SECTION G
Contingency Plan

SECTION G

CONTINGENCY PLAN

HUKILL CHEMICAL CORPORATION

The information contained herein is submitted in accordance with the requirements for a Contingency Plan, as contained in OAC 3745-50-(A)(7) (40 CFR 270.14 (b) (7)) and OAC 3745-54-50 TO 56 (264 Subpart D).

G-1 Contingency Plan - General Information

The intent of OAC 3745-54-50 TO 56 (40 CFR 264, Subpart D) (Contingency Plan and Emergency Procedures) of RCRA is to ensure that facilities that treat, store, or dispose of hazardous wastes have established the necessary planned procedures to follow in the event an emergency situation should arise.

The intent of the requirements under OAC 3745-54-30 TO 37 (40 CFR 264, Subpart C) (Preparedness and Prevention), which was described in Section F, is to ensure that a facility is properly designed and equipped to minimize the possibility of accidents and prevent the occurrence of emergency situations. The requirements under OAC 3745-54-50 TO 56 (40 CFR 264 Subpart D) address the actions that are to be taken if an accident should occur.

The Hukill Chemical Corporation facility is located in an industrial park at 7013 Krick Road, Bedford, Ohio. This facility is owned and operated by the Hukill Chemical Corporation. Robert L. Hukill is the company President and on-site Manager.

HCC owns an 8.5 acre site of which 4.5 acres are utilized. Figure G-1 shows the plot plan for the utilized portion of the site. The southern portion of the plant is bounded by Krick Road.

HCC repackages and resells industrial chemicals and reclaims spent industrial solvents. The S.I.C. codes 7389 , solvent recycling and 5169, chemical distribution apply to the HCC operation.

As shown in Figure G-1, the plant is split into two types of chemical processing operations. The west side of the plant contains the acid tank farm which is partititioned. The south partition of the acid tank farm contains two storage tanks which contain 50% Sodium Hydroxide solution and Ammonium Hydroxide respectively.

The Acid Department Area is used for custom blending and packaging both acid and caustic materials. The Acid Department Area also contains a paint spray booth where reconditioned drums are painted.

Flammable material storage is restricted from the west portion of the plant, including the Warehouse Area.

Flammable materials are stored in the east portion of the plant. Flammable materials in approved drums are stored on the concrete pad behind the loading dock. Flammable materials are stored in the Solvent Tank Farm, Hazardous Waste Storage tanks and HW Fuels Blend tank dike.

Flammable materials are stored in approved drums on pallets in the East Warehouse which is rated Class 1, Group D, Division 1 and fully covered by an automatic sprinkler system.

The Processing Area adjacent to the East Warehouse contains three distillation systems and is used to process flammable liquids.

This Processing Area is also rated Class 1, Group D, Division 1. It is fully covered by an automatic sprinkler system.

G-2 Emergency Coordinators

1. Robert Hukill - President Primary Coordinator
   [redacted]
   [redacted]
   Work Phone: 216 - 232 - 9400
   Home Phone: [redacted]

2. Robert Lang - Production Supervisor
   [redacted]
   [redacted]
   Work Phone: 216 - 232 - 9400
   Home Phone: [redacted]

3. Steve Schillinger - Maintenance Supervisor
   [redacted]
   [redacted]
   Work Phone: 216 - 232 - 9400
   Home Phone: [redacted]

4. Mark Matthews - Process Engineer
   [redacted]
   [redacted]
   Work Phone: 216 - 232 - 9400
   Home Phone: [redacted]

The above listed Emergency Coordinators are hereby authorized to commit necessary resources to respond to rectify any emergency situation requiring the implementation of this Contingency Plan.

Signature: Robert L Hukill Date: 2/3/92

Robert L. Hukill - President

G-3 Implementation

Criteria For Implementation of Contingency Plan

The contingency plan will be implemented at the direction of any designated Hukill Chemical Corporation Emergency Coordinator.

Basic guidelines for implementing the contingency plan are as follows:

1. Emergency situation (spill or fire) may result in environmental contamination.

2. Further evaluation of emergency situation required prior to implementing remedial actions.

3. Fire alarm and / or sprinkler system activated.

4. Scheduled fire response drill or spill control drill.

There will always be one Emergency Coordinator, either "on duty" or "on call" at all times. There will be a roster to which the Emergency Coordinator will be assigned. The designated coordinator will carry with him a "beeper" communicator that will be turned on anytime he is off the premises. During periods when the plant is shut down, i.e., weekends and holidays, the designated coordinator will then be "on call" with the "beeper" communicator.

The Emergency Coordinator or his alternate is responsible for coordinating all internal emergency response measures. He will also work with the first responders to provide current information on the hazards which may be encountered and provide information of any facility equipment that may be of service in an emergency. He will also provide all necessary reports within the required time period.

G-4 Emergency Response Procedures

Methodology for immediate notification of Facility Personnel:

Two effective methods for immediate notification of facility personnel have been developed at Hukill Chemical Corporation.

1. If an emergency situation arises, requiring implementation of the Contingency Plan, but not requiring evacuation of the facility, personnel with responsibilities in the Contingency Plan will be notified via telephone or contacted personally. The facility is equipped with a public address system which is audible in all important areas of the facility.

2. If an emergency situation arises requiring evacuation of the facility, the fire alert / alarm will be activated.

The Local Emergency Planning Committee will be notified and the Emergency Coordinator will provide assistance in the determination by the On-Scene Coordinator for evacuation of areas outside of the facility.

3. The necessary Federal, state and local agencies will be notified. This includes the Ohio EPA Emergency Response Team.

4. When contact is made with national Response Center and the Ohio EPA Emergency Response Team, the Emergency Coordinator will report the following:
   a. Name and telephone number of the reporter.
   b. Name and address of the facility.
   c. Time and type of incident (e.g., fire release).
   d. Name and quantity of materials involved.
   e. Extent of any injuries.
   f. Potential hazards to human health or the environment outside the facility.

G-4a Notification

LOCAL, STATE, AND FEDERAL AGENCIES

Bedford Police Department.....216 - 232 - 1234
Bedford Fire Department.....216 - 232 - 1212
OR.....911 *
National Response Center.....800 - 424 - 8802
Chem Trec.....800 - 424 - 9300
Regional Emergency Response Coordinator.....312 - 353 - 2318
Ohio EPA Emergency Response.....800 - 282 - 9378
Ohio EPA - Twinsburg, Ohio.....216 - 425 - 9171
Ohio Emergency Response Coordinator.....614 - 466 - 6542
U.S. Coast Guard Marine
Environmental Response (Days).....216 - 522 - 3983
U.S. Coast Guard Marine
Environmental Response (Nights).....216 - 522 - 3984
Cleveland Division of Air Pollution Control
Commissioner.....216 - 441 - 7400
Engineer.....216 - 441 - 7419
For Air Pollution..... 216 - 664 - 3500
Northeast Ohio Regional Sewer District
Days.....216 - 641 - 6000
24 Hr.....216 - 641 - 3200
Cuyahoga Emergency Management Assistance Center
.....216 - 443 - 5700

Hazardous Materials Spill (CECOMS).....216 - 771 - 1365

G-4b Identification of Hazardous Materials

Procedures for identification of hazardous materials involved in the emergency.

When identifying hazardous materials involved in the emergency, one of the following procedures will be followed.

1. Container spill material will be identified by noting hazardous waste label information and referring to manifest document and analysis in operating record.

2. Tank spill material will be identified by noting tank from which spillage occurred and referring to the operating record and the tank charts which indicate material characteristic in the tank.

3. If reference to labels on containers in the container storage area is impossible due to nature of emergency (large fire and smoke), the Operating Record will be used to identify hazardous materials currently being stored in the area.

   Responsibility for Operating Record review will be assigned by the Emergency Coordinator during an actual emergency.

4. Emergency Coordinators will have a copy of tank information.

G-4c Assessment

Policy for assessment of possible hazards that result from emergency.

Immediately upon implementation of the Contingency Plan, the responsible Emergency Coordinator will obtain and evaluate all available information with respect to the emergency.

The evaluation of this information will result in a determination whether or not to initiate a facility evacuation and notify authorities. A determination will also be made as to whether the seriousness of the emergency requires evacuation of local residents or other businesses.

ALTHOUGH THE EVALUATION BY THE EMERGENCY COORDINATOR IS BASED ON HIS EXPERIENCE, KNOWLEDGE OF THE FACILITY, KNOWLEDGE OF THE CHEMICALS INVOLVED AND THE MAGNITUDE OF THE EMERGENCY, HE WILL USE THE FOLLOWING GUIDELINES TO MAKE HIS DETERMINATION:

THE FIRE DEPARTMENT AND LOCAL EMERGENCY PLANNING COMMITTEE WILL BE CONTACTED UNDER THE FOLLOWING CONDITIONS:

1. A FIRE IN THE SPENT SOLVENT PROCESSING OR STORAGE AREAS.

2. AN EXPLOSION IN THE CORROSIVE WASTE HANDLING, SPENT SOLVENT PROCESSING OR SOLVENT STORAGE AREAS.

THE LOCAL EMERGENCY PLANNING COMMITTEE, THE CUYAHOGA EMERGENCY MANAGEMENT ASSISTANCE CENTER AND THE OHIO EPA EMERGENCY RESPONSE TEAM WILL BE CONTACTED UNDER THE FOLLOWING CONDITIONS:

1. A SPILL OR RELEASE, OR A SITUATION WHERE THE POTENTIAL FOR A SPILL OR RELEASE EXISTS, OF HAZARDOUS MATERIAL OUTSIDE OF A CONTAINMENT AREA THAT MAY POSE A THREAT TO THE ENVIRONMENT OR HUMAN HEALTH.

