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LOVE CANAL TREATMENT FACILITY  
CONTINGENCY PLAN  
GLENN SPRONGS HOLDINGS, INC.

(Filed as Report 247 - 1069 Folder)

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## 1.0 EMERGENCY TELEPHONE NUMBERS

EMERGENCY..... 911

### AMBULANCE SERVICE

Frontier Ambulance Service ..... 285-3663  
Niagara Ambulance Service ..... 284-4228  
Niagara Falls Memorial Hospital..... 278-4000  
    Emergency Room: ..... 278-4505  
    Nurses Station:..... 278-4394

### POLICE

Niagara Falls ..... 286-4711  
Sheriff..... 285-5355  
State Police..... 297-0755

### SPILL CONTROL

NYS Oil and Hazardous Material  
    Spill Notification..... (716) 851-7220 (Business Hours) (800) 457-7362  
    (After 5 P.M. and weekends)  
National Response Center.....(800) 424-8802  
Niagara Falls Wastewater Treatment Plant..... 286-4973 (Shift Operator)

### NIAGARA COUNTY HEALTH DEPARTMENT

Business Hours..... 278-8791  
After 5 p.m. & weekends ..... 439-7430

### EMERGENCY CLEANUP CONTRACTOR

Sevenson ..... Office... (716) 284-0431  
    (Gary Rosen).....Home...(716) 745-7550  
    ..... Pager...(716) 618-0207

## 2.0 EMERGENCY COORDINATORS

During operation at the Love Canal Leachate Treatment Facility, there are two plant operators. In the event of a spill or other emergency, both persons have full authority and responsibilities for implementing the contingency plan. The primary emergency coordinator will:

1. direct work by on-site personnel or private contractors in clean-up operations,
2. be responsible for the notification of all outside agencies during the implementation,
3. provide an accurate description of the situation to outside response groups, and
4. insure that clean-up operations are carried out as described in this plan.

The Emergency Coordinators are listed below. Mr. Crockett will act as primary emergency coordinator whenever he is on-site. If Mr. Crockett is not on site, Mr. Tubridy or Mr. Parkhill will act as primary emergency coordinator.

<u>NAME</u>	<u>OFFICE</u>	<u>HOME</u>	<u>TITLE</u>
Darrell Crockett	(716) 283-0111	(716) 297-6228	Process Supervisor
Pager	(716) 448-5784		
Don Tubridy	(716) 283-0112	(716) 433-4618	Site Manager
Pager	(716) 448-5770		
Scott Parkhill	(716) 282-1862	(716) 692-8328	Process Supervisor
Pager	(716) 448-1799		
George Luxbacher	(606) 244-2159	(606) 223-3418	Director of Operations
Pager	(888) 644-6308		

### 3.0 RESPONSE TO EMERGENCY SITUATIONS

#### 3.1 GENERAL INSTRUCTIONS

For all cases, which require implementation of the contingency plan, the following actions should be taken in order:

1. Notify the emergency coordinator.
2. Get immediate attention for any injuries. Emergency phone number for police, fire, or ambulance is 911. Other emergency phone numbers are listed in Section 1.0.
3. Shut down all field pumps and plant process pumps. Field pumps can be shut down from the treatment plant office control panel. The process pumps can be shutdown on the operation's screen on the treatment facility computer.
4. Perform a primary search of the situation and determine level of severity based on amount of release, material involved, and area damaged.
5. Stop any continuous release if able to do so without entering contaminated environment.
6. Inform the spill cleanup contractor, if necessary, and other appropriate emergency response organizations and the NYSDEC Regional Headquarters in Buffalo.
7. Proceed with response and cleanup activities outlined in each section.
8. An investigation should be conducted to determine the cause of the event which triggered the implementation of this contingency plan. Ways to reduce a future occurrence of the event should be undertaken.

Each time the Contingency Plan is put into effect, the complete details of the incident must be noted in the operator's daily log, and reported to the Site Manager; Don Tubridy, in a written report. An incident report form is included in the Appendix A.

## 3.2 TREATMENT FACILITY

### 3.2.1 AQUEOUS PHASE LEAKS (RAW WATER AND FILTER FEED TANKS, AND NON-SLUDGE PIPING SYSTEM)

#### a) Protective Clothing Required

1. Level B protective gear.
2. Supplied air respirators. Respiratory protection may be reduced to full-face air purifying respirator after sufficient air monitoring shows continuous levels of less than 5 PPM total organic vapor concentration and oxygen levels greater than 19.5%.

#### b) Equipment and Materials Required for Cleanup

1. A minimum of 3 persons, 2 of which must have completed required training. At least one GSHI person must supervise the cleanup.
2. Protective clothing, mops, absorbent pigs, used clothing drums, and detergent are stored in the process area. If protective clothing and supplied air cannot be obtained because of the spills, duplicate equipment is stored in the administration building garage and drum barn.

#### c) Action To Be Taken

1. Shut down all plant processes<sup>1</sup>.
2. Suit up in protective clothing. (See A. Section above requirements)
3. Close upstream valve.
4. If leak is continuing, take action to contain and then stop the leak. For a leaking pipe, patch pipe or contain and collect leaking fluids. For a tank leak, empty contents of tank to below the source of the leak.
5. Bleed pipe from valve to source of leak if necessary .

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<sup>1</sup> Process pumps may be run under the observation of the treatment plant operator for the purpose of emptying a leaking tank.

6. Flush spilled material to chemical floor drain with large volume of water using available low-pressure water hoses with nozzle in the treatment room. Use industrial cleaning agents or penetone to aid in flushing to chemical drain.
7. Steam clean affected areas of floor using high-pressure steam from Steam Jenny.
8. Mop floor and dispose of mop(s) when done with cleanup.
9. Decontaminate any equipment which became contaminated during leak (such as lawn mower or items stored under adsorber unit).

d) Final Clean-Up And Inspection

All mop heads, absorbent pigs, squeegees, and protective clothing should be placed in drums for disposal in accordance with the facility's drum storage policy. The floor should be visually inspected (especially in tight areas around the tank) for contamination. Air should be monitored with an HNu meter. If readings persist above background levels, the floor should be steam cleaned and scrubbed until readings correspond to background levels.

Immediate arrangements should be made replace or repair tank and all affected pipes. Similar equipment should be inspected for possible failure in the same area; if the raw water tank cracked at the connection to the pump suction line, for example, the corresponding connection should be closely inspected on the filter feed tank.

3.2.2 NON-AQUEOUS PHASE LEAKS (RUPTURE OF INDOOR SLUDGE TANK AND SLUDGE TRANSPORT LINES)

a) Protective Clothing Required

1. Level B protective gear.
2. Supplied air respirators. Respiratory protection may be reduced to full-face air purifying respirator after sufficient air monitoring shows continuous levels of less than 5 PPM total organic vapor concentration and oxygen levels greater than or equal to 19.5%.

b) Equipment and Materials Required for Cleanup

1. A minimum of 3 persons, 2 of which must have completed required training. At least one GSHI person must supervise the cleanup.
2. Protective clothing, shovels, hard bristle brooms, absorbent pigs, used clothing drums and detergent are stored in the process area. If protective clothing and supplied air cannot be obtained because of the spill, duplicate equipment is stored in the administration building garage and drum barn.
3. Floorsorb is located in the Treatment Building. Annex

c) Action To Be Taken

1. Shut down all plant processes<sup>1</sup>. Treatment Bay doors should be open.
2. Suit up in protective clothing and supplied air.
3. If leak is continuing, take action to contain and then stop the leak. For a leaking pipe, place pail under leak and close valve. For a tank leak, empty contents of tank to below the source of the leak.
4. Bleed pipe from valve to source of leak if necessary.
5. Set up a perimeter berm around the spill using floorsorb to contain the sludge.
6. Take shovels full of floorsorb and apply to sludge perimeter and leak area.
7. Cover the spill with floorsorb until the sludge is not permeating the upper layer.
8. Shovel the spent floorsorb into drums. Position the drum so that drum-moving equipment have access to it.
9. Scrub floor with hard bristle brooms using hot water and detergent solution. Work all water using squeegees including rinse water towards the chemical floor drain.
10. Scrub floor a second time using hot water and detergent solution. Work all water including rinse water towards the chemical floor drain.
11. Decontaminate any equipment which became contaminated during leak (such as lawn mower or items stored under adsorber unit).

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<sup>1</sup> Process pumps may be run under the observation of the treatment plant operator for the purpose of emptying a leaking tank.



d) Final Clean-Up and Inspection

All shovels, mop heads, other expendables, and protective clothing should be placed in drums for final disposal in accordance with the RCRA drum storage policy. Immediate arrangements should be made through GSHI to replace or repair the tank and all affected pipes. The floor should be visually inspected (especially in tight areas around the tank) for contamination. Trough area should also be checked for sludge buildup. Air should be monitored with an HNu meter. If reading persist above background levels, the floor should be steam cleaned and rinsed until readings correspond to background levels.

3.2.3 CLARIFIER LEAK

a) Protective Clothing Required

1. Level B protective gear.
2. Supplied air respirators. Respiratory protection may be reduced to full-face air purifying respirator after sufficient air monitoring shows continuous levels of less than 5 PPM total organic vapor concentration and oxygen levels greater than or equal to 19.5%.

b) Equipment and Materials Required for Cleanup

1. A minimum of 3 persons, 2 of which must have completed required training. At least one GSHI person must supervise the cleanup.
2. Protective clothing, shovels, hard bristle brooms, absorbent pigs, used clothing drums and detergent are stored in the process area. If protective clothing and supplied air cannot be obtained because of the spill, duplicate equipment is stored in the administration building storage room.
3. Floorsorb is located in the Treatment Building Annex.

c) Action to Be Taken

1. Shut down clarifier feed pump, if on. Treatment Bay doors should be open.
2. Suit up in protective clothing and supplied air.
3. Empty clarifier by connecting hose to drain connection on influent side of clarifier and throttling to chemical drain trench.
4. Set up a perimeter berm around the spill using floorsorb to contain sludge or leachate.
5. Take shovels full of floorsorb and apply to sludge perimeter and leak area.
6. Cover the spill with floorsorb until the sludge is not permeating the upper layer. Leachate can be flushed to floor trench or utility pumped to raw water tank.
7. Shovel the spent floorsorb into drums. Position the drum so that drum-moving equipment has access to it.
8. Flush floor with large volume of water using hoses in treatment room.
9. Scrub floor with hard bristle push brooms using hot water and detergent solution. Work all water with squeegee including rinse water towards the chemical floor drain.
10. Scrub floor a second time using hot water and detergent solution. Work all water including rinse water towards the chemical floor drain.

d) Final Clean-Up and Inspection

Decontaminate any equipment which became contaminated during leak (such as lawn mower or items stored under adsorber unit). Drum all contaminated expendables. Immediate arrangements should be made through GSHI to replace or repair tank and all affected pipes. The floor should be visually inspected (especially in tight areas around the tank) for contamination. Trough area should also be checked for sludge build-up. Air should be monitored with an HNu meter. If reading persist above background levels, the floor should be steam cleaned and rinsed until readings correspond to background levels.

