Health Department. Dr. Paigen said she must clear all public appearances, press releases and interviews pertaining to Love Canal in advance with Roswell authorities and the "harassment" is affecting her work. She also charges politics have stifled her research efforts on toxic chemical dumping grounds. Dr. Paigen, who has had several grants cut off, says this kind of situation can drive good scientists away from their research efforts.

January 31

Liability issue stalls the resale of homes in Love Canal area. None of the existing agencies involved wants to assume future legal liability for the potentially contaminated homes.

February 2

Congressman LaFalce urges State to revise "standstill" policy on Love Canal. LaFalce said the State Legislature's \$5 million revitalization program was based on "an inherent contradiction". Most of the \$5 million was earmarked for the purchase of homes whose residents wish to leave.

However, the "Revitalization and Stabilization Committee" headed by the Mayor of Niagara Falls was established to encourage people to move back into the area.

February 4

Chemical contamination was found both inside the main water intake pipe and below it in the bedrock. The contamination is believed to have come from a Hooker Chemical and Plastic Corporation chemical dump located about 200 yards from the treatment plant. In order to protect the City's water supply, it may be necessary to replace at least 1,725 foot section of the intake and possibly another 3,600 feet pending further tests.

February 5

The Niagara Falls City council agreed to pay Newco \$370,648 for repairs and extra work they performed during the canal remedial clean-up. The Council decided not to take Newco to court because of defects in the leachate collection system they originally installed to stop the migration of toxic wastes from the canal. Newco originally billed the city for \$312,211 for the extra work to correct their own mistakes.

February 9

Falls Mayor urged the Governor to ask the State Legislature for another \$10 to 15 million to restore the canal area to a stable community status. In addition to the money, the Mayor asked the Governor to have State Legislature form a non-profit corporation to handle the purchase of canal homes. The Mayor announced the four goals of the Task Force for stabilizing and revitalizing the Love Canal area, which are:

1) Completion of appraisals for over 400 homes, whose owners want to sell; 2) Forming a corporation to buy and resell the homes; 3) Seeking additional \$10 to 15 million for the program; 4) Planning rehabilitation measures for the canal. The goal the Mayor said is to overcome the Love Canal problem and put it behind the community - not constantly remind everyone of a Love Canal problem that someday will be history.

February 13

The US Justice Department subpoenaed the State Health Department records on Love Canal for use in the Federal government's \$124 million civil suit against Hooker Chemical Corporation and its parent firm, Occidental Petroleum Company. The Federal lawyers issued the subpoena because the State Officials would not turn over their records voluntarily.

February 15

Revitalization open public meeting was at City Hall in Niagara Falls. The meeting was emotionally charged with the residents expressing their fears that there is not enough funds to purchase all homes of residents who wish to leave; the security in the area is poor with many homes already severaly vandalized and gutted; residents were upset that their tax money may be used to "fix-up"

the area; and that the committee is dragging their feet and act as though there are no problems at Love Canal.

February 15

State Health Department said it would not honor a Federal subpoena for canal residents health records. The State Officials cited confidential nature of the health information. Lois Gibbs from LCHA said the Health Department has consistently refused to provide health data to anybody and that the majority of canal area residents would be willing to allow their medical histories and results of health tests to be given to the Justice Department for their suit.

February 20

EPA under section "311" of the 1976 Clean Water Act, will become involved at Love Canal. EPA's regional Administrator, Mr. Warren, pledged to: Establish and maintain long-term monitoring of air, water and soil contamination levels in and around the canal; Provide long-term health studies for selected Love Canal residents; To consider further remedial clean-up work. Warren said the Federal agency has allocated \$250,000 in cooperation with the U.S. Coast Guard to clean toxins out of storm sewers, which empties into Black Creek, as well as errecting a fence along the creek to shut off public access to its dioxin-laden sediment.

February 20

EPA officials said that air testing of homes several blocks from the canal had levels of benzene, a cancer causing agent, which raises the risk of cancer to about 2% above that of a similar home located next to a gasoline station or in an area of heavy petro-chemical industries. "Based on these findings and recognizing that the agency's policy is that the safe benzene level is zero, EPA is concerned."

February 21

Hooker announced its net income for 1979 to be \$9.5 million and its parent company, Occidental Petroleum Corporation, reported that its 1979 net income rose to a record \$567.1 million.

February 22

The U.S. Justice Department and Hooker Chemical lawyers are negotiating an out-of-court settlement for clean-up of three other Hooker dumps, the 102nd Street dump one block south of Love Canal, the "S" dump adjacent to the Niagara Falls Water Treatment Plant, and the Hyde Park landfill in the Town of Niagara.

February 22

EPA officials met with canal leaders to announce that arrangements were being made with New York State Health Department and University of Buffalo Medical School to begin an extensive health study of canal residents and that work on the storm sewers clean-up will begin immediately and completed by June 15, 1980. (Note: As of 10/6/82, there has been no sign of clean-up activity.) Lois Gibbs, president of Love Canal Homeowners Association,

pleaded for Federal help to provide temporary relocation for residents who are waiting for the State to purchase their homes.

February 22

George Zachos (EPA) was quoted in the local newspaper that eventually a bentonit (a special type of clay) wall will have to be built around the Love Canal from ground level to bedrock.

February 29

The State of New York, who now owns 237 homes that encircle the canal, asked the City of Niagara Falls for their approval to allow the State to demolish some of the homes and bury the debris in the basements of those homes. The city would not approve the project based on the recommendations of their legal council.

March 8

Dr. Beverly Paigen explained to Roswell Advisors of alleged research hindrance on her research of toxic chemicals which is being required to 'meet a test of political acceptability." Dr. Paigen is employed at Roswell Park Memorial Institute, a state institution with the New York State Health Commissioner as her boss. Dr. Paigen charged that she has been the subject of "highly unusual" administrative decisions that have caused her to lose funding for her project. She applied in November 1978 for funds, for a joint project with the State Department of Environmental Conservation, to develop a screening test for toxic chemicals in the environment. Projects normally are not reviewed by the State Health Commissioner but hers was sent to Albany and delayed until finally her chance for funding was lost. This is only one of a series of harassments that have occurred since Dr. Paigen reported the results of her research concerning the health hazards at Love Canal. Dr. Paigen called for a statement from the board at Roswell to support scientific freedom and remove the harassments the institute has imposed on her.

March 9

The Niagara Falls officials discussed the membership of the Revitalization Committee. The members must be estimated before it is presented to the State Legislature for approval. The proposal now calls for a 15 member board which includes: Three representatives from the City of Niagara Falls, the Town of Wheatfield and Niagara County, three private citizens and three State representatives. The Governor's office wants to drop the State representatives and make other minor changes in the plan to avoid direct state participation.

March 10 ·

The LCHA began circulating petitions throughout the community to have the street names changed. The name-change effort is to warn anyone who may buy a canal home of the dangers in the neighborhood. The streets which are now numbered 101st, 102nd, 103rd, etc., would be changed to HOOKER ALLEY, BENZENE BOULEVARD, DIOXIN LANE, and more.