2. A SPILL OR RELEASE, OR A SITUATION WHERE THE POTENTIAL FOR A SPILL OR RELEASE EXISTS, THAT MAY REQUIRE EVACUATION OF THE FACILITY.

The above determination will be reviewed and the authorities again notified, if necessary, based on new information received about any changing conditions with respect to the emergency.

The Emergency coordinator will provide an assessment of possible hazards to human health and the environment that may result from the release, fire or explosion. He will consider both the direct and indirect effects, i.e., surface water run-off, toxic gas generation, etc., of the release, fire or explosion and provide his assessment to the On-Scene Coordinator.

G-4d <u>Control Procedures</u>

Specific procedures for controlling fire, explosion or hazardous material release.

The specific hazardous chemicals used in each area of the plant have been discussed with regard to the action required in case of an emergency. In any case, it is the first priority to be sure no human life is at risk. Hukill has conducted plant tours and provided information to the Bedford Fire Department and they would be expected to be the first responders.

G-4e <u>Prevention of Recurrence or Spread of Fires, Explosions, or Releases</u>

~~Necessary steps to insure fires, explosions, or releases~~
The Emergency Coordinator will take all necessary steps to insure that fires, explosions, or releases do not occur, recur, or spread to other hazardous wastes during or after an emergency situation. The Emergency Coordinator will shut down operations where adviseable. Where safe to do so, the Emergency Coordinator will have containers moved to prevent further endangerment. The emergency Coordinator will also take steps to isolate materials and clean up residue when it is safe to do so.

OTHER ACTIONS THE EMERGENCY COORDINATOR MUST CONSIDER ARE:

1. SHUT OFF POWER TO ALL AREA VENT FANS.
2. SHUT OFF THE COOLING TOWER WATER PUMPS.
3. CLOSE MAIN STEAM HEADER VALVE.
4. BE SURE ALL FIRE DOORS ARE CLOSED.
5. MOVE TRACTORS AND TRAILERS OUT OF THE AREA.
6. CLOSE NITROGEN SUPPLY BLOCK VALVE AT SOUTH WALL OF EAST WAREHOUSE TO AVOID RELEASE OF PRESSURIZED NITROGEN.
7. SHUT DOWN ALL SOLVENT TRANSFER PUMPS.
8. CHECK CONTAINMENT SYSTEM OPERATION AND AVOID OVERFLOW OF THE 15,000 GALLON CONTAINMENT SYSTEM TANK (H-115).
9. CLOSE THE EAST PAD CONTAINMENT VALVE IF CONTAINMENT SYSTEM IS IN DANGER OF OVERFLOWING DUE TO SPRINKLER WATER VOLUME.

The Emergency Coordinator will take precautions to ensure that fires, explosions or releases will not reoccur and that all areas are secure before resuming operations.

G-4f <u>Storage and Treatment of Released Material</u>

Provisions for treatment, storage, or disposal of any material that results from a release, fire, or explosion.

THE EMERGENCY COORDINATOR WILL ASSURE THAT ALL PERSONNEL INVOLVED IN THE CLEAN-UP OF SPILLED MATERIAL HAVE THE PROPER PERSONAL PROTECTION FOR ENTERING THE AREA. THE MSA EXPLOSION/OXYGEN METER WILL BE USED TO SAMPLE ALL CLEAN-UP AREAS TO BE SURE THAT THEY ARE SAFE TO ENTER. CLEAN-UP PERSONNEL WILL WORK IN TEAMS. SPARK-PROOF SHOVELS AND EXPLOSION PROOF EQUIPMENT MUST BE USED IN ANY AREA WHERE THERE IS SOLVENT PRESENT, EITHER AS A SPILLED MATERIAL OR IS STORAGE TANKS AND CONTAINERS. EQUIPMENT AND CONTAINERS WILL BE PROPERLY GROUNDED, WHERE PUMPING SOLVENTS, TO AVOID STATIC ELETRICITY.

All residual materials resulting from a release or fire will be properly contained and characterized USING THE TEST METHODS OUTLINED IN SECTION C, C-2B AND C-4B, AS APPLICABLE. Any contaminated soil or residue will be placed in sealed, approved storage containers, placed in a containment area and properly labeled. Representative samples will be taken and analyzed by the HCC laboratory or an approved outside testing laboratory.

After the material is properly characterized, a determination will be made as to the proper method for handling this material. If the material is still usable, it will be returned to the recovery process. If contamination of the material is excessive, disposal at a permitted hazardous waste disposal facility or incineration will be conducted. No residue material will be discharged from the site without proper characterization.

G-4g Incompatible Waste

No incompatible waste will be treated, stored or located in affected areas until clean up procedures are completed. Precautions will be taken to assure that the containers are compatible with the waste to be stored in them. Wastes will be checked for compatibility to assure that incompatible wastes are not mixed together.

G-4h Post Emergency Maintenance

All emergency equipment will be cleaned, inspected, repaired, and ready for use before operations are resumed at the facility. The Emergency Coordinator will use the list of emergency equipment available at the site as a check list to be sure that all equipment and supplies are repaired and replenished.

G-4i Container Spills and Leakage

Procedures for responding to container spills or leakage.

Expeditious removal of spilled waste.
Whenever waste leakage or spillage is detected, the material will be contained by absorbent. The contaminated material will be put into a compatible drum for hazardous wastes marked with the required label and held until disposal.

Repair or replacement of containers.
The contents of any leaking or damaged containers in the container storage facility will be removed to a secure drum and the defective container will be replaced.

Containers will be inspected for damage and an inventory of damaged containers will be made. All damaged containers will be either transferred to clean approved, compatible containers or the damaged container will be placed in an approved overpack.

G-4j Tank Spills and Leakage

Procedures for responding to tank spills or leakage.

Expeditious removal of spilled waste.
In the event of spillage or leakage from a tank system, flow of hazardous material into that system will be stopped immediately. If the tank is leaking, all remaining material in the tank will be transferred to an empty tank or tanker. The tank system will be inspected immediately. Any large spill of material will be contained within a diked area; or any small spill will be contained by absorbent. Material in the diked area will be pumped into the same tanks as used above or another tank or tanker. Material contained with absorbent will be cleaned up and put into a drum for proper

hazardous waste disposal. The drum will be marked with the required label.

In the case where hazardous material is spilled into secondary containment, the spilled material will be removed within 24 hours.

In the case where hazarodus material may have spilled onto soil or surface water, an inspection will be made immediately and all visible areas of contamination will be contained and removed to approved, compatible, properly labeled containers for proper disposal.

If it is determined that the release is greater than one pound or less than one pound that cannot be cleaned up immediately, a report will be submitted to the director of the Ohio EPA with the information required by OAC 3745-55-96(D)(3) within 24 hours.

Repair Of Tank

Upon removal of material from the tank system, the tank system will be repaired using standard tank repair techniques. Individual components of the tank system will be repaired or replaced as required. If the tank OR SECONDARY CONTAINMENT is damaged, the tank or supports are severely stressed, punctures or broken, the damage will be assessed by a person qualified to evaluate the extent of the damage. This will include thickness tests of the area surrounding the damaged portion AND ASSESSMENT OF THE SECONDARY CONTAINMENT. A record of the assessment and required repairs will be placed in the operating record. After completion of the tank SYSTEM repair, the tank SYSTEM will be tested hydrostatically and/or with air pressure. A more frequent inspection of the tank will be conducted to evaluate the tank repair procedure over time.

If the required repairs to the tank system are considered to be major (welding or straightening of tank or supports OR REPLACEMENT OF CONTAINMENT SYSTEM STRUCTURE), the repaired tank system will be assessed by an independent, qualified, registered professional engineer prior to placing the tank system back into service. The repaired tank system certification by the P.E. will be sent to the director of the Ohio EPA within seven days of returning the tank system to service.

If the requirements paragraph (E)(2) through (E)(4) OF OAC 3745-55-96 cannot be met, the tank system will be closed in accordance with OAC 3745-55-97.

G-5 Emergency Equipment

The equipment described below represents the minimum emergency response equipment available to respond to either fire or spill emergencies at Hukill Chemical Corporation.

General:

1. Fire Alarm
   There are two methods for sending out a fire alarm.

   a. The paging system which is used to page throughout the plant. The page boxes are located in the front office.

   b. The Time Buzzer can be manually activated by a button located outside the lunch room. This buzzer is audible throughout the Plant.

      We have upgraded our alarm system by installing eleven bells and eleven hand pulls throughout the two plant buildings. This system is also connected to our electronic security system which would notify the fire department.

      The planned facilities will be added to this fire alarm system.

2. Automatic Sprinkler System

   The automatic sprinkler system is fed by an on-site 250,000 gallon water tank. The system is a grid of sprinkler heads throughout both East and West buildings. The system is a wet pressure system on the West building, and a dry air pressure system in the East building. If the sprinkler head is activated by the heat of a fire, the resulting pressure drop activates the pump and the alarm.

   The automatic sprinkler system is tested annually by Grinell and the automatic controls and alarms are tested every two months by Honeywell. Repairs are made by outside contractors as required.