### 3.2.4 FIRE

#### A) SMALL FIRE WITH NO THREAT OF CHEMICAL CONTAMINATION

##### a) Protective Clothing Required

None Initially.

Level D or greater level of protection if already being worn.

##### b) Equipment and Materials Required for Cleanup

Fire extinguishers are located in the treatment area as shown on the floor plan.

##### c) Action to Be Taken

1. Shut down electrical equipment.
2. If alone, use intercom to tell other plant personnel you are fighting a fire and give location.
3. Use appropriate fire extinguisher.
4. If extinguisher is ineffective in fighting fire, take the same action described below for a large fire. Dial 911.
5. Watch for reignition.
6. Notify The Site Manager

##### d) Final Clean-Up and Inspection

When cool, dispose of all waste items properly. If fire was electrical, have electrical contractor review circuits prior to energizing. Try to determine cause of fire. Make a list of all items destroyed or unusable. Get extinguisher recharged.

B) LARGE FIRE OR FIRE WITH THREAT OF CHEMICAL CONTAMINATION

a) Protective Clothing Required

None initially. During final cleanup and inspection, Level B shall be worn unless a lesser level is appropriate in accordance with GSHI Guidance.

b) Equipment and Materials Required for Cleanup

None.

c) Action to Be Taken

1. Shut down electrical equipment and compressors.
2. Use intercom or alarm to alert all on-site personnel.
3. Call Fire Department. Dial 911.
4. Evacuate to Administration Building at the discretion of the emergency coordinator. Emergency coordinator should be able to open gate and direct Fire Dept. personnel. At least one GSHI person must be present at all times at the site entrance gate.
5. Emergency coordinator will coordinate with the Fire and Police Departments in accordance with their Department's Standard Operating Procedures.

d) Final Clean-Up and Inspection

Approval will be obtained by the Fire Dept. prior to a site building entry. Upon approval, the emergency coordinator will conduct a thorough investigation of the building and establish a list of cleanup and inspection priorities.

### 3.2.5 EXPLOSION

a) Protective Clothing Required

See Action To Be Taken.

b) Equipment and Materials Required for Cleanup

Fire extinguisher.

c) Action to Be Taken

1. Report incident to Emergency Coordinator.
2. Call Fire Department.
3. Cease operations.
4. Notify others in vicinity.
5. Leave Building Quickly. Commence Evacuation Plan if necessary.
6. Fire Department to enter building first. Be aware of possible vapor build-up. Monitor air, use Level B personal protection and explosion proof equipment.

d) Final Clean-Up and Inspection

After the Fire Department has determined the area of the explosion to be safe, cleanup released NAPL and APL first. Cleanup contaminated debris next, then non-contaminated debris. Assess damage, being sure to also look for any splattering of liquids on walls and process equipment, cracked windows, and loose pipe connections.

### 3.3 ADMINISTRATION BUILDING

#### 3.3.1 SPILLS

No hazardous waste is stored in or near the administration building.

a) Protective Clothing Required

Level C protection.

b) Equipment and Materials Required for Cleanup

Detergent, mop and pail, rags.

c) Action to Be Taken

1. If there is a solvent spill or gasoline spill in the Administration Bldg., a no smoking rule exists at the site.
2. Ventilate the building by opening doors and windows.
3. Use mop and pail with industrial detergent to clean up spill. Dispose of liquid into leachate collection system.
4. If the spilled material reached the floor drains, flush drains with a generous amount of soapy water.

d) Final Clean-Up and Inspection

Emergency coordinator will determine when area is clean by a visual inspection. Leave solvent-soaked rags in a pail of water on the Decon Pad for 24 hours prior to placing in trash or storing as a hazardous waste.

### 3.3.2 FIRE

#### A) SMALL FIRE

##### a) Protective Clothing Required

None initially Level D

##### b) Equipment and Materials Required for Cleanup

Fire extinguishers are located in each room as shown on the floor plan.  
(Floor plans shown in Equipment List Section.)

##### c) Action to Be Taken

1. If alone, use intercom to tell other plant personnel you are fighting a fire and give location.
2. Use fire extinguisher.
3. If extinguisher is ineffective in fighting the fire, take the same action described below for a large fire.
4. Watch for reignition.
5. Notify the Site Manager

##### d) Final Clean-Up and Inspection

When cool, dispose of all waste items properly. If fire was electrical, have electrical contractor evaluate the circuit prior to energizing. Try to determine cause of fire. Make a list of all items destroyed or unusable. Get extinguisher recharged.

B) LARGE FIRE

a) Protective Clothing Required

Stay in clothing being presently worn and do not enter into the hazardous area.

b) Equipment and Materials Required for Cleanup

Spill cleanup equipment for use after the fire is out. (Refer to specific section of Contingency Plan for cleanup).

c) Action to Be Taken

1. Shut down electrical equipment.
2. Use intercom or alarm to alert all on-site personnel.
3. Call Fire Department. Dial 911
4. Evacuate to Treatment Facility Building at the discretion of the emergency coordinator. Emergency coordinator should be able to open gate and direct Fire Dept. personnel. At least one GSHI person must be present at all times at the site entrance gate.
5. Emergency coordinator will coordinate with the Fire and Police Departments in accordance with their Department's Standard Operating Procedures.

d) Final Clean-Up and Inspection

The Fire Department prior to a site building entry will obtain approval. Upon approval, the emergency coordinator will conduct a thorough investigation of the building and establish a list of cleanup and inspection priorities.



### 3.4 SITE

#### 3.4.1 SLUDGE STORAGE TANKS RUPTURE

##### a) Protective Clothing Required

1. Level B protective gear.

##### b) Equipment and Materials Required for Cleanup

1. A minimum of 3 persons, 2 of which must have completed required training. At least one GSHI person must supervise the cleanup.
2. Protective clothing, shovels, hard bristle brooms, absorbent pigs, used clothing drums, and detergent are stored in the process area.
3. Floorsorb is located in the Treatment Building Annex.

##### c) Action to Be Taken

###### 1. Pinhole Leaks

- i. Suit up in protective clothing and supplied air.
- ii. If leak is continuing, take action to contain then stop the leak. For a leaking pipe, place pail under leak and close valve. For a tank leak, empty contents of tank to below the source of the leak.
- iii. Bleed pipe from valve to source of leak, if necessary.
- iv. Take shovels full of floorsorb and apply to sludge perimeter and leak area.
- v. Cover the spill with floorsorb until the sludge is not permeating the upper layer.
- vi. Shovel the spent floorsorb into drums. Position the drum so that drum-moving equipment has access to it.
- vii. Scrub containment area with hard bristle brooms using the water and detergent solution. Pump all water including rinse water into the chemical drain.

- viii. Scrub containment area a second time using hot water and detergent solution. Pump all water including rinse water into the chemical floor drain.
- ix. Decontaminate all cleanup equipment and any equipment which became contaminated during leak.

## 2. Rupture

- i. Evacuate treatment facility.
- ii. Call the Site Manager; also contact the emergency cleanup contractor (Sevenson).
- iii. If adequate manpower is available, suit up in protective clothing and supplied air to estimate damage and amount spilled.
- iv. One GSHI person is to remain "clean" to be able to enter buildings.
- v. Restrict visitor access to the site.
- vi. Coordinate with cleanup contractor the transfer of sludge in secondary containment area to either sludge storage tanks or central sector leachate holding tank. Verify that sludge volume can be accepted into tank prior to pumping.
- vii. Cleanup remaining sludge in containment area by following steps IV thru IX for Pinhole Leak Procedure, previous page.
- viii. Cover ruptured area with polyethylene to minimize odor.

### d) Final Clean-Up and Inspection

All shovels, mop heads, brooms, and protective clothing should be placed in drums for final disposal. Immediate arrangements should be made through GSHI to replace or repair tank and all affected pipes. Visually inspect the containment area. Air should be monitored with an HNu meter. If readings persist above background levels, the area is to be steam cleaned and rinsed until readings correspond to background levels.

### 3.4.2 OVERFLOW OF HOLDING TANKS

#### a) Protective Clothing Required

1. Level C protection.
2. Air purifying, full-face mask respirator. Air must be monitored with photovac tip or HNu meter. Air readings above 5 PPM total organics will require supplied air protection.

#### b) Equipment and Materials Required for Cleanup

50 lb. bags of floorsorb are available in the Treatment Building Annex along with shovels, rakes and plastic. 55 gallon drums are stored in the Drum/Decon Storage Facility. A worst case estimate would require 20 to 30 drums. At least 2 GSHI employees must be present during cleanup operations.

#### c) Action to Be Taken

Both the North and South Sector leachate holding tanks are protected from surcharges by electrical wastefeed cut-offs. However, if failure should occur proceed as follows:

1. Shut down pumps feeding the holding tank. This can be done from the MDCP control panel in the plant office and/or the power panels located at each storage feed pump station. Turn all switches to the "off" position. All other processes and pumps in the facility should also be shut down.
2. Determine the extent of contamination. This should be done by visual observation. If leachate has reached the storm sewers, the City of Niagara Falls Wastewater Treatment Plant, and the New York State Oil and Hazardous Material Spill Notification Number should be called.
3. Stop any flow at the spill's outer boundary by forming a dike with absorbent.
4. Cover the affected area with a one-half inch layer of the absorbent material. Once the spill has been contained and there are no free

liquids, the emergency coordinator must decide if the spill can be cleaned by hand or if a backhoe or other equipment is required.

5. All absorbent and the top 6 inches of soil should be removed and placed in drums for storage. The area should then be covered with a plastic tarpaulin and roped off to discourage access.
6. If leachate is present in the tank manway, process south sector at least until manway is empty.

d) Final Clean-Up and Inspection

Inspect Pump Chamber 2 (PC2) for signs of leachate intrusions through chamber walls. Develop plan to further decontaminate affected areas and manway.

NOTE: The North/Central Sector Holding Tank has an overflow drain which sends all overflowed leachate into the south sector collecting system. If the overflow drain becomes clogged, and an uncontained overflow occurs, the action to be taken will follow the procedure for the overflow of the South Sector Holding Tank.

3.4.3 DRUM RUPTURE

a) Protective Clothing Required

1. Level C protection.
2. Air-purifying full-face mask respirator.
3. Thick leather or suede work gloves worn under high elbow gloves and steel-toed shoes (worn under overboots). Tractor operator must have available all protective equipment in the tractor but may doff equipment as necessary to enable safe handling of the tractor. Air should be monitored with HNu Photoionizer.

b) Equipment and Materials Required for Cleanup

1. 50 LB bags of floorsorb, available in the Treatment Building Annex and Decon/Drum Bldg.

