

Love Canal Containment Facility

Contingency Plan

Revised: FEB 28 1990
APR 06 1992
SEP 20 1994

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
 LOVE CANAL CONTAINMENT FACILITY
 CONTINGENCY PLAN
 CONTENTS

| | | | |
|----|---|-----------|----|
| A) | Emergency Telephone Numbers | | 1 |
| B) | Emergency Coordinators | | 2 |
| C) | Response Procedures | | |
| | 1. General Response | | 4 |
| | 2. Treatment Facility | | |
| | a) Aqueous Phase Leaks | | 5 |
| | b) Non-Aqueous Phase Leaks | | 6 |
| | c) Clarifier Leak | | 7 |
| | d) Fire | | 8 |
| | e) Explosion | | 9 |
| | 3. Administration Building | | |
| | a) Spills | | 10 |
| | b) Fire | | 11 |
| | 4. Site | | |
| | a) Sludge Storage Tank Rupture | | 12 |
| | b) Overflow of Holding Tanks | | 14 |
| | c) Drum Rupture | | 15 |
| D) | Equipment List | | 16 |
| E) | Evacuation Plan | | |
| | 1. Treatment Facility and Administration Bldg. | | 22 |
| | 2. Field Operations | | 22 |
| | 3. Bomb Threats, Severe Weather and Vandalism | | 28 |
| F) | Agreements with Response Officials | | |
| | 1. Police Department | | 29 |
| | 2. Fire Department | | 29 |
| | 3. Hospital | | 29 |
| | 4. Cleanup Contractors | | 29 |
| G) | Amendment of Contingency Plan | | 31 |
| H) | Appendix | | 32 |
| | Site Description and Operation | | |
| | Niagara Falls Fire Department Standard Operating Procedures | | |
| | Hazardous Material Storage Areas | | |
| | Air Monitoring | | |
| | Decontamination of Equipment and Tools | | |
| | Incident Report Form | | |
| | Contingency Plan Revision Log | | |

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 | (518) 457-7362 OR (800) 457-7362 |
| National Response Center | (800) 424-8802 |
| Niagara Falls Wastewater Treatment Plan | 286-4973 Shift Operator |

NIAGARA COUNTY HEALTH DEPARTMENT

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

EMERGENCY COORDINATORS

During normal operations at the Love Canal Leachate Treatment Facility, there are two on-site 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 on the following page.

EMERGENCY COORDINATORS

| Name | Telephone Number | | Title |
|-------------------|------------------|----------------|--------------------------------|
| | Office | Home | |
| *Brian Sadowski | (716) 283-0111 | (716) 731-5654 | Senior Treat. Fac. Operator |
| 2) Maurice Moore | (716) 283-0111 | (716) 283-5230 | Treatment Fac. Operator |
| 3) Loren Green | (716) 283-0111 | (716) 283-2335 | Maintenance Assistant |
| 4) Abul Barkat | (716) 851-7220 | (716) 691-4157 | Environmental Engineer II |
| 5) Michael Hinton | (716) 851-7220 | (716) 433-9387 | Environmental Engineer II |
| 6) Daniel King | (716) 851-7220 | | Environmental Engineer III |

Additionally, there are personnel based in Albany who are on-site from time to time. Again, these are listed in order of priority.

Albany, NY - based personnel

| | | | |
|---------------|----------------|----------------|-----------------------------|
| *Gerald Rider | (518) 457-0927 | (518) 674-5985 | Section Chief |
| 7) Ben Loredo | (518) 457-0927 | | Environmental Engineer I |

*Mr. Rider will act as primary emergency coordinator whenever he is on-site. Mr. Loredo, when on-site, will act as primary emergency coordinator in Mr. Rider's absence. If neither Mr. Rider nor Mr. Loredo is on-site, Mr. Sadowski will act as primary emergency coordinator.

PROCEDURES

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RESPONSE TO EMERGENCY SITUATIONS
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 on the inside front cover.
3. Shut down all plant process pumps and field pumps. Field pumps can be shut down from the treatment plant office control panel. Plant pumps can be shut down by closing the air valve at each individual pump. If the emergency situation exists within the treatment area, plant pumps are to be shut down by turning off the air compressor in the mechanical room.
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 Central Office in Albany.
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 Director of the Bureau of Construction Services through the Chief of the Operation and Maintenance Section in a written report. An incident report form is included in the Appendix.

AQUEOUS PHASE LEAKS
(RAW WATER AND FILTER FEED TANKS, 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 5ppm 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 NYSDEC 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 storage room.
- c. **Action to be taken:**
- 1) Shut down all plant processes. ¹
 - 2) Suit up in protective clothing and supplied air.
 - 3) Close upstream valve.
 - 4) If leak is continuing, take action to contain 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.
 - 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).

¹ Process pumps may be run under the observation of the treatment plant operator for the purposes of emptying a leaking tank.

- 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 through the Operation & Support Section to 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.

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 NYSDEC 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 storage blockhouse
- c. Action to be taken.
1. Shut down all plant processes.¹ Treatment Bay doors should be open
 2. Suit up in protective clothing and supplied air.
 3. 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.
 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 floor sorb 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 has 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)

¹ Process pumps may be run under the observation of the treatment plant operator for the purposes of emptying a leaking tank.

Final cleanup and inspection:

All shovels, mop heads, other expendables and protective clothing should be placed in drums for final disposal in accordance with the Site's drum storage policy. Immediate arrangements should be made through Albany 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 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.

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 NYSDEC person must supervise the cleanup.
 - 2) Protective clothing, shovels, 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 spill, duplicate equipment is stored in the administration building storage room.
 - 3) Floorsorb is located in the storage blockhouse
- 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 floor sorb 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 Cleanup
- 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 Albany 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 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.

TREATMENT PLANT

FIRE

A) **SMALL FIRE with no threat of chemical contamination**

- a. **Protective clothing required:**
Level D or greater level of protection if already being worn.
- b. **Equipment and materials required:**
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 Albany DEC office.
- d. **Final cleanup 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 DEC Guidance.
- b. **Equipment and materials required:**
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 NYSDEC 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 Cleanup 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.

EXPLOSION.

a) Protective Clothing Required:

See Action to be Taken.

b) Equipment and Materials required:

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 buildup. Monitor air, use Level B personal protection and explosion proof equipment.

d) Final cleanup 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.

TREATMENT PLANT

SPILL - ADMINISTRATION BUILDING

No hazardous-waste is stored in or near the administration building. At times there may be ignitable solvents in the lab room. Ignitable solvents will not exceed 5 gallons and will not be stored overnight.

a. Protective clothing required:

Level C protection.

b. Equipment and materials required:

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 will be put into effect until the spill is cleaned up.
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.

ADMINISTRATION BUILDING

FIRE - ADMINISTRATION BUILDING

A) SMALL fire:

- a. Protective clothing required:
Level D.
- b. Equipment and materials required:
Fire extinguishers are located in each room as shown on the floor plan.
(Floor plan shown in Equipment List Section.)
- c. Action to be taken:
 - 1) If alone, use intercome 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 Albany DEC office.
- d. Final cleanup 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:
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 NYSDEC 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 Cleanup and inspection:

Approval will be obtained by the Fire Department 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.

RUPTURE OF SLUDGE STORAGE TANKS

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 NYSDEC 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 storage blockhouse.

c. Action to be taken.

I. Pinhole Leaks

1. Suit up in protective clothing and supplied air.
2. 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.
3. Bleed pipe from valve to source of leak if necessary.
4. Take shovels full of floor sorb and apply to sludge perimeter and leak area.
5. Cover the spill with floorsorb until the sludge is not permeating the upper layer.
6. Shovel the spent floorsorb into drums. Position the drum so that drum moving equipment has access to it.
7. Scrub containment area with hard bristle brooms using hot water and detergent solution. Pump all water including rinse water into the chemical drain.
8. Scrub containment area a second time using hot water and detergent solution. Pump all water including rinse water into the chemical floor drain.
9. Decontaminate all cleanup equipment and any equipment which became contaminated during leak.

RUPTURE OF SLUDGE STORAGE TANKS (CONTINUED)

- c. II. Rupture
1. Evacuate treatment facility.
 2. Call NYSDEC SPILL NOTIFICATION (518) 457-7362 to request emergency cleanup contractor.
 3. If adequate manpower is available, suit up in protective clothing and supplied air to estimate damage and amount spilled.
 4. One NYSDEC person is to remain "clean" to be able to enter buildings.
 5. Restrict visitor access to the site
 6. 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.
 7. Cleanup remaining sludge in containment area by following steps 4 thru 9 for Pinhole Leak Procedure, previous page.
 8. Cover ruptured area with polyethylene to minimize odor.

Final cleanup and inspection:

All shovels, mop heads, brooms, and protective clothing should be placed in drums for final disposal. Immediate arrangements should be made through Albany 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.

SITE

OVERFLOW - SOUTH SECTOR HOLDING TANK

a. Protective clothing required:

Level C protection

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:

50 lb. bags of floorsorb are available in the storage blockhouse 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 NYSDEC 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 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 Cleanup and inspection

Inspect pump chamber 2 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.

SITE

DRUM RUPTURE

- a. Protective clothing required:
Level C protection.
Air-purifying full face mask respirator.
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:
50 lb bags of floorsorb, available in the blockhouse and Decon/Drum Bldg.
Shovels, stored in the treatment plant.
55 gallon and overpack drum(s), stored in the Decon/Drum Storage Building (DDSF)
Pallets, stored in the DDSF
Tractor, with forks and drum hooks
Labels and paint pen, stored in administration bldg.
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 hooks. 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 Cleanup and inspection
Visually inspect soil, pad, or floor. Also inspect pallets and other drums near area where drum ruptured for signs of contamination.
Decontaminate all tools accordingly.

SITE



LIST OF EMERGENCY EQUIPMENT

A) Treatment Facility

| ITEM (# of) | LOCATION | DESCRIPTION AND CAPABILITIES |
|---|---|--|
| Fire extinguishers (7) | See Floor Plan: Treatment Facility Emergency Equipment Locations. | Model 10H ABC Multiuse CB dry chemical fire extinguisher for use on A,B,C type fires A - wood, paper B - flammable liquids C - electrical |
| Scott ska-pak emergency escape unit (4) | in cabinet #1 on the SW wall of the treatment plant area | The ska-pak is a full 5 min. escape SCBA. Its primary purpose is for use with an air line supply. |
| Half face and full respirators, cartridge type, (3) | on storage rack in hallway | For use in the presence of face organic vapors and acid gases, <u>only</u> when oxygen content is greater than 19.5% |
| Compressed air cylinder - breathing quality (2) | along east wall | Airlines are kept at the NW corner of the treatment room area. Supplies air suitable for breathing for a minimum 2 hours. |
| protective coveralls, gloves, boots, and hardhats (6 minimum) | in cabinet #2 SW wall of treatment room. | Coveralls, gloves and boots are used to protect against dermal contamination. |

EQUIPMENT LIST

LIST OF EMERGENCY EQUIPMENT

A) Treatment Facility (continued)

| <u>ITEM (# of)</u> | <u>LOCATION</u> | <u>DESCRIPTION AND CAPABILITIES</u> |
|---------------------------------------|---------------------------------------|---|
| 50 lb. bags of absorbent (10 minimum) | in block house south of plant | Absorbent material used to contain spills and increase solids content of sludges and slurries |
| First aid kits (3) | 1 in plant office 2 in locker room | Two basic and one industrial 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 is IDLH |

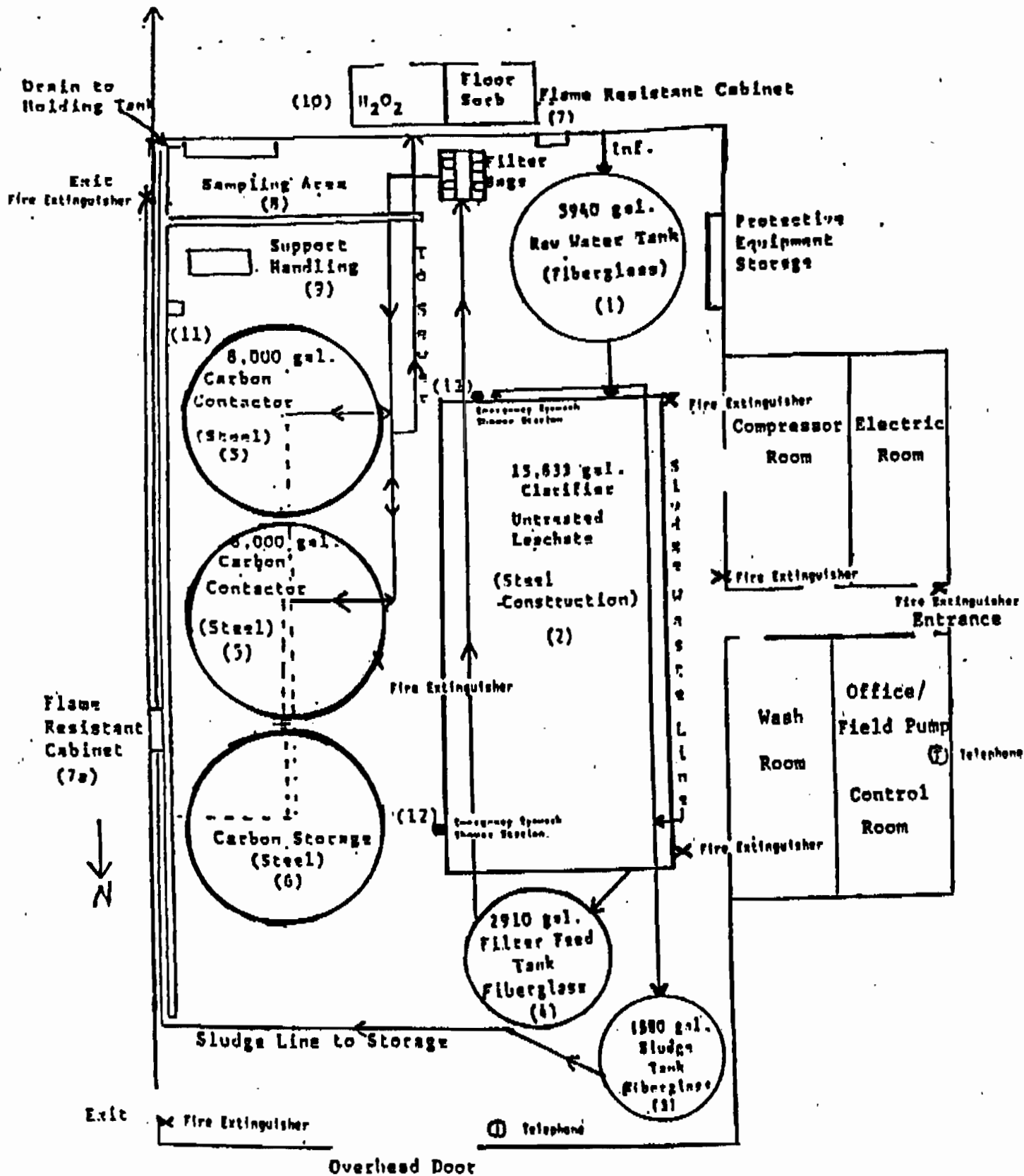
B) Administration Building

| | | |
|--|---|---|
| Scott air-packs (4) | 4) located in the Adm. Bldg. storage room center row. | 30 minute air supply with full face masks. Positive pressure self-contained breathing apparatus |
| Bellow and tank resuscitation units (1) | 1) located in storage room, center row. | Used to resuscitate accident victims overcome by fumes and/or lack of oxygen |
| Fire extinguisher (7) | in each room | Dry chemical and CO ₂ , 17 lb. |
| Protective coveralls, gloves, boots and hard hats | in storage room. Minimum 3 boots size 12 all other minimum quantity: 12 | Coveralls, gloves and boots are used for dermal protection |
| Disposable half mask respirator (6) | in equip. storage room | 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 minimum each make & 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 storage room | For signalling people in field |

EQUIPMENT LIST

Administration Building (continued)

| | | |
|---|--|--|
| Combination - Oxygen meter and Explosivemeter (1) | Laboratory | Measures percent of oxygen in the atmosphere; measures percent of lower and upper explosive limit of atmosphere |
| HNu Photoionizer (1) | Laboratory | Capable of characterizing the general concentration of organic vapors in air. |
| C) Decontamination and Drum Storage Building | | |
| Fire extinguisher (5) | See Drawing: Emergency Equipment Locations | Dry chemical, 10 lb. |
| 50 lb. bags of absorbent (20 minimum) | 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. |

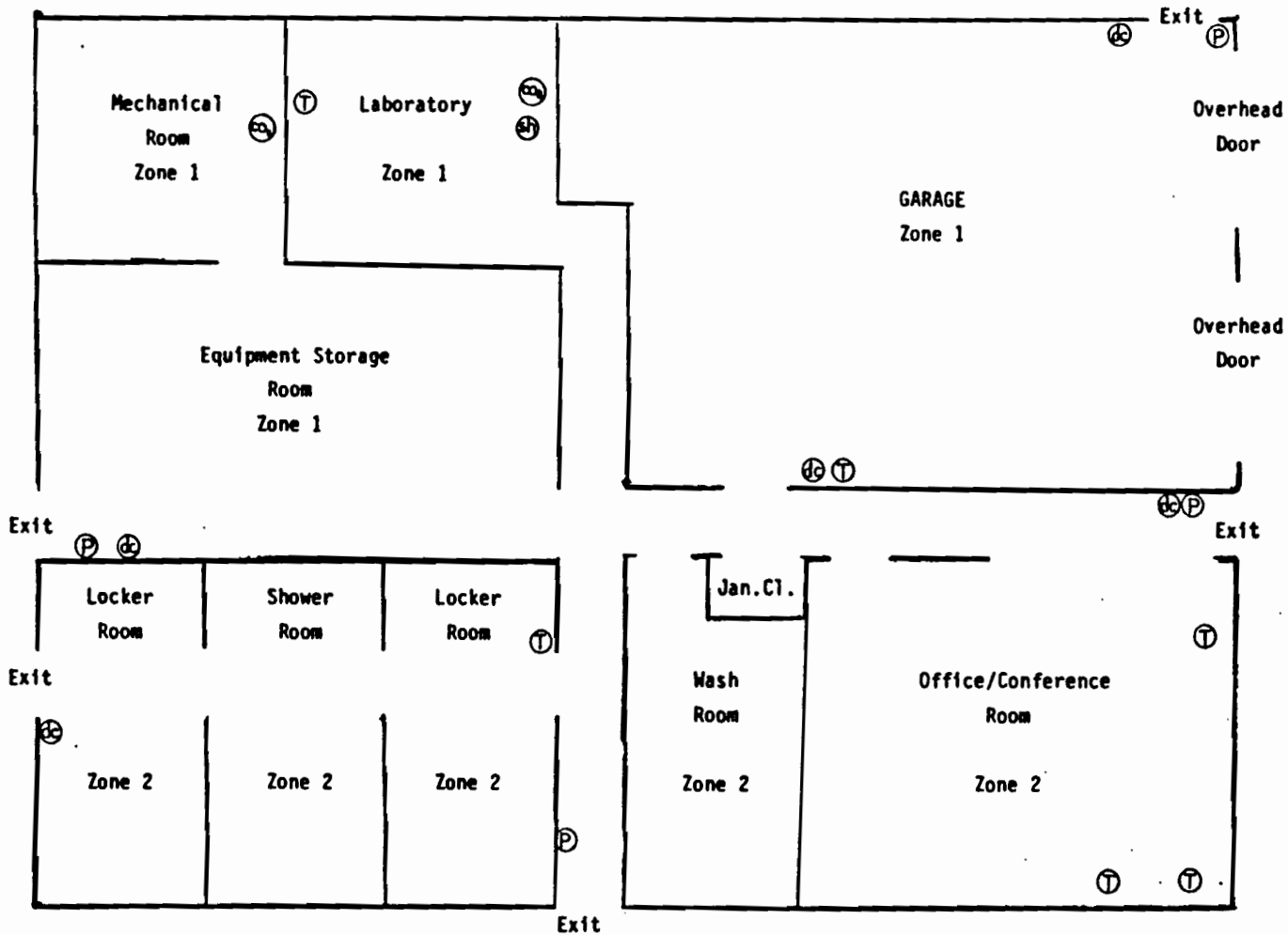


TREATMENT FACILITY
FLOOR PLAN/EMERGENCY EQUIPMENT/COMMUNICATION LOCATIONS

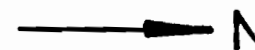
1/30, 9/94

Drawing Not To Scale

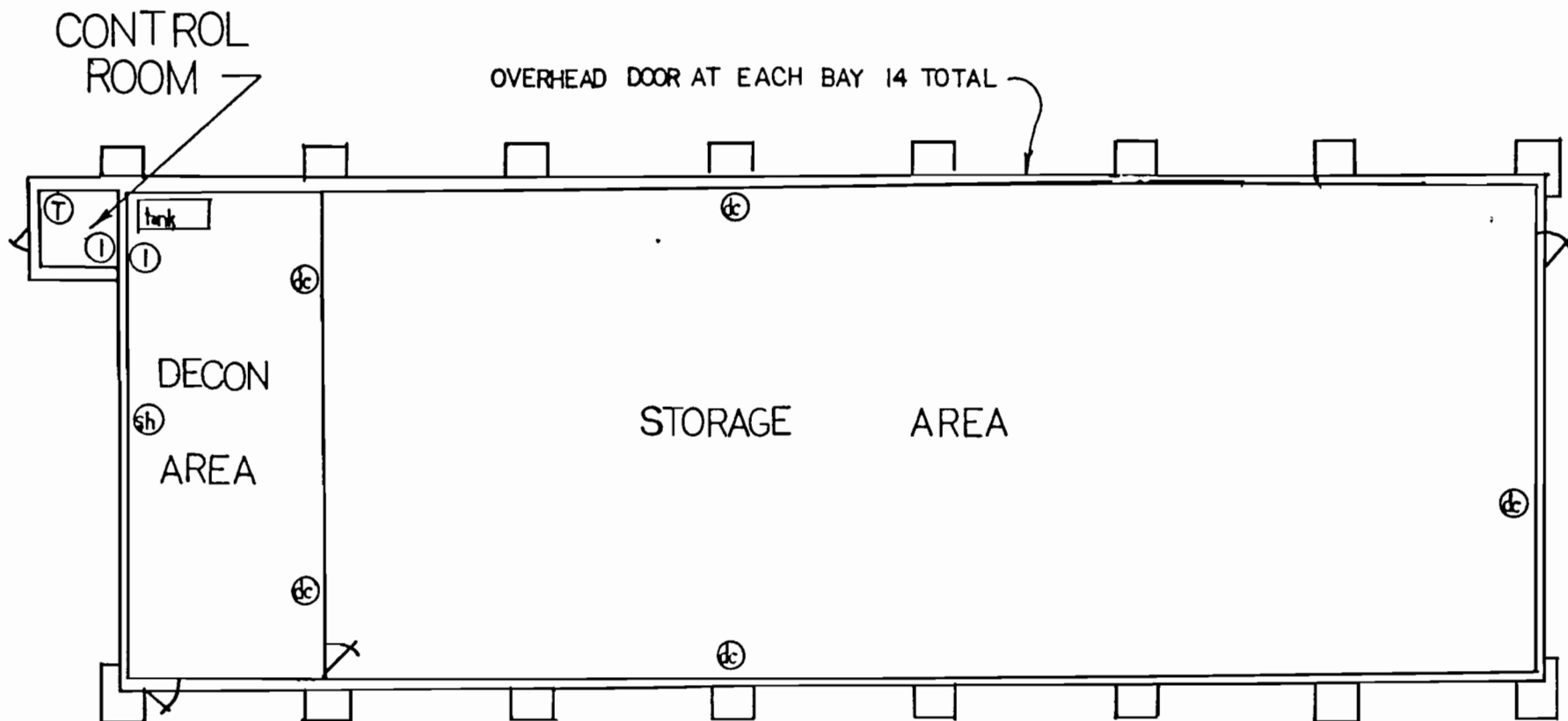
EMERGENCY EQUIPMENT/ COMMUNICATION LOCATIONS
 ADMINISTRATION BUILDING FLOOR PLAN -



- (P) PULL STATION FIRE ALARM
- (T) TELEPHONE
- (EWS) EMERGENCY EYE WASH AND SHOWER
- (CO₂) CARBON DIOXIDE FIRE EXTINGUISHER
- (DC) DRY CHEMICAL FIRE EXTINGUISHER



EMERGENCY EQUIPMENT/COMMUNICATION LOCATIONS



OVERHEAD DOOR AT EACH BAY 14 TOTAL

CONTROL ROOM

DECON AREA

STORAGE AREA

T
I
I

sh

dc

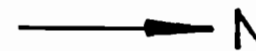
dc

dc

dc

TANK IS 275 GAL DIESEL OIL

- I INTERCOM
- T TELEPHONE
- sh EMERGENCY EYE WASH AND SHOWER
- dc DRY CHEMICAL FIRE EXTINGUISHER



BUILDING PLAN

DECONTAMINATION/DRUM STORAGE FACILITY

EVAC. PLAN

EVACUATION PLAN

A. EVACUATION OF TREATMENT FAC. ADMINISTRATION BLDG., DECON/DRUM BLDG.

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 - 97th Street at Read Avenue.