March 16 - One year after the Governor asked the State Attorney General to sue Hooker, nothing has been done to pursue any claim the state may have against Hooker.

March 20 - A nine-member task force has been named by EPA to move quickly on a safety and health plan for cleaning storm sewers, within the northern section of Love Canal neighborhood. The proposal for the sewer clean-up project was delayed due to complaints by residents that the work ignored possible dangers to the community.

March 21 - Niagara County's participation in the Love Canal Revitalization program is now being questioned by the County Attorney. State Senator Daly said the County's refusal to participate in the program could jeopardize the program's eligibility for Federal funding.

March 23

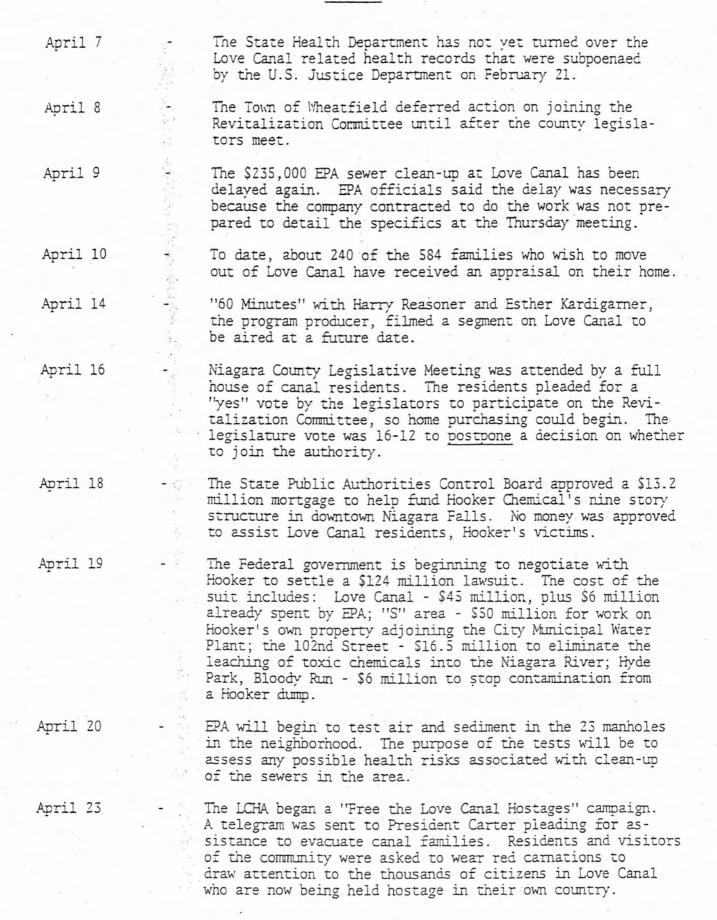
The LCHA released a ten page report which accused the State of New York of engaging in a "cover-up" of the true extent of the health hazards in the area. The report contends that: The state has conducted studies of poor quality; Has been secretive about the resulting data; Has misinterpreted or minimized the data that was released to the public and failed to perform obvious studies. The report questions whether the state's actions resulted from the conflict of interest situation in which the state has to both define the health risks and pay the costs of correcting the situation or whether the "cover-up" results from a desire to protect Hooker Chemical Corporation.

March 28 - The City of Niagara Falls and Niagara County continue to argue about the County's participation. The county wants to be kept out of it. The squabble threatens to scuttle the whole relocation process. Meanwhile, the residents are stuck in the middle of the bureaucracy living in contaminated homes.

March 29 - The Love Canal Homeowners Association has requested of State Legislature to conduct a bipartisan investigation of the Health Department's activities at the canal. LCHA feels that an impartial legislative inquiry would offer an appropriate forum for reviewing the Association's allegations and the Health Department's defense of its performance.

March 29 - White House is working on a plan which would provide the temporary relocation of residents to military housing in the Niagara Falls area. An announcement is expected in mid-May.

April 1 - Occidental Petroleum Corporation's insurance company has disclaimed responsibility for the lawsuits filed against its clients. Occidental is the parent company of Hooker Chemical Corporation.



April 25

New York Senator, Thomas Bartosiewicz, from Brooklyn released a report which lambasted the State Health Department for its delays and inaction at Love Canal. The report is critical of the Health Department and uses stronger language than the LCHA "cover-up" report release in March. The Senator plans to ask the Governor to empanel a committee under the 'Moreland Act' to investigate handling of the canal clean-up. The report states: "Despite the enormous amounts of money spent, however, the state agencies' response to the Love Canal situation never addressed a serious health problem existent there. Resolution of that problem came not from the deliberate action of the State Agency charged with the protection of the public health of New York, but from political solution negotiated by the residents and their legislative representatives." The report also stated that, 18 months after the State Health Commissioner persisted insensitivity to the wet area's health danger, the Health Department thus recognized that a serious health threat existed in the Love Canal area. Bartosiewicz alleges that the department "once it did learn a health problem existed failed to act aggressively to protect public health."

April 29

White House announced a delay on any decision to temporarily relocate canal residents into military housing for another month. White House official, Kirschenbaum, said that many local officials have expressed a fear that the Federal government, by providing temporary lodging, would be encouraging people to leave the area and did not want to disturb the overall long-term plan for the neighborhood.

April 29

State Attorney General filed a \$635 million lawsuit against Hooker Chemical Corporation to recover damages as a result of the Love Canal dumpsite LCHA questions whether the State is serious about the suit and if they will follow it through. The suit referrs to Love Canal as a 'public health and environmental disaster' yet residents are told repeatedly, by the State, that there is no great risk and do not need to be evacuated.

May 3

Governor Carey refused to appoint an independent commission to investigate how the state agencies handled the Love Canal problem. Instead the Governor said he thinks David Axelrod, the Health Commissioner, and others "should get some kind of an award."

May 3

A strange event occurred. Dr. Paigen's 1976 State tax return is now being audited and for some unknown reason, the state's audit file contains newspaper clippings about her efforts to help canal families.

May 3

A joint Senate and Assembly hazardous waste sub-committee held hearing on hazardous waste facilities. Hooker was

opposed to the concept of one major treatment facility serving the entire state, which was recommended in the report. Hooker would rather have four regional sites. A Niagara Falls councilman addressed the committee and said he would like to see the facility built right in the city.

May 3

Michael H. Brown, a former news reporter for a local paper, released his new book, "Laying Wastes." The book is great and tells the events of Love Canal from 1977, when he first learned of the dump, until 1978-79. He tells of how all levels of government handled the situation and many factual stories of families who lived and suffered at the canal. Brown also investigated other dumps across the country and writes about the health and environmental damage that has been found at those sites.