2. Shovels, stored in the Treatment Plant.
3. 55 gallon and overpack drum(s), stored in the Decon/Drum Storage Building (DDSF).
4. Pallets, stored in the DDSF.
5. Tractor, with forks and drum hooks.
6. Labels and paint pen, stored in Administration Bldg.
7. At least 2 people must be present during cleanup operations.

c) Action to Be Taken

1. Move outer pallets, with tractor and fork attachment, surrounding the pallet supporting the ruptured drum to allow tractor access to ruptured drum.
2. Place new pallet and overpack drum by pallet of ruptured drum.
3. Place ruptured drum in overpack drum using tractor fork and drum hook. STAND CLEAR OF THE DRUM IN CASE THE HOOKS SLIP.
4. If drum hooks cannot be used, (possibly because the drum top is damaged), take the top of the ruptured drum off and hand shovel contents into new drum. Place ruptured drum in overpack drum.
5. Place other drums that were on the same pallet as the ruptured drum on the new pallet.
6. Break up pallet that was supporting ruptured drum and place wood into the new drum.
7. If the drum was over soil, scrape off, using hand shovel, the top 2" of soil for an area large enough to pick up any spillage, and place it in an overpack drum. If ruptured drum was staged at the decontamination pad or in the Decon/Drum Building, flush the pad area or floor with soapy water.
8. Fill any void spaces in overpack drum with absorbent.
9. Secure tops on all drums.
10. Label overpack and new drums appropriately.
11. Place any moved pallets back into original position.

d) Final Clean-Up and Inspection

1. Visually inspect soil, pad, or floor. Also inspect pallets and other drums near area where drum ruptured for signs of contamination.
2. Decontaminate all tools accordingly.

## 4.0 LIST OF EMERGENCY EQUIPMENT

### 4.1 TREATMENT FACILITY

<u>ITEM (# of)</u>	<u>LOCATION</u>	<u>DESCRIPTION AND CAPABILITIES</u>
50 lb. bags of absorbent (10 min)	in Treatment Bldg. Annex	Absorbent material used to contain spills and increase solids content of sludges and slurries
First aid kits (2)	1 in plant office 1 in locker room	Two basic first aid kits for treatment of accident victims
Shower/eyewash Stations	2 at ends of clarifier 1 portable	Used to flush contaminants from body or eyes in the event of situation that in IDLH

### 4.2 ADMINISTRATION BUILDING

<u>ITEM (# of)</u>	<u>LOCATION</u>	<u>DESCRIPTION AND CAPABILITIES</u>
Scott air-packs (4)	4 located in the Adm. Bldg. Garage	30 minute air supply with full face masks. Positive pressure self-contained breathing apparatus.
Fire extinguisher (7)	in each room	Dry chemical and CO2, 17 lb.
Disposable half mask respirator (6)	Admin Bldg. garage	For use in the presence of organic vapors and acid gas, only when oxygen content is greater than 19.5%
Organic Vapor Respirator Cartridges; 4 min. Make and model	in equipment storage room	For use in Scott, American Optical or MSA Air-Purifying Respirators
First Aid Kit (1)	in locker room	Small industrial
Air Horn (1)	in locker room	For signaling people in field
Combination Oxygen meter and Explosivemeter (1)	laboratory	Measures percent of oxygen in the atmosphere and percent of lower and upper explosive limit of atmosphere
HNu Photoionizer (1)	laboratory	Capable of characterizing the general concentration of organic vapors in air

#### 4.3 DECONTAMINATION AND DRUM STORAGE BUILDING

<u>ITEM (# of)</u>	<u>LOCATION</u>	<u>DESCRIPTION AND CAPABILITIES</u>
Fire extinguisher (5)	see drawing: Emergency Equipment Locations	Dry Chemical, 10 lb.
50lb. bags of absorbent	equipment storage area	Absorbent material used to contain spills and increase solids content of sludges and slurries
Shower/eyewash stations	in decontamination area	Used to flush contaminants from body or eyes in the event of situation that is IDLH
Bellow and tank Resuscitation Units (1)	1 located in drum barn 1st bay	Used to resuscitate accident victims overcome by fumes and/or lack of oxygen
Protective coveralls Gloves, boots and Hard hats	in drum barn 1st bay min. 3 boots (SZ.12), all other minimum quantity: 12	Coveralls, gloves and boots are used for dermal protection



NOT TO SCALE

Key Attached

**LEGEND**

- Ⓡ INTERCOM
- Ⓣ TELEPHONE
- Ⓢ EMERGENCY EYE WASH AND SHOWER
- ⓓ DRY CHEMICAL FIRE EXTINGUISHER

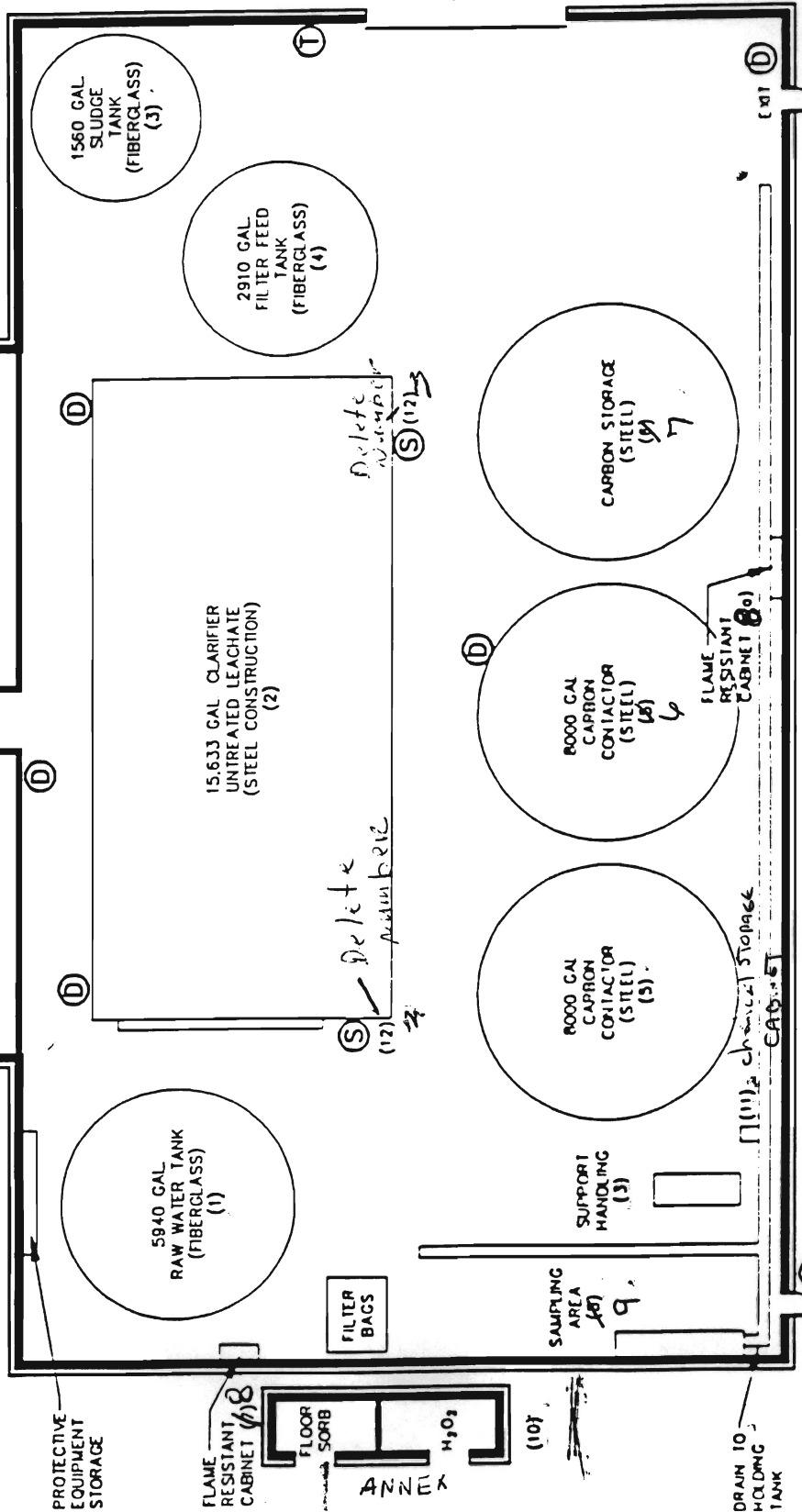


figure ?  
**FLOOR PLAN/EMERGENCY EQUIPMENT/COMMUNICATION LOCATIONS**  
**LOVE CANAL TREATMENT BUILDING**  
*Occidental Chemical Corporation*