5. Evacuate site to Public Information Office

B. 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

EVACUATION PLAN

EVACUATION PLAN (CONTINUED)

4. Meeting Areas

The project leader will oversee that all in-the-field personnel meet first in front of the: 1) Treatment Facility; If conditions prohibit meeting in this area, the next meeting areas will be, in priority; 2) 97th Street at Read Avenue; 3) The gate at Frontier Avenue and 95th Street.

5. Evacuate site to Public Information Office

C. FIELD OPERATIONS - CONTRACTOR OPERATIONS

1. Responsibility

The emergency coordinator will be responsible for signal to evacuate and designating the meeting area. The State Project Engineer 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 97th Street and Colvin Blvd.

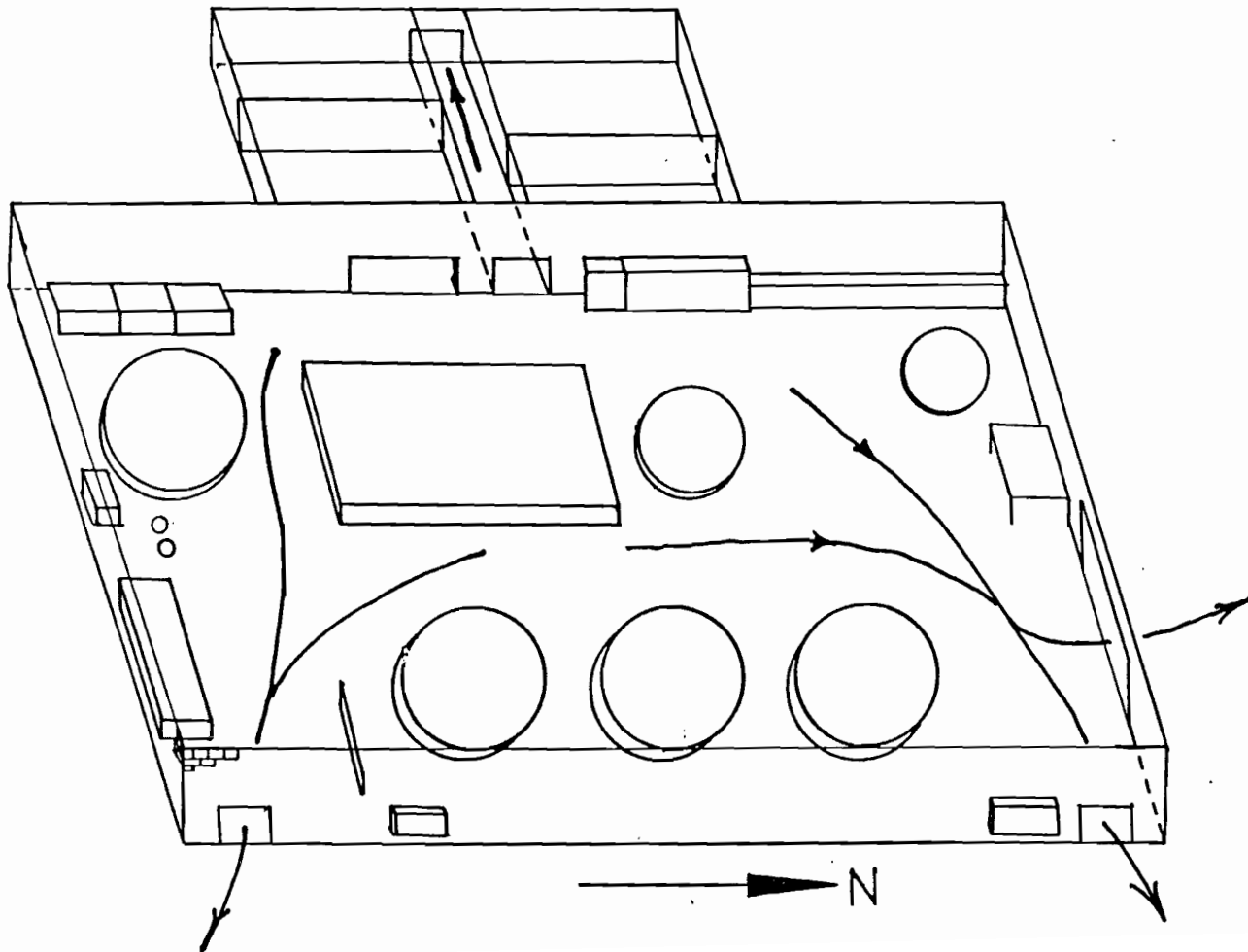
E. RESIDENTIAL AREAS

Any hazardous material release or threat of release which will extend beyond the secure Love Canal Site will require 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.

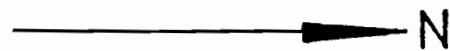
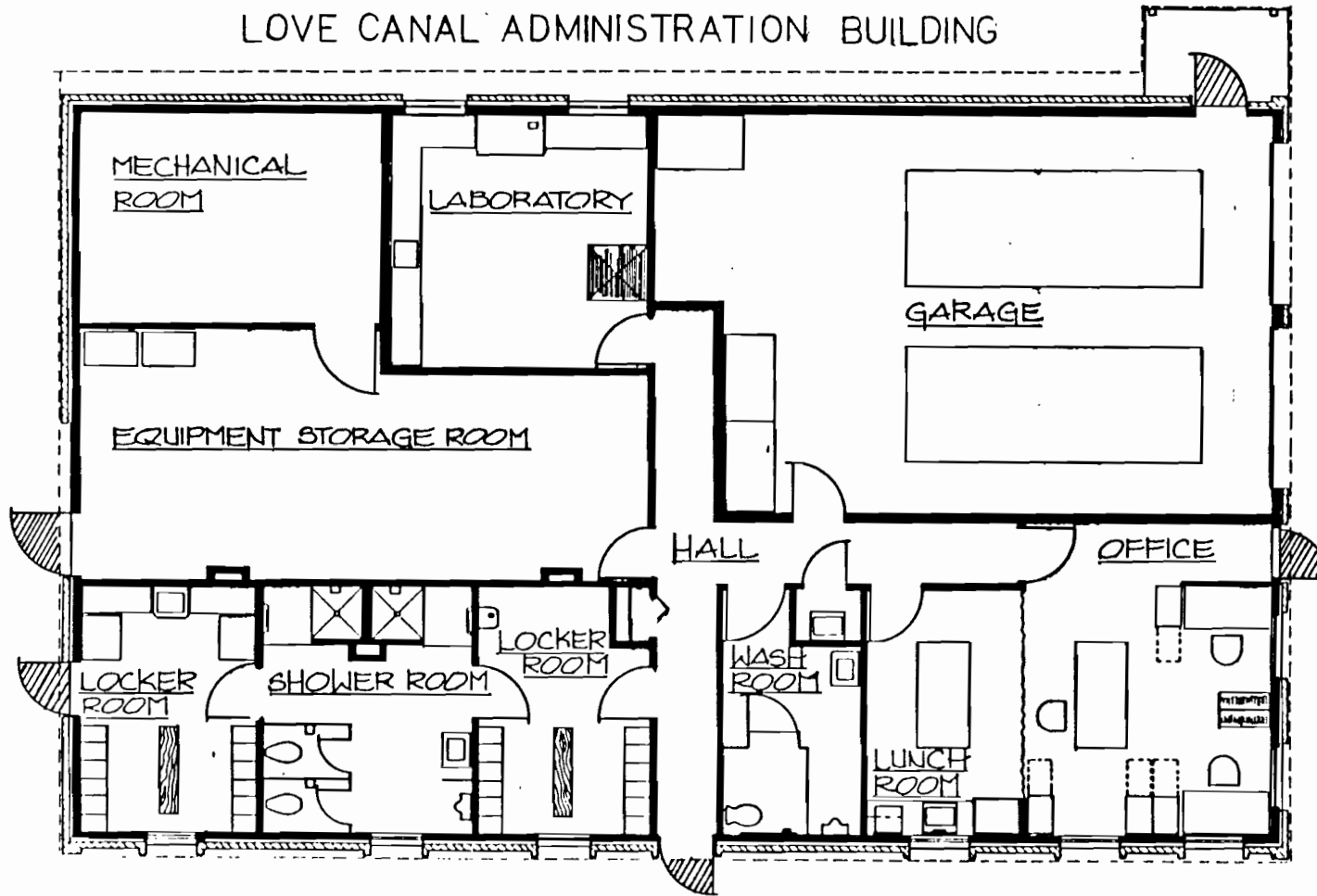
EVACUATION ROUTES

LOVE CANAL LEACHATE TREATMENT FACILITY



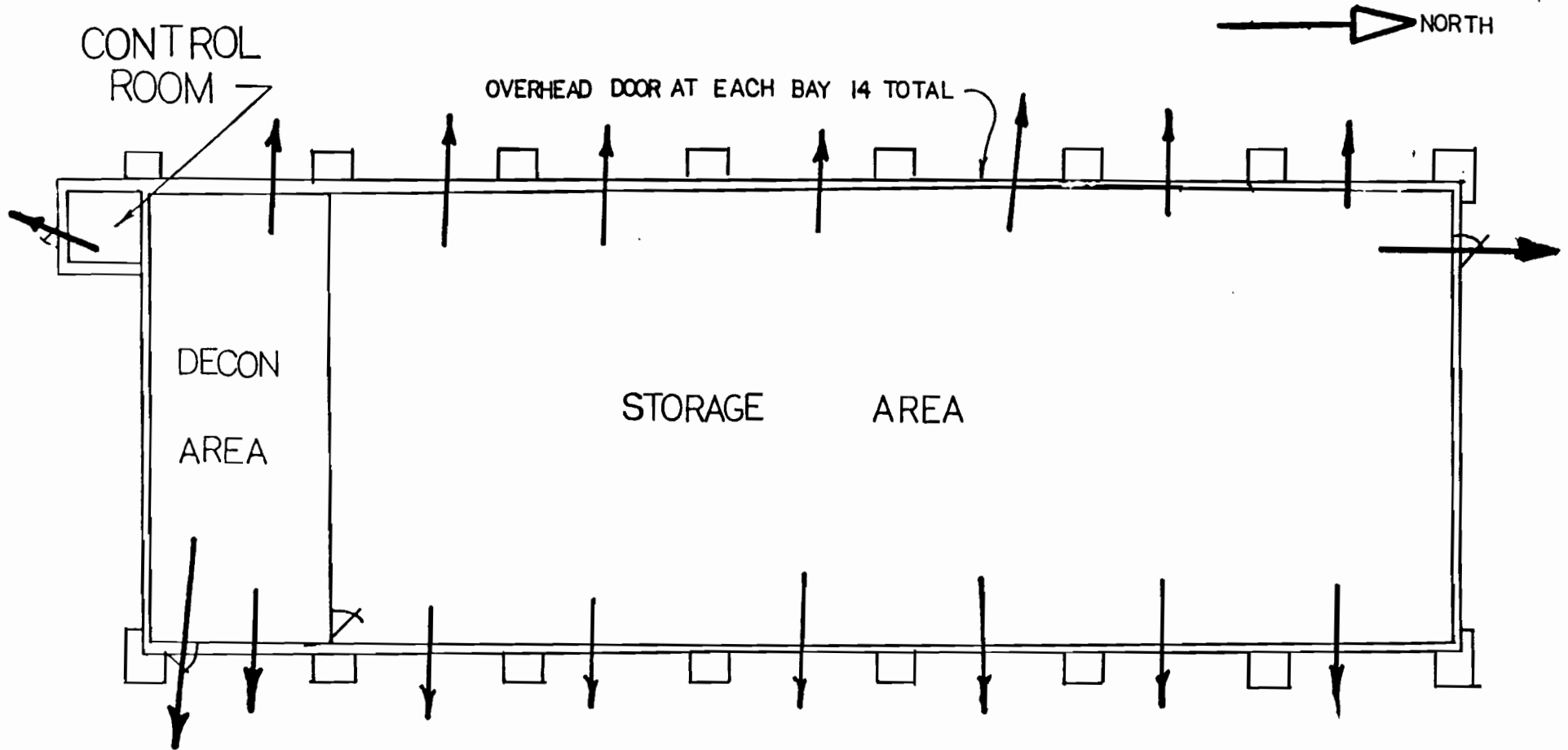
EVACUATION ROUTES

LOVE CANAL ADMINISTRATION BUILDING



////// EXIT DOORS

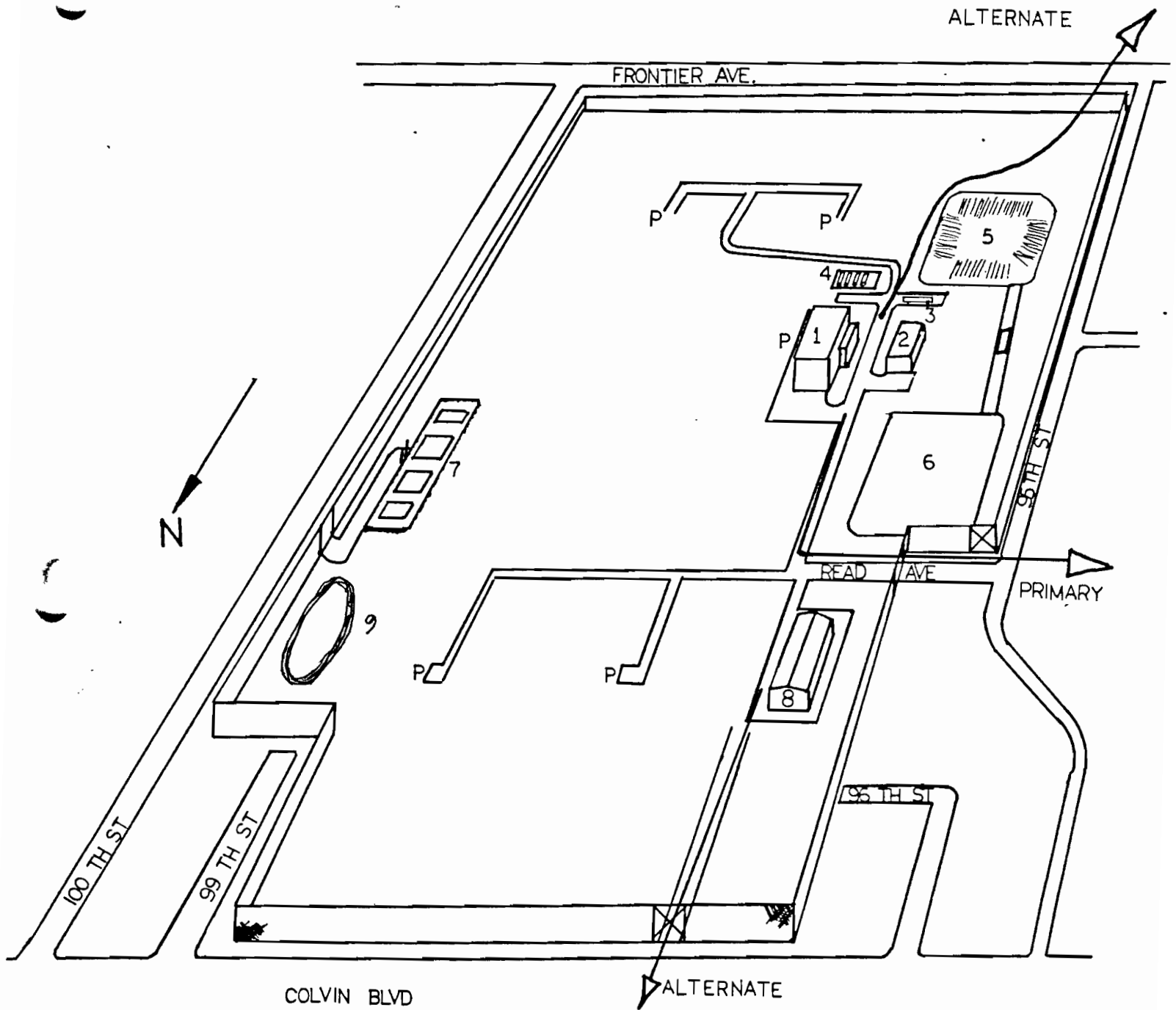
EVACUATION ROUTES



BUILDING PLAN

DECONTAMINATION/DRUM STORAGE FACILITY

SITE EVACUATION ROUTES



PUBLIC INFORMATION OFFICE (Currently closed)

LOVE CANAL SITE

FEBRUARY 1990

Revised October 1994

- | | |
|---------------------------------|---------------------------------|
| 1 LEACHATE TREATMENT FACILITY | 6 STAGING AREA |
| 2 ADMINISTRATION BUILDING | 7 SEWER SEDIMENT FACILITY |
| 3 PLASMA ARC UNIT TRAILER | 8 DECONTAMINATION/DRUM FACILITY |
| 4 SLUDGE STORAGE TANKS | 9 EARTHEN BERM |
| 5 DEWATERING CONTAINMENT FACIL. | P PUMP STATION |

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 NYSDEC Operation & Maintenance Section Supervisor

BOMB THREATS, SEVERE WEATHER AND ACTS OF VANDALISM

AGREEMENTS

SUMMARY OF AGREEMENTS WITH EMERGENCY RESPONSE OFFICIALS

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 NYSDEC employee arrives. In addition, a security system will be centrally monitored by Security Today, Inc.
2. Officials from the Niagara Falls Fire Department were given a tour 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 DEC 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. 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, either the New York State Spill Response Number (Buffalo: 851-7220, 7:30 a.m. - 4:30 p.m.; or (800) 452-7362 anytime) will be called or the Site's carbon removal contractor will be called.

ARRANGEMENTS WITH AUTHORITIES

The Region 9 NYSDEC has contracts with two cleanup contractors which are obligated to respond to a spill within 2 hours.

ARRANGEMENTS WITH AUTHORITIES

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

AMENDMENT OF CONTINGENCY PLAN

APPENDIX

APPENDIX

SITE DESCRIPTION AND OPERATION

The Love Canal leachate collection and treatment system was constructed to prevent the outward migration of chemical contamination from the abandoned hazardous waste landfill. The leachate collection system consists of approximately 7000 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. On the eastern edge of the site, across the cap from the treatment plant, is the sewer dewatering facility consisting of settling tanks and a sand filter.

At 95th Street and Read Avenue is the Decontamination/Drum Storage Building. This building has a capacity for 2000 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.

LOVE CANAL TREATMENT FACILITY
95TH ST. + READ AVE.
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 TWO OPERATORS AND ONE MAINTENANCE ASSISTANT FROM 7:30 AM - 4:00 PM MONDAY-FRIDAY ONLY.

KEYS - ENGINES 7, 9, T2 and CAR 80 HAVE WHICH OPEN BOTH BLDGS.

EMERGENCY PHONE NO. - IN THE EVENT OF AN EMERGENCY AT THIS SITE ONE OF THE PLANT PERSONNEL LISTED BELOW SHOULD BE NOTIFIED AS SOON AS POSSIBLE.

BRIAN SADOWSKI
731-5654
MAURICE MOORE
283-5230
LOREN GREFNE
283-2335

ENTRY GATE - THERE IS ONLY ONE VEHICLE ENTRY GATE TO THIS FACILITY. IT IS LOCATED ON 95TH ST. APPROX. 1,000 FEET NORTH OF READ AVE. THIS GATE IS MADE UP OF TWO SECTIONS. ONE SECTION IS REMOTELY CONTROLLED FROM THE ADMINISTRATION BLDG AND TREATMENT FACILITY AND THE OTHER WHICH IS PADLOCKED MAY BE OPENED MANUALLY BY CUTTING THE PADLOCK.

HYDRANTS - THERE IS ONLY ONE HYDRANT WITHIN THE FENCED AREA. IT IS LOCATED 150 NORTH OF THE TREATMENT PLANT ON THE ENTRANCE ROAD.

THE 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 N/W CORNER OF THE BUILDING. THERE CAN BE UP TO TWO VEHICLES PARKED IN THIS AREA.

MAIN ELECTRIC: LOCATED IN THE S/W CORNER OF THE BUILDING
(SEE DRAWING)

MAIN WATER SHUTOFF: LOCATED IN THE S/E CORNER OF THE BUILDING
(SEE DRAWING)

ALARM PANEL IS LOCATED INSIDE THE MAIN DOOR ON THE NORTH END OF THE BUILDING. THERE ARE TWO ZONES. ZONE #1 IS THE EAST HALF OF THE BUILDING AND ZONE #2 IS THE WEST HALF OF THE BUILDING.

DETECTORS - THERE ARE SMOKE AND HEAT DETECTORS IN THIS BUILDING.

MAIN GAS SHUTOFF. THE MAIN GAS SHUTOFF IS LOCATED 50 S/W OF THE BUILDING
(SEE DRAWING)

UPDATE 2/90, 1/92, 4/93, 9/94

THE 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 FIREFIGHTING WATER RUNOFF SHOULD BE FLUSHED INTO THIS TRENCH IF POSSIBLE.