May 3

A group of shareholders in Occidental Petroleum Corporation (Hooker's parent company) will present a resolution at a shareholder's meeting on May 21, 1980. The resolution requests the Board of Directors to establish policies and procedures to safeguard the company from any future environmental contamination problems that affect its profitability and viability. The shareholders hope to raise public consciousness with this resolution.

May 3

The county legislature announced that they will not act on the question of participating in the Revitalization Committee, until May 20. Residents who have patiently waited since November to have their homes purchased are becoming upset, emotional and scared that the buy out will never happen. The neighborhood has developed a very tense-stressful ora around it.

May 4

The State Health Department will begin an environmental testing program in homes that surround the Bloody Rum dump. The Bloody Rum dump is another Hooker dump, located in Niagara County, which is leaking toxic wastes into the surrounding community.

Мау б

Hooker Chemical is now conducting feasibility studies in Niagara Falls to establish a new \$700 million vinyl chloride plant. The Mayor agreed to assist Hooker in every way possible, if the company decides to build the plant in Niagara Falls.

May 7

At a county legislature meeting a vote was taken on joining the Revitalization Committee. The legislatures voted 'NO'. The residents became angry and threatened to take the matter in their own hands. Many residents expressed their fears, many crying, but all full of frustrations and feelings of helplessness. The Town of Wheatfield has publicly stated that they will not join unless the county joins and the State will not participate at all.

May 9

The Revitalization Committee met in a public meeting but did nothing because: 1) There is only \$5 million, not enough to purchase homes of all residents appraised; 2) The legal entity to accept the \$5 million and seek other funds does not yet exist, the Town of Wheatfield will meet on May 19, 1980, to decide whether they will participate on the committee; 3) The Mayor is trying to convince the county to reconsider their decision to "stay out of it". The only useful idea (at least the residents thought) that was brought up at the meeting was when Lois Gibbs invited the Mayor to Washington to join the residents in a protest. The residents were considering a flotilla of boats down the Potomac River to the Lincoln Memorial. Then to ask President Carter to help them now that they have come to him on boats. Referring to the Federal assistance program for the Cuban refugees, the residents agreed the Cuban refugees needed help, but the canal families needed assistance too.

May 12

The State Health Department asked the National Academy of Sciences to review all studies conducted at Love Canal. The State is requesting the review as a result of public questions on whether the state "covered-up" the health problems at the canal.

May 13

The Niagara Falls City Council decided they no longer could wait for the other municipalities to make up their minds whether to participate in the Revitalization Committee. The council voted to seek a "home rule message" from the State Legislature. A home rule message would allow the city to spur creation of the authority as recommended by the Love Canal Task Force.

May 13

The Mayor announced that no community member who has entered into litigation on Love Canal issue can sit on the authority. This eliminates anyone belonging to the Homeowners Association and over 90% of the community. Residents cannot understand why a resident with a pending lawsuit is in a "conflict of interest", as the Mayor said. Yet, the City which is also in litigation, is not "in conflict" especially since the Mayor is chairman of the authority.

May 14

EPA held a public informational meeting to explain the first phase of a plan to clean-up storm sewers which are believed responsible for contaminating Black Creek, which is in the northern section of the neighborhood, with toxic wastes including dioxin. Officials said work should begin within a few weeks. Residents who attended the meeting expressed their fears that their families would become ill, due to air and dust contamination during the clean-up, as the families experienced during the clean-up of the canal. The residents asked EPA for temporary evacuation during the clean-up activities to protect their families. Many

residents told EPA not to come near their property for reasons such as: 'My patience had worn out several weeks ago, when EPA workers wearing gas masks came on my property to do some testing on a manhole in front of my asthmatic daughter."

May 14

The State Department of Transportation announced that the appraisals of homes in Love Canal totaled \$17.9 million. There is only \$4.5 million set aside to purchase homes and \$500,000 for improvements to the La Salle Housing Development, which is located just west of the canal.

May 16

The local news at 11:00 announced that there was a high incidence of chromosome breakage in residents who had blood tests by EPA in December 1979. The report was leaked out of EPA that 11 of the 36 tested had damaged chromosomes. The 36 residents had not been given their results yet, and the news report put most of them into a panic. They did not know what it all meant or if they had the damage. Most walked the floor all night, after all, who can you call at 11:00 at night!

May 17

EPA flew a team of doctors to Love Canal to meet privately with the 36 families who had blood testing done to explain the results. EPA spoke with each family at the Association office from 8:00 AM till noon. They allowed a family one half hour to ask questions or talk with the physicians. After the half hour whether they still did not understand the results or had other questions, the residents were told to leave so EPA could stay on schedule. Residents were told thay if they had chromosome breakages, then they have an increased chance of developing cancer, reproductive disorders, birth defects and if the damage was due to the canal and their children exposed in the same way, that their children may have damaged chromosomes too. When families asked what they could do to protect their babies (diet, vitamins, etc.), they were told that if it's due to Love Canal, the only way to protect their children is to move them out of the area. Canal families left the meeting angry, emotional, crying and a few hysterical. People feared their children would develop cancers and die. They are tired of governments' inaction and felt trapped like an animal in a cage.

May 17 (NOON)

EPA held a press conference in Niagara Falls and an identical one in Washington. EPA said they found 11 of the 36 residents tested had evidence of chromosome breakage, "a very rare observation in any population." An EPA official described the aberrations as the inclusion of extra fragments and attributed their existence to exposure to "some environmental agent." The official went on to say, "the major health hazard to be concerned about is cancer" and that abnormalities of this type is usually found in less than

1% of a normal population, but it showed up in over 22% of the canal residents tested. Residents were told they have a "higher risk" of health problems and should cut back on other risks such as cigarette smoking and choosing a less dangerous lifestyle.

Neither EPA or any other governmental agency will move residents temporarily until the report goes through a peer review process. This process should be complete by May 22, 1980. Residents once hearing this statement became unruly, demanding they be moved. "Everyone agrees we are at risk, for God's sake, move us, don't just walk away!", one resident said and others shouted similar remarks.

Niagara Falls Mayor was furious with the way the Federal government handled the announcement. He said, "It's like they dropped a bomb on this city, then left us here to pick up the pieces."

The Homeowners Association President sent a telegram to the President begging for relocation of all families and "not to allow the canal problems to become lost in a sea of red tape, while innocent children are being threatened. Please act immediately and let my people go!"

A local newspaper headline read, "White House Blocked Canal Pullout," the article said the EPA wanted to make an immediate evacuation announcement with May 17th release but the White House ruled against it. Residents began to gather in front of the Association office after seeing the headlines. They were angry, panicked and acting out of emotion. Within a short time, there were about 100 people standing in the streets. They began to stop cars which entered the community and if the driver was not a resident, then the car was turned away. They were told to "find another route, this area is unsafe, if the government won't protect you, we will!"

Within an hour, additional people arrived and some residents began burning the grass spelling out EPA.

People wanted answers: Why the White House said NO? Why the EPA doctors only answered the questions of the 36 people tested and did not hold a public meeting later to explain what, if anything, the results mean to the whole community?