**CRA**



FLOOR PLAN / EMERGENCY EQUIPMENT / COMMUNICATION LOCATIONS KEY  
LOVE CANAL TREATMENT FACILITY

LOCATION

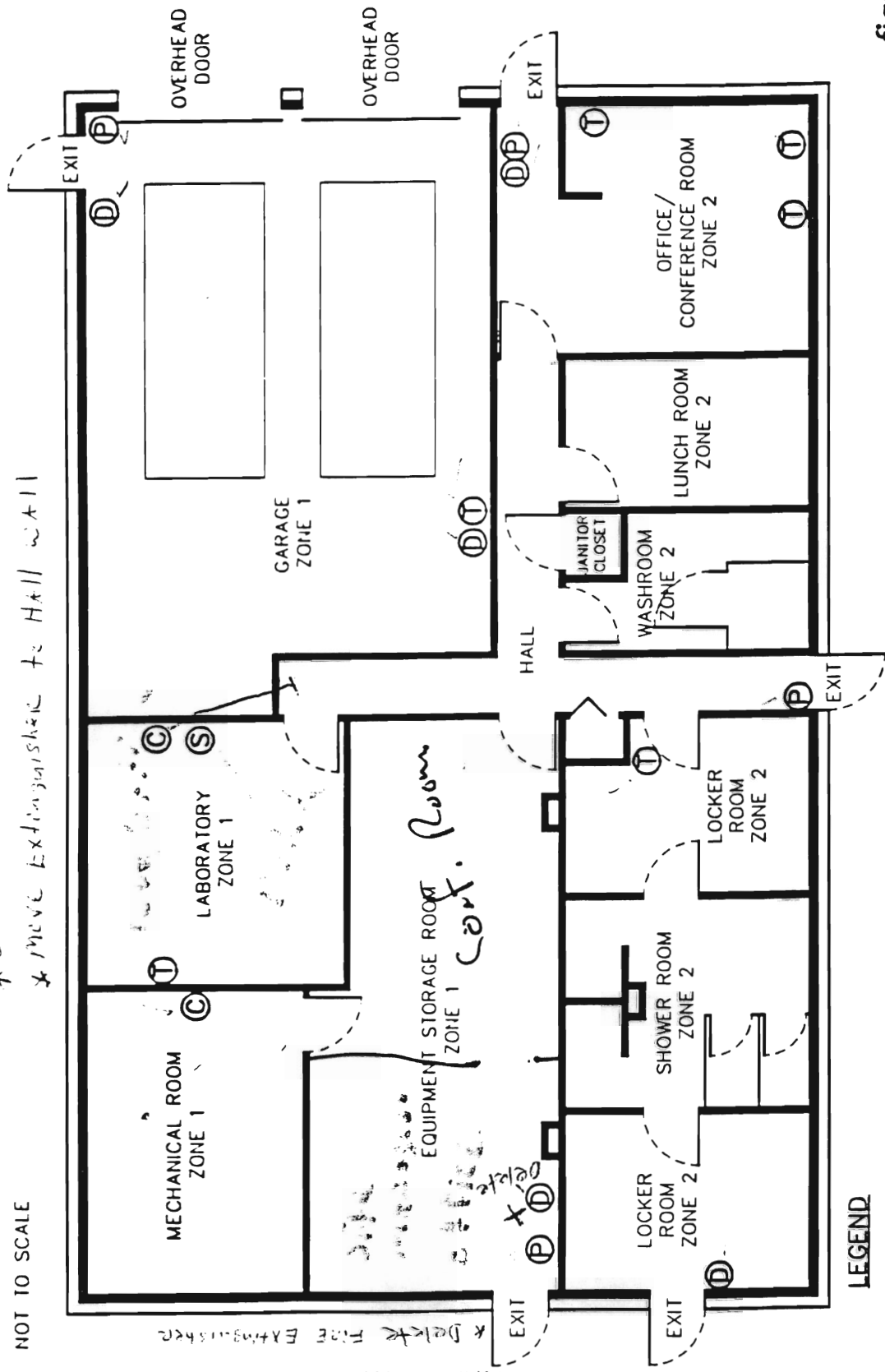
1. RAW WATER TANK
2. CLARIFIER
3. SLUDGE TANK
4. FILTER FEED TANK
5. CARBON BED
6. CARBON BED
7. CARBON BED STORAGE
8. FLAME RESISTANT CABINET
9. SAMPLING AREA
10. ANNEX
11. CHEMICAL STORAGE CABINET

**ADD THIS KEY TO DIAGRAM (P468)**



NOT TO SCALE

\* Rename Laboratory to Laboratory / Office  
 \* Delete shower located in lab/office  
 \* Move Extinguisher to Hall wall



- LEGEND**
- (I) INTERCOM
  - (T) TELEPHONE
  - (S) EMERGENCY EYE WASH AND SHOWER
  - (D) DRY CHEMICAL FIRE EXTINGUISHER
  - (C) CARBON DIOXIDE FIRE EXTINGUISHER
  - (P) PULL-STATION FIRE ALARM

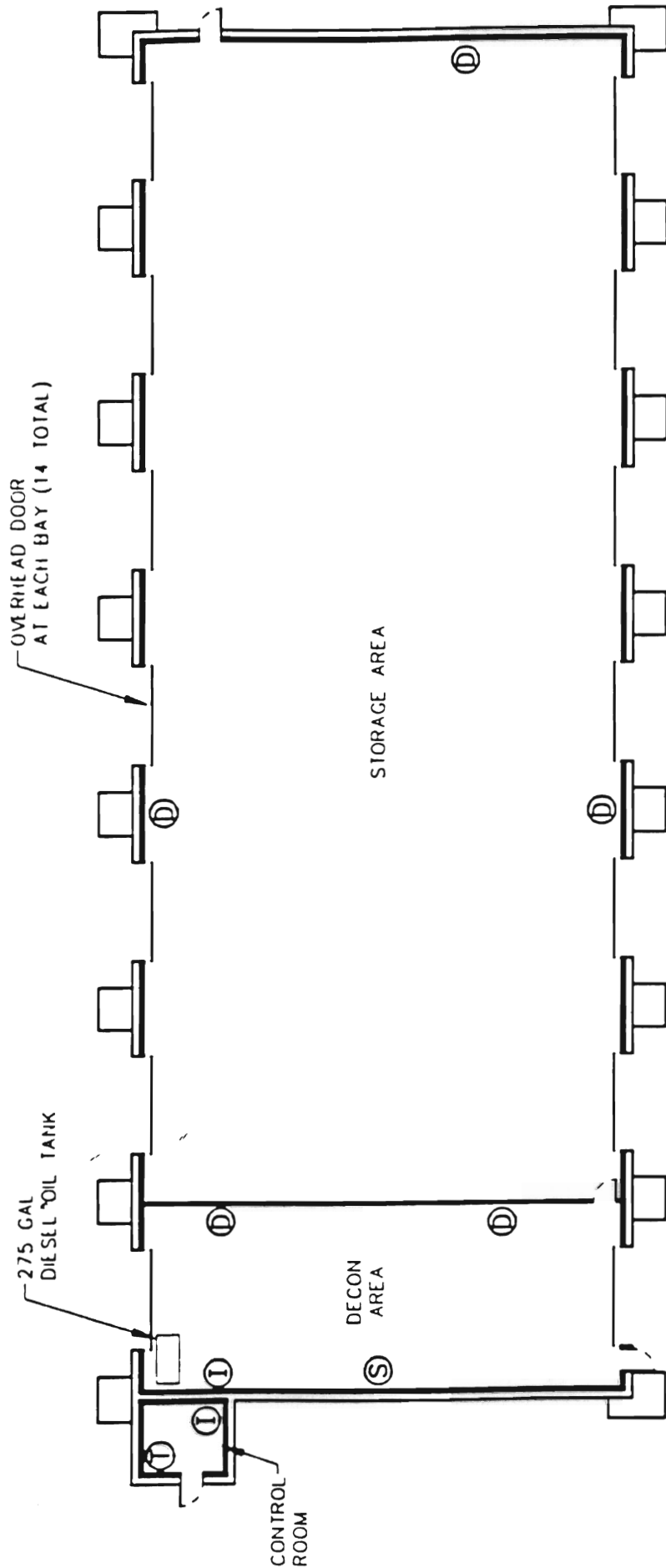
figure ?  
**FLOOR PLAN/EMERGENCY EQUIPMENT/  
 COMMUNICATION LOCATIONS**  
**LOVE CANAL ADMINISTRATION BUILDING**  
*Occidental Chemical Corporation*

\* Add to all beds per new configuration  
 \* Remove Equipment + Staff Room  
 \* To site materials office and  
 Conference Room

**CRA**



NOT TO SCALE



**LEGEND**

- ⓐ INTERCOM
- ⓑ TELEPHONE
- ⓒ EMERGENCY EYE WASH AND SHOWER
- ⓓ DRY CHEMICAL FIRE EXTINGUISHER

figure ?

FLOOR PLAN/EMERGENCY EQUIPMENT/  
COMMUNICATION LOCATIONS

DECONTAMINATION/DRUM STORAGE FACILITY

*Occidental Chemical Corporation*

**CRA**

## 5.0 EVACUATION PLAN

### 5.1 EVACUATION OF TREATMENT FACILITY, ADMINISTRATION BUILDING, AND DECONTAMINATION/DRUM BUILDING

1. Responsibility:

The emergency coordinator will be responsible for the evacuation of all personnel from the building(s). The emergency coordinator will conduct the evacuation or appoint an individual to conduct the evacuation.

2. Signal:

The signal to evacuate the buildings will be the directive given by the emergency coordinator or his designee to evacuate. Either the telephone intercom or face to face communication will be used.

3. Procedure:

- a. Shut down all on-going operations.
- b. Exit the nearest accessible exit. See Evacuation Routes.
- c. Assemble at meeting area.

4. Meeting Area:

All persons evacuated will initially meet in 97th Street in front of the building. The emergency coordinator or his designee will count heads and verify that everyone has been evacuated.

The secondary meeting area will be at the main gate to the Love Canal Site - 97<sup>th</sup> Street at Read Avenue.

5. Evacuate site to Senior Citizen's Center.

### 5.2 FIELD OPERATIONS - DEPARTMENT LEAD

1. Responsibility:

The emergency coordinator will be responsible for signal to evacuate and designating the meeting area. The project leader will be responsible for procedure.

2. Signal:  
The emergency coordinator or his designee will signal the project leader by radio or air horn communication. Three long (3-5 sec.) blasts of the air horn will signal an emergency situation with possible evacuation. The emergency coordinator will tell the project leader the meeting area.
  
3. Procedure:
  - a. Shut down all ongoing operations.
  - b. Pack-up or secure equipment so that it will not be windblown or weathered.
  - c. Decontaminate of person if necessary.
  - d. Evacuate to meeting area.
  
4. Meeting Areas:  
The project leader will oversee that all in-the-field personnel meet first in front of the Treatment Facility.  
If conditions prohibit meeting in this area, the next meeting areas will be, in order of priority: 1) 97<sup>th</sup> Street at Read Avenue, and 2) the gate at Frontier Avenue and 95<sup>th</sup> Street.
  
5. Evacuate site to Senior Citizen's Center.

### 5.3 FIELD OPERATIONS - CONTRACTOR OPERATIONS

1. Responsibility:  
The emergency coordinator will be responsible for signal to evacuate and designating the meeting area. The emergency coordinator will be responsible for overseeing the evacuation procedure.
  
2. Signal:  
The emergency coordinator or his designee will signal the Project Engineer by radio or air horn communication. Three long (3-5 sec.) blasts of the air horn will signal an emergency situation with possible evacuation. The emergency coordinator will tell the Project Engineer the meeting area.

3. Procedure:

The evacuation procedure will be in accordance with the evacuation plan in the Contractor's approved Health and Safety Plan. In the absence of a Contractor Health and Safety Plan, the procedure will be:

- a. Shut down all ongoing operations.
- b. Pack-up or secure equipment so that it will not be windblown or weathered.
- c. Decontaminate of person if necessary.
- d. Evacuate through nearest available exit to field trailer. If there is no field trailer, assemble at 97<sup>th</sup> Street and Colvin Blvd.

5.4 RESIDENTIAL AREAS

Any hazardous material release or threat of release which will extend beyond the secure Love Canal Site will required notification of the Niagara Falls Police Department - Dial 911.

It will be the responsibility of the emergency coordinator to be sure the appropriate authorities are notified.

5.5 BOMB THREATS, SEVERE WEATHER, AND ACTS OF VANDALISM

a) Bomb Threats

1. Get as much information from the caller as you can (where, time of detonation, type of bomb, who is calling, etc.).
2. Notify emergency coordinator.
3. Phone emergency number, 911, or call the Niagara Falls Police Department.
4. Evacuate area.

b) Severe Weather Or Acts Of Vandalism

1. Determine extent of damage: identify what equipment items need repair/replacement, any hazardous material releases-material and quantity.
2. Contain and stop any continuing releases.
3. Report to the Niagara Falls Police Department and the Emergency Coordinators.