   The planned additional H.W. storage and processing areas outside of the existing sprinkler system will be protected by fire fighting foam monitor systems. HCC has discussed this with the vendor of the foam monitors and the Bedford Fire Department. An 8 inch water line will be routed to supply the foam monitors. This water line will be supplied by A NEW 12 INCH city water LINE.

~~////////with the//////250,000 gallon fire water tank system/~~

3. Fire Hydrant

A fire hydrant is located on the facility. Fire hoses are available and foam liquid concentrate, 60 gallons of AFFF foam concentrate, is provided with the proper nozzle for foaming. This foam can also be used to replenish the supply for the Bedford Fire Department foam equipped truck.

4. Portable Fire Extinguishers

Portable Fire Extinguishers have been located throughout the facility. These fire extinguishers are rated for A, B, and C fires. Protective fire equipment is located in the Emergency Supply Cabinets located in the East and West Warehouses. The equipment in those cabinets is listed in #6 below.
There are two fire fighting foam carts with 15 gallons each of foam concentrate, one cart on each side of the plant.

There are two 80 pound BC powder fire extinguisher carts on site, one on each side of the plant.

5. Spill Response

A collection of spill response equipment and protective equipment is located in the East Warehouse. This equipment includes:

a. Absorbent media such as Floor dry for spill control and clean up.

b. Non Sparking Shovels

c. Brooms

d. Solvent for Decontamination

e. Bung Wrench

f. Electric Barrel Cutter (Remove drum top to transfer contents)

g. Pumps, Hand Pumps

h. Tank Repair Equipment

In addition, HCC has purchased a new 5,000 gallon vacuum tanker that will provide rapid cleanup of large volume spills and/or contaminated surface water.

6. Safety Equipment

   a. Hard Hats With Splash Shields

   b. Protective Clothing (rubber overalls, gloves, boots)

   c. Organic, Acid and Ammonia Vapor Respirators

   d. Self Contained Breathing Apparatus

   e. Emergency Eye Wash

   f. Totally Encapsulated Emergency Response Suits

Safety and Emergency Equipment

THE LOCATIONS FOR SAFETY AND EMERGENCY EQUIPMENT ARE SHOWN FOR THE EXISTING FACILITY ON FIGURE G-2, FOUND IN THE APPENDIX TO THIS SECTION. THE SAFETY AND EMERGENCY EQUIPMENT LOCATIONS FOR THE PLANNED SPENT SOLVENT CONTAINER PROCESSING BUILDING AND THE CORROSIVE WASTE PROCESSING BUILDING ARE PROVIDED IN FIGURES G-4 AND G-5, RESPECTIVELY.

A///Fire/Alarm/Pulls
B///Fire/Blanket
C///Self/Contained/Breathing/Equipment
D///Fire/Hydrant
E///Main/Electrical/Switch
F///First/Aid/Station
G///Emergency/Supply/Cabinets
H///Hose/Connected/to/Sprinkler/System
J///Fire/Wall
K///Oxygen
L///Emergency/Lighting
M///Fire/Skid/With/Foam/for/Tank/Fires
N///Skids/with/Spill/Treatment/Absorbent/and/Accessories
O///Oxygen/(dial/201)
P///Telephone/and/Intercom
R///Organic/Acid/and/Ammonia/Vapor/Respirators
S///Street/Hear
T///250,000/gallon/H2O/Tank//Heated//for/Sprinklers
V///Vent/Switch
W///Emergency/Eye/Wash
X///Portable/Fire/Extinguishers
Z///Cutting/Torch/+/Plasma/Arc

Key/for/Figure/G+2

G-6 Coordination Agreements

A letter describing materials handled at Hukill Chemical detailing the evacuation plan, and a map locating all safety and emergency equipment was sent to the following emergency organizations:

Bedford Police Department
365 Columbus Road
Bedford, Ohio 44146

Bedford Fire Department
365 Columbus Road
Bedford, Ohio 44146

Community Hospital of Bedford
44 Blaine Avenue
Bedford, Ohio 44146

Deaconess Hospital
4229 Pearl Road
Cleveland, Ohio 44109

Briar Primary Care Clinic
836 Broadway Avenue
Bedford, Ohio 44146

Brentwood Hospital
4110 Warrensville Center Road
Warrensville, Hts., Ohio 44128

Regional Emergency Response
U.S. EPA
536 South Clark Street
Chicago, Illinois 60605
Attn: Robert J. Bowden

Ohio Emergency Response
Ohio EPA
361 E. Broad Street
Columbus, Ohio 43216
Attn: Kenneth Schultz

Cleveland Air Pollution
Control Center
2735 Broadway Avenue
Cleveland, Ohio 44115

Cleveland Air Pollution
Control Commander (MPES)
U.S. Coast Guard
1240 E. 9th Street
Cleveland, Ohio 44199

Each organization was invited to respond, comment, and visit Hukill Chemical. All responses and agreements are included on Exhibit G-6.

G-7 Evacuation Plan

A. Criteria For Evacuation

Hukill Chemical might initiate evacuation for safety reasons, or to group employees in assembly areas for redeployment when the following conditions exist:

1. Fire
2. Explosion
3. Spill
4. Hazardous Vapors
5. Earthquake
6. Other incidents deemed dangerous

B. Evacuation Procedure

1. When it is identified as necessary to evacuate Hukill Chemical the fire alarm system will notify employees.
2. Evacuation will be by routes identified on figure G-3.
3. Employees normally working on side A will report to evacuation assembly areas A, and employees normally working in area B will report to evacuation assembly area B.
4. Lead men for each area in the plant will be responsible for head count of their area.
5. The most senior Hukill manager present will be responsible for coordination of areas A and B.

G-8 Required Reports

Provisions of submission of reports of emergency incidents within 15 days of occurrences.

Within 15 days after an incident requiring implementation of the facility contingency plan, a written report will be submitted by the facility operator to the Director of the Ohio EPA.

The report will include:

1. Name, address and telephone number of the owner or operator.
2. Name, address and telephone number of the facility.
3. Date, time, and type of incident (e.g. fire, explosion).
4. Name and quantity of material involved.

5. The extent of injuries, if any.

6. An assessment of actual or potential hazards to human health or the environment.

7. Estimated quantity and disposition of recovered material that resulted from the incident.

Maintenance of records of any incident which requires implementation of Contingency Plan.

Summary reports and details of all incidents that require implementing the Contingency Plan will be recorded in the Facility Operating Record.