Approximately 200 residents had gathered in front of the Association when the two EPA representatives arrived to answer questions. Once the two men were inside the office, the residents began to encircle the building announcing that they would not allow the EPA representatives to leave until the Federal government provides the assistance necessary for canal families to move.

May 19

The Federal officials were held for five hours inside the Association office. The crowd outside the building grew to about 500 angry residents, who were determined not to let them free. Lois Gibbs notified the White House of the situation and again pleaded for help for the suffering families. It was then announced to the press, that two women, Lois Gibbs and Barbara Quimby, "were detaining the Federal representatives from leaving the building for their own protection." There was no violence towards the two officials, and they said that they were not openly threatened during the period.

At 9:00 PM, Lois Gibbs addressed the angry crowd saying, "We have made our point that we will no longer sit back and allow the government to ignore our life threatening problem. Our Congressman is now in a meeting with President Carter asking for help." Lois asked for their approval to release the officials and the vote was 60-40%. Lois Gibbs then finished with a threat that, "if we do not receive temporary relocation by Wednesday noon (May 21), then today will seem like a Sesame Street picnic!"

May 19

The hostages told news reporters that they will not file criminal charges but the Justice Department is considering criminal charges. They also said they bear no hard feelings towards Love Canal residents. Both said upon arrival they realized the intensity of the anger and frustration of the homeowners, but thought their superiors in Washington underestimated the potential for violence. They also said, "They understand, considering all the circumstances, how the people are frustrated enough to do something like that."

May 19

During the "hostage taking" activities, Dr. Stephen Barron, a Buffalo neurologist, met with individual residents to explain the results of a study of nerve damage, which he completed. With 33 residents and a control population of 20 people from outside Love Canal, participated in the study. Dr. Barron said the results reflected a high percentage of nerve damage among canal residents. The tests indicated nerve damage in "50 to 70%" of the residents, which indicated a need for a future study.

May 19

The Town of Wheatfield voted unanimously to join the Revitalization Committee. The County and State still refusing to participate on the committee.

May 19

Hooker Chemical Corporation admitted in Federal Court that the firm deposited 188,900 TONS of chemical waste at Love Canal and three other Niagara Falls sites. Hooker also admits learning from the city in 1958 that children had been injured playing in soil excavated from the canal area.

May 19

If a disaster declaration was declared at Love Canal, it would (according to the acting director of finance) cripple the city. The city would lose \$168,678.09 in tax revenues as well as the loss of sewer rents, water rents and utility receipts taxes. In addition, the city would lose the per-capita aid from the state and Federal government if people relocated outside the city. Besides, the city's loss of the school district would also lose \$189,476.36 in tax revenues next year. The Town of Wheatfield which has 59 homes in Love Canal area would lose \$31,683.33 in combined town, school and county taxes.

May 19

The Carter administration met to discuss and coordinate the Federal role in the possible evacuation of canal families. They announced no evacuation decision will be made until a team of geneticists report their review of the chromosome study on 36 residents.

May 20

An appraisal firm in Niagara Falls conducted a study of the housing market in the designated Love Canal area and has concluded that "there is no market in the area for homes." Prior to August 1978, the area accounted for 5% of the total number of housing sales in the city.

May 20

Niagara County Legislature met and again rejected a plan to join the Revitalization Committee. Hundreds of residents packed the meeting (standing room only) and strongly voiced their disapproval of the county's action. Residents, frustrated, angry and scared, requested that the legislatures who are their representatives, explain to them why they voted NO. After 2 1/2 hours of pleading for an answer and after Lois Gibbs was physically removed three times from the meeting (because she refused to allow the legislatures to resume its regular session until the residents received an explanation), the sheriff deputies sealed off the chambers so the legislatures could continue their meeting. No one has yet received an answer from any of the legislatures of why they voted "NO."

May 20

The State Attorney General's office filed papers to request that the state be named a party in the \$124 million Federal Action and that the Federal Court step back and let the State Supreme Court suits go first.

May 20

Dr. Dante Picciano from Biogenics Corporation in Houston, Texas, who evaluated the chromosome study on the 36 canal residents refused to allow a panel of scientists to review his work. Picciano refused because EPA would not allow one scientist of his own choosing (he provided a list of five scientists to EPA) to sit on the review panel. Picciano had two reasons for helping to name the review panel: 1) To ensure that the panel was qualified to interpret the genetic data; 2) To avoid the possibility

that government "picked" geneticists might reach conclusions based less on medicine than on politics. Residents of Love Canal are now wondering if the Federal government is trying to minimize and cover-up the health effects, similar to what the state has been doing throughout the canal crisis. The fact that EPA, even after a number of recommendations from Dr. Picciano and Dr. Paigen, refused to test a control population for the chromosome study adds further questions to a possibility of a cover-up.

May 20 (NOON)

The government met the deadline set by residents during the detainment of EPA officials. At noon, Lois Gibbs received a phone call from Washington which announced that the Federal government would temporarily evacuate all residents who wish to leave the area up to one year. Residents, approximately 800 families, could immediately go to area hotels, motels, or apartment dwellings, with the Federal government picking up the costs. Residents happy, others doubtful and confused, all celebrated the victory by dumping champagne over each other's heads. Lois Gibbs told residents that she believed this was only a first step and that permanent evacuation announcement should be coming soon.

May 21

A Federal panel headed by Dr. Rall, Head of the National Institute of Environmental Health Sciences, concluded that the chromosome study provided an inadequate basis to determine health damage. New York State Health Department also had a member, Dr. Hook, of the Department, who sat on the review panel. Once the review was complete, the Health Commissioner told reporters the study, "is an inadequate basis for any scientific or medical conclusions" and called the study "irresponsible, like screaming fire in a crowded theater." The panel said they did not look at the slides or photographs, therefore, was unable to evaluate fully the findings. They listed some of the problems with the study as being: The lack of a suitable control population, the lack of information on variables (occupation, exposure, radiation or chemotherapy, etc.), and incomplete information on the methods used in scoring. Canal residents are upset, calling 'political interference in the review," since the scientists did not look at the raw data, but commented on the study. Residents knew that they were refused participation in the study because of occupation, radiation, etc., and begged for a control population, which the Federal government themselves refused to fund. Therefore, the panel's report is wrong.

May 21

Stephen Gage from EPA announced that carefully controlled medical tests on canal residents will begin within the next few days. EPA hopes to complete some of the studies within 29 days or sooner. The tests will be conducted on adults and children who live or lived in the canal area.

May 21

At Occidental Petroleum Corporation annual stockholders meeting, a resolution asking Occidental (Hooker's parent corporation) to adopt a program to prevent "future environmental contamination," was voted down.