IT IS THE OPINION OF THE SENIOR TREATMENT PLANT OPERATOR 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 GAL. SLUDGE STORAGE TANK LOCATED IN THE N/W CORNER OF THE BUILDING. THERE ARE FOUR 10,000 GAL. 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 MAIN DOOR ON THE CENTER OF THE WEST WALL (SEE DRAWING)

MAIN WATER SHUTOFF: LOCATED IN THE COMPRESSOR ROOM (SEE DRAWING)

MAIN GAS SHUTOFF LOCATED APPROX. '50 S/W 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 TWO SMOKE AND HEAT DETECTORS. THEY ARE CENTRALLY MONITORED BY SECURITY TODAY, INC.

BECAUSE OF THE HAZARDOUS NATURE OF THE MATERIALS IN THE TREATMENT PLANT, OFFICERS WILL INSURE THAT ALL PERSONNEL ARE PROPERLY EQUIPPED WITH FULL PROTECTIVE CLOTHING AND BREATHING APPARATUS BEFORE ENTERING THE GATE.

SOP

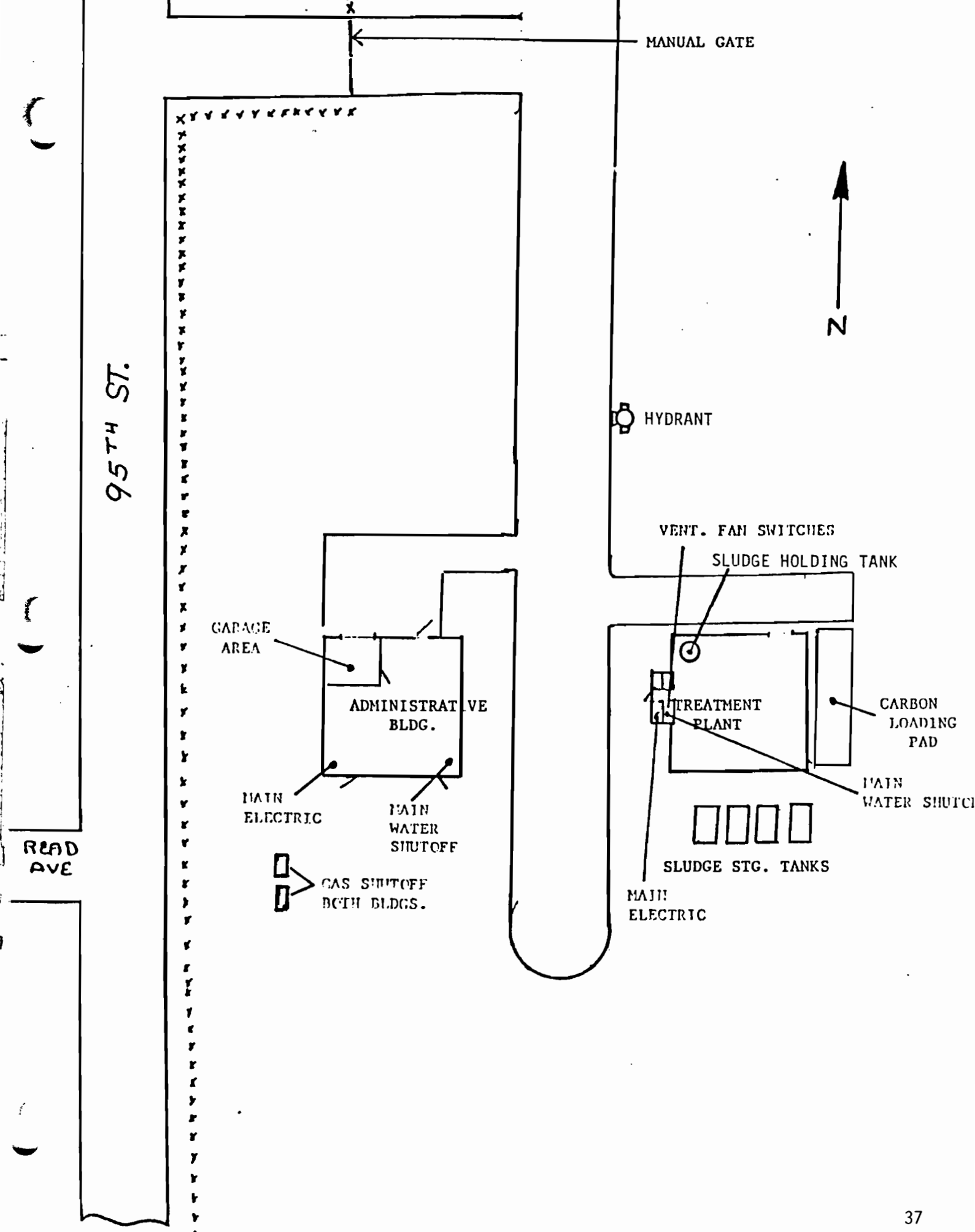
FIRST ENGINE: MASK UP AT THE GATE.
HIT HYDRANT ON THE WAY IN OR CALL FOR THE
SECOND DUE ENGINE TO LAY A SUPPLY LINE.
PARK UPWIND AND ATTACK THE FIRE.

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 GAL. HOLDING TANK FOR EVENTUAL TREATMENT IN THE SYSTEM.

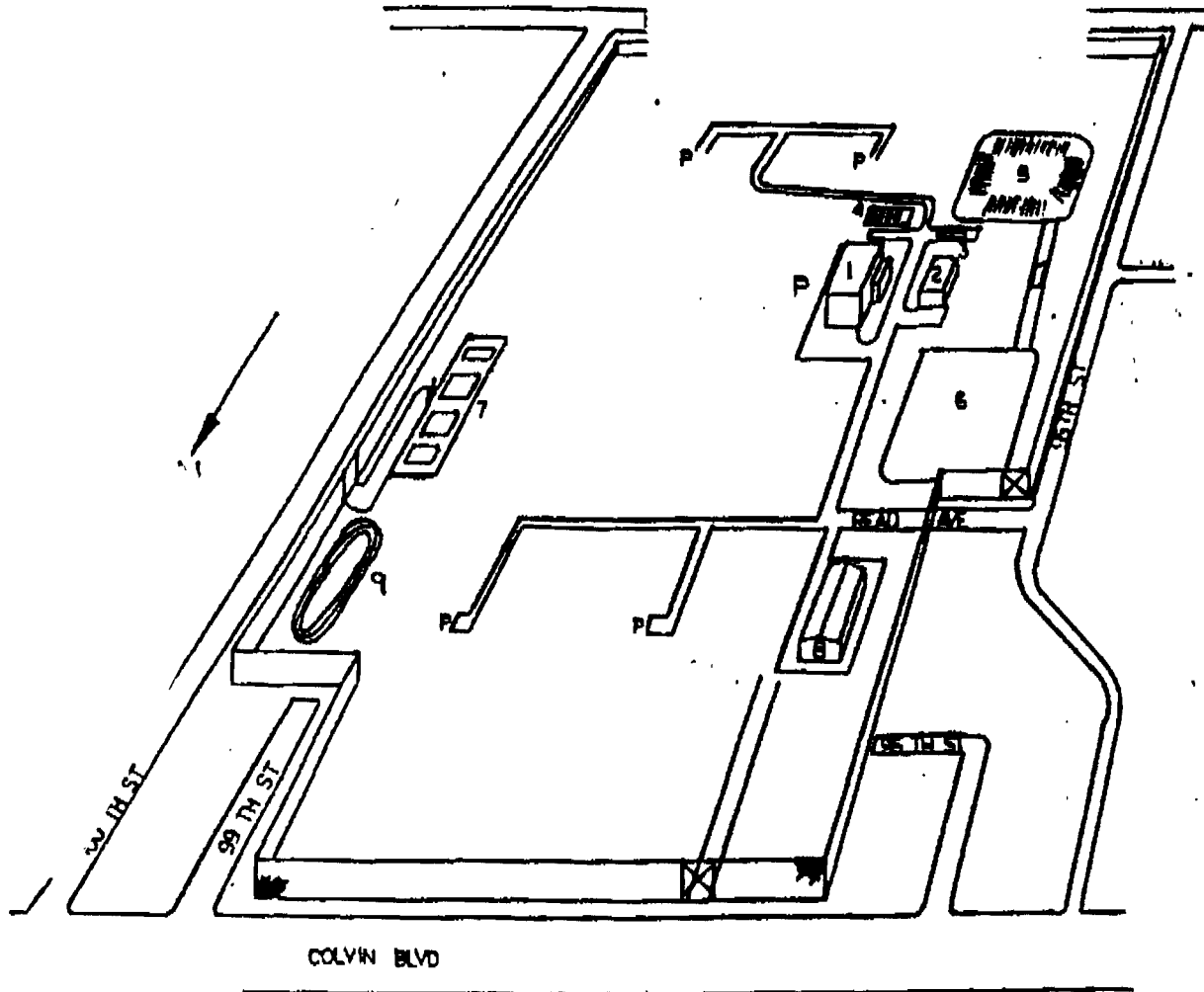
B/C DENNIS D. LONG



Key to Hazardous Material Storage

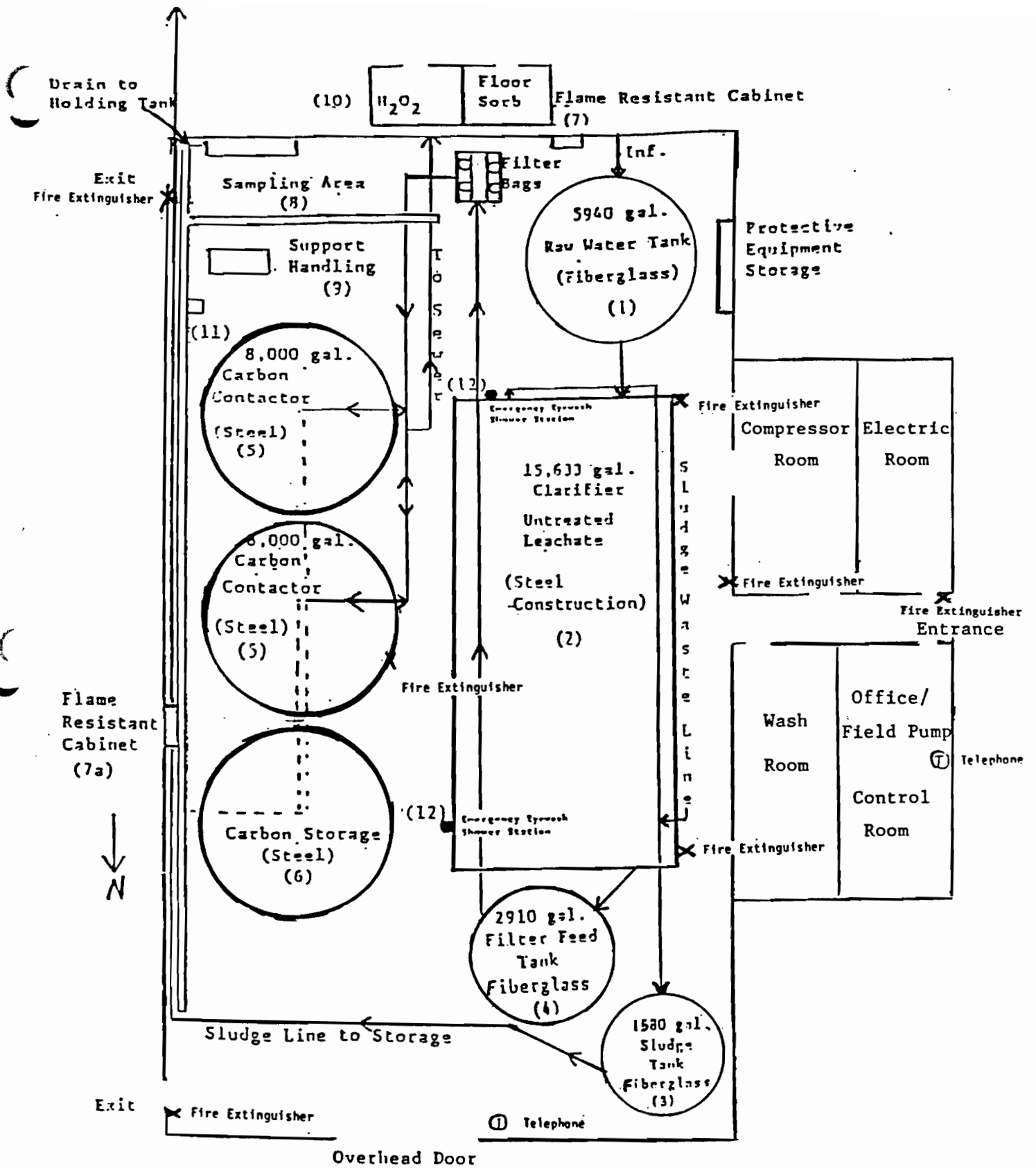
Location

1. See Treatment Facility Key
2. Maximum 10 gallons of flammable liquids in laboratory and garage.
3. No hazardous materials present.
4. 7,305 gallons (approx.) of highly toxic sludge in storage tank #3.
This liquid is considered flammable because of the presence of 2%-5% toluene.
5. Contains construction and demolition debris buried under approx. 3 feet of clay and soil.
6. No hazardous materials stored.
7. Inactive. Hypalon lines.
8. Drums contain non-flammable solids only. 275 gallons diesel oil tank in southwest corner.



LOVE CANAL SITE
September 1994

- | | |
|------------------------------------|----------------------------------|
| 1. Leachate Treatment Facility | 6. Staging Area |
| 2. Administration Bldg. | 7. Sewer Sediment Facility |
| 3. Plasma Arc Unit Trailer | 8. Decontamination/Drum Facility |
| 4. Sludge Storage Tanks | 9. Earthen Berm. |
| 5. Dewatering Containment Facility | P - Pump Station |



TREATMENT FACILITY

FLOOR PLAN/EMERGENCY EQUIPMENT/COMMUNICATION LOCATIONS

1/90, Rev. 1/12

Key on Following Page
Drawing Not To Scale

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 1500 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 work space.
9. Support handling area with variable air and clean water pressures.
10. Hydrogen peroxide stored in this blockhouse 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

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).

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.

Additional decontamination procedures are described on the following pages.

INCIDENT REPORT FORM

**TO: Section Chief, Operations and Maintenance Section
Bureau of Hazardous Site Control
Division of Hazardous Waste Remediation**

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** _____
Approximate quantity _____

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 _____

CONTINGENCY PLAN REVISION LOG

| DATE | AREA REVISED | NEW ACTION |
|--------|---|---|
| 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 R/9 Office Added |
| 3/92 | General Response Overflow of Holding Tanks | Turn off field pumps at MDCP Panel or at pump chamber power panels |
| 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 Earthn 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 Familiarizations (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. |

**Niagara Falls Fire Department
Site Familiarizations**

| | | | |
|------------------|-------------|-----------------|------------|
| December | 1988 | Platoons | 1-4 |
| June | 1989 | Platoons | 1-4 |
| September | 1991 | Platoons | 1-4 |
| August | 1992 | Platoons | 1 |
| August | 1993 | Platoons | 2 |
| July | 1994 | Platoons | 3 |

Love Canal Containment Facility

Contingency Plan

Revised:

SPEED
MESSAGE 44-900

Wilson Jones Carbonless
Snap-A-Way® Forms

SPEED MESSAGE

TO Ben

FROM Jerry

SUBJECT Love Canal Contingency Plan

DATE 4/20/93

Please review Brian's changes and let me know if any questions arise. Should be straight forward. Substitute new sheets and make a copy for yourself.

1 Please return my copy! Thanks!

To:
Jerry
No comments
BOTH

SIGNED

ORIGINAL

Wilson Jones Carbonless - MADE IN U.S.A.
44-900 Duplimate

SPEED MESSAGE

TO General Rivera Jr. P.E. N.Y.S.D.C.
DTM SECTION CHIEF
CENTRAL OFFICE - ALBANY

FROM BRIAN SADOWSKI N.Y.S.D.C.
DTM SECTION
LOWE CANAL - NIAGARA FALLS

SUBJECT CONTINGENCY PLAN REVISIONS

DATE APRIL 14, 1993

PLEASE FIND ENCLOSED REVISIONS (UPDATES) TO
OUR CONTINGENCY PLAN PLACE THE INSERTS INTO THEIR
RESPECTIVE AREAS. THANK YOU.

APR 19 1993

cc T. Sciascia w/enc.
ENR. ENGR. III
RUFFALO

SIGNED Amin

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
 LOVE CANAL CONTAINMENT FACILITY
 CONTINGENCY PLAN
 CONTENTS

| | | |
|----|---|----|
| A) | Emergency Telephone Numbers | 1 |
| B) | Emergency Coordinators | 2 |
| C) | Response Procedures | |
| | 1. General Response | 4 |
| | 2. Treatment Facility | |
| | a) Aqueous Phase Leaks | 5 |
| | b) Non-Aqueous Phase Leaks | 6 |
| | c) Clarifier Leak | 7 |
| | d) Fire | 8 |
| | e) Explosion | 9 |
| | 3. Administration Building | |
| | a) Spills | 10 |
| | b) Fire | 11 |
| | 4. Site | |
| | a) Sludge Storage Tank Rupture | 12 |
| | b) Overflow of Holding Tanks | 14 |
| | c) Drum Rupture | 15 |
| D) | Equipment List | 16 |
| E) | Evacuation Plan | |
| | 1. Treatment Facility and Administration Bldg. | 22 |
| | 2. Field Operations | 22 |
| | 3. Bomb Threats, Severe Weather and Vandalism | 28 |
| F) | Agreements with Response Officials | |
| | 1. Police Department | 29 |
| | 2. Fire Department | 29 |
| | 3. Hospital | 29 |
| | 4. Cleanup Contractors | 29 |
| G) | Amendment of Contingency Plan | 31 |
| H) | Appendix | 32 |
| | Site Description and Operation | |
| | Niagara Falls Fire Department Standard Operating Procedures | |
| | Hazardous Material Storage Areas | |
| | Air Monitoring | |
| | Decontamination of Equipment and Tools | |
| | Incident Report Form | |
| | Contingency Plan Revision Log | |

EMERGENCY TELEPHONE NUMBERS

EMERGENCY 911

AMBULANCE SERVICE

Frontier Ambulance Service 285-3663
Niagara Ambulance Service 284-4228
Niagara Falls Memorial Hospital 278-4000

POLICE

Niagara Falls 278-8280
Sheriff 285-5355
State Police 297-0755

SPILL CONTROL

N.Y.S. Oil and Hazardous
Material Spill Notification (518) 457-7362 OR (800) 457-7362
National Response Center (800) 424-8802
Niagara Falls Wastewater 278-8138
Treatment Plant 286-4973 Shift Operator

NIAGARA COUNTY HEALTH DEPARTMENT

Business Hours 284-3124
After 5 pm & weekends 439-7430

NIAGARA COUNTY

Emergency Management Office
Emergency Operating Center 283-0371

EMERGENCY COORDINATORS

During normal operations at the Love Canal Leachate Treatment Facility, there are two on-site 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 on the following page.

EMERGENCY COORDINATORS

| Name | Telephone Number | | Title |
|--------------------|------------------|----------------|--------------------------------|
| | Office | Home | |
| * Brian Sadowski | (716) 283-0111 | (716) 731-5654 | Senior Treat. Fac. Operator |
| 2) Maurice Moore | (716) 283-0111 | (716) 283-5230 | Treatment Fac. Operator |
| 3) Loren Green | (716) 283-0111 | (716) 283-2335 | Maintenance Assistant |
| 4) Abul Barkat | (716) 851-7220 | (716) 691-4157 | Environmental Engineer II |
| 5) Michael Hinton | (716) 851-7220 | (716) 433-9387 | Environmental Engineer II |
| 6) Joseph Sciascia | (716) 851-7220 | (716) 631-8118 | Environmental Engineer III |

Additionally, there are personnel based in Albany who are on-site from time to time. Again, these are listed in order of priority.

Albany, NY-based personnel

| | | | |
|----------------|----------------|----------------|------------------------------|
| * Gerald Rider | (518) 457-0927 | (518) 674-5985 | Section Chief |
| 7) John Strang | (518) 457-0927 | (518) 235-7883 | Environmental Engineer II |

*Mr. Rider will act as primary emergency coordinator whenever he is on-site. Mr. Strang, when on-site, will act as primary emergency coordinator in Mr. Rider's absence. If neither Mr. Rider nor Mr. Strang is on-site, Mr. Sadowski will act as primary emergency coordinator.

RESPONSE TO EMERGENCY SITUATIONS
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 numbers for police, fire or ambulance is 911. Other emergency phone numbers are listed on Page 1.
3. Shut down all plant process pumps and field pumps. Field pumps can be shut down from the treatment plant office control panel by turning all switches on the MDCP to the "off" position. Plant pumps can be shut down by closing the air valve at each individual pump. If the emergency situation exists within the treatment area, plant pumps are to be shut down by turning off the air compressor in the mechanical room.
4. Don Level B protection until lesser level of protection is ascertained to be appropriate.
5. Determine severity of situation based on amount of release, material involved and area damaged.
6. Stop any continuous release if able to do so without entering contaminated environment.
7. Inform the appropriate emergency-response organizations and the NYSDEC Central Office in Albany.
8. Proceed with response and cleanup activities outlined in each section.
9. 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 Chief of the Operation & Maintenance Section in a written report. An incident report form is included in the Appendix.

AQUEOUS PHASE LEAKS
(RAW WATER AND FILTER FEED TANKS, 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 NYSDEC 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 spill, duplicate equipment is stored in the administration building storage room.
- c. Action to be taken.
1. Shut down all plant processes.¹
 2. Suit up in protective clothing and supplied air.
 3. Close upstream valve.
 4. If leak is continuing, take action to contain 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.
 4. Bleed pipe from valve to source of leak if necessary.
 5. 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.
 6. Steam clean affected areas of floor using high pressure steam from Steam Jenny.
 7. Mop floor and dispose of mop(s) when done with cleanup.
 8. Decontaminate any equipment which became contaminated during leak (such as lawn mower or items stored under adsorber unit)

¹ Process pumps may be run under the observation of the treatment plant operator for the purposes of emptying a leaking tank.

- 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 through the Special Projects Section to 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.

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 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 NYSDEC 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 storage blockhouse
- c. Action to be taken.
1. Shut down all plant processes.¹
 2. Suit up in protective clothing and supplied air.
 3. 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.
 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 floor sorb 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 has 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)

¹ Process pumps may be run under the observation of the treatment plant operator for the purposes of emptying a leaking tank.

Final cleanup and inspection:

All shovels, mop heads, other expendables and protective clothing should be placed in drums for final disposal in accordance with the Site's drum storage policy. Immediate arrangements should be made through Albany 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 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.

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 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 NYSDEC person must supervise the cleanup.
 - 2) Protective clothing, shovels, 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 spill, duplicate equipment is stored in the administration building storage room.
 - 3) Floorsorb is located in the storage blockhouse
- c. Action to be taken.
1. Shut down clarifier feed pump if on.
 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 floor sorb 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 Cleanup
- 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 Albany 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 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.

TREATMENT PLANT

FIRE

- A) SMALL FIRE with no threat of chemical contamination
- a. Protective clothing required:
Level D or greater level of protection if already being worn.
 - b. Equipment and materials required:
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 the fire, take the same action described below for a large fire. Dial 911.
 5. Watch for reignition.
 6. Notify Albany DEC Office.
 - d. Final cleanup 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 DEC Guidance.
 - b. Equipment and materials required:
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 or Public Information Office at the discretion of the emergency coordinator. Emergency coordinator should be able to open gate and direct Fire Dept. personnel. At least one NYSDEC 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 Cleanup and inspection
Approval will be obtained by the Fire Department 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.