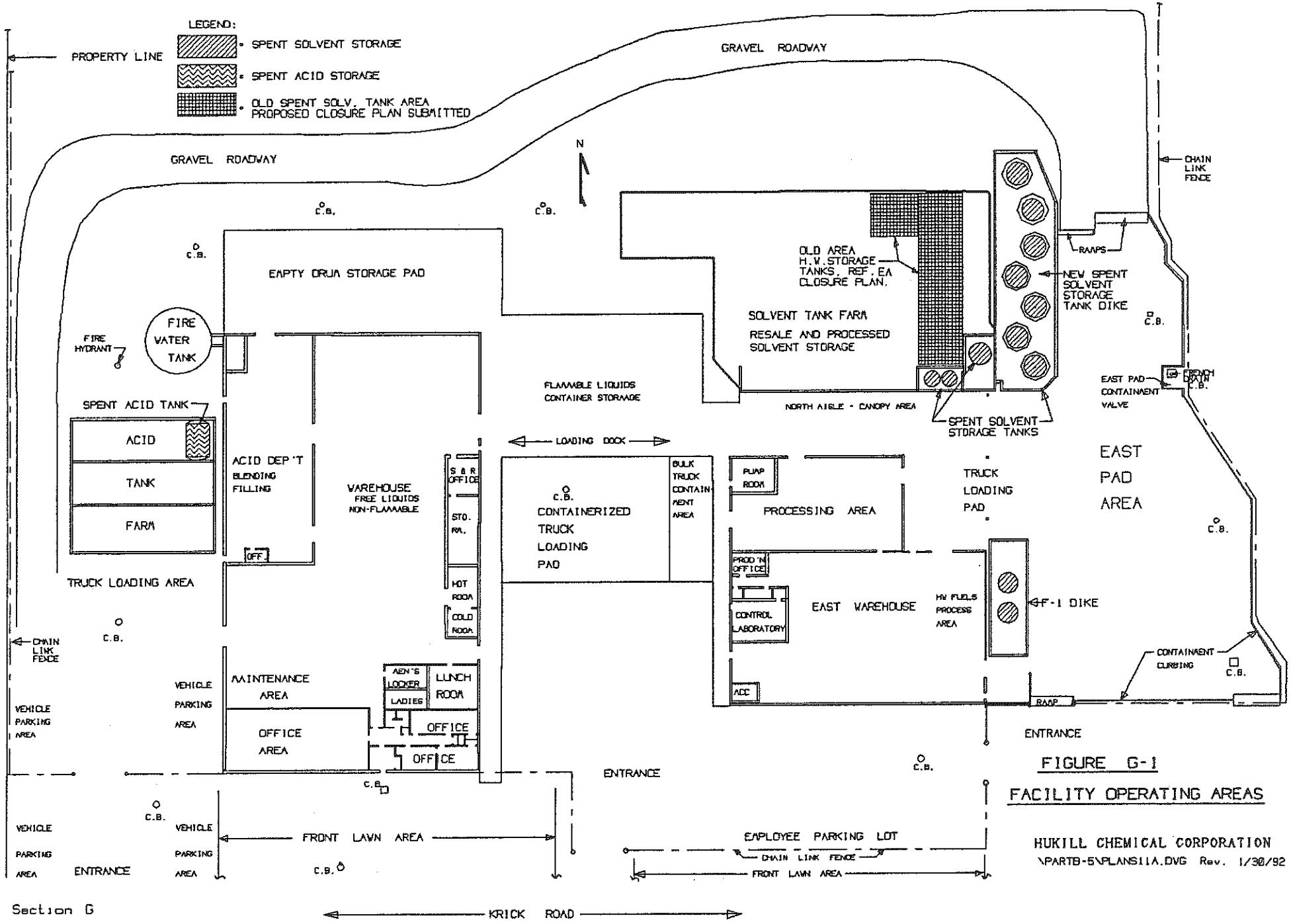
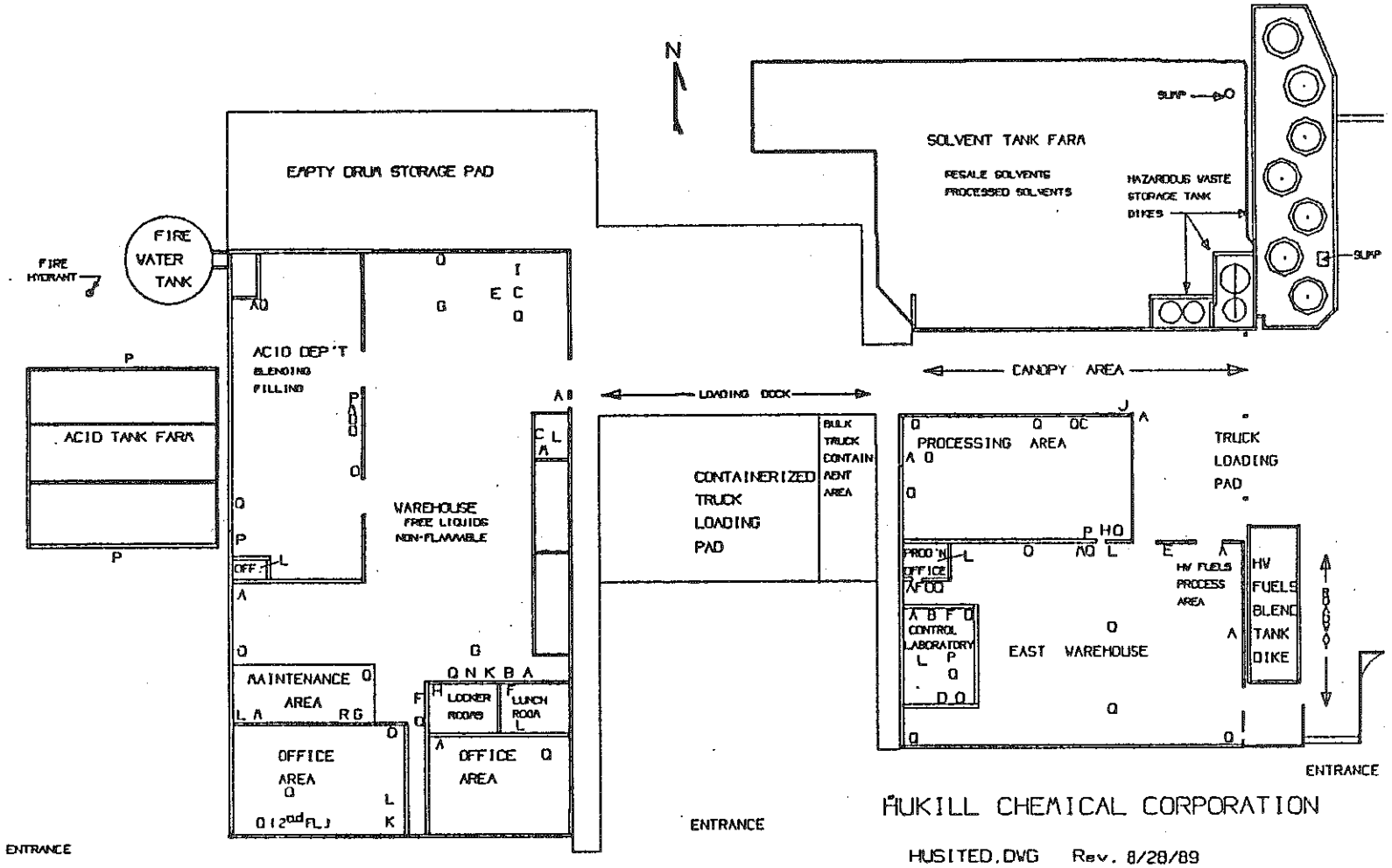


FIGURE G-1

FACILITY OPERATING AREAS

HUKILL CHEMICAL CORPORATION

\PARTB-5\PLANS11A.DWG Rev. 1/30/92

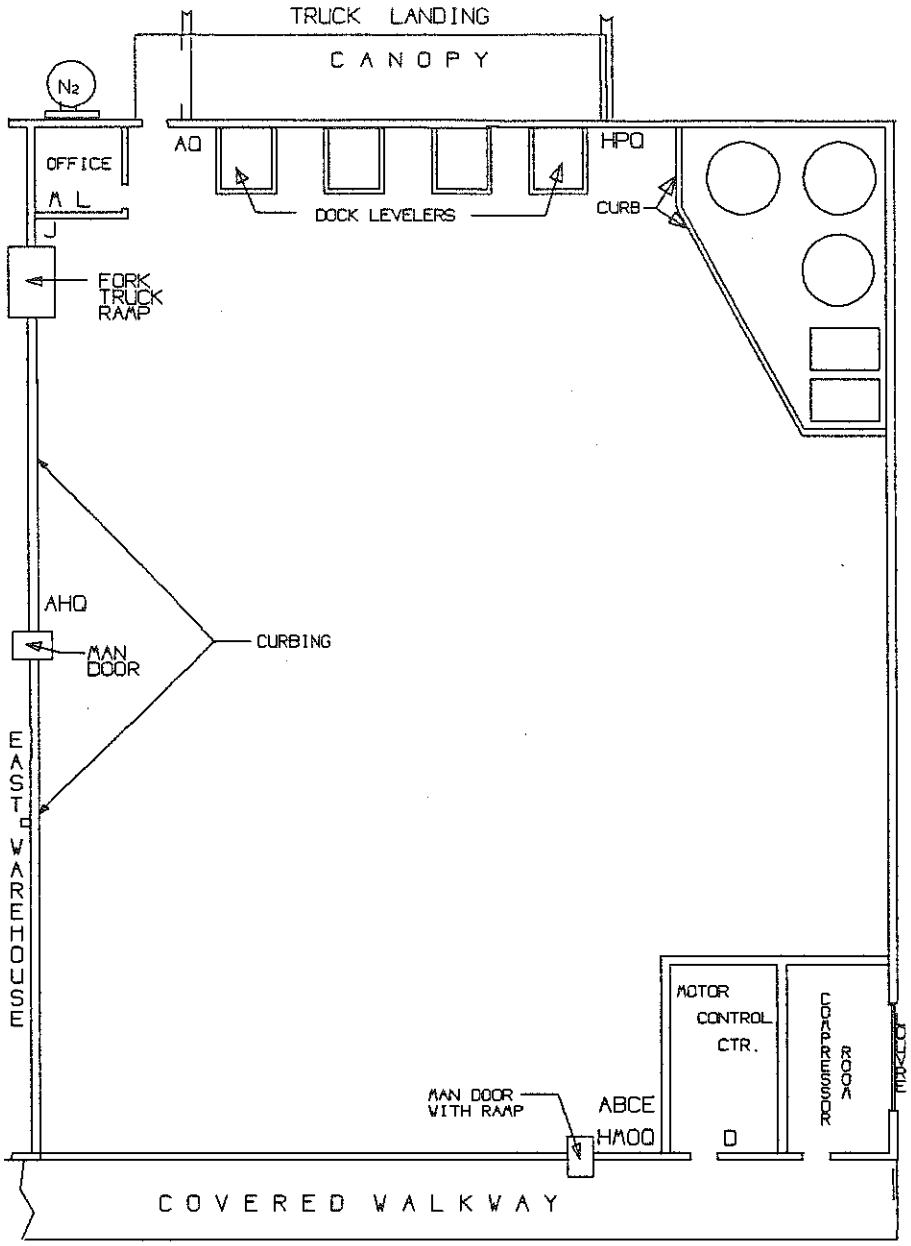


SAFETY AND EMERGENCY EQUIPMENT LOCATION

Legend:

A Fire Alarm Pulls
B Fire Blanket
C Self Contained Breathing Equipment
D Main Electrical Switch
E Emergency Supply Cabinets
F First Aid Cabinets
G Hose Connected to Sprinkler System
H Emergency Lighting
I Fire Skid with Foam for Tank Fires
J Skids with absorbent & accessories
K Oxygen
L Telephone & Intercom
M Organic Vapor Respirators
N Stretcher
O Vent Switch
P Emergency Safety Shower/Eye Wash
Q Portable Fire Extinguishers
R Cutting Torch

EXHIBIT G-2



LEGEND:

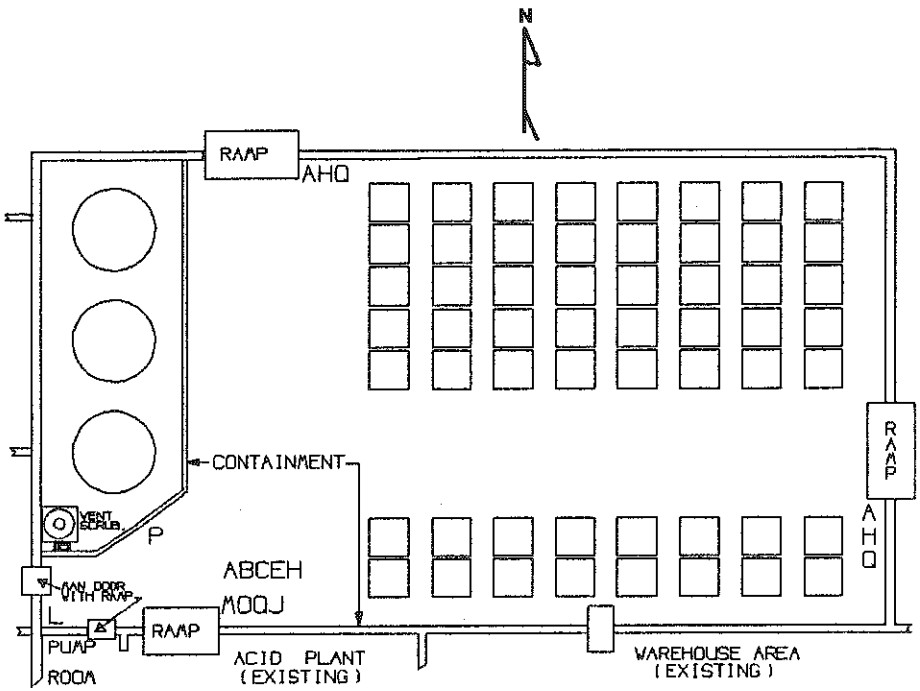
- A Fire Alarm Pulls
- B Fire Blanket
- C Self-Cont. Breathing Equip.
- D Main Electrical Switch
- E Emergency Supply Cabinet
- H Emergency Lighting
- J Skids with Absorbent
- L Telephone & Intercom
- M Organic Vapor Respirators
- O Vent Switch
- P Safety Shower/Eye Wash
- Q Portable Fire Extinguishers

PLANNED SPENT SOLVENT CONTAINER PROCESSING BLDG.

FIGURE G-4

SAFETY & EMERGENCY EQUIPMENT LOCATION

HUKILL CHEMICAL CORPORATION
\PARTB-5\PROCEMEQ.DWG Rev. 12/21/91
Scale : 1" = 20'



LEGEND:

- A Fire Alarm Pulls
- B Fire Blanket
- C Self-Contained Breathing Equipment
- E Emergency Supply Cabinet
- H Emergency Lighting
- J Skids with Absorbent & Accessories
- L Telephone & Intercom
- M Acid Vapor Respirators
- O Vent Switch
- P Emergency Safety Shower/Eye Wash
- Q Portable Fire Extinguishers

PLANNED CORROSIVE WASTE PROCESSING BUILDING

FIGURE G-5

SAFETY & EMERGENCY EQUIPMENT LOCATION

HUKILL CHEMICAL CORPORATION
\PARTB-5\D002EMED.DWG Rev. 12/21/91
Scale: 1" = 20'

CITY OF BEDFORD OHIO

65 COLUMBUS ROAD
DIVISION OF FIRE

BEDFORD, OHIO 44146

PHONE: (216) 232-1214
JEFFREY L. DUBER, CHIEF

October 25,1993

The Bedford Fire Department is familiar with the Hukill Chemical Corproation facility located at 7013 Krick Road. The Fire Department has been briefed on the chemicals stored at this site.

In an emergency response situation, the Bedford Fire Department would coordinate the activities of other responders to bring the incident to a safe conclusion.

Jeffrey L. Duber
Chief of Fire

Exhibit G-6

BEDFORD POLICE DEPARTMENT

65 COLUMBUS RD., BEDFORD, OHIO 44146
PHONE 216-232-7600
216-232-1234
FAX 216-232-4371*2

Robert R. Reid, Jr.
Chief of Police

October 25, 1993

Hukill Chemical Corp.
7013 Krick Road
Bedford, Ohio 44146

Gentlemen:

The Bedford Police Department is familiar with the Chemical Corporation facility located at 7013 Krick Road.

In an emergency response situation, the Bedford Police Dept. would provide response activities as needed.

Sincerely,

Robert R. Reid

Chief of Police
Bedford Police Dept.

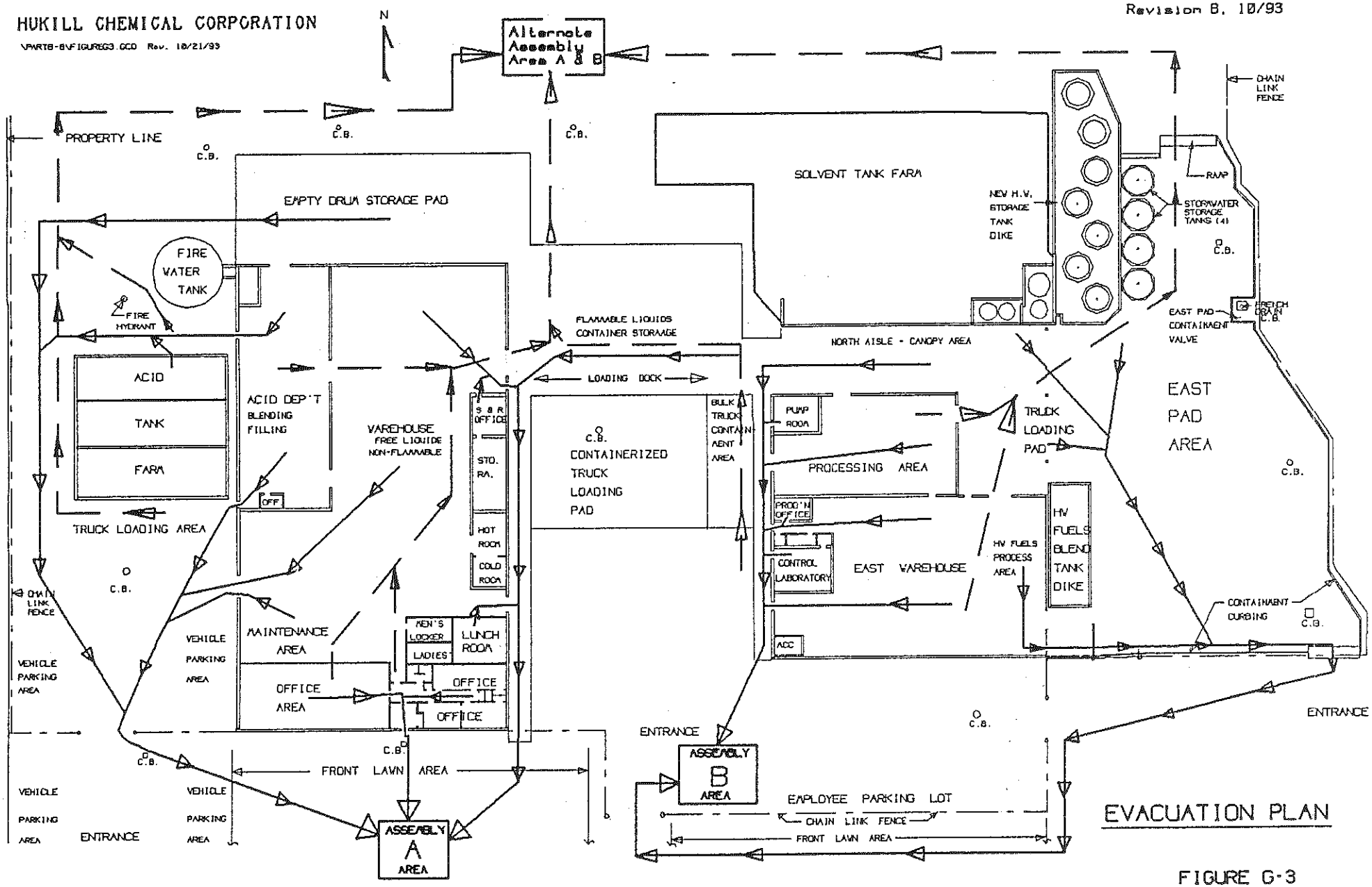
RECEIVED
OCT 26 1993
HUKILL CHEMICAL CORP.

Exhibit G-6

HUKILL CHEMICAL CORPORATION

\PART8-8\FIGUREG3.GCD Rev. 10/21/93

Revision B. 10/93



EVACUATION PLAN

FIGURE G-3

FOLLOW PATH MARKED WITH ARROWS FROM YOUR WORK AREA TO ASSEMBLY AREA A OR B.
(Alternate Evacuation Route Shown in Dotted Lines)

Section II
Personnel Training

SECTION H

PERSONNEL TRAINING

H1 Outline of Training Program

HUKILL CHEMICAL'S TRAINING PROGRAM, INITIAL AND CONTINUING, IS SET UP IN BOTH CLASSROOM AND HANDS-ON FORMATS. VIDEOS, SLIDES, WRITTEN COMPANY PROCEDURES AND OPEN DISCUSSION WITH HANDOUTS AND QUIZZES ARE INCORPORATED INTO THE PROGRAM. THE CONTENTS OF THE PROGRAMS ARE REVIEWED AND UPDATED AS LAWS CHANGE, TECHNOLOGIES CHANGE OR OUR PROCEDURES CHANGE.