May 21

LCHA called a meeting with Federal representatives to answer residents many immediate questions. About 400 - 500 people attended and expressed their real need to be permanently evacuated. Other concerns expressed at the meeting were inadequate amount of temporary housing that is available in the Niagara Falls area, the need for security to protect the empty homes from vandals since residents have to leave everything behind to go to hotels, how parents without transportation of their own can get their children to and from school, and what happens to the small businessmen who live off what they earn through restaurants and small stores in the canal area.

May 22

The total cost of Love Canal reported by local paper (Buffalo Evening News) may be more than \$80 million. This would include: \$25 million to purchase homes; \$45 million to complete containment system; \$4 to \$7 million to conduct health and environmental studies; and \$3 to \$5 million for temporary relocation program.

May 22

House Commerce Sub-Committee held hearings in Washington to learn why it took the government so long to agree to help finance relocation of Love Canal families - political or medical decision. Several findings were brought out at the hearings: 1) EPA tried to get money in its fiscal 1981 budget to pay for health tests but was told they could not have it by the Office of Management and Budget; 2) The National Institute of Environmental Health Services tried to get the New York State Health Department to apply for a Federal grant, but the state never did; 3) Dr. Barron said he was certain there were neurological disorder differences between Love Canal residents and an outside area, before EPA STATISTICIANS knocked down much of his data. The Federal officials also said they were assured studies were being done by the State Health Department, then added "though it was hard to find it." EPA enforcement representatives said they had great difficulty in finding out about the state study and had to subpoena the data. All Federal officials said the relocation decision was based on science, not politics. The LCHA finds that hard to believe!

May 23

Sarah Herbert, Renter Association President, was pleased that 240 families living in the La Salle Development, (a housing project) will be able to leave the area.

May 23

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LCHA received a telegram from former hostage, Frank Napal, saying, "I miss your oatmeal cookies, best wishes from your friendly hostage, Frank Napal."

May 29 - A State Assembly Task Force report said there was evidence that the army dumped or oversaw the dumping of nerve gas, uranium and other radio-active wastes from the manufacture of atomic bombs, and other chemical warfare wastes in Love Canal and other sites in the Niagara area.

June 2 - Lois Gibbs went to Washington to meet with many agencies and elected officials. All meetings were confirmed before leaving New York. Once Gibbs arrived in Washington, agency heads began cancelling all prearranged appointments. Later, Gibbs was told by one agency official confidentially that the order was, "not to meet with Gibbs," which came from the Office of Management and Budget and the White House.

Jume 4 - Instead of private meetings with Lois Gibbs, the White House arranged for a large meeting with seven agencies including a dozen representatives to discuss the canal families concerns and needs. Nothing was accomplished because of the little time available (two hours) and the amount of people and agencies present. Lois Gibbs believed the meeting was planned purposely to defuse any impact a one-on-one meeting might have publicly.

June 5 - Governor Carey named a panel of six doctors to evaluate all medical and scientific data collected at Love Canal of health problems. The panel will be headed by Dr. Lewis Thomas, President of Sloan Kettering Cancer Center in New York City.

Jnue 6 - U.S. Attorneys received 31 microfilm reels of data from the State Health Department, through a subpoena and discovered the reels were useless. All information pertaining to human health data was retracted beyond use.

June 7 - Two canal residents testified at a Senate Hearing, sponsered by Senator Edward Kennedy. Phyllis Whitenight and Barbara Quimby testified to the cancer, miscarriage, birth defects, respiratory disease, chromosome breakage, and psychological sufferings their families have experienced. When the women finished, Senator Kennedy was left speechless.

June 8 - A study of the growth of children between 0-18 years began today. This study is being done by State University at Buffalo, Anthropology and Dental Schools.

June 8 - Hooker Chemical Corporation held an open house at their Grand Island plant. Residents from Love Canal (approximately 200) protested at the plant wearing T-shirts which said, "Love Canal, Another Product of Hooker Chemical."

The protest was a "die-in" when the leader blew a police whistle, all 200 fell where they were and "died."

June 10

Leo Martel, acting Mayor while the Mayor was attending a convention, passed a resolution at the City Council meeting to declare the city of Niagara Falls a "disaster area," the vote was 3-0. Mayor O'Laughlin was not happy and will not allow the resolution.

June 12

The state never installed an inexpensive waste monitoring system around the Canal area, therefore, no one will be able to tell if the multi-million dollar containment project has in fact stopped the spread of chemicals.

June 13

Another review of the chromosome study said the panel could not find anything which indicated the actual presence of chromosome damage originally sited. This panel was headed by Dr. Roy Albert of the New York Medical Center and reviewed photocopies of photographs. Lois Gibbs (LCHA) said, 'No reputable scientist would make a conclusion after looking at photocopies of photographs; scientists are exact people.' Lois asked the Federal agency to investigate the review panel for possible conflicts of interest.

June 14

Dr. Beverly Paigen requested that her "scientific censor-ship" case be heard "in an open hearing where all parties present their case and are allowed to rebut." On June 3, the board found no "political interference" by Dr. Axelrod, Health Commissioner. Dr. Axelrod who has been accused of harassing Dr. Paigen, chairs the committee who reviews the allegations (a bit of a conflict!). Dr. Paigen said the June 3rd hearing was a total violation of her human rights and an unfair hearing because charges were brought against her in secret, that she never heard; evidence was presented against her in secret which she did not get to review. The statement of the administration was presented in secret, she did not get to hear it. The person accused of political interference sat as a member on the board which decided the case.

June 17

New York State refused to allow EPA scientists into the evacuated canal homes that abut the canal property to test for chemical wastes.

June 17

New York State Health Department continues to refuse to provide health data to the U.S. Justice Department arguing the data contains "highly sensitive and personal information."

June 17

The chromosome study was again reviewed by a panel headed by Dr. Kilion of the University of Texas and confirmed Picciano's conclusions. To date: Dr. Albert, NYS - No abnormalities; Dr. Picciano - Yes; Dr. Green, EPA - Yes; Vilma Hunt - Yes; Dr. Marvin Lagator, from Hooker, also agreed with Picciano's conclusions of damage.