TREATMENT PLANT

EXPLOSION.

a) Protective Clothing Required:

See Action to be Taken.

b) Equipment and Materials required:

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 buildup. Monitor air, use Level B personal protection and explosion proof equipment.

d) Final cleanup 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.

SPILL - ADMINISTRATION BUILDING

No hazardous waste is stored in or near the administration building. At times there may be ignitable solvents in the lab room. Ignitable solvents will not exceed 5 gallons and will not be stored overnight.

a. Protective clothing required:

Level C protection.

b. Equipment and materials required:

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 will be put into effect until the spill is cleaned up.
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.

ADMINISTRATION BUILDING

FIRE - ADMINISTRATION BUILDING

A) SMALL Fire

a. Protective clothing required:
Level D.

b. Equipment and materials required:
Fire extinguishers are located in each room as shown on the floor plan.
(Floor plan 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 Albany DEC Office.

d. Final cleanup 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:
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 or Public Information Office at the discretion of the emergency coordinator. Emergency coordinator should be able to open gate and direct Fire Dept. personnel. At least one NYSDEC 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 Cleanup and inspection

Approval will be obtained by the Fire Department 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.

RUPTURE OF SLUDGE STORAGE TANKS

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 NYSDEC 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 storage blockhouse.

c. Action to be taken.

I. Pinhole Leaks

1. Suit up in protective clothing and supplied air.
2. 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.
3. Bleed pipe from valve to source of leak if necessary.
4. Take shovels full of floor sorb and apply to sludge perimeter and leak area.
5. Cover the spill with floorsorb until the sludge is not permeating the upper layer.
6. Shovel the spent floorsorb into drums. Position the drum so that drum moving equipment has access to it.
7. Scrub containment area with hard bristle brooms using hot water and detergent solution. Pump all water including rinse water into the chemical drain on the pad adjacent to the containment area.
8. Scrub containment area a second time using hot water and detergent solution. Pump all water including rinse water into the chemical floor drain.
9. Decontaminate all cleanup equipment and any equipment which became contaminated during leak.

SITE

RUPTURE OF SLUDGE STORAGE TANKS (CONTINUED)

- c. II. Rupture
1. Evacuate treatment facility.
 2. Call NYSDEC SPILL NOTIFICATION (518) 457-7362 to request emergency cleanup contractor.
 3. If adequate manpower is available, suit up in protective clothing and supplied air to estimate damage and amount spilled.
 4. One NYSDEC person is to remain "clean" to be able to enter buildings.
 5. Restrict visitor access to the site
 6. 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.
 7. Cleanup remaining sludge in containment area by following steps 4 thru 9 for Pinhole Leak Procedure, previous page.
 8. Cover ruptured area with polyethylene to minimize odor.

Final cleanup and inspection:

All shovels, mop heads, brooms, and protective clothing should be placed in drums for final disposal. Immediate arrangements should be made through Albany 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.

SITE

OVERFLOW - SOUTH SECTOR HOLDING TANK

- a. Protective clothing required:
Level C protection
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:
50 lb. bags of floorsorb are available in the storage blockhouse 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 NYSDEC 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 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 Cleanup and inspection
Inspect pump chamber 2 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 overfilled 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.

DRUM RUPTURE

- a. Protective clothing required:
Level C protection.
Air-purifying full face mask respirator.
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:
50 lb bags of floorsorb, available in the blockhouse and Decon/Drum Bldg.
Shovels, stored in the treatment plant.
55 gallon and overpack drum(s), stored in the Decon/Drum Storage Building (DDSF)
Pallets, stored in the DDSF
Tractor, with forks and drum hooks
Labels and paint pen, stored in administration bldg.
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 hooks. **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 Cleanup and inspection
Visually inspect soil, pad, or floor. Also inspect pallets and other drums near area where drum ruptured for signs of contamination.
Decontaminate all tools accordingly.

SITE

LIST OF EMERGENCY EQUIPMENT

A) Treatment Facility

| ITEM (# of) | LOCATION | DESCRIPTION AND CAPABILITIES |
|---|---|--|
| Fire extinguishers (7) | See Floor Plan: Treatment Facility Emergency Equipment Locations. | Model 10H ABC Multiuse CB dry chemical fire extinguisher for use on A,B,C type fires A - wood, paper B - flammable liquids C - electrical |
| Scott ska-pak emergency escape unit (4) | in cabinet #1 on the SW wall of the treatment plant area | The ska-pak is a full 5 min. escape SCBA. Its primary purpose is for use with an air line supply. |
| Half face and full respirators, cartridge type, (3) | on storage rack in hallway | For use in the presence of face organic vapors and acid gases, <u>only</u> when oxygen content is greater than 19.5% |
| Compressed air cylinder - breathing quality (2) | along east wall | Airlines are kept at the NW corner of the treatment room area. Supplies air suitable for breathing for a minimum 2 hours. |
| protective coveralls, gloves, boots, and hardhats (6 minimum) | in cabinet #2 SW wall of treatment room. | Coveralls, gloves and boots are used to protect against dermal contamination. |

EQUIPMENT LIST

LIST OF EMERGENCY EQUIPMENT

A) Treatment Facility (continued)

| <u>ITEM (# of)</u> | <u>LOCATION</u> | <u>DESCRIPTION AND CAPABILITIES</u> |
|---------------------------------------|---------------------------------------|---|
| 50 lb. bags of absorbent (10 minimum) | in block house south of plant | Absorbent material used to contain-spills and increase solids content of sludges and slurries |
| First aid kits (3) | 1 in plant office 2 in locker room | Two basic and one industrial 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 is IDLH |

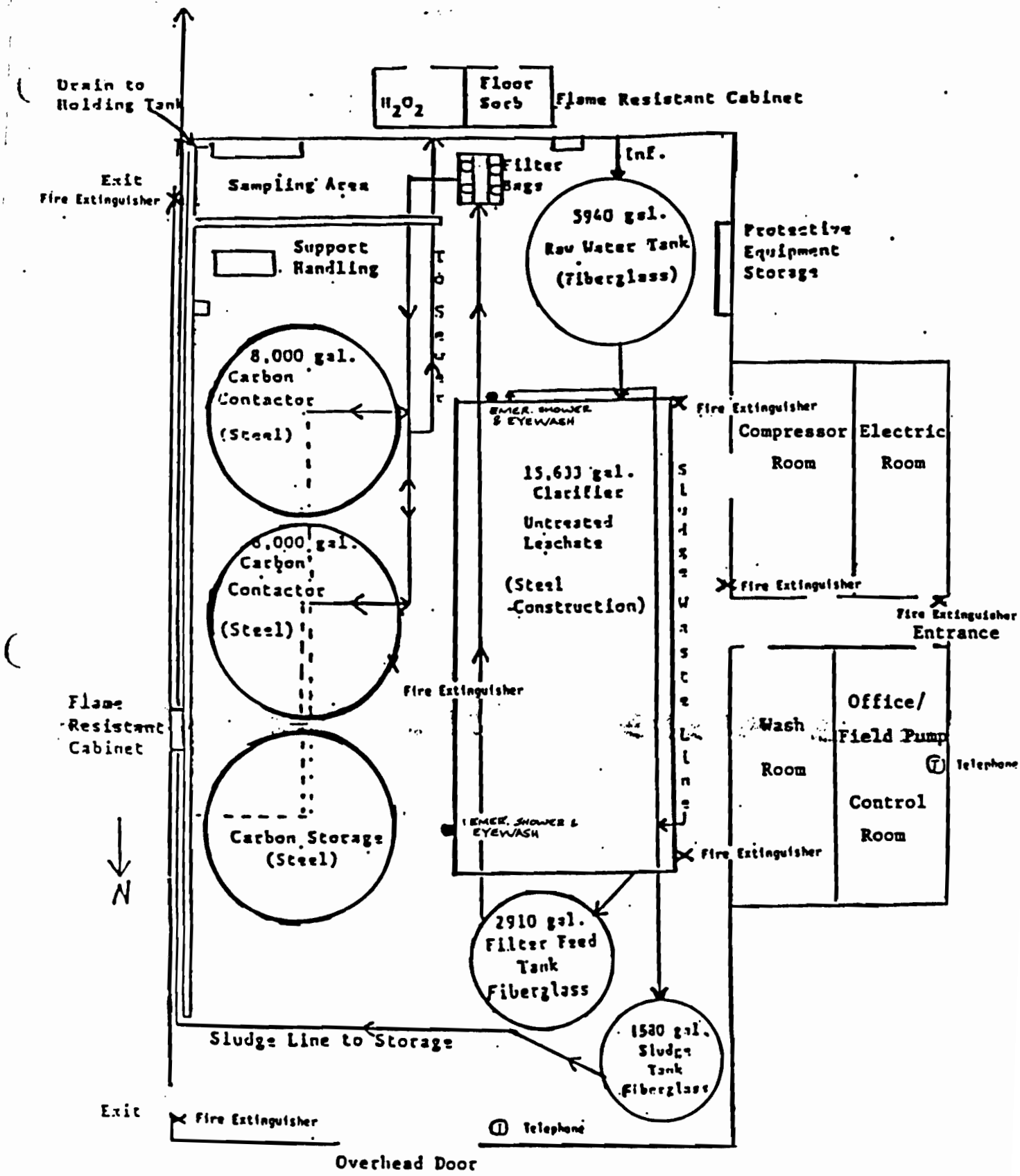
B) Administration Building

| | | |
|--|---|---|
| Scott air-packs (4) | 4) located in the Adm. Bldg. storage room center row. | 30 minute air supply with full face masks. Positive pressure self-contained breathing apparatus |
| Bellow and tank resuscitation units (1) | 1) located in storage room, center row. | Used to resuscitate accident victims overcome by fumes and/or lack of oxygen |
| Fire extinguisher (7) | in each room | Dry chemical and CO2, 17 lb. |
| Protective coveralls, gloves, boots and hard hats | in storage room. Minimum 3 boots size 12 all other minimum quantity: 12 | Coveralls, gloves and boots are used for dermal protection |
| Disposable half mask respirator (6) | in equip. storage room | 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 minimum each make & 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 storage room | For signalling people in field |

EQUIPMENT LIST

Administration Building (continued)

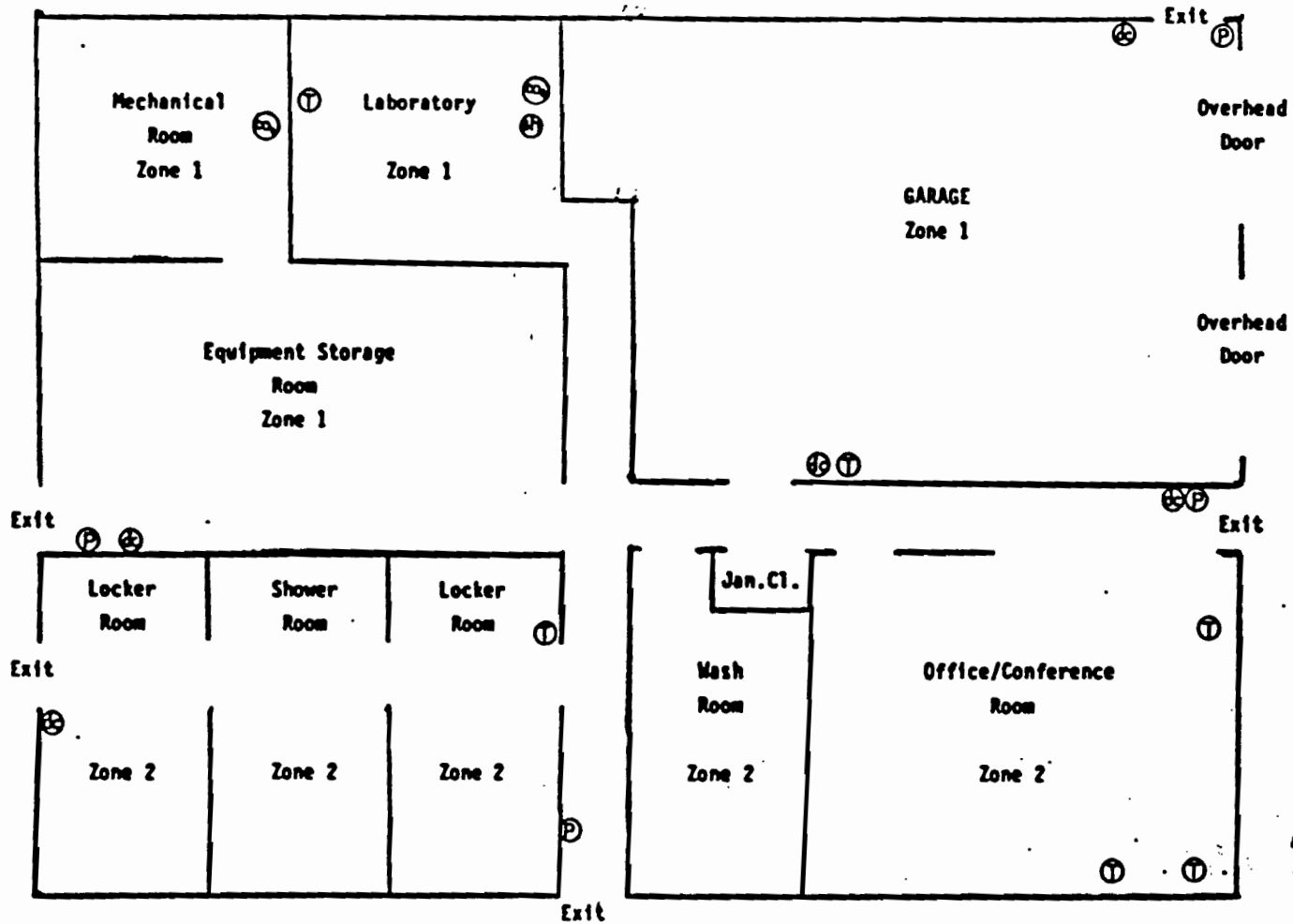
| | | |
|---|--|--|
| Combination Oxygen meter and Explosivemeter (1) | Laboratory | Measures percent of oxygen in the atmosphere; measures percent of lower and upper explosive limit of atmosphere. |
| HNu Photoionizer (1) | Laboratory | Capable of characterizing the general concentration of organic vapors in air. |
| C) Decontamination and Drum Storage Building | | |
| Fire extinguisher (5) | See Drawing: Emergency Equipment Locations | Dry chemical, 10 lb. |
| 50 lb. bags of absorbent (20 minimum) | 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. |



TREATMENT FACILITY

FLOOR PLAN/EMERGENCY EQUIPMENT/COMMUNICATION LOCATIONS

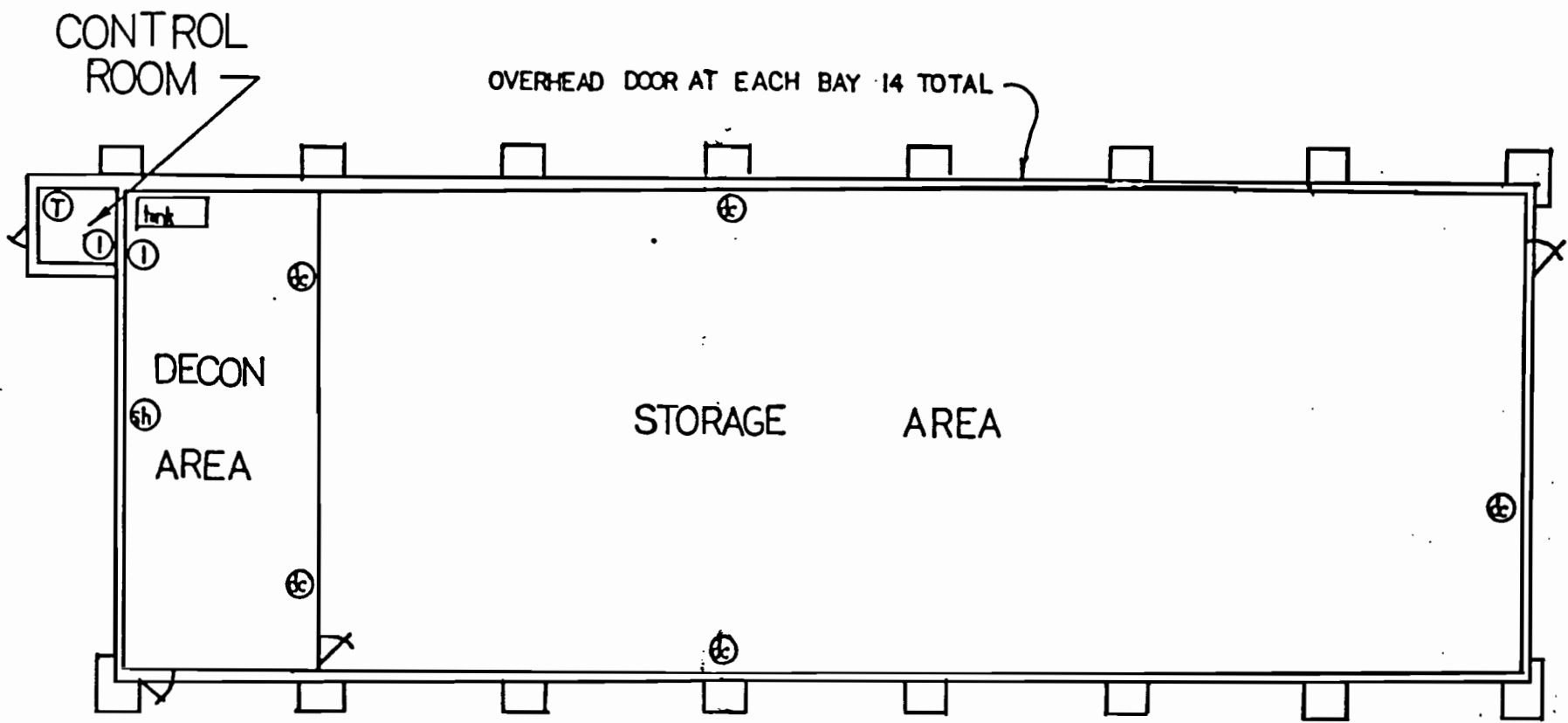
EMERGENCY EQUIPMENT/ COMMUNICATION LOCATIONS
 ADMINISTRATION BUILDING FLOOR PLAN



- Ⓟ PULL STATION FIRE ALARM
- Ⓣ TELEPHONE
- Ⓜ EWS EMERGENCY EYE WASH AND SHOWER
- Ⓢ CO₂ CARBON DIOXIDE FIRE EXTINGUISHER
- Ⓛ DC DRY CHEMICAL FIRE EXTINGUISHER



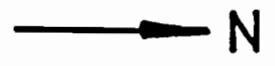
EMERGENCY EQUIPMENT/COMMUNICATION LOCATIONS



OVERHEAD DOOR AT EACH BAY 14 TOTAL

TANK IS 275 GAL DIESEL OIL

- ① INTERCOM
- Ⓣ TELEPHONE
- ⓔ EMERGENCY EYE WASH AND SHOWER
- ⓕ DRY CHEMICAL FIRE EXTINGUISHER



BUILDING PLAN

DECONTAMINATION/DRUM STORAGE FACILITY

EVACUATION PLAN

A. EVACUATION OF TREATMENT FAC. ADMINISTRATION BLDG., DECON/DRUM BLDG.

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 - 97th Street at Read Avenue.

B. 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

EVACUATION PLAN

EVACUATION PLAN (CONTINUED)

4. Meeting Areas

The project leader will oversee that all in-the-field personnel meet first in front of the: 1) Treatment Facility; If conditions prohibit meeting in this area, the next meeting areas will be, in priority; 2) 97th Street at Read Avenue; 3) The gate at Frontier Avenue and 95th Street.

5. Evacuate site to Public Information Office

C. FIELD OPERATIONS - CONTRACTOR OPERATIONS

1. Responsibility

The emergency coordinator will be responsible for signal to evacuate and designating the meeting area. The State Project Engineer 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 97th Street and Colvin Blvd.

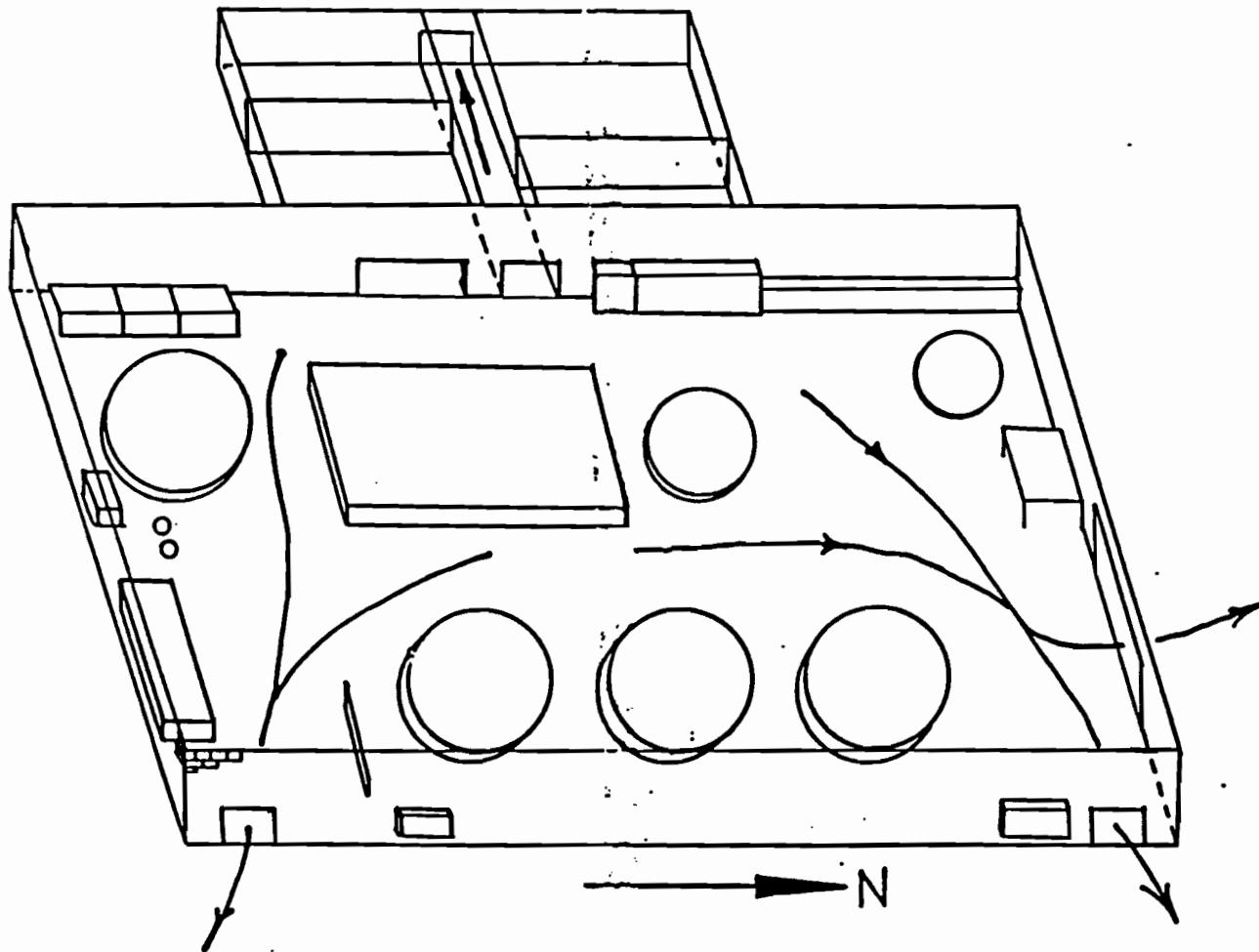
E. RESIDENTIAL AREAS

Any hazardous material release or threat of release which will extend beyond the secure Love Canal Site will require 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.