THE CLASSROOM FORMAT INCORPORATES DISCUSSION OF JOB DUTIES. VIDEOS ARE DISCUSSED AND APPLICABLE JOB PERTINENT PORTIONS ARE STRESSED. HANDS ON TRAINING INCORPORATES SAFETY, EFFICIENCY AND COMPANY PROCEDURES. THE TRAINING PROGRAMS STRESSES SAFE AND PROPER HANDLING OF OF HAZARDOUS MATERIAL, SAFETY PRECAUTIONS IN PLANT, ALONG WITH INDOCTRINATIONS IN PAPER TRAIL REQUIREMENTS OF MATERIALS HANDLED.

A. Introduction
   I. General training (all employees)
      a. Overview of Hukill Chemical ~~(slide/of/video presentation)~~
      b. "Working With Chemicals and Your Health" (Figure H-1)
      c. Evacuation Plan (Figures H-2,3)
      d. Plant Tour (Figure H-4)
      e. Contingency Plan (Section G)

   II. Management Training
      a. Initial Training
         1. Operating Record Plan
         2. ~~SPCC~~ CONTINGENCY Plan
         3. Emergency Procedures
         4. Safety ~~Plan~~ PROGRAM
      b. Continuing Training
         1. Annual Review of Hazardous Waste Procedures And Development Update.
         2. Monthly Safety AND/OR TRAINING Review

   III. OPERATIONS PERSONNEL
      A. INITIAL "HANDS ON" FOR ACTUAL DUTIES
      B. CONTINGENCY PLAN
      C. CONTINUING TRAINING
         1. ANNUAL REVIEW OF HAZARDOUS WASTE PROCEDURES
         2. MONTHLY SAFETY AND/OR TRAINING MEETING

B. Record Keeping
   I. Folder
      a. Position Description
      b. Training Record Sheet (Figure H-5)

c. Training Certificates
   1. Hukill (Figure H-6)
   2. Outside Source

d. Other Pertinent Documents

II. RECORD RETENTION

H1a Hukill Roster

The roster of the job titles for those dealing with hazardous waste management for Hukill Chemical is Figure H-7. The stars indicate the employees given specific hazardous waste training. The President and Vice President attend seminars to accumulate information and understanding of procedures to enhance their ability for interface with necessary external contacts. The duties of those employees receiving hazardous waste training are enumerated in Figure H-8 and H-21B.

H1b Training Content, Frequency and Techniques

A. Instruction

I. Initial Training is given to all employees consisting of:

a. A presentation of the daily routine function of Hukill Chemical. The areas that would have any hazardous waste or emergency potential are highlighted and explainED for preventative and reactive procedures.

b. The National Safety Council's series "Working With Chemicals and Your Health" is one of the resources used for assuring a basic familiarity with the precautions for working with chemicals. This series covers general concepts, solvents, acids, and bases, and toxic metals in a pre-test, note-taking and post test format.

c. The evacuation PLAN is personalized for the area in which each new employee will be working.

d. A plant tour is given to familiarize the new employee with the areas viewed in the slide presentation. Particular attention is given to point out emergency equipment, doorways, safety pulls along with answering questions of the new employee and explaining precautionary procedures.

e. The employee is introduced and indoctrinated in the Contingency Plan presented in this document (Section G).

f. A new employee must complete all phases of training as described in OAC 3745-54-16 (40 CFR 264.16(b))

in the first 6 months of employment and before working UNSUPERVISED with Hazardous Wastes WHILE UNSUPERVISED.

II. Management Personnel (Figures H-8 through H-13) are given both initial and annual training:

a. Initial training for management is designed to formalize the procedures at Hukill Chemical for supervising employees who might handle hazardous waste, and the documenting of handling hazardous waste. These management employees would be stepped through:
   1. The Operating Record Plan
   2. The Contingency Plan
   3. Emergency Procedures
   4. Safety Program

b. The annual review will be conducted by a person trained in hazardous waste management procedures selected by Hukill Chemical to present the most relevant program for that particular time.

III. Operations personnel will be given both initial training and periodic review training at the least, annually.

a. Initial training for "hands on" operations employees and the duties of that employee (Figure H-22)

b. In addition, employees will be trained in the Contingency Plan and in the handling of emergency spill clean up.

c. Annually the operations employees will be given a refresher seminar. This will be conducted by a person trained in hazardous waste management procedures.
   1. CONTINUING TRAINING
   2. TO INSURE A CONSTANT AWARENESS FOR AND TO KEEP CURRENT IN ALL ASPECTS THERE WILL BE A MONTHLY SAFETY AND/OR EMERGENCY TRAINING MEETING. FOR A RECENT EXAMPLE SEE (FIGURE H-23 A,B)

d////To/insure/a/constant/awareness/for/and/to/Keep /////current/in/all//aspects/there/will//be/a/monthly//safety and/or/emergency/training/meeting///For/a/recent/example//see (Figure/H-23/A,B)

FIGURE H-22

OPERATIONS EMPLOYEES

INITIAL TRAINING DEMONSTRATIONS

I. OPERATOR

A. Using Safety Equipment
B. Handling Flammable Liquids
C. Handling Toxic Chemicals
D. Connecting Hoses and Valves
E. Loading and Unloading Farm Tanks
F. Operating Pumps
G. Operating Luwa
H. Operating Blow Down Boiler
I. Handling Corrosive Liquids

II. FORMULATOR

A. Using Safety Equipment
B. Handling Flammable Liquids
C. Handling Toxic Chemicals
D. Connecting Hoses and Valves
E. Loading and Unloading Farm Tanks
F. Operating Pumps
G. Filling Acid Containers
H. Blending Acids
I. Loading and Unloading Bulk Trucks
J. Washing Containers
K. Handling Corrosive Liquids

III. MECHANIC

A. Using Safety Equipment
B. Handling Flammable Liquids
C. Handling Toxic Chemicals
D. Connecting Hoses and Valves
E. Loading and Unloading Farm Tanks
F. Operating Pumps
G. Repairing Pumps, Valves, Tanks and Pipes
H. Maintenance on Pumps, Valves, Tanks and Pipes
I. Handling Corrosive Liquids

IV. UTILITY MAN

A. Using Safety Equipment
B. Handling Flammable Liquids
C. Handling Toxic Chemicals
D. Connecting Hoses and Valves
E. Loading and Unloading Farm Tanks
F. Operating Pumps

FIGURE H-22 CONTINUED - OPERATIONS EMPLOYEES

G. Loading and Unloading Bulk Trucks
H. Driving Lift Trucks
I. Pumping Out Drums
J. Cleaning and Repainting Drums
K. Handling Corrosive Liquids

V. TRUCK DRIVER

A. Using Safety Equipment
B. Handling Flammable Liquids
C. Handling Toxic Chemicals
D. Connecting Hoses and Valves
E. Loading and Unloading Tanks
F. Loading and Unloading Tank Trucks
G. Manifesting For Hazardous Waste
H. Placarding Tanks and Vans
I. Labeling and Marking
J. Securing Drums In Van
K. Reporting Any Unusual Circumstances To Home Office Immediately
L. Handling Corrosive Liquids
M. D.O.T. Spill Response Requirements

B. Record Keeping

I. For each employee at Hukill Chemical, a folder is placed in a training file. This folder contains:

a. A position description enumerating the title, requirements for employment, areas of responsibility and the limits of authority.

b. A training record Summary Sheet which describes employees interface with the handling of Hazardous Waste and the training sessions the employee has attended.

c. Copies of certifications of training.

d. Any other documents that Hukill Chemical will deem relevant to an employee and their training.

II///The/Records/of//each/employee/will//be/kept/for//at least/three//years/after//separation///Records//will//be updated/annually//or/when//training/occurs///If//closure were/necessary/all/records/would/be/updated//immediately prior/to/that/closure/

II. RECORD RETENTION

A. THE RECORDS OF EACH EMPLOYEE WILL BE KEPT FOR AT LEAST THREE YEARS AFTER SEPARATION

B. RECORDS WILL BE UPDATED ANNUALLY OR WHEN TRAINING OCCURS

C. IF CLOSURE WERE NECESSARY ALL RECORDS WOULD BE UPDATED IMMEDIATELY PRIOR TO THAT CLOSURE

H1c <u>Training Director</u>
A Training Director has been appointed for Hukill Chemical. In addition to overseeing the general training program and the initial training for each employee; the training director will chair the committee to select the content and presentation of the annual review and update sessions.

Mr Kevin Lehner provided the initial training for Hukill Chemical current employees. Mr. Lehner's resume is (Figure H-25 A & B).

H1d <u>Personnel Training</u>
Each person is given hazardous waste training that will be related to his function. Management personnel are concerned with operation of the facility, control of employees, and reporting of

hazardous waste activity. "Hands On" personnel are concerned with the processing of products. The management training is enumerated in section H-1b and the training cross reference for the "Hands On" employees is found in (Figure H-22).