June 19	Lois Gibbs sent a letter to Federal Judge Curtain, stating that the State of New York refused to honor 330 written, notorized release for residents' health data from the state health department.
June 19	Governor Carey visited Love Canal area. Carey continued to stress the fact that if you remain in Love Canal, your investment in your homes would be protected.
June 23	New York State, after two years, released the results of pregnancy outcomes for the canel neighborhood. The study included 2,600 people. This same study was reviewed by Science magazine and refused publication because of the quality of the study. The report concluded that miscarriage rates decreased since the 1960's, where the rate was 50%. The report said the miscarriage rate now were about normal but not 50%. LCHA study of the last 22 pregnancies showed there was only four normal children born.
July 1	The Town of Wheatfield appointed three representatives to the Love Canal Revitalization Agency (LCRA). To date, the agency consists of six members, three from the city of Niagara Falls, and three from the Town of Wheatfield. Three more must be appointed from the community.
July 1	- LCHA has decided to boycott the new proposed Center For Dise se Control health studies. LCHA feels the studies are designed to meet the interests of the governmental agencies rather than in the interests of the community. Residents wanted imput into the design of the study to ensure that their interests are represented.
July 1	- EPA defined a new monitoring system: by planting hybrid of the Spiderwort (a plant), they will be able to define pollution because the plants will flower pink instead of blue when exposed to certain substances.
July 1	The Federal; Love Canal Bill (to purchase homes) was delayed in the House after passing the Senate.
July 2	A Niagara Falls contractor would like to lease the Love Canal treatment plant, so they can use the facility to treat non-Love Canal wastes from across the state of New York.
July 3	- Occidental's in trouble with the Securities & Exchange Commission (SEC) for not properly informing their stockholders of the company's potential liability for the chemical contamination of the Love Canal and several other sites across the country.
July 3	The Federal Love Canal Bill was passed by the House and the Senate and is in the hands of the White House. It is up to the President to make it affective. The bill gives

1980

enough money to permanently evacuate all canal families

		that wish to leave.
July 8	-	Attorneys representing Hooker asked the State Supreme Court Justice to delay the state's suit until similar Federal lawsuits are resolved.
July 13	•	State Senator John Daly asked the National Academy of Sciences to become involved in order to provide the residents with credible scientific information.
July 17		All of the members (which were also all men) were appointed. There is only one member of the committee which is actually from the canal neighborhood.
July 17	-	EPA scientists arrived at Love Canal to talk with residents about a massive environmental study including air, soil, groundwater, and animals in the canal neighborhood.
July 18	-	LCHA began a fundraising activity to raise enough money to charter a bus to New York City where the Democratic Convention was being held. This demonstration was to make a direct appeal to President Carter.
July 20	- 1	Love Canal residents sent a complaint to the state on the security measures in the neighborhood. The current security has not been effective to deter vandals and arson.
July 21	-	Genetic experts and the Center For Disease held an informative public meeting with residents. Residents were not pleased with the meeting as scientists could not tell them if their families would suffer from cancers or other diseases in the future.
July 21		Lois Gibbs returned from California with \$1,400.00 raised at a fundraising party to be used in the charter bus fund; 600 telegrams were also sent to the White House from California citizens; and LCHA received a resolution passed by the City of Los Angeles City Council in support of residents evacuation.
July 24	-	State Tax Commissioner James Tully, apologized to Dr. Beverly Paigen, of Roswell, but denied that her audit was the result of her activities at Love Canal. (Dr. Paigen's state file contained newsclips from her activities at Love Canal, which just happened to fall out when the auditor opened his file.)
July 27	-	Hooker's own hired toxicologist confirmed the chromosome breakages in the Love Canal residents tested, agreeing that 11 of the 36 had damage.
July 30	-	Federal agencies pleaded with residents to allow them to begin health studies of the neighborhood, but LCHA continues to boycott the studies until they are allowed imput into the study design.

July 31	-	The Gannett Foundation awarded Dr. Paigen and the Environmental Defense Fund \$50,000 to conduct a study on canal children. Residents are enthusiastic about the study and have pledged their full cooperation.
July 31	-	Buffalo State University and the Center For Disease Control cannot reach an agreement on the proposed health studies at Love Canal, thus the studies are delayed.
July 31	- ,.	A State Supreme Court denied a motion by Hooker to have insurance claims heard in Califoria Courts, since New York State law holds firms liable for polluting the environment and Califoria does not have such a law.
August 1		The Federal Government agreed to lend New York State \$15 million to purchase Love Canal homes\$7 1/2 million in a grant and \$7 1/2 million in a loan to be paid back in three years.
August 2	•	Dioxin was discovered in Love Canal storm sewer system. The deadly chemical was found at 29 parts per billion in three samples; 120 and 312 parts per billion in two other samples.
August 2	. •	Twenty organic chemicals and many toxic metals were detected in residents' blood of the 36 people tested for chromosomal breakages. Forty-three organic and eight metals were looked for in their blood.
August 3		Canal residents were outraged to discover that EPA staff refuses to drink the water in their Love Canal office; brings in fresh spring water; yet tells the residents it's safe for them to drink.
August 3	•	Center for Disease Control announces they are now ready to begin their health studies, but residents continue to boycott until their questions have been addressed.
August 6	-	Unexplained radioactive substance, Cesium 137, was found near the 99th Street School outside the dump.
August 7	- .	Richard Morris, from the New York State Department of Transporation, was appointed temporary executive director of the Love Canal Revitalization Agency.
August 15		LCHA demonstrated at the Democratic Convention in New York City. Residents carried inflated rubber boats asking President Carter if he will now recognize they need assistance; now that they have come to him on boats. (Theme from Asian boat people, LCHA sympathized with them but wanted equal treatment.)

August 25 State officials proposed to drill a ring of monitoring wells around the dump to determine if the collection system (clean-up) is working. (As of this writing, August 16, 1982, the wells have not been installed, thus the evaluation of the containment system has yet to be determined.) September 6 Niagara County Attorneys ordered an investigation on the clean-up costs at Love Canal. Newco Chemical Wastes, Inc., now called CECOS International, charged the state about \$6 million to clean up the first third of the canal while Elia Construction only charged about \$2 million to clean up the remaining two thirds of the canal. The construction and clean-up work were identical. September 9 Niagara Falls residents told State Assembly panel that they saw U.S. Army trucks dump at Love Canal in the 40's. September 10 Love Canal Revitalization Agency refused to ask the Federal government for 3% loans for Love Canal families. Loans that are normally given in a natural disaster. September 14 The City audit has shown that the claims against the City have increased from \$3 billion to \$16 billion. September 16 Contrary to the promise made by Federal officials in May, temporary relocation funding will be cut off on November 14, 1980. September 23 Superfund, for other "Love Canals" across the country, was passed by the House of Representatives. September 30 Lois Gibbs, LCHA, gave a tour to foreign media representatives from Egypt, Saudi Arabia, Ethiopia, Swaziland and Zambia. October 1 President visited Niagara Falls to sign Love Canal bill appropriating money to purchase homes. Carter invited LCHA president Lois Gibbs to the stage and commended the LCHA for bringing the toxic waste issue/problems to the nation's attention. Gibbs asked for 3% mortgage rates for residents while she was standing next to the President.

October 10

A New York State panel of state experts concluded that there is no evidence that chemical pollution at Love Canal has affected the health of residents. LCHA dismissed their conclusions as the committee consisted of all New York State scientists, no outside scientists, the state's epidemiological study was judged by the state's own division head, and Thomas refused to answer inquiries from

residents or other scientists.