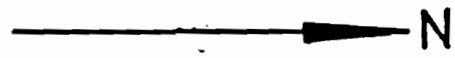
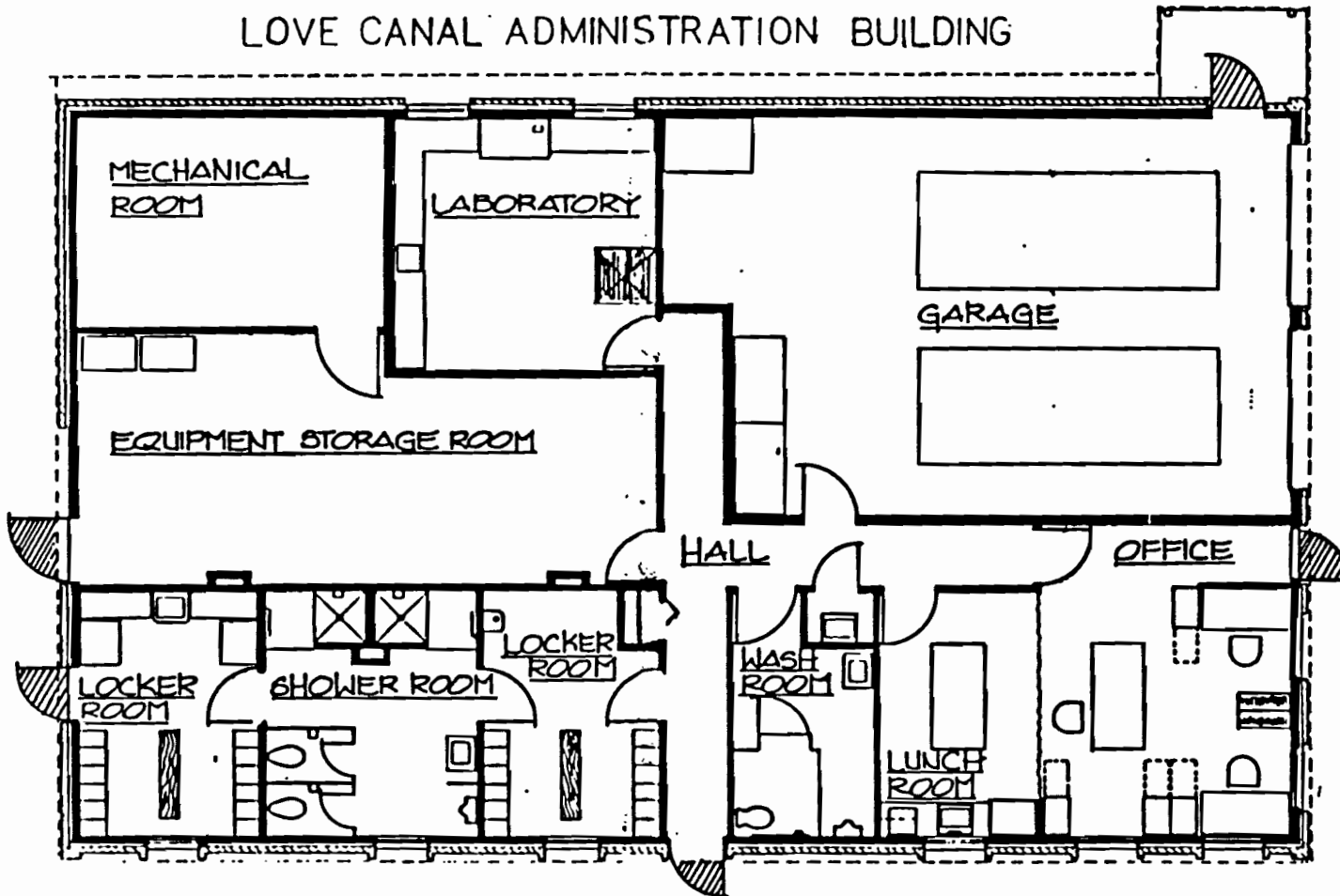
EVACUATION ROUTES

LOVE CANAL LEACHATE TREATMENT FACILITY



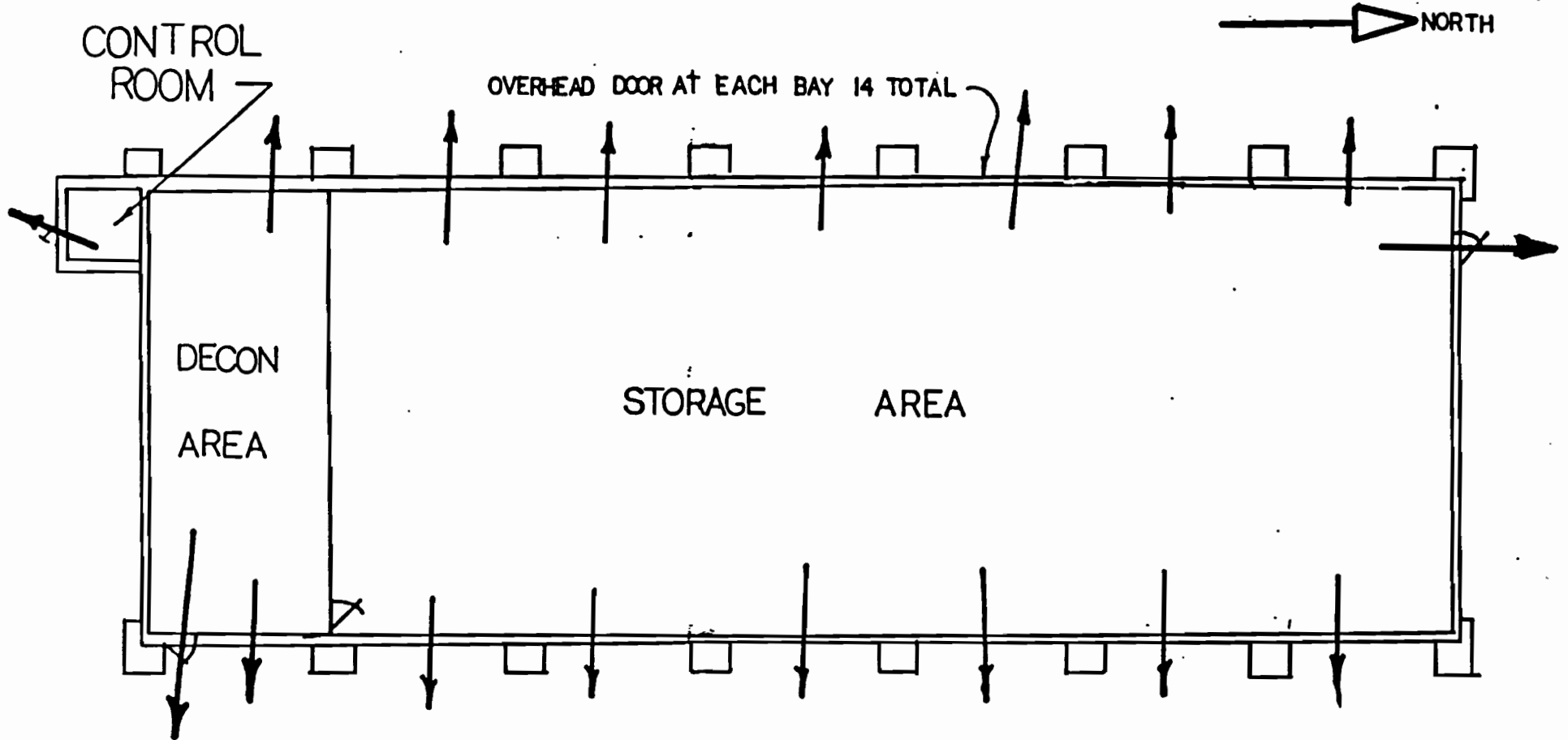
EVACUATION ROUTES

LOVE CANAL ADMINISTRATION BUILDING



////// EXIT DOORS

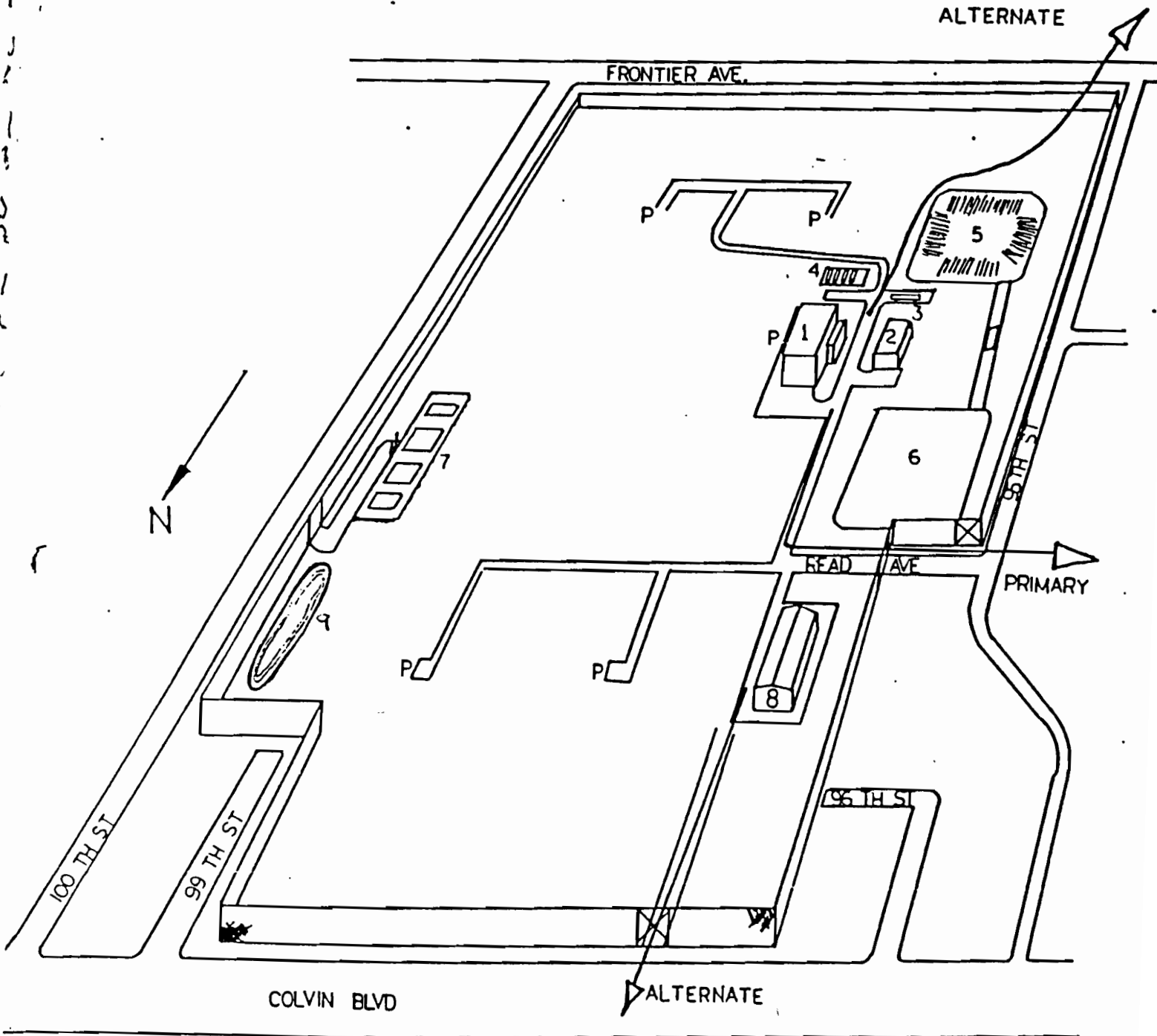
EVACUATION ROUTES



BUILDING PLAN

DECONTAMINATION/DRUM STORAGE FACILITY

SITE EVACUATION ROUTES



LOVE CANAL SITE

JANUARY 1992
APRIL 1993

- | | |
|---------------------------------|---------------------------------|
| 1 LEACHATE TREATMENT FACILITY | 6 STAGING AREA |
| 2 ADMINISTRATION BUILDING | 7 SEWER SEDIMENT FACILITY |
| 3 PLASMA ARC UNIT TRAILER | 8 DECONTAMINATION/DRUM FACILITY |
| 4 SLUDGE STORAGE TANKS | 9 EARTHEN BERM |
| 5 DEWATERING CONTAINMENT FACIL. | P PUMP STATION |

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 NYSDEC Operation & Maintenance Section Supervisor

BOMB THREATS, SEVERE WEATHER AND ACTS OF VANDALISM

SUMMARY OF AGREEMENTS WITH EMERGENCY RESPONSE OFFICIALS

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 NYSDEC employee arrives. In addition, a security system will be centrally monitored by Security Today, Inc.
2. Officials from the Niagara Falls Fire Department were given a tour 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 DEC 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. 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, either the New York State Spill Response Number (Buffalo: 851-7220, 7:30 a.m. - 4:30 p.m.; or (800) 452-7362 anytime) will be called or the Site's carbon removal contractor will be called.

ARRANGEMENTS WITH AUTHORITIES

The Region 9 NYSDEC has contracts with two cleanup contractors which are obligated to respond to a spill within 2 hours.

ARRANGEMENTS WITH AUTHORITIES

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

AMENDMENT OF CONTINGENCY PLAN

APPENDIX

SITE DESCRIPTION AND OPERATION

The Love Canal leachate collection and treatment system was constructed to prevent the outward migration of chemical contamination from the abandoned hazardous waste landfill. The leachate collection system consists of approximately 7000 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. On the eastern edge of the site, across the cap from the treatment plant, is the sewer dewatering facility consisting of settling tanks and a sand filter.

At 95th Street and Read Avenue is the Decontamination/Drum Storage Building. This building has a capacity for 2000 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.

LOVE CANAL TREATMENT FACILITY
95TH ST. + READ AVE.
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 TWO OPERATORS AND ONE MAINTENANCE ASSISTANT FROM 7:30 AM - 4:00 PM MONDAY-FRIDAY ONLY.

KEYS - ENGINES 7, 9, T2 and CAR 80 HAVE WHICH OPEN BOTH BLDGS.

EMERGENCY PHONE NO. - IN THE EVENT OF AN EMERGENCY AT THIS SITE ONE OF THE PLANT PERSONNEL LISTED BELOW SHOULD BE NOTIFIED AS SOON AS POSSIBLE.

BRIAN SADOWSKI
731-5654
MAURICE MOORE
283-5230
LOREN GREFNE
283-2335

ENTRY GATE - THERE IS ONLY ONE VEHICLE ENTRY GATE TO THIS FACILITY. IT IS LOCATED ON 95TH ST. APPROX. 1,000 FEET NORTH OF READ AVE. THIS GATE IS MADE UP OF TWO SECTIONS. ONE SECTION IS REMOTELY CONTROLLED FROM THE ADMINISTRATION BLDG AND TREATMENT FACILITY AND THE OTHER WHICH IS PADLOCKED MAY BE OPENED MANUALLY BY CUTTING THE PADLOCK.

HYDRANTS - THERE IS ONLY ONE HYDRANT WITHIN THE FENCED AREA. IT IS LOCATED '150 NORTH OF THE TREATMENT PLANT ON THE ENTRANCE ROAD.

THE 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 N/W CORNER OF THE BUILDING. THERE CAN BE UP TO TWO VEHICLES PARKED IN THIS AREA.

MAIN ELECTRIC: LOCATED IN THE S/W CORNER OF THE BUILDING
(SEE DRAWING)

MAIN WATER SHUTOFF: LOCATED IN THE S/E CORNER OF THE BUILDING
(SEE DRAWING)

ALARM PANEL IS LOCATED INSIDE THE MAIN DOOR ON THE NORTH END OF THE BUILDING. THERE ARE TWO ZONES. ZONE #1 IS THE EAST HALF OF THE BUILDING AND ZONE #2 IS THE WEST HALF OF THE BUILDING.

DETECTORS - THERE ARE SMOKE AND HEAT DETECTORS IN THIS BUILDING.

MAIN GAS SHUTOFF. THE MAIN GAS SHUTOFF IS LOCATED '50 S/W OF THE BUILDING
(SEE DRAWING)

THE 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 FIREFIGHTING WATER RUNOFF SHOULD BE FLUSHED INTO THIS TRENCH IF POSSIBLE.

IT IS THE OPINION OF THE SENIOR TREATMENT PLANT OPERATOR 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 GAL. SLUDGE STORAGE TANK LOCATED IN THE N/W CORNER OF THE BUILDING. THERE ARE FOUR 10,000 GAL. 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 MAIN DOOR ON THE CENTER OF THE WEST WALL (SEE DRAWING)

MAIN WATER SHUTOFF: LOCATED IN THE COMPRESSOR ROOM (SEE DRAWING)

MAIN GAS SHUTOFF LOCATED APPROX. '50 S/W 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 TWO SMOKE AND HEAT DETECTORS. THEY ARE CENTRALLY MONITORED BY SECURITY TODAY, INC.

BECAUSE OF THE HAZARDOUS NATURE OF THE MATERIALS IN THE TREATMENT PLANT, OFFICERS WILL INSURE THAT ALL PERSONNEL ARE PROPERLY EQUIPPED WITH FULL PROTECTIVE CLOTHING AND BREATHING APPARATUS BEFORE ENTERING THE GATE.

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 GAL. HOLDING TANK FOR EVENTUAL TREATMENT IN THE SYSTEM.

B/C DENNIS D. LONG

95TH ST.

READ AVE

MANUAL GATE



HYDRANT

VENT. FAN SWITCHES

SLUDGE HOLDING TANK

GARAGE AREA

ADMINISTRATIVE BLDG.

TREATMENT PLANT

CARBON LOADING PAD

MAIN ELECTRIC

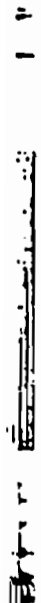
MAIN WATER SHUTOFF

MAIN WATER SHUTOFF

GAS SHUTOFF BOTH BLDGS.

SLUDGE SIG. TANKS

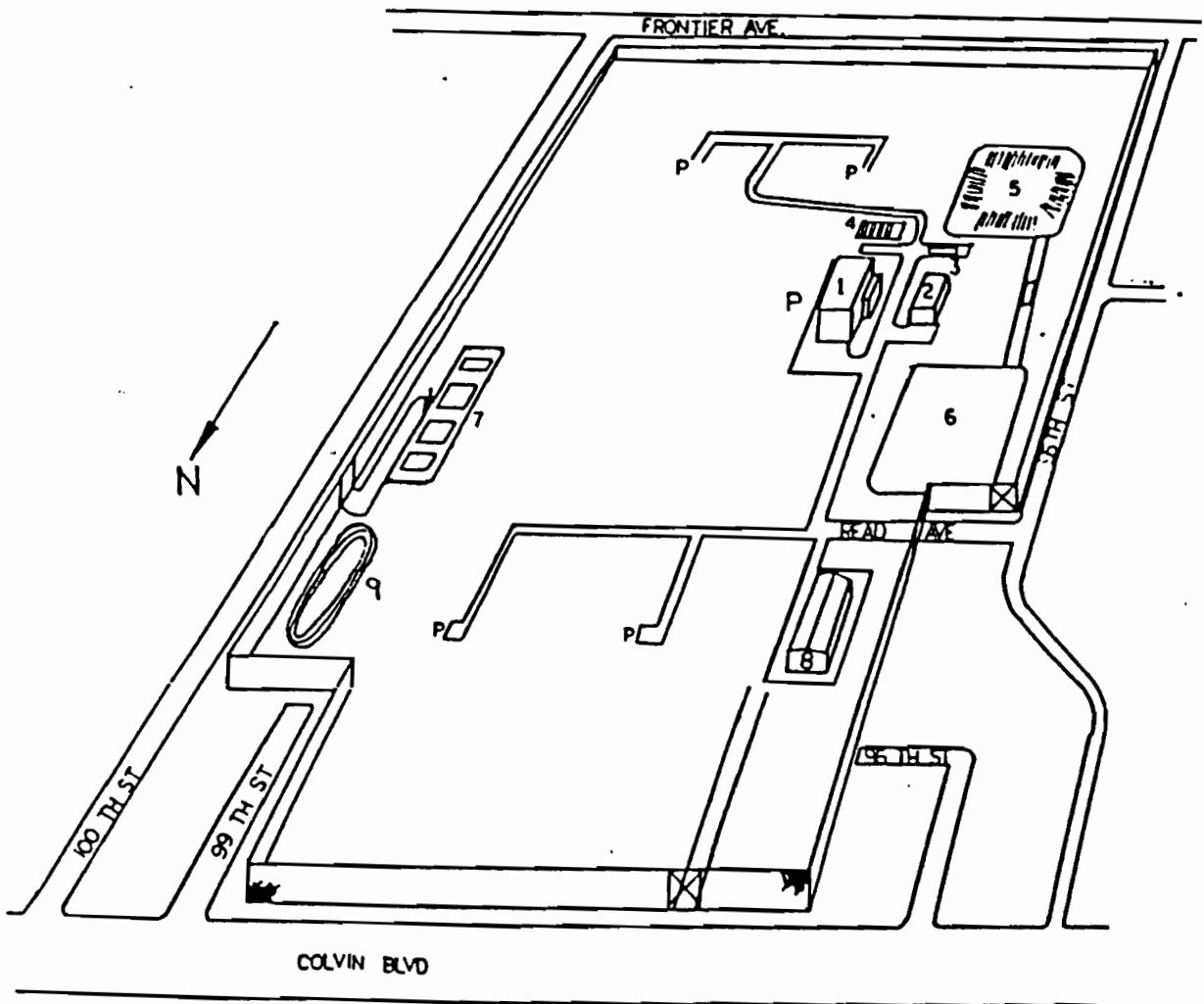
MAIN ELECTRIC



KEY TO HAZARDOUS MATERIAL STORAGE

LOCATION

- 1 See Treatment Facility Key
- 2 Maximum 10 gallons of flammable liquids in laboratory and garage
- 3 No hazardous materials present
- 4 22,356 gallons (approx.) of highly toxic sludge and incinerable organics at this location and outside number eight (8) in three mobile tank trailers. This liquid is considered flammable because of the presence of 2%-5% toluene.
- 5 Contains construction and demolition debris buried under approx. 3 feet of clay and soil
- 6 No hazardous materials stored
- 7 Currently empty. For wastewater storage only. Hypalon[®] lining.
- 8 Drums contain non-flammable solids only. 275 gallon diesel oil tank in southwest corner.