H1E TRAINING FOR EMERGENCY RESPONSE

HUKILL CHEMICAL'S CONTINGENCY PLAN, EVALUATION PLAN, INSPECTION PROGRAM, AND SOME OF THE MONTHLY TRAINING PROGRAMS INCORPORATE FAMILIARIZATION WITH EMERGENCY PROCEDURES, EQUIPMENT AND SYSTEMS WITHIN THE FACILITY. (THESE PLANS AND INSPECTION FORMS ARE INCLUDED WITHIN THIS DOCUMENT.) INITIAL AND CONTINUING TRAINING TAKES THESE PROGRAMS AND ENSURES THE EMPLOYEES HAVE DEMONSTATIONS APPROPRIATE TO THEIR PARTICULAR JOB DESCRIPTION, DUTIES AND LOCATIONS. FOR EXAMPLE, THE MAINTENANCE DEPARTMENT WOULD HAVE MORE IN-DEPTH TRAINING IN REPAIRS OR REPLACEMENTS OF EQUIPMENT. AS DESCRIBED ELSEWHERE IN THIS DOCUMENT, ALL EMPLOYEES ARE TRAINED IN THE COMMUNICATIONS AND ALARM SYSTEMS WHICH ARE PLANT-WIDE - USED FOR DAY TO DAY COMMUNICATIONS AND EMERGENCY OR LIFE THREATENING SITUATIONS. THIS IS INCLUDED DURING INITIAL PLANT TOURS, AS WELL AS DURING HANDS-ON TRAINING IN ASSIGNED AREAS. FIGURES H-27 ARE EXAMPLES OF OUR SHUTDOWN OF OPERATIONS PROCEDURES, GROUNDWATER CONTAINMENT TRAINING, INSPECTION AND MONITORING OF THE FACILITY'S EMEGENCY EQUIPMENT TRAINING.

H1f Training For Emergency Responses

A. Contingency Plan - Each new employee is instructed in the processes of the Hukill Chemical Corporation Contingency Plan.

B. Evacuation Plan - Every new Hukill employee is given specific instruction in evacuation procedures for their working areas.

C. Monthly Safety and/or Emergency Training - Once a month a training session is held.

H1g Implementation of Training Program

A. Kevin Lehner was brought in by Hukill Chemical to give initial training to all current employees. The schedule of that training is (Figure H-26).

B. The Training Director will assure the continuance of the program that is outlined in this section. The files thus required will be kept in the main office files at Hukill Chemical.

HUKILL CHEMICAL CORPORATION

RCRA TRAINING AGENDA

APRIL 22, 1989

I. Introduction - Rob Hukill

II. Overview of the Regulations - Rob Hukill

III. Hazardous Waste Management Procedures

Generators Waste Profile Sheet - Rob Hukill
Proper DOT/EPA Shipping Descriptions - John Hukill
Packaging, Labeling, Placarding - Rob Hukill

Break

IV. Release Prevention and Response

Video: Emergency Planning, produced by BNA
Groundwater Containment Procedure - Rob Hukill
Video: Seconds Count, produced by BNA
Video: Spill Drum, HCC
Inspections - Steve Schillinger
Review of Contingency Plan - Mark Matthews
Review of Evacuation Plan - Mark Matthews
Emergency Shutdown of Operations - Mark Matthews

Lunch

V. Summary of Morning Session

VI. Workers Right to Know

Video: Main Street, Your Right to Know, produced by BNA
Video: Intro to Chemical Safety
Solvents, Corrosives, Acids, Oxiders
HMIS Wall Chart

VII. Summary

VIII. Adjourn

HUKILL CHEMICAL CORPORATION

EMERGENCY SPILL PROCEDURES

1.) Shut off source of spill and determine nature of material spilled.

2.) Shut off valve at 001 outlet.

3.) Notify leadman and/or supervisor. Notify others working in the vicinity of the spill.

4.) Leadman or Supervisor to notify Emergency Co-ordinator.

Robert L. Hukill, President (Primary Co-ordinator)
991-2179

Robert Lang, Production Supervisor
467-1233

Steve Schillinger, Maintenance Supervisor
1-867-9144

5.) Emergency Co-ordinator will notify authorities if you have a large spill. (These telephone numbers are listed in our Contingency Plan.)

6.) Contain Spill - Absorbent pillows and floor dry.

7.) Always work on cleanups in pairs. Check for necessary personnel protection gear before beginning cleanup.

8.) Start clean up procedures using pumps and floor dry.

9.) Put spilled material into Tank V114 (the designated hazardous waste spill control tank) or drums depending on size of spill.

10.) If evacuation is required, follow Schematic in Contingency Plan as per your area, meeting in the front of the building.

11.) If evacuation is not required, after cleaning up all material, decontaminate the area, your protective clothing and your tools used to clean up spill. Material containing any absorbent will be cleaned up and put into a drum for solid waste disposal.

HUKILL CHEMICAL CORPORATION
PLANT SHUTDOWN EMERGENCY PROCEDURES

IN THE EVENT THERE IS A FIRE WHICH CANNOT BE EXTINGUISHED, A THREAT TO LIFE, OR OTHER POTENTIALLY VOLATILE SITUATION: CLEAR THE BUILDING (FOLLOW THE EVACUTATION PLAN-REPORT TO THE FRONT OF THE BUILDING) AND ASSIST THE FIRE DEPARTMENT AS NEEDED.

IF TIME PERMITS, PERSONNEL IN THEIR OWN AREAS SHOULD FOLLOW THESE INSTRUCTIONS IN A QUICK, CALM MANNER, THEN CLEAR THE BUILDING, FOLLOWING THE EVACUATION PLAN -- REPORTING TO THE FRONT OF THE BUILDING:

ACID DEPARTMENT

Shut Off all valves on tanks in tank farm.
Turn off lights, fans.
Close doors --- Do not lock.

MAINTENANCE DEPARTMENT

Shut off Main Natural Gas Line.
Turn off lights, fans.
Close any doors --- do not lock.

PROCESSING DEPARTMENT

Turn off all equipment.
Close all valves.
Follow emergency shut down procedure for Luwas and Tower. (attached)

LAB

Close tank valve on O (oxygen) cylinder (green).
Turn off air conditioner/heater and hood blower.
Open tank valve on CO (carbon dioxide) cylinder (Gray).
Turn off lights.
Close door --- do not lock.

OFFICE

Turn off any equipment, lights.
Close doors.

EMERGENCY SHUT DOWN PROCEDURE OF LUWA #1 NEW

#1 -- TURN OFF STEAM PRESSURE TO "0" USING THE STEAM CONTROL GAUGE ON NEW LUWA PANEL. PUT SMALL LEVER TO "A" POSITION. TURN "SET" KNOB COUNTER-CLOCKWISE SO THAT RED INDICATOR IS AT ZERO.

#2 -- RELEASE JACKET STEAM PRESSURE BY OPENING VALVES TO BLUE BOX BY EAST WALL.

#3 -- RELEASE VACUUM BY TURNING VACUUM CONTROL KNOB CLOCKWISE TO WIDE OPEN. GAUGE SHOULD READ 15 PSI OR GREATER.

#4 -- TURN OFF ROTOR BY PUSHING OFF BUTTON ON NEW LUWA CONTROL PANEL.

#5 -- TURN PUMP SWITCH ON NEW LUWA CONTROL PANEL TO OFF - THIS WILL STOP ALL PUMPS.

#6 -- CLOSE FEED LINE VALVE.

#7 -- CALL SUPERVISOR: BOB LANG or DAVE MARLIN.

HAROLD YOUNGLESS

EMERGENCY SHUT DOWN PROCEDURE #2 LUWA OLD

#1 -- SHUT MAIN STEAM VALVE USING CHAIN VALVE.

#2 -- RELEASE JACKET STEAM PRESSURE BY OPENING VALVES TO BLUE BOX BY EAST WALL.

#3 -- RELEASE VACUUM BY TURNING VACUUM CONTROL KNOB CLOCKWISE ON OLD LUWA PANEL WIDE OPEN. GAUGE SHOULD READ 15 PSI OR GREATER.

#4 -- SHUT OFF ROTOR & PUMPS - PUT ALL ON/OFF SWITCHES TO THE OFF POSITION (RED BUTTONS) LOCATED ON OLD LUWA PANEL.

#5 -- SHUT OFF VALVES ON FEED LINES.

#6 -- CALL SUPERVISOR: BOB LANG or DAVE MARLIN.

HAROLD YOUNGLESS

HUKILL CHEMICAL CORPORATION
EMPLOYEE ROSTER
AS OF 08/90

me		Position
* Anderson	Wilbert J.	Leadman - Acid Department
Calvin	Shirley A.	Accounting Supervisor
* Cochrac	Robert	Truck Driver
* Duncan	Rickey W.	Leadman/Operator - Processing
* Fortson	Robert	Utility Man - Plant Wide
* Fulkerson	Audrey R	Sales Service Representative
* Glenn	Nathan	Leadman - Utility
* Golden	Dolores K.	Sales Service Supervisor
* Howard	William	Leadman - Warehouse
Hukill	James P	Executive Vice President
* Hukill	John C	Sales Representative
* Hukill	Robert L.	President
** Kainec	Richard J.	Utility Man - Processing
* Knapik	Thomas A	Asst.Mechanic - Maintenance
* Kranz	Kristian A	General Office Clerk
* Kray	Dorene	Administrative Assistant
* Kress	Lawrence J.	Sales Representative
Kulik	Phyllis	Secretary/Receptionist
* Lang	Robert D.	Production/Process Supervisor
Lass	William A	Sales Representative
* Madden	David R	Utility Man - Processing
Madden	Karen R	Accounts Payable Clerk - Acctg
* Margolis	Paul B.	Leadman/Operator - Processing
[illegible]arn	Joseph S	Laboratory Technician
[illegible]sk	Margaret	Sales Representative
* Matthews	Mark R	Processing Engineer
* McArdle	Mark A	Truck Driver
Mitch	Rita	Buyer
** Mitchell	Derek	Utility Man - Processing
* Moskaluk	William G	Truck Driver
* Muniz	Carlos	Laboratory Supervisor
* Murphy	Jimmie B.	Utility Man - Acid Dept
* Pangrace	Robert	Utility Man - Processing
** Robertson	Ray	Truck Driver
* Schillinger	Stephen	Maintenance Supervisor
* Solomon	Roland	Truck Driver
* Sturges	Richard E	Leadman - Maintenance
* Syas	Delbert H.	Leadman/Operator - Processing
* Travnik	Carol J	Sales Service Representative
* Tylman	Stephen	Laboratory Technician
* Vargo	John	Utility Man - Processing
* Wade	Terry	Truck Driver
* Walters	Nancy	Sales Service Clerk
* Williams	John E.	Utility Man - Acid Dept.
* Wrona	Allan D.	Laboratory Technician