NOT TO SCALE

**LEGEND**



EVACUATION ROUTE

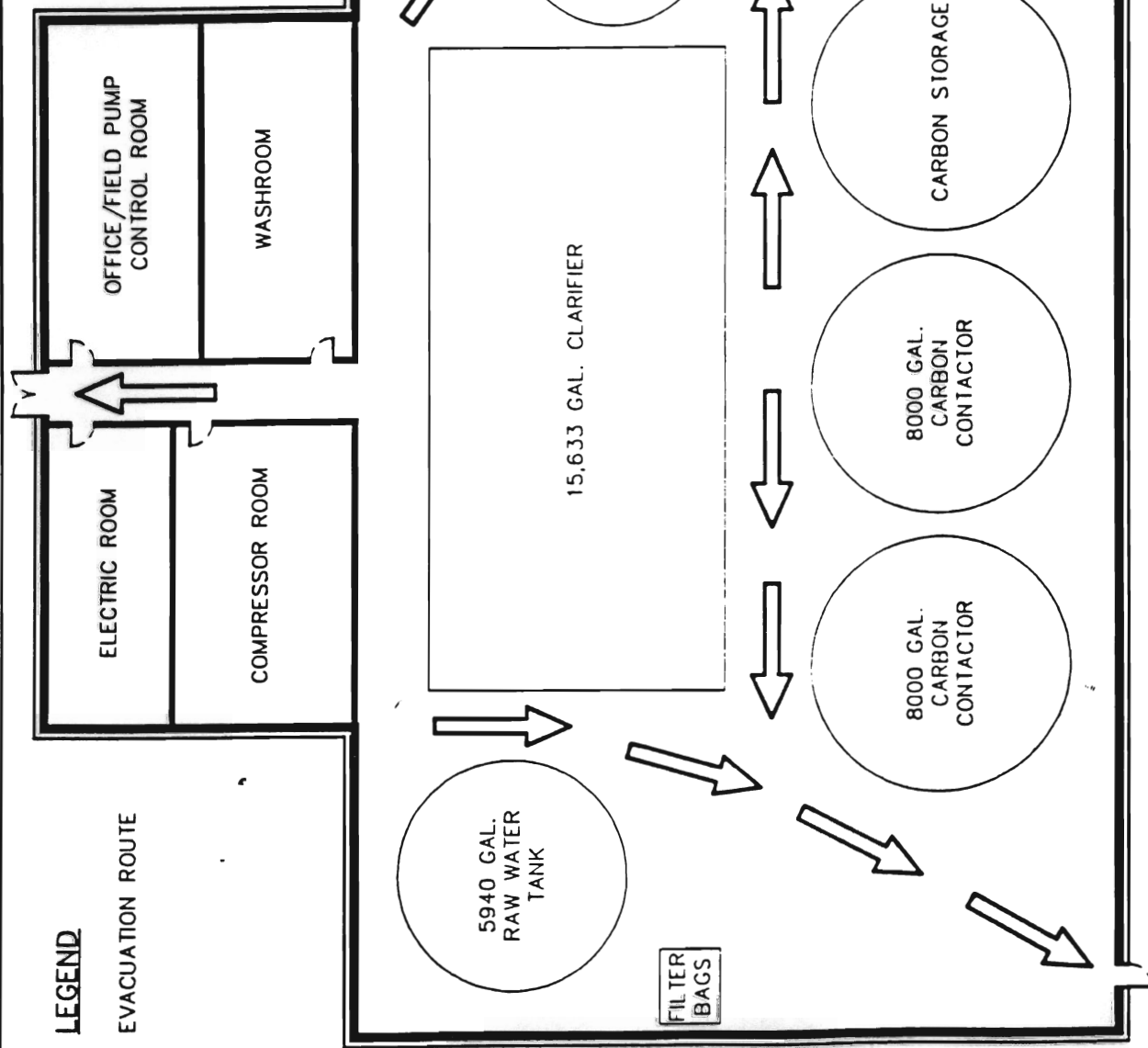


figure ?  
 EVACUATION ROUTES  
 LOVE CANAL TREATMENT BUILDING  
 Occidental Chemical Corporation

FLOOR  
 SORB  
 ANNEX H<sub>2</sub>O<sub>2</sub>

\* 201 1 2 2 2 \*

**CRA**





NOT TO SCALE

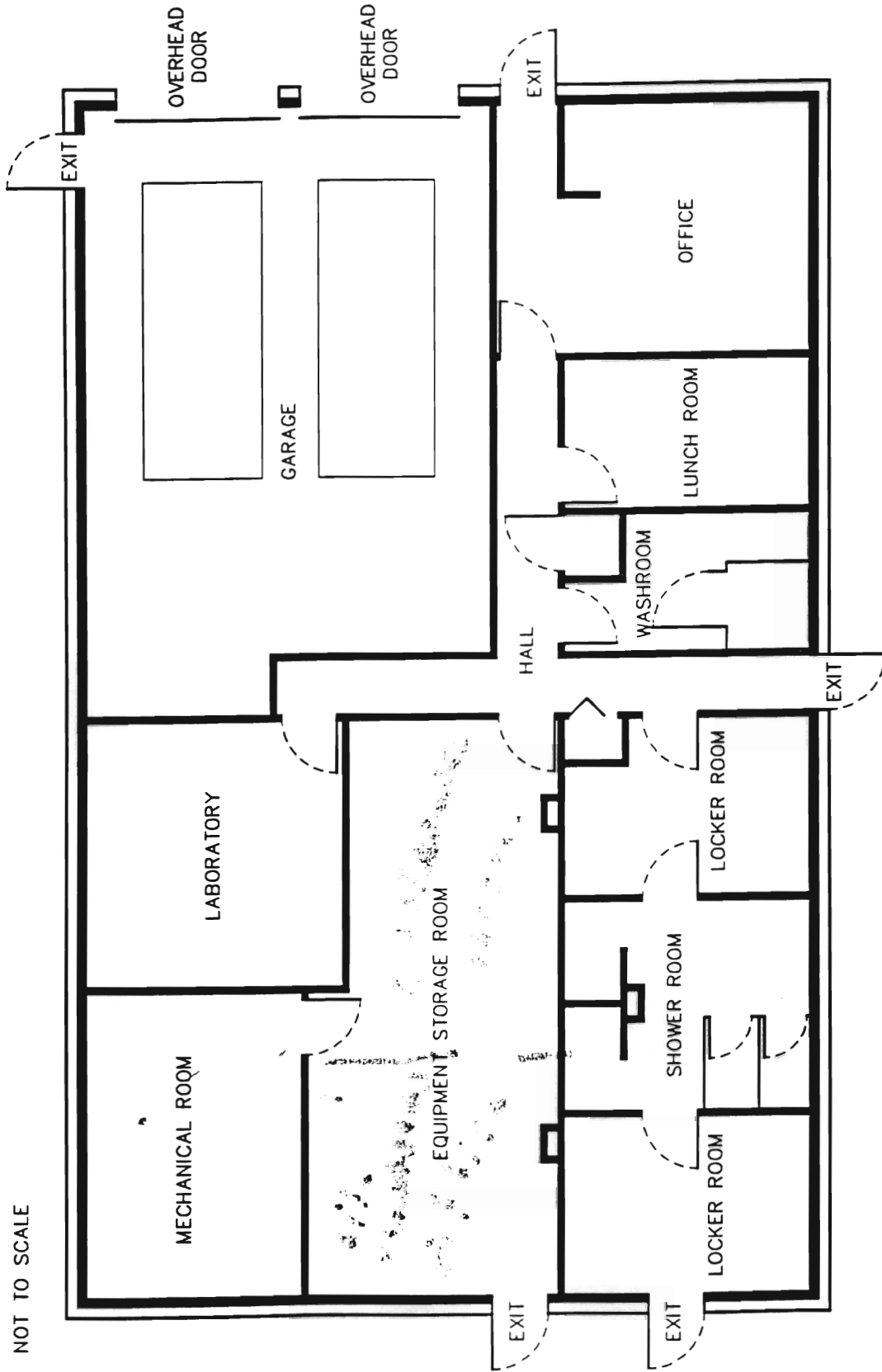


figure ?  
EVACUATION ROUTES  
LOVE CANAL ADMINISTRATION BUILDING  
*Occidental Chemical Corporation*

**CRA**

1069 (L) DEC 08/97(W) REV.0 (P461)

## **6.0 SUMMARY OF AGREEMENTS WITH EMERGENCY RESPONSE OFFICIALS**

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The following arrangements have been made through meetings, phone calls, and correspondence with the Niagara Falls Police and Fire Departments and the Niagara Falls Memorial Hospital.

1. The Niagara Falls Police Department has agreed to the following:
  - To provide frequent patrols of the Love Canal Area.
  - To secure the area and restrict unauthorized entry during any emergency at the facility.
  - In case of forced entry at the facility, officers will not enter the building until a GSHI employee arrives. In addition, a security system will be centrally monitored by ADT Security.
  
2. Officials from the Niagara Falls Fire Department are given an annual inspection of the facility. The following agreements were made:
  - In case of fire, forced entry should be made into the site and any of the buildings rather than wait for a GSHI employee.
  - If entry is made into the treatment plant during a fire, full protective clothing must be worn including a full face mask with SCBA. This also holds true for entry into pump chambers.
  - The sludge holding tank was identified as being a possible source of toxic fumes if ignited. Areas where flammable solvents are likely to be found were also pointed out. These areas are marked on the floor plan, located in the equipment list.
  
3. Representatives of the Niagara Falls Memorial Medical Center were also given a tour of the facility in the past. The following arrangements were made:
  - In case of medical emergency, the hospital will be contacted at 278-4000.
  - Hospital emergency room personnel will be equipped with isolation suits if needed. Emergency room procedures will be the same as those for the hospital's disaster preparedness program.
  - Arrangements for the use of an isolation room at the hospital have been made.

- Any protective clothing contaminated during the medical operations will be placed in a drum and returned to the Love Canal.

4. In the event of a need for a cleanup contractor, the Site's carbon removal contractor will be called.

GSHI has a contract with one cleanup contractor who is obligated to respond to a spill within 2 hours. (Sevenson).

#### EMERGENCY CLEANUP CONTRACTOR

Sevenson ..... Office... (716) 284-0431  
(Gary Rosen).....Home...(716) 745-7550  
..... Pager...(716) 618-0207

## **7.0 AMENDMENT OF CONTINGENCY PLAN**

This contingency plan will be immediately amended whenever:

- 1) The plan fails in an emergency.
- 2) The site changes in its design, construction, operation, maintenance, or other circumstances in a way that materially increased the potential for fires, explosions, or releases of hazardous waste or hazardous waste constituents, or changes the response necessary in an emergency.
- 3) The list of emergency coordinators changes.
- 4) The list of emergency equipment changes.