LOVE CANAL SITE

FEBRUARY 1990 APRIL 1993

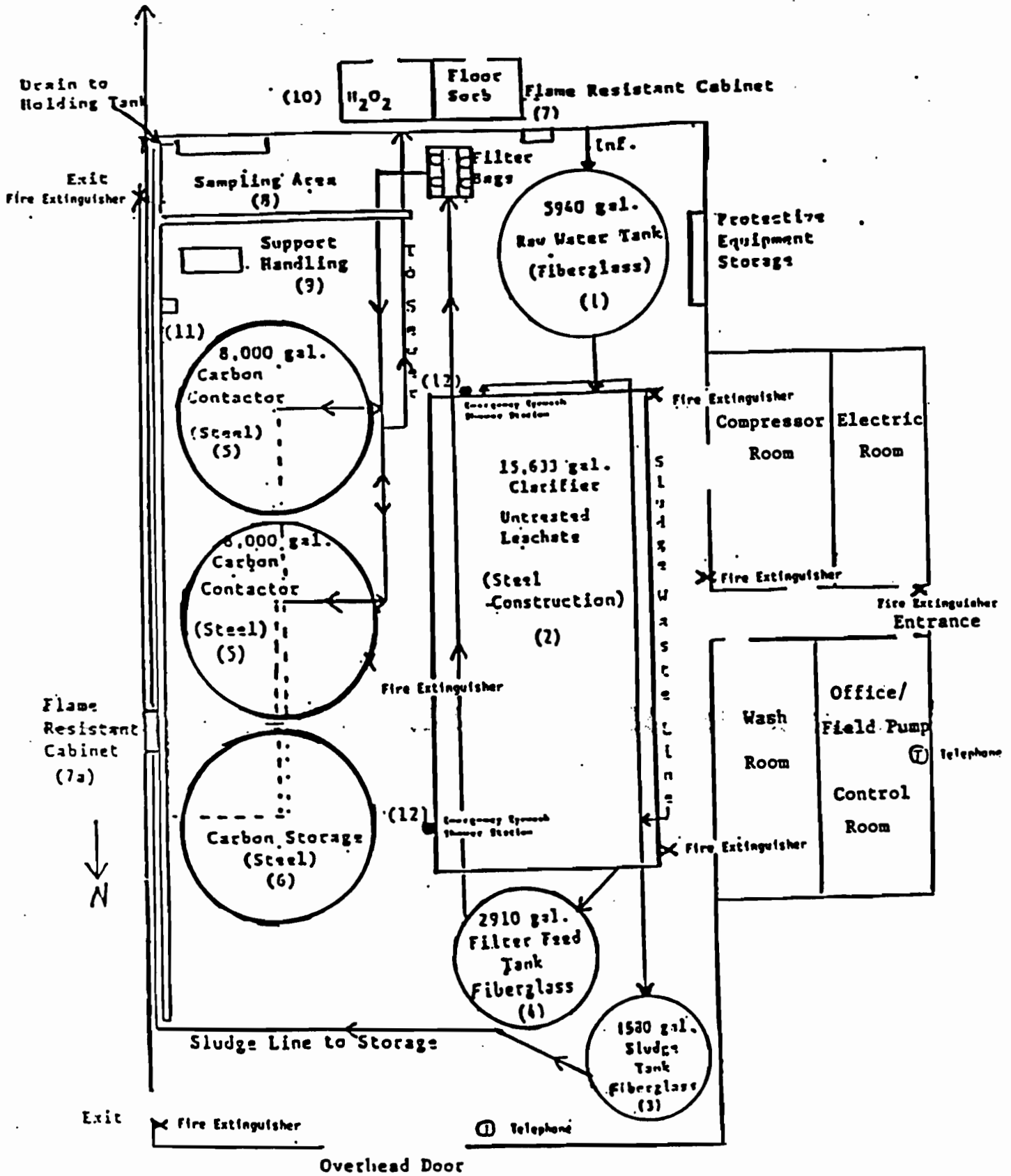
JANUARY 1992

- | | |
|---------------------------------|---------------------------------|
| 1 LEACHATE TREATMENT FACILITY | 6 STAGING AREA |
| 2 ADMINISTRATION BUILDING | 7 SEWER SEDIMENT FACILITY |
| 3 PLASMA ARC UNIT TRAILER | 8 DECONTAMINATION/DRUM FACILITY |
| 4 SLUDGE STORAGE TANKS | |
| 5 DEWATERING CONTAINMENT FACIL. | 9 Earthen Berm. |
| | P - PUMP STATION |

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 1500 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 work space.
9. Support handling area with variable air and clean water pressures.
10. Hydrogen peroxide stored in this blockhouse 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



TREATMENT FACILITY

FLOOR PLAN/EMERGENCY EQUIPMENT/COMMUNICATION LOCATIONS

1/90, REVISED 1/12

Key on Following Page
Drawing Not To Scale

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).

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.

Additional decontamination procedures are described on the following pages.

INCIDENT REPORT FORM

T0: Section Chief, Operations and Maintenance Section
Bureau of Construction Services
Division of Hazardous Waste Remediation

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 _____
Approximate quantity _____
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 _____

CONTINGENCY PLAN REVISION LOG

| DATE | AREA REVISED | NEW ACTION |
|---------|---|---|
| 9/05/89 | Evacuation Plan | Air horn (3 long blasts) added |
| 9/05/89 | Procedures for Explosion Written | |
| 3/92 | Emergency Coordinators | Revised List. New DEC Region 9 Office Added |
| 3/92 | General Response Overflow of Holding Tanks | Turn off field pumps at MDCP Panel or at pump chamber power panels |
| 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 Earthen Berm and Removed Public Information Office |

SPEED MESSAGE

TO Ben *file*

FROM Jerry

SUBJECT Love Canal Contingency Plan

DATE 4/20/93

Please review Bureau changes and let me know if any questions arise. Should be straight forwarded. Substitute new sheets and make a copy for yourself.

1 Please return my copy! Thanks!

To: Jerry,
No comments
BON

SIGNED

ORIGINAL

Love Canal Containment Facility

Contingency Plan

Revised:

SPEED MESSAGE

TO
GERALD RIVER JR. P.C. N.Y.S.D.C.
OTM SECTION CHIEF
CENTRAL OFFICE - ALBANY

FROM
BRIAN SPADOWSKI N.Y.S.D.C.
OTM SECTION
LOWE CANAL - NIAGARA FALLS

SUBJECT CONTINGENCY PLAN REVISIONS

DATE APRIL 14, 1993

PLEASE FIND ENCLOSED REVISIONS (UPDATES) TO
OUR CONTINGENCY PLAN. PLEASE PLACE THE INSERTS INTO THEIR
RESPECTIVE AREAS. THANK YOU.

APR 19

cc. J. SCIASCIA w/ENCL.
ENV. ENGR. III
BUFFALO

SIGNED *Amin*

ORIGINAL

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
 LOVE CANAL CONTAINMENT FACILITY
 CONTINGENCY PLAN
 CONTENTS

| | | | |
|----|---|-----------|----|
| A) | Emergency Telephone Numbers | | 1 |
| B) | Emergency Coordinators | | 2 |
| C) | Response Procedures | | |
| | 1. General Response | | 4 |
| | 2. Treatment Facility | | |
| | a) Aqueous Phase Leaks | | 5 |
| | b) Non-Aqueous Phase Leaks | | 6 |
| | c) Clarifier Leak | | 7 |
| | d) Fire | | 8 |
| | e) Explosion | | 9 |
| | 3. Administration Building | | |
| | a) Spills | | 10 |
| | b) Fire | | 11 |
| | 4. Site | | |
| | a) Sludge Storage Tank Rupture | | 12 |
| | b) Overflow of Holding Tanks | | 14 |
| | c) Drum Rupture | | 15 |
| D) | Equipment List | | 16 |
| E) | Evacuation Plan | | |
| | 1. Treatment Facility and Administration Bldg. | | 22 |
| | 2. Field Operations | | 22 |
| | 3. Bomb Threats, Severe Weather and Vandalism | | 28 |
| F) | Agreements with Response Officials | | |
| | 1. Police Department | | 29 |
| | 2. Fire Department | | 29 |
| | 3. Hospital | | 29 |
| | 4. Cleanup Contractors | | 29 |
| G) | Amendment of Contingency Plan | | 31 |
| H) | Appendix | | 32 |
| | Site Description and Operation | | |
| | Niagara Falls Fire Department Standard Operating Procedures | | |
| | Hazardous Material Storage Areas | | |
| | Air Monitoring | | |
| | Decontamination of Equipment and Tools | | |
| | Incident Report Form | | |
| | Contingency Plan Revision Log | | |

EMERGENCY TELEPHONE NUMBERS

EMERGENCY 911

AMBULANCE SERVICE

Frontier Ambulance Service 285-3663
Niagara Ambulance Service 284-4228
Niagara Falls Memorial Hospital 278-4000

POLICE

Niagara Falls 278-8280
Sheriff 285-5355
State Police 297-0755

SPILL CONTROL

N.Y.S. Oil and Hazardous
Material Spill Notification (518) 457-7362 OR (800) 457-7362
National Response Center (800) 424-8802
Niagara Falls Wastewater 278-8138
Treatment Plant 286-4973 Shift Operator

NIAGARA COUNTY HEALTH DEPARTMENT

Business Hours 284-3124
After 5 pm & weekends 439-7430

NIAGARA COUNTY

Emergency Management Office
Emergency Operating Center 283-0371

EMERGENCY COORDINATORS

During normal operations at the Love Canal Leachate Treatment Facility, there are two on-site 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 on the following page.

EMERGENCY COORDINATORS

| Name | Telephone Number | | Title |
|--------------------|------------------|----------------|-----------------------------|
| | Office | Home | |
| * Brian Sadowski | (716) 283-0111 | (716) 731-5654 | Senior Treat. Fac. Operator |
| 2) Maurice Moore | (716) 283-0111 | (716) 283-5230 | Treatment Fac. Operator |
| 3) Loren Green | (716) 283-0111 | (716) 283-2335 | Maintenance Assistant |
| 4) Abul Barkat | (716) 851-7220 | (716) 691-4157 | Environmental Engineer II |
| 5) Michael Hinton | (716) 851-7220 | (716) 433-9387 | Environmental Engineer II |
| 6) Joseph Sciascia | (716) 851-7220 | (716) 631-8118 | Environmental Engineer III |

Additionally, there are personnel based in Albany who are on-site from time to time. Again, these are listed in order of priority.

Albany, NY-based personnel

| | | | |
|----------------|----------------|----------------|---------------------------|
| *Gerald Rider | (518) 457-0927 | (518) 674-5985 | Section Chief |
| 7) John Strang | (518) 457-0927 | (518) 235-7883 | Environmental Engineer II |

*Mr. Rider will act as primary emergency coordinator whenever he is on-site. Mr. Strang, when on-site, will act as primary emergency coordinator in Mr. Rider's absence. If neither Mr. Rider nor Mr. Strang is on-site, Mr. Sadowski will act as primary emergency coordinator.

RESPONSE TO EMERGENCY SITUATIONS
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 numbers for police, fire or ambulance is 911. Other emergency phone numbers are listed on Page 1.
3. Shut down all plant process pumps and field pumps. Field pumps can be shut down from the treatment plant office control panel by turning all switches on the MDCP to the "off" position. Plant pumps can be shut down by closing the air valve at each individual pump. If the emergency situation exists within the treatment area, plant pumps are to be shut down by turning off the air compressor in the mechanical room.
4. Don Level B protection until lesser level of protection is ascertained to be appropriate.
5. Determine severity of situation based on amount of release, material involved and area damaged.
6. Stop any continuous release if able to do so without entering contaminated environment.
7. Inform the appropriate emergency response organizations and the NYSDEC Central Office in Albany.
8. Proceed with response and cleanup activities outlined in each section.
9. 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 Chief of the Operation & Maintenance Section in a written report. An incident report form is included in the Appendix.

AQUEOUS PHASE LEAKS
(RAW WATER AND FILTER FEED TANKS, 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 NYSDEC 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 spill, duplicate equipment is stored in the administration building storage room.

c. Action to be taken.

1. Shut down all plant processes.¹
2. Suit up in protective clothing and supplied air.
3. Close upstream valve.
4. If leak is continuing, take action to contain 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.
4. Bleed pipe from valve to source of leak if necessary.
5. 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.
6. Steam clean affected areas of floor using high pressure steam from Steam Jenny.
7. Mop floor and dispose of mop(s) when done with cleanup.
8. Decontaminate any equipment which became contaminated during leak (such as lawn mower or items stored under adsorber unit)

¹ Process pumps may be run under the observation of the treatment plant operator for the purposes of emptying a leaking tank.

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 through the Special Projects Section to 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.

TREATMENT PLANT

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 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 NYSDEC person must supervise the cleanup.
- 2) Protective clothing, shovels, hard bristle brooms, absorbent pags, 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 storage blockhouse

c. Action to be taken.

1. Shut down all plant processes.¹
2. Suit up in protective clothing and supplied air.
3. 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.
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 floor sorb 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 has 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)

¹ Process pumps may be run under the observation of the treatment plant operator for the purposes of emptying a leaking tank.

Final cleanup and inspection:

All shovels, mop heads, other expendables and protective clothing should be placed in drums for final disposal in accordance with the Site's drum storage policy. Immediate arrangements should be made through Albany 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 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.

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 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 NYSDEC person must supervise the cleanup.
 - 2) Protective clothing, shovels, 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 spill, duplicate equipment is stored in the administration building storage room.
 - 3) Floorsorb is located in the storage blockhouse
- c. Action to be taken.
1. Shut down clarifier feed pump if on.
 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 floor sorb 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 Cleanup
- 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 Albany 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 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.

TREATMENT PLANT

FIRE

- A) SMALL FIRE with no threat of chemical contamination
- a. Protective clothing required:
Level D or greater level of protection if already being worn.
 - b. Equipment and materials required:
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 the fire, take the same action described below for a large fire. Dial 911.
 5. Watch for reignition.
 6. Notify Albany DEC Office.
 - d. Final cleanup 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 DEC Guidance.
- b. Equipment and materials required:
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 or Public Information Office at the discretion of the emergency coordinator. Emergency coordinator should be able to open gate and direct Fire Dept. personnel. At least one NYSDEC 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 Cleanup and inspection
Approval will be obtained by the Fire Department 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.

TREATMENT PLANT

EXPLOSION.

a) Protective Clothing Rquired:

See Action to be Taken.

b) Equipment and Materials required:

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 buildup. Monitor air, use Level B personal protection and explosion proof equipment.

d) Final cleanup 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.

TREATMENT PLANT

SPILL - ADMINISTRATION BUILDING

No hazardous waste is stored in or near the administration building. At times there may be ignitable solvents in the lab room. Ignitable solvents will not exceed 5 gallons and will not be stored overnight.

a. Protective clothing required:

Level C protection.

b. Equipment and materials required:

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 will be put into effect until the spill is cleaned up.
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.

ADMINISTRATION BUILDING

FIRE - ADMINISTRATION BUILDING

A) SMALL Fire

a. Protective clothing required:
Level D.

b. Equipment and materials required:
Fire extinguishers are located in each room as shown on the floor plan.
(Floor plan 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 Albany DEC Office.

d. Final cleanup 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:

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 or Public Information Office at the discretion of the emergency coordinator. Emergency coordinator should be able to open gate and direct Fire Dept. personnel. At least one NYSDEC 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 Cleanup and inspection

Approval will be obtained by the Fire Department 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.

RUPTURE OF SLUDGE STORAGE TANKS

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 NYSDEC 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 storage blockhouse.

c. Action to be taken.

I. Pinhole Leaks

1. Suit up in protective clothing and supplied air.
2. 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.
3. Bleed pipe from valve to source of leak if necessary.
4. Take shovels full of floor sorb and apply to sludge perimeter and leak area.
5. Cover the spill with floorsorb until the sludge is not permeating the upper layer.
6. Shovel the spent floorsorb into drums. Position the drum so that drum moving equipment has access to it.
7. Scrub containment area with hard bristle brooms using hot water and detergent solution. Pump all water including rinse water into the chemical drain on the pad adjacent to the containment area.
8. Scrub containment area a second time using hot water and detergent solution. Pump all water including rinse water into the chemical floor drain.
9. Decontaminate all cleanup equipment and any equipment which became contaminated during leak.

SITE

RUPTURE OF SLUDGE STORAGE TANKS (CONTINUED)

- c. II. Rupture
1. Evacuate treatment facility.
 2. Call NYSDEC SPILL NOTIFICATION (518) 457-7362 to request emergency cleanup contractor.
 3. If adequate manpower is available, suit up in protective clothing and supplied air to estimate damage and amount spilled.
 4. One NYSDEC person is to remain "clean" to be able to enter buildings.
 5. Restrict visitor access to the site
 6. 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.
 7. Cleanup remaining sludge in containment area by following steps 4 thru 9 for Pinhole Leak Procedure, previous page.
 8. Cover ruptured area with polyethylene to minimize odor.

Final cleanup and inspection:

All shovels, mop heads, brooms, and protective clothing should be placed in drums for final disposal. ~~Immediate~~ arrangements should be made through Albany 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.

SITE

OVERFLOW - SOUTH SECTOR HOLDING TANK

- a. Protective clothing required:
Level C protection
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:
50 lb. bags of floorsorb are available in the storage blockhouse 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 NYSDEC 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 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 Cleanup and inspection
Inspect pump chamber 2 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.

SITE

DRUM RUPTURE

- a. Protective clothing required:
Level C protection.
Air-purifying full face mask respirator.
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:
50 lb bags of floorsorb, available in the blockhouse and Decon/Drum Bldg.
Shovels, stored in the treatment plant.
55 gallon and overpack drum(s), stored in the Decon/Drum Storage Building (DDSF)
Pallets, stored in the DDSF
Tractor, with forks and drum hooks
Labels and paint pen, stored in administration bldg.
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 hooks. **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 Cleanup and inspection
Visually inspect soil, pad, or floor. Also inspect pallets and other drums near area where drum ruptured for signs of contamination.
Decontaminate all tools accordingly.

SITE

LIST OF EMERGENCY EQUIPMENT

A) Treatment Facility

| ITEM (# of) | LOCATION | DESCRIPTION AND CAPABILITIES |
|---|---|--|
| Fire extinguishers (7) | See Floor Plan: Treatment Facility Emergency Equipment Locations. | Model 10H ABC Multiuse CB dry chemical fire extinguisher for use on A,B,C type fires A - wood, paper B - flammable liquids C - electrical |
| Scott ska-pak emergency escape unit (4) | in cabinet #1 on the SW wall of the treatment plant area | The ska-pak is a full 5 min. escape SCBA. Its primary purpose is for use with an air line supply. |
| Half face and full respirators, cartridge type, (3) | on storage rack in hallway | For use in the presence of face organic vapors and acid gases, <u>only</u> when oxygen content is <u>greater than 19.5%</u> |
| Compressed air cylinder - breathing quality (2) | along east wall | Airlines are kept at the NW corner of the treatment room area. Supplies air suitable for breathing for a minimum 2 hours. |
| protective coveralls, gloves, boots, and hardhats (6 minimum) | in cabinet #2 SW wall of treatment room. | Coveralls, gloves and boots are used to protect against dermal contamination. |

EQUIPMENT LIST

LIST OF EMERGENCY EQUIPMENT

A) Treatment Facility (continued)

| <u>ITEM (# of)</u> | <u>LOCATION</u> | <u>DESCRIPTION AND CAPABILITIES</u> |
|---------------------------------------|---------------------------------------|---|
| 50 lb. bags of absorbent (10 minimum) | in block house south of plant | Absorbent material used to contain spills and increase solids content of sludges and slurries |
| First aid kits (3) | 1 in plant office 2 in locker room | Two basic and one industrial 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 is IDLH |

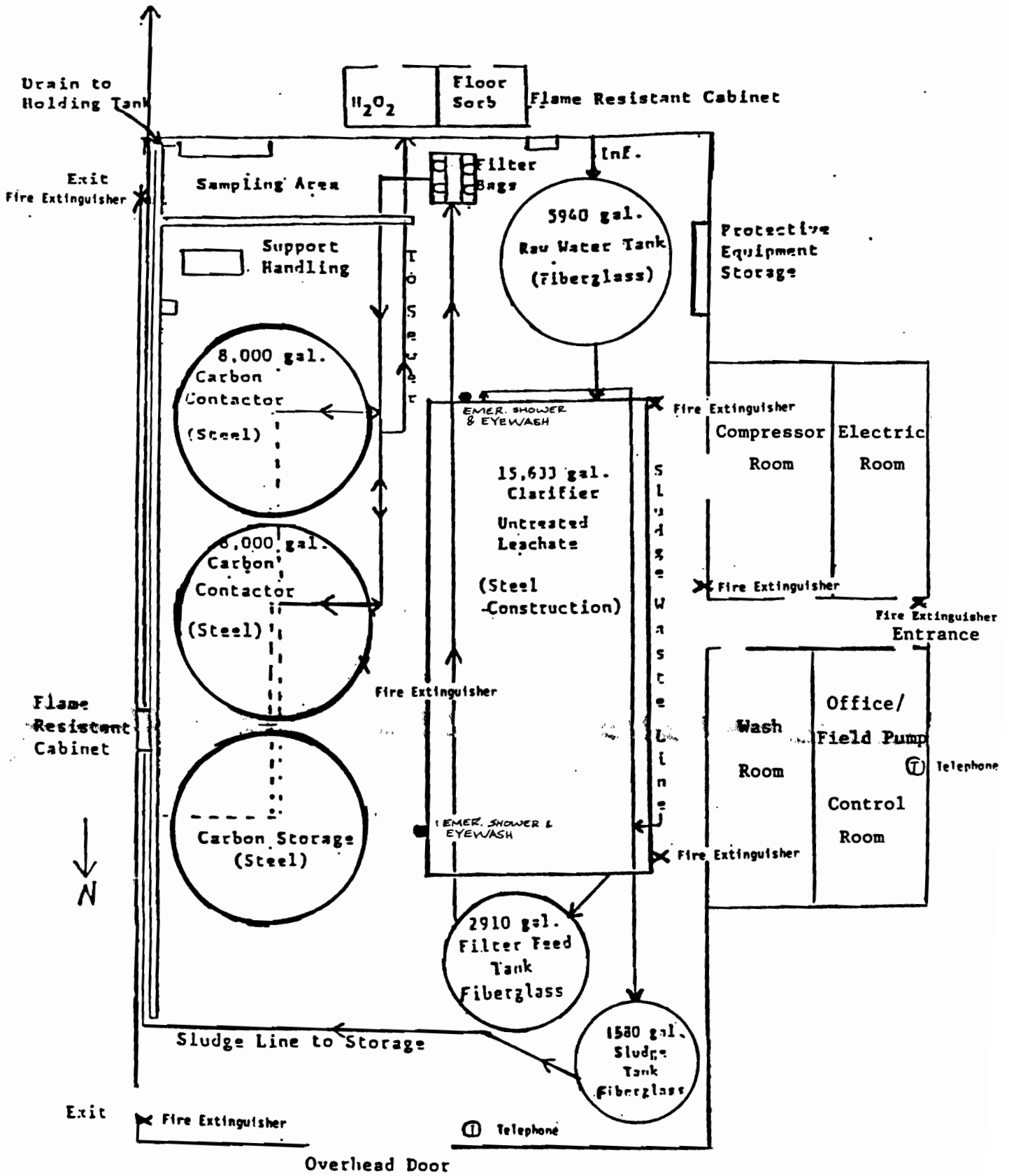
B) Administration Building

| | | |
|--|---|---|
| Scott air-packs (4) | 4) located in the Adm. Bldg. storage room center row. | 30 minute air supply with full face masks. Positive pressure self-contained breathing apparatus |
| Bellow and tank resuscitation units (1) | 1) located in storage room, center row. | Used to resuscitate accident victims overcome by fumes and/or lack of oxygen |
| Fire extinguisher (7) | in each room | Dry chemical and CO2, 17 lb. |
| Protective coveralls, gloves, boots and hard hats | in storage room. Minimum 3 boots size 12 all other minimum quantity: 12 | Coveralls, gloves and boots are used for dermal protection |
| Disposable half mask respirator (6) | in equip. storage room | 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 minimum each make & 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 storage room | For signalling people in field |