October 21 The New York State Department of Environmental Conservation decided to abandon the canal monitoring system, to define the effectiveness of the clean-up construction, because it was too expensive (\$500,000 higher than the state allocated.) The construction costs totaled millions of dollars. October 23 Revitalization Agency has decided not to purchase "absentee owners" homes or small businesses. LCHA was outraged at this discrimination between what homes will be purchased. October 23 President Carter asked Congress for money to fund health studies at Love Canal (\$13.8 million). October 27 State investigators received new information that the Army dumped radioactive and chemical wastes from wartime operations in several western New York locations including Love Canal. November 3 Bruce Davis, President of Hooker, claimed that emotionalism surrounding the Love Canal contamination could cause dangerous economic setbacks for the national chemical industry. He also said Hooker will not abandon the City of Niagara Falls because of adverse publicity (although they have changed their name to Occidental Chemical) since they have invested many millions of dollars there. November 11 LCHA attorney, Richard Lippes, urged residents not to sign purchase contracts with the Revitalization because necessary amendments must be made to avoid residents from waiving certain rights and privileges. One clause left open the possibility that a resident would be sued by a new buyer for selling a contaminated home. November 15 The first home was sold to the Revitalization Agency by a family with one child and another on the way. The state filed additional suits against Hooker for im-November 18 proper disposal of chemicals at three of Hooker's other dumps -- Hyde Park, 102nd Street and the "S" area. November 18 The state charged that the toxic chemicals from Hooker are threatening the drinking water of approximately 100,000 Niagara residents. December 2 Congress refused to appropriate the monies necessary to conduct health studies at Love Canal. Therefore, there will be no health tests of residents at Love Canal despite the promises made by President Carter and Barbara Blum of EPA. The state gave Hooker permission to incinerate 5,000 gallons December 2 of dioxin-tainted wastes from Love Canal and 200,000 gallons from Hyde Park Landfill. Health experts feared that Hooker's

1980

incinerator was incapable of totally destroying dioxin, thus unknown amounts drifted over the surrounding neighborhood.

December 11 - "Superfund" legislation passed containing a \$1.6 billion fund for the clean up of Love Canal type problems. Unfortunately, "Superfund" stimulated by the Love Canal disaster does not help the people who surround such dumps.

December 16 - The EPA is thinking about suing Hooker for their past incineration practices at Love Canal, Hyde Park wastes, as well as Hooker's recent request to burn 200 tons of additional wastes from Hyde Park.

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January 13 - The Revitalization Agency approved financial aid to families who were renting at Love Canal, including moving costs, security deposits, utility deposits, telephone installation, appliance installation costs, funds for transportation to look at new apartments, and new stoves and refrigerators for those who do not have them, because of current apartments supplying them.

February - Senator Moynihan, D-NY, has proposed an amendment to Superfund to help the state with the costs of cleaning up Love Canal.

March 14 - 228 homes have been sold to the Revitalization Agency out of 550 properties. Also, there have been a total of 468 purchase offers made to date. The average purchase price \$34,700.

March 28 - Hooker wants the Federal Court to keep all information from pre-trial stages secret because it contains the "innermost workings" of Hooker and Occidental.

March 29 - Lois Gibbs and children move to Washington, DC. Gibbs will still maintain her presidency at Love Canal Homeowners Association and establish a new organization to assist other victims of toxic wastes.

Discouraging to see that fence out there...it serves no purpose and is causing an uneasiness in the neighborhood.

At the same meeting, the Cerebral Palsy Association and Association for Retarded Children were awarded contracts to provide workers to keep up the vacant contaminated properties. (Does the Mayor know there is a problem yet?)

May 15 - One year after being held hostage at Love Canal, Frank
Napal remembers his captors with sympathy and the agency
(EPA) "stupid".

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May 18		The City of Niagara Falls identified traces of dioxin and other chemicals in the City water intake, where the drinking water supply is drawn from. City officials blame chemicals from Hooker's "S" dump for the contamination. (Although these chemicals were found, the City denies the drinking water is unsafe.)
May 20		Sister Malone attended Occidental Petroleum stockholders meeting to alert stockholders of Occy's waste and dumping practices, but had her microphone turned off for the second year in a row. Armand Hammer told her to "go back to Buffalo" when she lives in Niagara Falls.
May 21		An EPA official stated that moving a family (Richard Morris') into Love Canal and to permit the handicapped people to work there is 'premature'. The Revitalization Agency should wait for the EPA report (now five months overdue) before making decisions.
June 4	-	A Love Canal family awaiting the purchase of their home became ill after a heavy rainfall which is believed to cause a liquid to flow through their cellar wall. EPA made three appointments to test the home, but never showed up.
June 5		The costs of Love Canal to date are: \$14.8 million by the State of New York for clean up; \$21 million by the Federal government; and \$6.3 million by the city.
June 5		Congress approved \$950,000 to conduct limited health studies at Love Canal. The original study plan would have cost \$3.8 million.
June 9	*	Hooker's desire for secrecy of pre-trial information was denied by the Federal Court.
June 12	- 3	State Cancer Registry shows that the men and women of Love Canal had the highest rate of lung cancer in the whole state of New York.
June 29		Wesley Methodist Church closes the door after being functioning since 1953. Wesley Church served many times as a community center, as well as a church for Love Canal residents fighting to leave the contaminated neighborhood.
July 2		Richard Morris moved his family into an abandoned Love Canal home.
July 12		To date, 376 out of 550 families have sold their homes to the Revitalization Agency.
July 23		Former residents of Love Canal protested the moving of Richard Morris and family into the Love Canal area at a meeting in City Hall. Morris' family moving into a

rent-free home was a concern of residents because of health and contamination problems in the neighborhood.

August 2

Drs. Beverly Paigen and Kenneth Paigen are planning to move from Western New York to California. Beverly no longer will work in an institution which continues to harass her and will not face up to the real issues such as Love Canal. Dr. Paigen will never be forgotten by the suffering families at Love Canal for the help she provided them.

August 5

The district attorney's office has begun investigating the financial records of the remedial clean up at Love Canal.

August 6

The State University at Buffalo was refused funds from the Federal government to fund a registry of residents past and present at Love Canal. The registry would have followed the families for 35 to 40 years.

August 6

EPA appropriated \$4 million to clean up sewers and creeks at Love Canal. This clean up activity is to begin next spring.

August 14

Hooker employees and families were studied for adverse health effects. When their medical histories were compared to statistics for Love Canal families, Dr. Vianna (NYSDOH) claimed there did not seem to be an excess of birth defects or abortions. Did Dr. Vianna forget that birth defects and abortions were the basis for two evacuation orders at Love Canal? Certainly he could have found a better group to compare results!

No cancer study was conducted on Hooker employees because Hooker refused researchers access to health records of employees back to 1950. Is Hooker afraid the researchers might find something?

August 30

Hooker is involved in a "PR" campaign to change the negative image Love Canal has brought (rightfully so) Hooker Chemical Corporation. Hooker reprinted and mailed about 40,000 copies of an article which was written taking the side of Hooker.

September 22

The Department of Human Services announced they will conduct chromosome studies at Love Canal instead of the intensive study originally planned. LCHA opposed to the chromosome study because it is too controversial and wanted a reproductive study which would give hard data instead.