# APPENDIX A

Niagara Falls Fire Dept.  
Site Review and  
Critical Information

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ATTACHMENT B	CONTINGENCY PLAN REVISION LOG
ATTACHMENT C	NIAGARA FALLS FIRE DEPARTMENT SITE FAMILIARIZATION
ATTACHMENT D	MSDS LIST OF CHEMICALS AT LOVE CANAL

## A.1.0 SITE DESCRIPTION AND OPERATION

The Love Canal leachate collection and treatment system was constructed to prevent the outward migration of chemical contamination from the closed hazardous waste landfill. The leachate collection system consists of approximately 7,000 linear feet of perforated drain pipe with sand backfill. The depth of the pipe ranges from 15 to 18 feet and surrounds the sixteen-acre landfill. Included in the system are four wet wells and two underground holding tanks of 25,000 and 30,000 gallon capacity.

The treatment plant system consists of mechanical clarification, filtration and carbon adsorption. There are also four 10,000-gallon holding tanks on site for sludge storage. Inside the treatment plant, there are two fiberglass leachate-holding tanks of 5,940 and 2,910 gallon capacity. There is also a sludge holding tank with a capacity of 1,580 gallons.

The treatment plant has a floor trench designed to intercept any spills, which may occur inside the treatment room. This trench drains to the 30,000 gallon holding tank for eventual treatment. Additionally, there is a concrete carbon loading pad in the back of the plant, which can be used for equipment decontamination; this also drains to the 30,000-gallon leachate holding tank.

Ventilation in the plant area is provided by a Dravo-Hastings Blower, located on the roof and two floor exhaust fans. Additionally six exhaust fans ventilate organic vapors from any *de minimus* losses in the process system and carbon vent sorbs.

Across the street from the treatment facility is the Administration Building. The Administration Building houses the office for the treatment plant operators, shower and locker facilities, a laboratory bench, and a garage area.

At 95<sup>th</sup> Street and Read Avenue is the Decontamination/Drum Storage Building. This building has a capacity for 2,000 drums and facilities for decontaminating equipment. It has its own washwater collection system that can be pumped to the site's collection system.



The building is constructed to NYSDEC's permit requirements for a hazardous waste facility.

The purpose of this plan is to establish procedures, which must be followed in order to minimize hazards to human health and the environment. These hazards could occur as a result of unplanned release of hazardous waste into the environment during operation and maintenance of the Love Canal Treatment Facility. The provisions of this plan must be carried out whenever there is a fire, explosion, or release of hazardous waste or hazardous waste constituents.

**A.2.0 LOVE CANAL TREATMENT FACILITY**  
**95<sup>TH</sup> ST. & READ AVE. (716) 283-0111**

The Love Canal Treatment Facility consists of two buildings in a fence-enclosed area. One building is the Administration Building and the other is the Treatment Plant. This facility is manned by one operator and one site manager from 7:30 am - 4:00 pm, Monday - Friday only.

Keys: - all buildings use 8I-14  
- all gates use 8I-15

Emergency phone number: In the event of an emergency at this site, one of the plant personnel listed below should be notified as soon as possible.

Darrell Crockett (716) 297-6228  
Don Tubridy (716) 433-4618  
Scott Parkhill (716) 692-8328

Entry gate: There is only one vehicle entry gate to this facility. Gate is made up of two sections. One section is remotely controlled from the Administration Bldg. and Treatment Plant and the other, which is padlocked, may be opened using key 8I-15 or cutting the lock.

Hydrants: There is only one hydrant within the fenced area. It is located 150' north of the treatment plant on the entrance road (I.D.#9B49).

**A.2.1 ADMINISTRATION BUILDING**

The Administration Building is a one-story brick building containing offices, storage, and locker rooms. The only area in this building, which may cause a problem, is the garage area, which is located in the northwest corner of the building. There can be up to two vehicles parked in this area.

Main Electric: Located in the southwest corner of the building (see drawing).

Main Water Shutoff: Located in the s/e corner of the building (see drawing).

Alarm Panel: Located inside next to the garage door in the hallway there is one zone. The alarm is centrally monitored by ADT Security.

Detectors: There are smoke and heat detectors in this building.

Main Gas Shutoff: The main gas shutoff is located 50' southwest of the building (see drawing).

#### A.2.2 TREATMENT PLANT

The Treatment Plant is a one-story brick building, which houses the leachate treatment equipment. The treatment area has a floor trench, which is designed to intercept any spills, which may occur. This trench drains into a 30,000 gal. holding tank for eventual treatment in the system. In the event of a fire involving hazardous materials any fire fighting water runoff should be flushed into this trench if possible.

It is the opinion of the site supervisor that the possibility of a fire in or outside the treatment plant is remote. But if there were a fire the most likely place would be the sludge storage tanks. There is a 1,500 gallon sludge storage tank located in the northwest corner of the building. There are four 10,000 gallon sludge storage tanks located approx. 30' south of the treatment plant. These tanks are surrounded by a concrete containment pad and walls, which are capable of holding 45,000 gal. of material in the event of a spill or leak.

Main Electric: Located in a small room on the right inside the man door on center of the west wall (see drawing).

Main Water Shutoff: Located in the compressor room (see drawing).

Main Gas Shutoff: Located approx. 50' southwest of the Administration Bldg. (see drawing).

Ventilation: The treatment area may be ventilated by using two exhaust fans, which are mounted on the roof, or two exhaust fans located at the floor. The controls for these fans are located in the compressor room on the west wall (see drawing).

Alarm System: The treatment area contains smoke detectors and heat detectors. They are centrally monitored by ADT Security.

Because of the hazardous nature of the materials in the treatment plant, Officers will insure that all personal are properly equipped with full protective clothing and breathing apparatus before entering the gate.

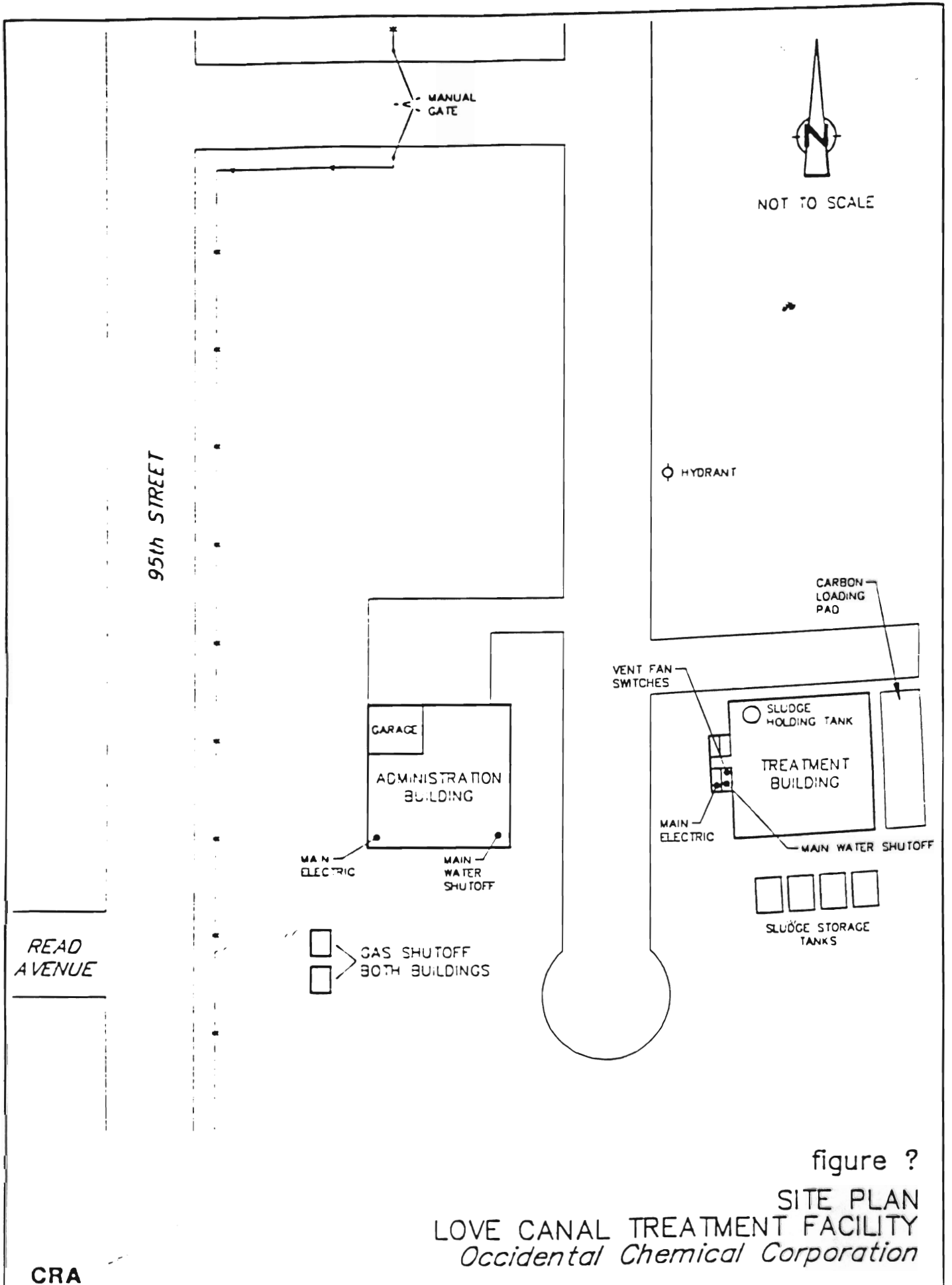
### A.2.3 STANDARD OPERATING PROCEDURE (SOP)


**First engine:** Mask up at the gate.  
Hit hydrant on the way in or call for the second due engine to lay a supply line.  
Park upwind and attack the fire.

**Second Engine:** Mask up at the gate.  
Lay supply line to the first engine, if necessary.  
Park upwind and assist the first engine in fighting the fire.

**First Truck:** Mask up at the gate.  
Proceed to the fire and park upwind.  
Ventilate.

Every effort should be made by all personnel to avoid contact with smoke or materials if possible when fighting a fire in the treatment area. In the event of contamination of personnel or equipment there is a concrete pad on the East Side of the treatment plant known as the carbon-loading pad which may be used as a decontamination area. This pad also drains into the 30,000 gallon holding tank for eventual treatment in the system.