EQUIPMENT LIST

Administration Building (continued)

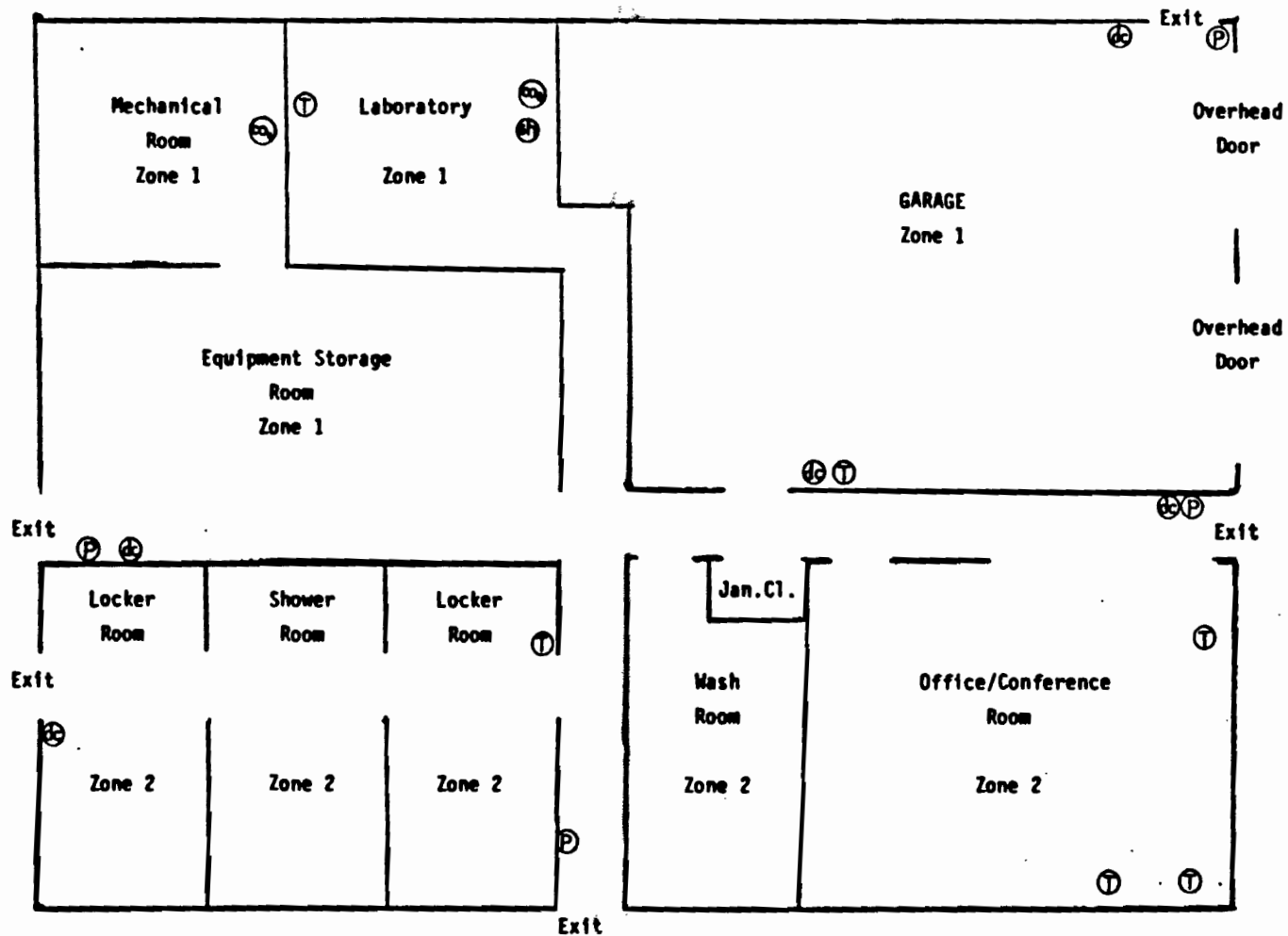
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|---|--|---|
| Combination Oxygen meter and Explosivemeter (1) | Laboratory | Measures percent of oxygen in the atmosphere; measures percent of lower and upper explosive limit of atmosphere |
| HNu Photoionizer (1) | Laboratory | Capable of characterizing the general concentration of organic vapors in air. |
| C) Decontamination and Drum Storage Building | | |
| Fire extinguisher (5) | See Drawing: Emergency Equipment Locations | Dry chemical, 10 lb. |
| 50 lb. bags of absorbent (20 minimum) | 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. |



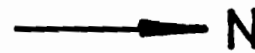
TREATMENT FACILITY

FLOOR PLAN/EMERGENCY EQUIPMENT/COMMUNICATION LOCATIONS

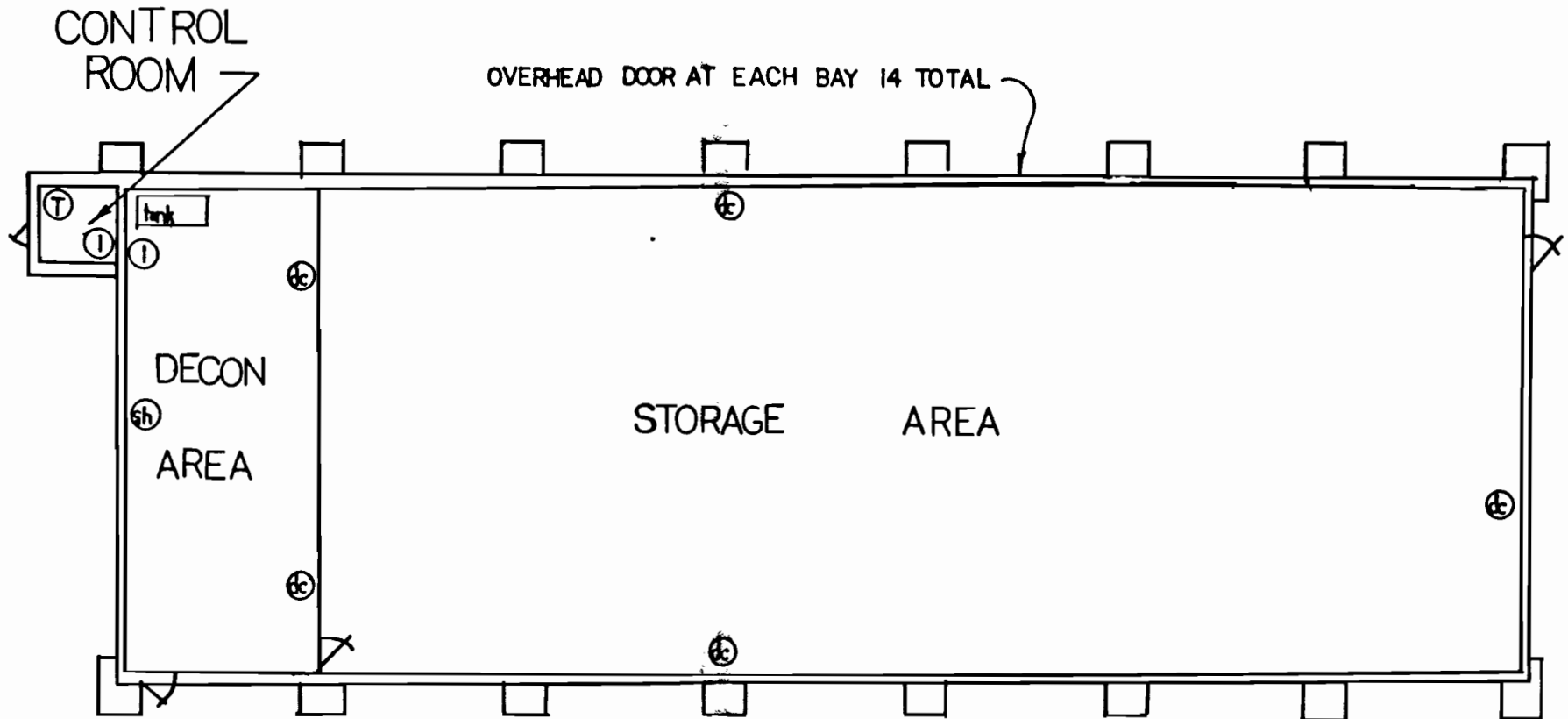
EMERGENCY EQUIPMENT / COMMUNICATION LOCATIONS
 ADMINISTRATION BUILDING FLOOR PLAN -



- (P) PULL STATION FIRE ALARM
- (T) TELEPHONE
- (EWS) EMERGENCY EYE WASH AND SHOWER
- (CO₂) CARBON DIOXIDE FIRE EXTINGUISHER
- (DC) DRY CHEMICAL FIRE EXTINGUISHER



EMERGENCY EQUIPMENT/COMMUNICATION LOCATIONS



TANK IS 275 GAL DIESEL OIL

- Ⓛ INTERCOM
- Ⓣ TELEPHONE
- Ⓢ EMERGENCY EYE WASH AND SHOWER
- Ⓔ DRY CHEMICAL FIRE EXTINGUISHER



BUILDING PLAN

DECONTAMINATION/DRUM STORAGE FACILITY

EVACUATION PLAN

A. EVACUATION OF TREATMENT FAC. ADMINISTRATION BLDG., DECON/DRUM BLDG.

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 - 97th Street at Read Avenue.

B. 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

EVACUATION PLAN

EVACUATION PLAN (CONTINUED)

4. Meeting Areas

The project leader will oversee that all in-the-field personnel meet first in front of the: 1) Treatment Facility; If conditions prohibit meeting in this area, the next meeting areas will be, in priority; 2) 97th Street at Read Avenue; 3) The gate at Frontier Avenue and 95th Street.

5. Evacuate site to Public Information Office

C. FIELD OPERATIONS - CONTRACTOR OPERATIONS

1. Responsibility

The emergency coordinator will be responsible for signal to evacuate and designating the meeting area. The State Project Engineer 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 97th Street and Colvin Blvd.

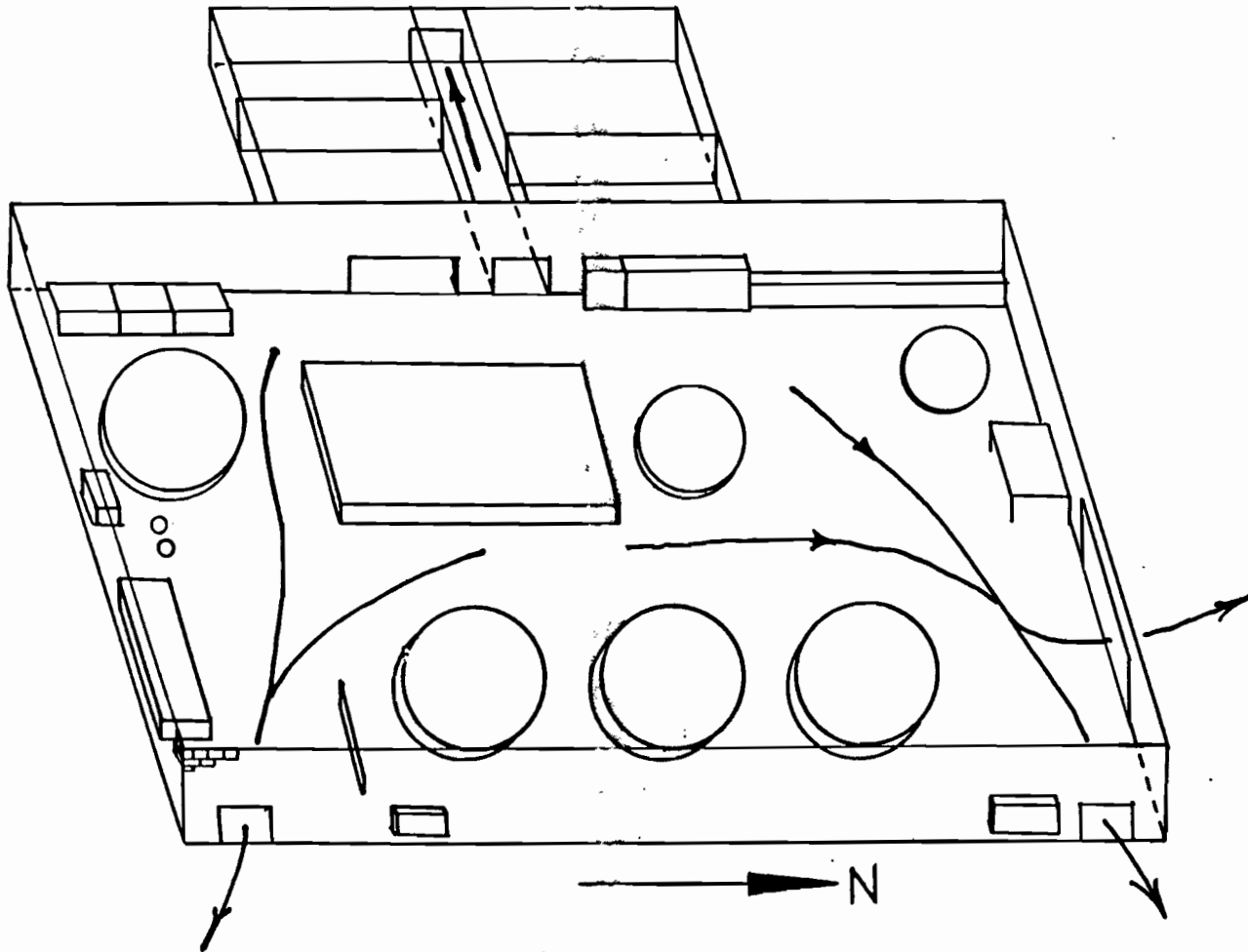
E. RESIDENTIAL AREAS

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.

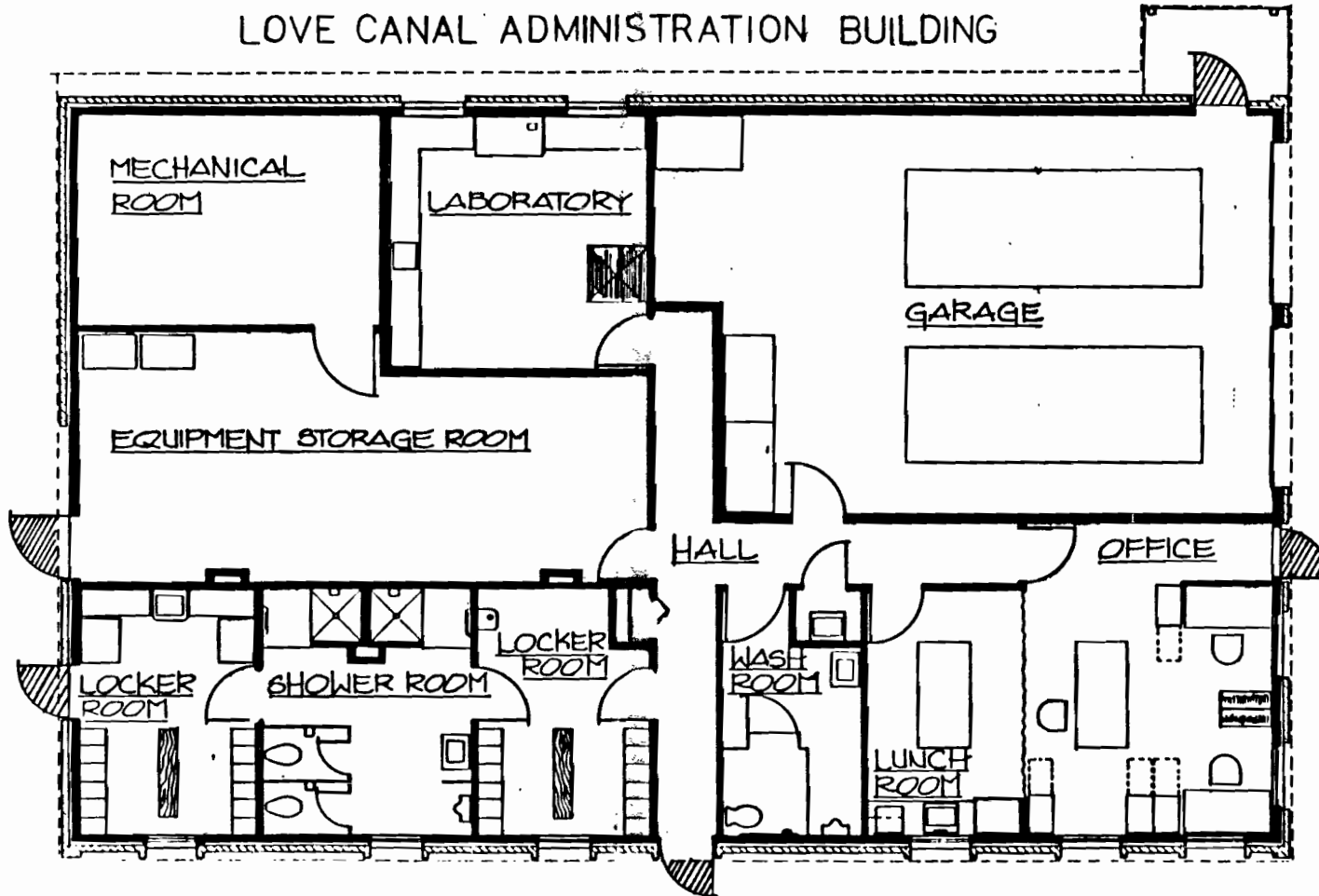
EVACUATION ROUTES

LOVE CANAL LEACHATE TREATMENT FACILITY



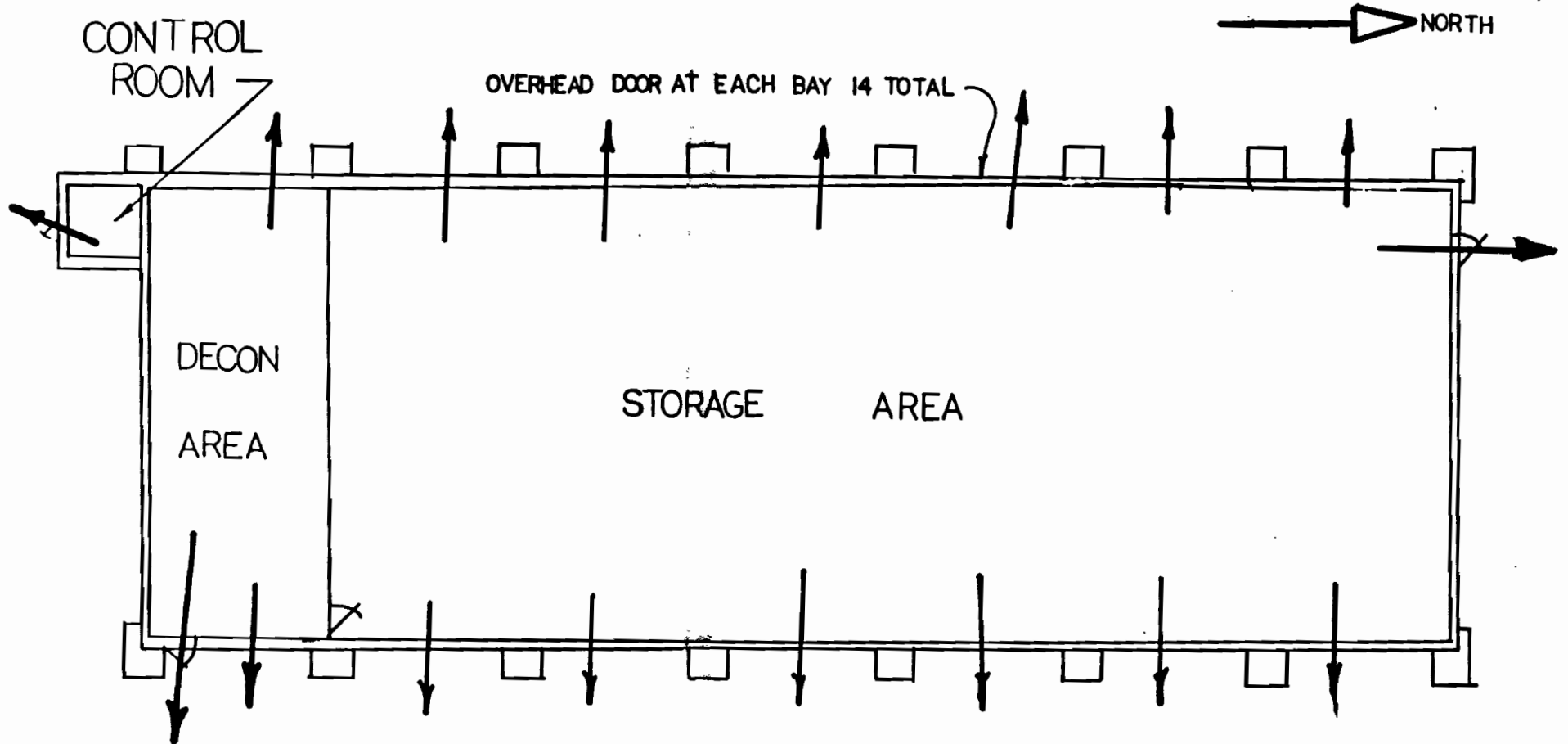
EVACUATION ROUTES

LOVE CANAL ADMINISTRATION BUILDING



— N
////// EXIT DOORS

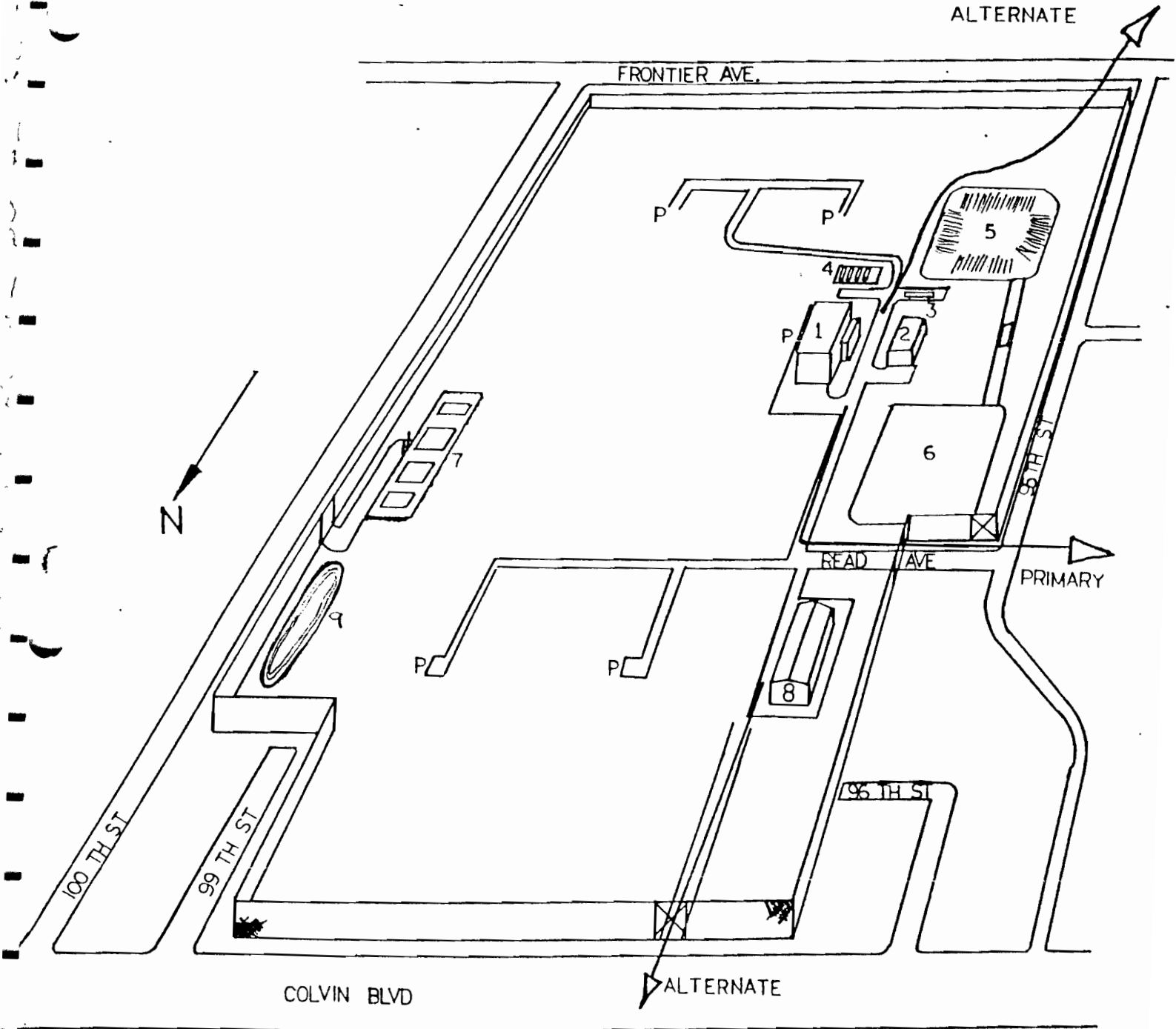
EVACUATION ROUTES



BUILDING PLAN

DECONTAMINATION/DRUM STORAGE FACILITY

SITE EVACUATION ROUTES



LOVE CANAL SITE

JANUARY 1992
APRIL 1993

- 1 LEACHATE TREATMENT FACILITY
- 2 ADMINISTRATION BUILDING
- 3 PLASMA ARC UNIT TRAILER
- 4 SLUDGE STORAGE TANKS
- 5 DEWATERING CONTAINMENT FACIL.