October 1

The Revitalization Agency's members cannot work together due to the way the bylaws are written and because the community representatives (3) are always out-numbered and

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out voted by the City and Town of Wheatfield members (6). William Waggoner and John Lynch (community representatives) are at least bringing the issues up to the attention of the committee and fighting hard.

- November 8
- 386 families of the 530 eligible families have sold their homes to the Revitalization Agency and moved out of Love Canal.
- November 20
- EPA announced plans to build an impermeable concrete wall around Love Canal in an attempt to permanently seal off the dump.
- December 4
- The Center for Disease Control (CDC) began their study of chromosome damage among Love Canal residents and a comparable population. CDC will test the some 36 residents involved in the May '80 EPA test; 36 controls and 12 people from ring 1 and ring 11 area. LCHA is opposed to this study as any finding will be controversial because the science is too young; because of the preselected subjects to be tested rather than a random sampling; and because of the length of time residents have been out of the contaminated area.
- December 11

Lee C. Armstrong, who owns six acres of the Love Canal dump, has just paid his years of back taxes totaling \$1,512. He paid the taxes in anticipation that someone will now pay him for storing chemicals on his property.

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- January 5
- The Revitalization Agency shuffled the nine-member committee around to change the voting power, thus leaving the citizen representatives powerless.
- January 9
- An environmental attorney questioned the legality of Mayor O'Laughlin and Town Supervisor Greinert chairing and participating as members of the Revitalization Agency.
- January 12
- The Board of Education is contemplating taking the state to court for damages by the easements around the school.
- January 14
- Homeowners just north of Love Canal emergency area won an out-of-court settlement to lower their property taxes by one-third due to the close proximity of their homes to the canal neighborhood.
- January 19

The State of New York has announced that they will soon be demolishing the 237 homes they purchased in 1978 (those closest to the canal).

January 26		A state "Superfund" bill appropriating \$15 million annually for the clean up of old dumps, passed the Assembly and will now go to the Senate.
February 15		Department of Environmental Conservation announces that they believe that 75% of the toxic chemicals polluting the Niagara River is a result of the 215 toxic waste dumps in Erie and Niagara Counties.
March 1	-	The State Supreme Court Justice denied Hooker access to the state health records of Love Canal residents.
March 3	-	Bids have gone out for the demolitions of Love Canal homes.
March 9	-	Senator Moynihan and Congressman LaFalce wrote a strong letter to EPA administrator Ann Gorsuch to try to pressure EPA to release the EPA environmental study which is now over a year overdue.
March 23	-	Over 100,000 gallons of chemical wastes were pumped from the canal with an anticipated 250,000 by the end of the week. D.E.C. has a major problem with what to do with an accumulation of 10,000 gallons of thick wastes that are presently being stored on-site, with no acceptable disposal alternatives available.
March 24	-	All attorneys involved in the Love Canal lawsuits tour the canal with the State Supreme Court Judge. The tour was conducted before the homes in ring 1 and ring 11 were to be demolished. Many of the participants on the tour used the protective equipment available, such as respirators and protective suits.
March 25	-	Someone released a phony report on the growth and maturation study conducted by Dr. Paigen and the Environmental Defense Fund. The fake report was quickly dismissed and residents were assured that the study results are not yet in, thus no conclusions have been drawn.
April 15		The Revitalization Agency has shuffled the membership to change voting power. Therefore, the citizen representatives have no voting power on the committee and thus become token figures.
April 22	-	The Niagara Falls Chamber of Commerce has awarded Hooker Chemical Corporation the "Company of the Year Award."
May 28	-	The EPA environmental study report which was promised January 1980 is now delayed indefinitely because of statistical problems.
June 16	-	A few members of the Revitalization Committee may plan a 'march on Washington' to demand the release of the EPA

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environmental study promised 1/80. The agency (LCRA) must wait for the report before they can revitalize the community.

- June 17 The demolition of homes immediately surrounding the canal began today. The homes were bulldozed down with the rubble buried in the basements. Later a clay cap will be placed on top of the area.
- July 7 William Waggoner, a citizen representative, asked the Attorney General's office about the legality of the recent Revitalization Committee's shuffle of members. The repositioning of members takes away the community's voting powers.
- July 12 The New York State Attorney General's office released the results of samples taken from sump pump and soils at Love Canal. The samples showed dioxin at levels 100,000 times the level found toxic in animal tests.
- July 15 EPA announced that the Love Canal neighborhood is habitable and that the clean-up work is containing the waste. However, EPA recommended that the storm sewers and creek be cleaned before new families move into the neighborhood. (EPA claimed Love Canal neighborhood, except the first two rows of homes, are habitable but would not say the homes were "safe".)
- July 15 The Love Canal Homeowners Assocation held a press conference to release their consultants' criticisms of the EPA environmental study. The homeowners called the report a whitewash with 21 pages of detailed scientific criticisms of the study. Their criticisms included: The study is a one-time picture of area, during the driest period of the year; an inadequate amount of controls to properly compare samples; too many laboratories used with each having its own levels of detection, thus rendering the data collected useless; the absence of including established health effects data in their review for habitability; Center for Disease Controls own outside consultants that review the data did not conclude the area was habitable; that EPA admits contamination throughout the community (many chemicals which cause cancer), yet has dismissed these chemicals and that the clean-up containment system cannot be working properly in view of the chemicals found by EPA in bedrock. The LCHA is outraged that EPA has given a 'habitable' statement to the neighborhood! LCHA believes no one should live in this community where so much death and destruction has already taken place.
- July 15 LCHA attorney, Richard Lippes, announced to the community that the recent EPA study conclusions would not affect the lawsuits filed by residents. Residents have filed lawsuits for damages prior to living at Love Canal prior to 1980.

- July 22 New York State Governor Carey agreed with the EPA's habitability conclusions then launched a personal attack on Lois Gibbs, calling her a "self-proclaimed leader of the Love Canal people."
- July 30 Senate hearings were held by Senator Chaffee to attempt to uncover the process of decisions made on the EPA Love Canal report and questions about the validity of the data.
- August 2 Love Canal Homeowners Association held their annual meeting and about 500 people attended. Reports were given from all committees and public elections held. The officers remain the same: Lois Gibbs, President; Debbie Cerrillo, Vice-President; Jean Hasely, Secretary; Jo Ann Kott, Treasurer; Harry Tolli, Sergeant at Arms.
- August 10 Congress held hearings on the EPA environmental study chaired by Representative Florio. Many of the critical scientific questions were raised at the hearing by Congressman La Falce, but due to the time, there were no final answers to the questions or concerns.

"CHEJ is the strongest environmental organization today – the one that is making the greatest impact on changing the way our society does business."

Ralph Nader

"CHEJ has been a pioneer nationally in alerting parents to the environmental hazards that can affect the health of their children."

New York, New York

"Again, thank you for all that you do for us out here. I would have given up a long time ago if I had not connected with CHEJ!"

Claremont, New Hampshire





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