  
 NOT TO SCALE

95th STREET

READ AVENUE

figure ?  
 SITE PLAN  
 LOVE CANAL TREATMENT FACILITY  
 Occidental Chemical Corporation

CRA

**LOCATION** ~~111 507 Hydrogen Peroxide~~

1. SEE TREATMENT FACILITY KEY.
2. MAXIMUM 10 GALLONS OF FLAMMABLE LIQUIDS IN LABORATORY AND GARAGE.
3. ~~HAZARDOUS MATERIALS PRESENT.~~ ?
4. 7305 GALLONS (APPROX) OF HIGHLY TOXIC SLUDGE IN STORAGE TANK #1. THIS LIQUID IS CONSIDERED FLAMMABLE BECAUSE OF THE PRESENCE OF 2%-5% TOLUENE.
5. ~~CONTAINS CONSTRUCTION AND DEMOLITION DEBRIS BURIED UNDER APPROX. 3' DEPTH OF CLAY AND SAND. CONTAINS COLLECTION FACILITY~~ **Removal??**

No HAZARDOUS MATERIAL PRESENT

Still true?

~~NO HAZARDOUS MATERIALS STORED.~~

~~INACTIVE HYDROXYLINES.~~

? HAZARDOUS MATERIALS STORED

6. DRUMS CONTAIN NON-FLAMMABLE SOLIDS ONLY. 50% HYDROGEN PEROXIDE
7. 275 GALLONS DIESEL OIL TANK IN SOUTHWEST CORNER OF BUILDING.

NOT TO SCALE

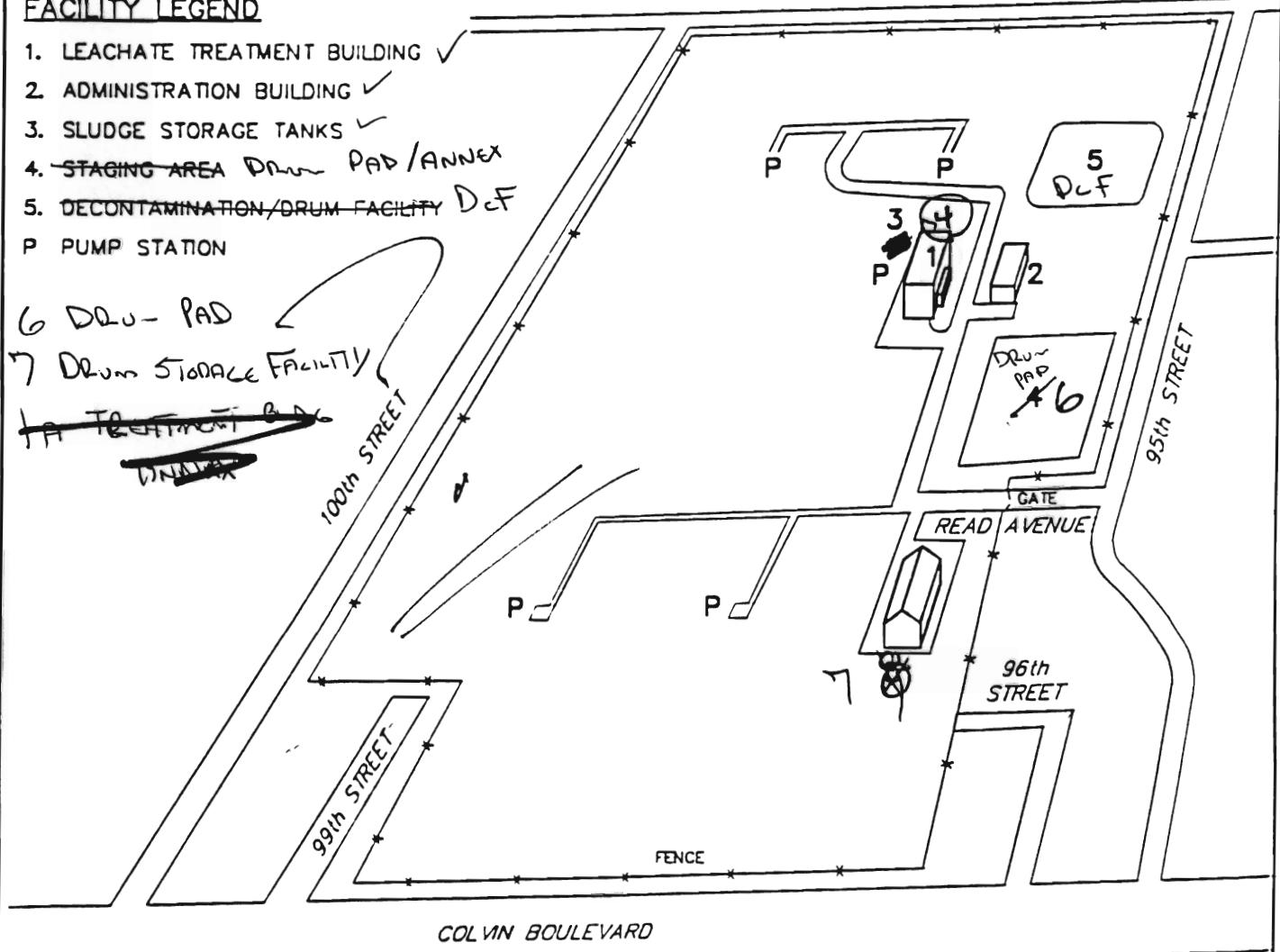
4 No HAZARDOUS MATERIALS STORED  
Do we still use??

**FACILITY LEGEND**

1. LEACHATE TREATMENT BUILDING ✓
2. ADMINISTRATION BUILDING ✓
3. SLUDGE STORAGE TANKS ✓
4. STAGING AREA DRUM PAD/ANNEX
5. DECONTAMINATION/DRUM FACILITY DCF
- P PUMP STATION

6 DRU-PAD  
7 DRUM STORAGE FACILITY

~~HA TREATMENT BLDG~~  
~~DRUM~~



X little Numbering As needed

figure ?

KEY TO HAZARDOUS MATERIALS STORAGE  
LOVE CANAL TREATMENT FACILITY  
Occidental Chemical Corporation

CRA

KEY TO HAZARDOUS MATERIALS STORAGE  
LOVE CANAL TREATMENT FACILITY DIAGRAM

LOCATION

1. SEE TREATMENT BUILDING KEY.
2. MAXIMUM 10 GALLONS OF FLAMMABLE LIQUIDS IN LABORATORY AND GARAGE.
3. HAZARDOUS MATERIALS PRESENT.
4. NO HAZARDOUS MATERIALS STORED
5. UNDER GROUND WATER COLLECTION FACILITY
6. NO HAZARDOUS MATERIALS STORED
7. DRUMS CONTAIN NON-FLAMABLE SOLIDS ONLY.  
275 GALLONS DIESEL OIL TANK IN SOUTH WEST CORNER OF BUILDING.  
30 GALLON DRUMS OF 50% HYDROGEN PEROXIDE IN DRUM BAY

FACILITY LEGEND

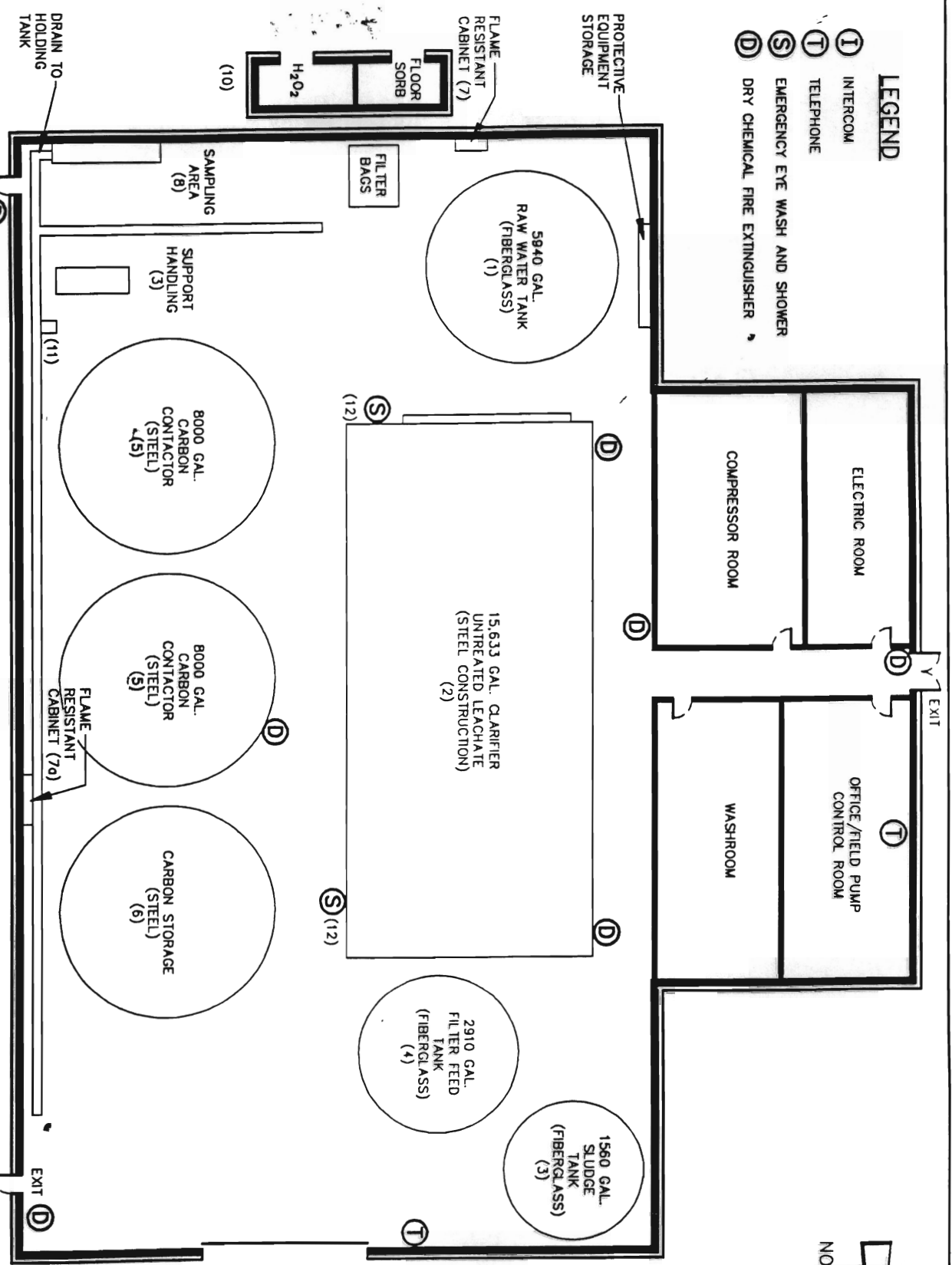
1. LEACHATE TREATMENT BUILDING
2. ADMINISTRATION BUILDING
3. SLUDGE STORAGE TANKS
4. DRUM / LOADING PAD
5. DCF (DEWATERING CONTAINMENT FACILITY)
6. DRUM PAD
7. DRUM STORAGE BUILDING

**ADD THIS KEY IN PLACE OF CURRENT KEY IN DIAGRAM (P467)**



**LEGEND**

- ① INTERCOM
- ① TELEPHONE
- ⑤ EMERGENCY EYE WASH AND SHOWER
- ⑤ DRY CHEMICAL FIRE EXTINGUISHER



**FLOOR PLAN/EMERGENCY EQUIPMENT/COMMUNICATION LOCATIONS  
LOVE CANAL TREATMENT BUILDING  
Occidental Chemical Corporation**

figure ?