- 6 STAGING AREA
- 7 SEWER SEDIMENT FACILITY
- 8 DECONTAMINATION/DRUM FACILITY
- 9 EARTHEN BERM
- P PUMP STATION

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 NYSDEC Operation & Maintenance Section Supervisor

BOMB THREATS, SEVERE WEATHER AND ACTS OF VANDALISM

SUMMARY OF AGREEMENTS WITH EMERGENCY RESPONSE OFFICIALS

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 NYSDEC employee arrives. In addition, a security system will be centrally monitored by Security Today, Inc.
2. Officials from the Niagara Falls Fire Department were given a tour 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 DEC 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. 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, either the New York State Spill Response Number (Buffalo: 851-7220, 7:30 a.m. - 4:30 p.m.; or (800) 452-7362 anytime) will be called or the Site's carbon removal contractor will be called.

ARRANGEMENTS WITH AUTHORITIES

The Region 9 NYSDEC has contracts with two cleanup contractors which are obligated to respond to a spill within 2 hours.

ARRANGEMENTS WITH AUTHORITIES

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

AMENDMENT OF CONTINGENCY PLAN

APPENDIX

SITE DESCRIPTION AND OPERATION

The Love Canal leachate collection and treatment system was constructed to prevent the outward migration of chemical contamination from the abandoned hazardous waste landfill. The leachate collection system consists of approximately 7000 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. On the eastern edge of the site, across the cap from the treatment plant, is the sewer dewatering facility consisting of settling tanks and a sand filter.

At 95th Street and Read Avenue is the Decontamination/Drum Storage Building. This building has a capacity for 2000 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.

LOVE CANAL TREATMENT FACILITY
95TH ST. + READ AVE.
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 TWO OPERATORS AND ONE MAINTENANCE ASSISTANT FROM 7:30 AM - 4:00 PM MONDAY-FRIDAY ONLY.

KEYS - ENGINES 7, 9, T2 and CAR 80 HAVE WHICH OPEN BOTH BLDGS.

EMERGENCY PHONE NO. - IN THE EVENT OF AN EMERGENCY AT THIS SITE ONE OF THE PLANT PERSONNEL LISTED BELOW SHOULD BE NOTIFIED AS SOON AS POSSIBLE.

BRIAN SADOWSKI
731-5654
MAURICE MOORE
283-5230
LOREN GREFNE
283-2335

ENTRY GATE - THERE IS ONLY ONE VEHICLE ENTRY GATE TO THIS FACILITY. IT IS LOCATED ON 95TH ST. APPROX. 1,000 FEET NORTH OF READ AVE. THIS GATE IS MADE UP OF TWO SECTIONS. ONE SECTION IS REMOTELY CONTROLLED FROM THE ADMINISTRATION BLDG AND TREATMENT FACILITY AND THE OTHER WHICH IS PADLOCKED MAY BE OPENED MANUALLY BY CUTTING THE PADLOCK.

HYDRANTS - THERE IS ONLY ONE HYDRANT WITHIN THE FENCED AREA. IT IS LOCATED '150 NORTH OF THE TREATMENT PLANT ON THE ENTRANCE ROAD.

THE 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 N/W CORNER OF THE BUILDING. THERE CAN BE UP TO TWO VEHICLES PARKED IN THIS AREA.

MAIN ELECTRIC: LOCATED IN THE S/W CORNER OF THE BUILDING
(SEE DRAWING)

MAIN WATER SHUTOFF: LOCATED IN THE S/E CORNER OF THE BUILDING
(SEE DRAWING)

ALARM PANEL IS LOCATED INSIDE THE MAIN DOOR ON THE NORTH END OF THE BUILDING. THERE ARE TWO ZONES. ZONE #1 IS THE EAST HALF OF THE BUILDING AND ZONE #2 IS THE WEST HALF OF THE BUILDING.

DETECTORS - THERE ARE SMOKE AND HEAT DETECTORS IN THIS BUILDING.

MAIN GAS SHUTOFF. THE MAIN GAS SHUTOFF IS LOCATED '50 S/W OF THE BUILDING (SEE DRAWING)

THE 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 FIREFIGHTING WATER RUNOFF SHOULD BE FLUSHED INTO THIS TRENCH IF POSSIBLE.

IT IS THE OPINION OF THE SENIOR TREATMENT PLANT OPERATOR 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 GAL. SLUDGE STORAGE TANK LOCATED IN THE N/W CORNER OF THE BUILDING. THERE ARE FOUR 10,000 GAL. 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 MAIN DOOR ON THE CENTER OF THE WEST WALL (SEE DRAWING)

MAIN WATER SHUTOFF: LOCATED IN THE COMPRESSOR ROOM (SEE DRAWING)

MAIN GAS SHUTOFF LOCATED APPROX. '50 S/W 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 TWO SMOKE AND HEAT DETECTORS. THEY ARE CENTRALLY MONITORED BY SECURITY TODAY, INC.

BECAUSE OF THE HAZARDOUS NATURE OF THE MATERIALS IN THE TREATMENT PLANT, OFFICERS WILL INSURE THAT ALL PERSONNEL ARE PROPERLY EQUIPPED WITH FULL PROTECTIVE CLOTHING AND BREATHING APPARATUS BEFORE ENTERING THE GATE.

SOP

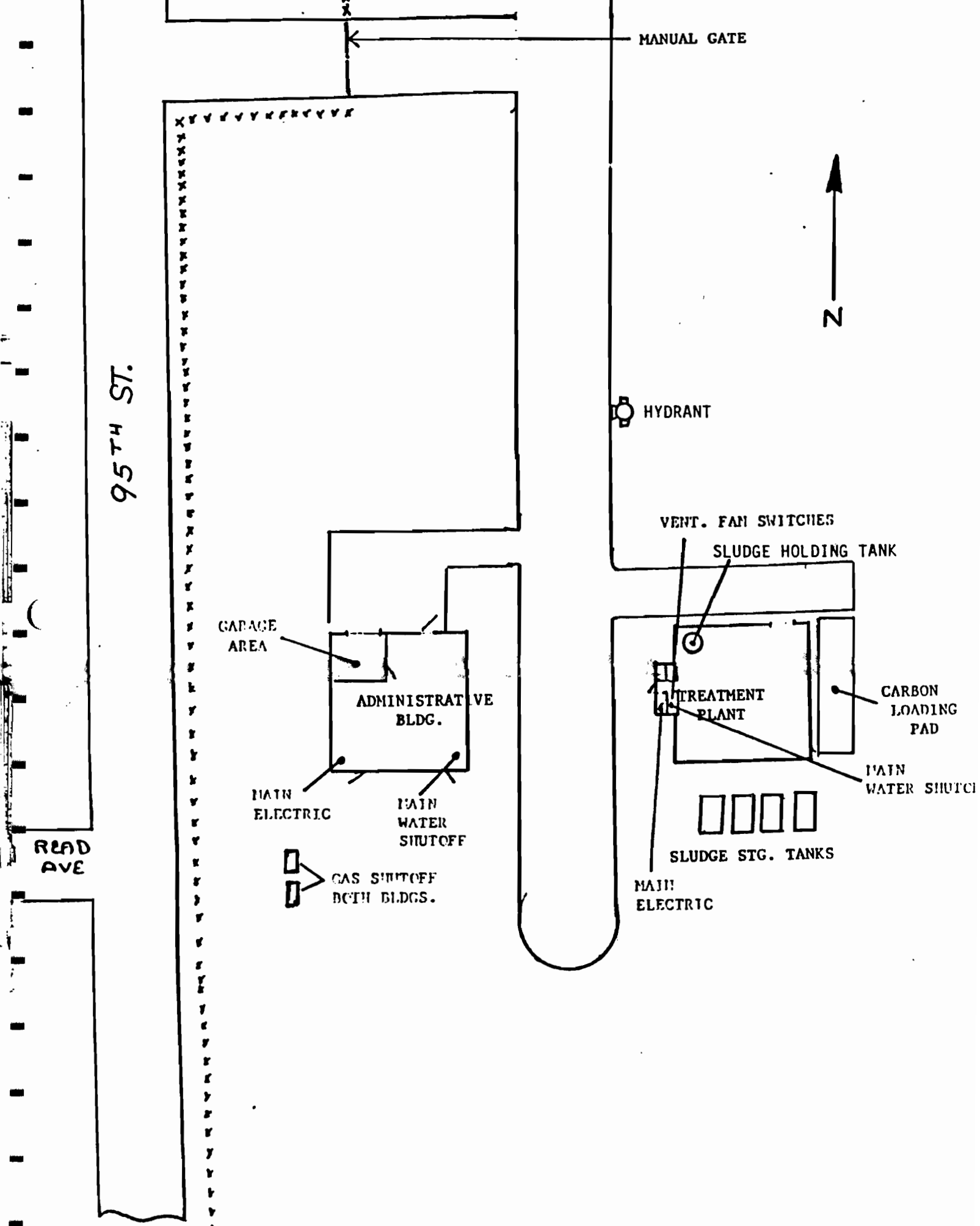
FIRST ENGINE: MASK UP AT THE GATE.
HIT HYDRANT ON THE WAY IN OR CALL FOR THE
SECOND DUE ENGINE TO LAY A SUPPLY LINE.
PARK UPWIND AND ATTACK THE FIRE.

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 GAL. HOLDING TANK FOR EVENTUAL TREATMENT IN THE SYSTEM.

B/C DENNIS D. LONG



95TH ST.

MANUAL GATE



HYDRANT

VENT. FAN SWITCHES

SLUDGE HOLDING TANK

GARAGE AREA

ADMINISTRATIVE BLDG.

TREATMENT PLANT

CARBON LOADING PAD

MAIN ELECTRIC

MAIN WATER SHUTOFF

MAIN WATER SHUTOFF

READ AVE

GAS SHUTOFF BOTH BLDGS.

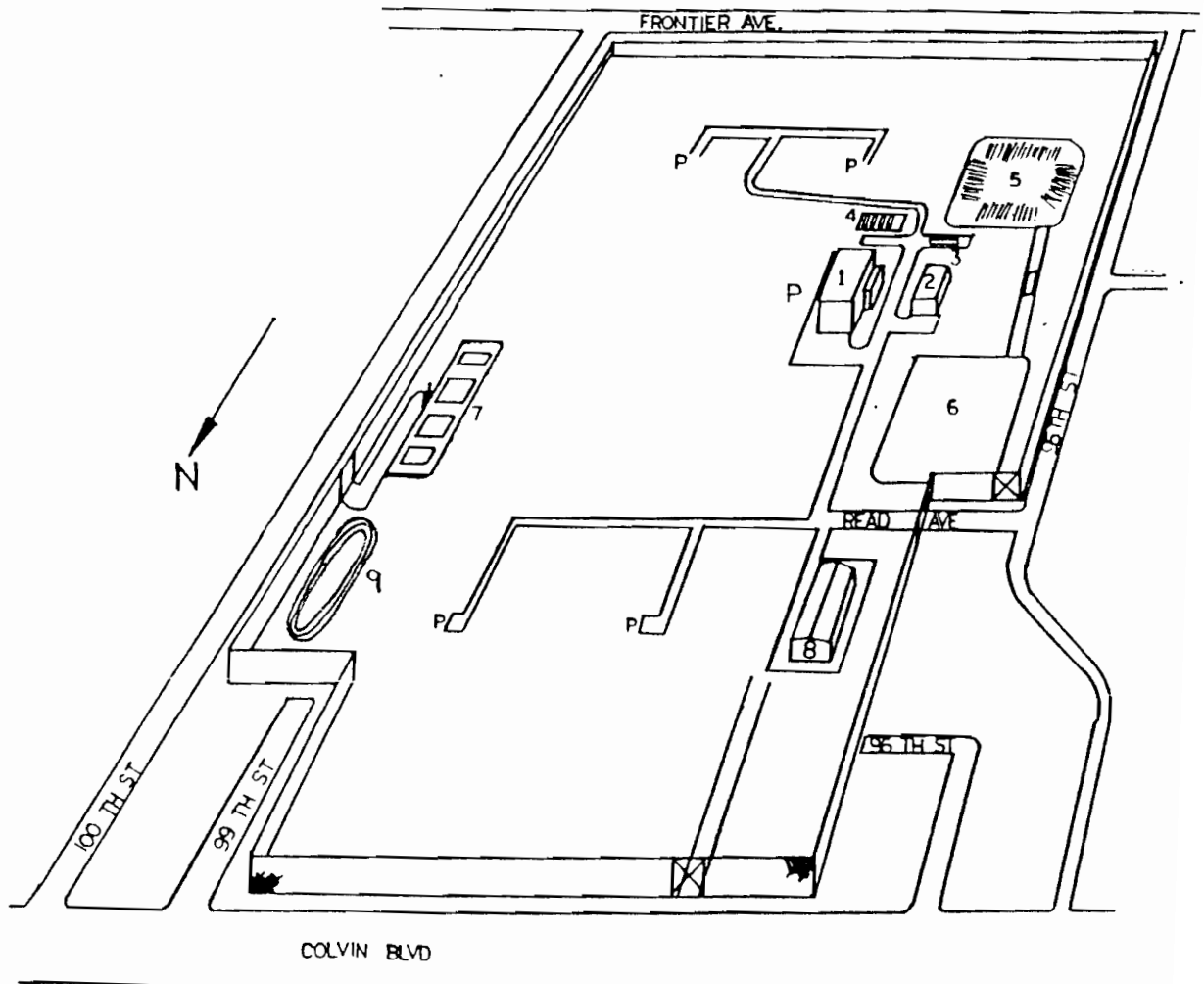
SLUDGE STG. TANKS

MAIN ELECTRIC

KEY TO HAZARDOUS MATERIAL STORAGE

LOCATION

- 1 See Treatment Facility Key
- 2 Maximum 10 gallons of flammable liquids in laboratory and garage
- 3 No hazardous materials present
- 4 22,356 gallons (approx.) of highly toxic sludge and incinerable organics at this location and outside number eight (8) in three mobile tank trailers. This liquid is considered flammable because of the presence of 2%-5% toluene.
- 5 Contains construction and demolition debris buried under approx. 3 feet of clay and soil
- 6 No hazardous materials stored
- 7 Currently empty. For wastewater storage only. Hypalon[®] lining.
- 8 Drums contain non-flammable solids only. 275 gallon diesel oil tank in southwest corner.



LOVE CANAL SITE

FEBRUARY 1990 APRIL 1993

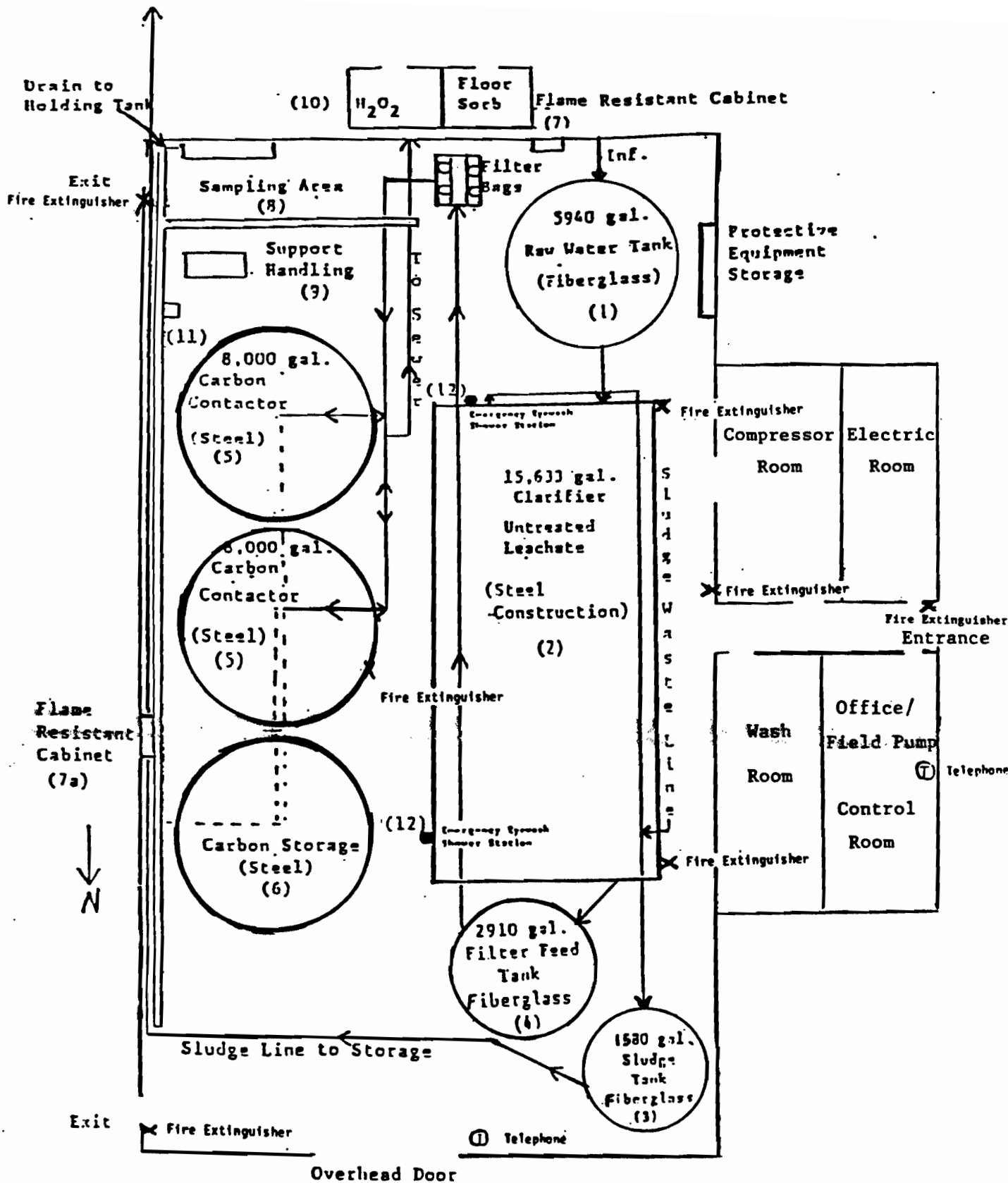
JANUARY 1992

- | | |
|---------------------------------|---------------------------------|
| 1 LEACHATE TREATMENT FACILITY | 6 STAGING AREA |
| 2 ADMINISTRATION BUILDING | 7 SEWER SEDIMENT FACILITY |
| 3 PLASMA ARC UNIT TRAILER | 8 DECONTAMINATION/DRUM FACILITY |
| 4 SLUDGE STORAGE TANKS | |
| 5 Dewatering Containment Facil. | 9 Earthen Berm. |
| | P - PUMP STATION |

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 1500 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 work space.
 9. Support handling area with variable air and clean water pressures.
 10. Hydrogen peroxide stored in this blockhouse 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



TREATMENT FACILITY

FLOOR PLAN/EMERGENCY EQUIPMENT/COMMUNICATION LOCATIONS

1/90, AS REVISION 1/92

Key on Following Page
Drawing Not To Scale

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).

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.

Additional decontamination procedures are described on the following pages.

INCIDENT REPORT FORM

TO: Section Chief, Operations and Maintenance Section
Bureau of Construction Services
Division of Hazardous Waste Remediation

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 _____
Approximate quantity _____
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 _____

CONTINGENCY PLAN REVISION LOG

| DATE | AREA REVISED | NEW ACTION |
|---------|---|---|
| 9/05/89 | Evacuation Plan | Air horn (3 long blasts) added |
| 9/05/89 | Procedures for Explosion Written | |
| 3/92 | Emergency Coordinators | Revised List. New DEC Region 9 Office Added |
| 3/92 | General Response Overflow of Holding Tanks | Turn off field pumps at MDCP Panel or at pump chamber power panels |
| 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 Earthen Berm and Removed Public Information Office |