**CRA**

**A.3.0 HAZARDOUS MATERIAL STORAGE AREAS AND QUANTITY KEY  
- LEACHATE TREATMENT FACILITY**

---

1. Contaminated water with 1% - 5% organic phase. During processing, this tank would contain between 1,000 and 4,000 gallons. At all other times, it contains approximately 200 to 300 gallons- This material would most probably extinguish flames on contact.
2. Contains approximately 15,000 gallons of contaminated water at all times. Would most probably extinguish flames on contact.
3. Contains from 0 to 1,500 gallons of highly toxic sludge. This material may burn if in contact with an ignition source, and would probably give off toxic fumes while burning.
4. Contains contaminated water, which would most probably extinguish flames on contact. During processing this tank contains 700 to 2,500 gallons. At all other times contains 200 to 300 gallons.
5. Steel pressure vessels containing activated carbon saturated with leachate. May give off toxic flammable gases if heated. Protected from rupture by a pressure release system.
6. Steel storage vessel. Normally empty, but may contain same materials as in (5) above. When not empty, the date board on the tank will indicate a date.
7. Fire resistant cabinet contains highly flammable solvents - acetone, hexane, methylene chloride.
- 7a. Fire resistant cabinet contains flammable and combustible motor fuels.
8. Sampling area that includes sample ports under a fume hood with adjacent workspace.
9. Support handling area with variable air and clean water pressures.
10. Hydrogen peroxide stored in this Treatment Bldg. Annex is fed into the plant through a small plastic tube. This area contains up to 150 gallons of 50% hydrogen peroxide in drums. Peroxide is a strong oxidizer and can aid in combustion.
11. Small quantities of nitric acid in a cabinet designed specifically for acids.
12. Emergency Eyewash and Shower Stations
- X Fire Extinguishers

#### **A.4.0 VENTILATION AND AIR MONITORING**

During all cleanup operations inside the Treatment Plant all doors to the outside should be opened to assist in ventilation. During cleanup activity, both indoors and outdoors, the atmosphere will be monitored using an HNu Model PL101 or equivalent. When the reading on the HNu is between 0 and 5 PPM, respiratory protection must be a full-face cartridge type respirator. If the reading exceeds 5 PPM, cleanup personnel must either leave the immediate area and wait for fumes to dissipate or resume operations using a self-contained breathing apparatus (SCBA) or a positive pressure supplied air using either breathing air cylinders or a portable air compressor. The air compressor must be located in a clean atmosphere. Supplied air must be used in conjunction with a 5-minute escape bottle. If the HNu reading exceeds 300 PPM, cleanup activities must be abandoned until fumes are allowed to dissipate.

The emergency coordinator and cleanup personnel are to be thoroughly trained in the use of safety and monitoring equipment. The emergency coordinator and cleanup personnel are to be familiar with the USEPA's publication Standard Operating Safety Guides and USEPA's Field Standard Operating Procedures Numbers 4, 6, 7, 8. (Site Entry, Work Zone, Decontamination of Response Personnel, Air Surveillance).

#### **A.4.1 DECONTAMINATION OF EQUIPMENT AND TOOLS**

All equipment and tools used during cleanup operations must be thoroughly decontaminated or stored as a hazardous waste with the intention of future disposal. All washwater used during decontamination must be returned to the leachate collection system for treatment. The liquids can be returned to the leachate collection system by disposing down the drain at the decontamination pad or through the sink located in the treatment room.

Small hand tools may be decontaminated by wiping clean with rags soaked in a solvent (i.e., methylene chloride, acetone) or in an industrial strength detergent (i.e., penetone). If this is not sufficient the tools may be cleaned with high-pressure steam or water.

Larger tools and vehicles such as trucks and backhoes may be cleaned using high-pressure water and steam upon the discretion of the emergency coordinator.

**ATTACHMENT A**

**INCIDENT REPORT FORM**

TO: DARRELL CROCKETT  
PROCESS SUPERVISOR

1. TIME INCIDENT DISCOVERED \_\_\_\_\_ DATE \_\_\_\_\_
2. TIME INCIDENT CONTAINED \_\_\_\_\_ DATE \_\_\_\_\_
3. APPROXIMATE LOCATION AND TYPE OF ACCIDENT (e.g., fire, explosion, release)  
\_\_\_\_\_  
\_\_\_\_\_
4. MATERIAL RELEASED \_\_\_\_\_
5. EXTENT OF INJURIES (if any) \_\_\_\_\_  
\_\_\_\_\_
6. ASSESSMENT OF ACTUAL OR POTENTIAL HAZARDS TO HUMAN HEALTH OR THE ENVIRONMENT (IF APPLICABLE) \_\_\_\_\_  
\_\_\_\_\_
7. ESTIMATED QUANTITY AND DISPOSITION OF MATERIAL RECOVERED FROM THE INCIDENT. \_\_\_\_\_  
\_\_\_\_\_
8. CORRECTIVE ACTION TO CONTROL THE INCIDENT AND PREVENT FURTHER INCIDENTS \_\_\_\_\_  
\_\_\_\_\_
9. PROPERTY AND EQUIPMENT DAMAGED  
\_\_\_\_\_  
\_\_\_\_\_
10. NAME OF EMERGENCY COORDINATOR \_\_\_\_\_  
SIGNATURE OF REPORTER \_\_\_\_\_  
DATE \_\_\_\_\_

## ATTACHMENT B

### CONTINGENCY PLAN REVISION LOG

<i>Date</i>	<i>Area Revised</i>	<i>New Action</i>
9/5/89	evacuation plan	air horn (3 long blasts added)
9/5/89	procedures for explosion written	
3/92	emergency coordinators	revised list - new DEC region 9 office added
3/92	general response	turn off field pumps at MDCP
3/92	overflow of holding tanks	panel or at pump power panel
3/92	equipment list	equipment inventoried and list revised as necessary
3/92	hazardous material storage	quantities updated as needed
4/93	hazardous material storage	quantities and locations
4/93	emergency coordinators	revised phone number
4/93	evacuation plan	removed A.5 public information office
4/93	site diagrams	added earth berm and removed public information office
9/94	emergency coordinators	revised local and Albany personnel and phone numbers
9/94	aqueous phase leaks	revised Albany section name
9/94	emergency telephone numbers	revised NFPD, NFWWTP, Niagara Co. Health Dept. removed Niagara Co. emergency management office
9/94	site diagram	revised volume or sludge and location (#4) Revised description (#7)
9/94	incident report form	revised Albany bureau name
9/94	NFFD site familiarization (new area)	dates of site visits
9/94	arrangement with authorities	Niagara Memorial's Occupational Health Director, Sharon Hockenberry, confirmed their readiness. Emergency room and nurse's station phone numbers relinquished.
12/94	emergency coordinators	revised occidental personal
10/97	emergency coordinators	revised Glenn Springs personal revised building description revised access and site access revised incident report form
4/98	contingency plan	revised updated table of contents revised emergency contractor phone revised emergency equipment list revised administration bldg. floor plans

**ATTACHMENT B**

**CONTINGENCY PLAN REVISION LOG**

<i>Date</i>	<i>Area Revised</i>	<i>New Action</i>
4/98	contingency plan	revised incident report from revised contingency revision log revised fire dept. site familiarization sheet

**Attachment C**

**NIAGARA FALLS FIRE DEPARTMENT  
SITE FAMILIARIZATIONS**

December 1988	Platoons 1-4
June 1989	Platoons 1-4
September 1991	Platoons 1-4
August 1992	Platoon 1
August 1993	Platoon 2
July 1994	Platoon 3
June 1995	Platoon 4
November 1996	platoon 1
July 1997	Platoon 2
April 1998	Platoon 3



## ATTACHMENT D

### MSDS LIST OF CHEMICALS AT LOVE CANAL

<i>Chemical</i>	<i>C.A.S. No.</i>	<i>Use, Form, Location, Etc.</i>
Acetone	67-64-1	chemical, leachate constituent
Acetylene	74-86-2	pressure Oxy/weld tank
Activated carbon	64365-11-3	bulk vapor and liquid phase
Aluminum sulfate	10043-01-3	small amount chemical
Antifreeze	107-21-1	antifreeze
n-Amynl acetate	628-63-7	banana oil fit-test
Asbestos	1332-21-4	garlock gaskets
Asphalt	8052-42-4	cold patch, etc.
Bentonite	1302-78-9	volclay, oil dry
Benzene	71-43-2	chemical and constituent (Love Canal)
Benzyl alcohol	100-51-6	leachate constituent (Love Canal)
2-Butanone	78-93-3	chemical
n-Butyl alcohol	71-36-3	leachate constituent (Love Canal)
gamma BHC	58-89-9	leachate constituent (Love Canal)
Bio-T-max	n/a	heavy duty cleaner/degreaser
Calcium carbonate	1317-65-3	cement, limestone
Calcium chloride	10043-52-4	road salt
Calcium hydroxide	1305-62-0	hydrated lime
Calcium oxide	1305-78-8	lime
Carbon black	1333-86-4	toner
Carbon tetrachloride	56-23-5	chemical
Chlorobenzene	108-90-7	leachate constituent (Love Canal)
Chloroform	67-66-3	chemical (Love Canal)
Citrikleen	n/a	degreaser
Copper	7440-50-8	pipes Cu.Be tools
meta-Cresol	108-39-4	Love Canal
ortho-Cresol	95-48-7	Love Canal
ortho-Dichlorobenzene	95-50-1	Love Canal
para-Dichlorobenzene	106-46-7	Love Canal
DDD	72-54-8	leachate constituent (lc)

No. 1 Diesel fuel	n/a	fuel, steam jenny
No. 2 Diesel fuel	n/a	fuel - 250 gal. tank
Diethylphthalate	86-66-2	Love Canal
Epiloid "g" yellow	n/a	paint
Epiloid "g" orange	n/a	paint
Epiloid "g" all others	n/a	paint
Epiloid "g" all part b	n/a	paint part b
Epiloid reducer 8-k-2	n/a	paint solvent
2-Ethoxyethyl acetate	111-15-9	Love Canal
Ethyl acetate	141-78-6	Love Canal
Ethyl alcohol	64-17-5	chemical
Ethyl benzene	100-41-4	Love Canal, gasoline

**\* apparently missing page or pages, skips from 'E' to 'W'!**

Wood dust	n/a	
Xylenes	1330-20-7	Love Canal
Zinc	7440-66-6	galvanized metal
Zinc chloride	7646-85-7	solder flux