Above listing includes truck drivers who are leased, not employees of Hukill Chemical.
* attended last RCRA Training Session
**RCRA training included during initial training for new hires.
*due to sick leave watched training video (actual video of session)

SMDE

Exhibit H-7

pay 7:30a–4:30p

HUKILL CHEMICAL CORPORATION
TRAINING SIGN IN SHEET
OCTOBER 19, 1991

OSHA awareness

Name	SSN	Hukill employees
Wilbert J. Anderson	[redacted]	Wilbert J. Anderson
Shirley A. Calvin		not required
Linda M. Dubrovich		excused
Rickey W. Duncan		
Robert Fortson		Robert Fortson
Nathan Glenn		Nathan Glenn
Dolores K. Golden		Dolores Golden
Henry W. Gulick		Henry W. Gulick
Bruce A. Hotton		
William Howard		William Howard
James P. Hukill		
John C. Hukill		John C. Hukill
Robert L. Hukill		Robert L. Hukill
Richard J. Kainec		Richard J. Kainec
Thomas A. Knapik		Thomas Knapik
Kristian A. Kranz		Kristian A. Kranz
Dorene B. Kray		excused
Lawrence J. Kress		Larry Kress
Phyllis M. Kulik		not required
Robert D. Lang		Robert Lang
William A. Lass		Bill Lass
David R. Madden		Dave Madden
Karen R. Madden		not required
Paul B. Margolis		Paul B. Margolis
Joseph S. Marn		Joe Marn
Margaret E. Mask		Margaret E. Mask

Personally Identifiable Info

SAMPLE

Figure H-23A

HOKILL CHEMICAL CORPORATION
TRAINING SIGN IN SHEET
OCTOBER 19, 1991

Name	SSN	Hukill Employee
Mark R. Matthews	Personally Identifiable Info [redacted]	
Carlos E. Muniz		
Jimmie B. Murphy		
Robert Pangrace		
William A. Phipps		
Stephen Schillinger		
Richard E. Sturges		
Delbert H. Syas		
Carol J. Travnik		
Steve Tylman		STEVE TYLMAN
John Vargo		
Nancy Walters		
John E. Williams		
Allan D. Wrona		
Lucy Simon		
GENE SASSO		

SAMPLE

HUKILL CHEMICAL CORPORATIO.
TRAINING SIGN IN SHEET
OCTOBER 19, 1991

Employee Name	Soc.Sec.#	Drivers
Robert Cochrac	Personally Identifiable Info [redacted]	
Mark McArdle		
William G. Moskaluk		
Ray Paul Robertson		
Gene Sasso		
Roland J. Solomon		
~~Jack Steg~~		
Terry M. Wade		

SAMPLE

Figure H-23D

Revision 8, 10/93

BURKILL CHEMICAL CORPORATION

EMERGENCY RESPONSE TRAINING
FOAM TRAINING
May 20, 1993

Time: From 1330 to 1445

5-20-93

Name	
Wilbert J. Anderson	
Rickey W. Duncan	
Robert Fortson	
Nathan Glenn	
William Howard	
Richard J. Kainec	
Thomas A. Knapik	
Robert D. Lang	
David R. Madden	
Matthew R. Madden	
Paul B. Margolis	
Mark R. Matthews	
Michael S. Mraz	
Jimmie B. Murphy	
Robert Pangrace	
Edward J. Potoma	
Peter J. Prigodich	
Mark A. Prior	
Stephen Schillinger	* VACATION *
Richard E. Sturges	
Delbert H. Syas	
Steve Tylman	
John Vargo	
John E. Williams	

SAMPLE

Figure H-23E

Revision 8, 10/93

HUKILL CHEMICAL CORPORATION

SAFETY/TRAINING MEETING
NOVEMBER 17, 1992

Topic(s): New DOT regulations (HM-181) overview
Loading/Unloading procedures
EPA (RCRA) annual review

pay from 7:30a dk

Time start: 7:45 **Time end:** 12:45

NAME	SIGNATURE
Paul Margolis	Paul Margolis
Del Syas	[illegible]
Bill Howard	Bill Howard
Nate Glenn	[illegible]
Rob Pangrace	R. Pangrace
Bob Fortson	Robert Fortson
John Vargo	J Vargo
Rich Kainec	Rich Kainec
Dave Madden	Dave Madden
Mike Mraz	Michael Mraz
Bob Lang	Bob Lang
Mark Matthews	Mark R. Matthews
Dorene Kray	Dorene Kray
Rickey Duncan	Rickey L. Duncan

SAMPLE

NORTHEASTERN ANALYTICAL CORPORATION
ENVIRONMENTAL TRAINING DIVISION

EMERGENCY RESPONSE: SAFETY & HEALTH TRAINING
FOR HAZMAT TECHNICIAN

DAY ONE

7:00 - 7:15 Registration & Program Overview

7:15 - 9:00 Hazardous Waste & Emergency Response Regulations

- OSHA 29 CFR 1910.120
- EPA 40 CFR Part 355
- EPA 40 CFR Part 264

SAMPLE

9:00 - 9:30 Chemical Characteristics of Hazardous Substances

- Flammability
- Corrosivity
- Reactivity
- Toxicity

9:30 - 9:45 Break

9:45 - 10:30 Chemical Characteristics (Cont'd)

10:30 - 11:15 Toxicology

- Dose/Response Relationship
- Toxic Responses
- Permissible Exposure Limits, Recommended Exposure Limits, Threshold Limit Values

NORTHEASTERN ANALYTICAL CORPORATION
ENVIRONMENTAL TRAINING DIVISION

EMERGENCY RESPONSE: SAFETY & HEALTH TRAINING FOR HAZMAT TECHNICIAN

DAY ONE (Cont'd)

11:15 - 11:45 Medical Surveillance

11:45 - 12:30 Lunch

12:30 - 1:00 Recognition & Hazard Evaluation

- Material Safety Data Sheets (MSDS)
- Labels, Placards & Manifests
- Emergency Response Guidebooks

SAMPLE

1:00 - 2:30 Recognition & Hazard Evaluation (Cont'd)

2:30 - 2:45 Break

2:45 - 3:30 Safety Hazards

- Heat Stress
- Cold Exposure
- Oxygen Deficiency
- Confined Spaces

3:30 - 4:00 Emergency Response Plan

- Lines of Authority/Communications/Personnel Roles
- Standard Operating Procedures

Figure H-26C

Revision 8, 10/93

NORTHEASTERN ANALYTICAL CORPORATION
TRAINING ADDED TO DAY ONE SCHEDULE
FOR HUKILL CHEMICAL CORPORATION

Preventative Procedures - includes inspections,locations of areas

RCRA training requirements

Contingency Plan - includes shut down procedures

Evacuation plan

SAMPLE

or shoveled into drums. The pads will be placed into drums. All drums used in this clean-up will be of compatible material of construction and properly sealed and labeled.

The containment area will then be rinsed with water or a cleaning solution which will then be collected and placed into containers. This rinseate will be placed in the neutralization process tanks.

The effectiveness of the decontamination will be determined through checking the pH of the rinseate and visual inspection. If the rinseate does not have the characteristic of corrosivity and no visible contamination exists, a rinseate test will be made using water. If contamination is observed or the rinseate has the characteristic of corrosivity, the rinsing process will be repeated.

A final water rinseate will be tested for the parameters by the methods listed in Table 3A, found in the Appendix of this section, and the area will be judged to be "clean" if it meets the Ohio EPA rinseate standards, listed in Table 3A and as outlined in the following section "I-2d(2) Closure of Tanks".

Representative samples of the contents of the drums to be shipped to an off-site TSDF will be taken using a ~~bottle and string~~ COLIWASA, SAMPLING TUBE or a drum thief, depending on the type of waste, liquid or solid. The sample labeling and chain-of-custody protocol described above will be followed. These samples will then be analyzed using the test methods listed in Section C-4b "Hazardous Waste Analysis and Test Methods".

Final water rinseate samples will follow the same sample handling protocol as described above. The final rinseate samples will be analyzed for pH and for the parameters listed in Table 3A, found in the Appendix of this section, using the test methods in Table 3A.

An independent, qualified, professional engineer, registered in the State of Ohio, will be present to observe the final rinsing and final rinseate sampling.

Core samples will be taken outside the east, north and west sides of the D002 Container Processing Building and inside the building, dike and storage area. A core sample will be taken near each sump. A minimum of four core samples will be taken for each area. Core samples will also be taken near any large cracks or any gaps in the containment slabs. These core samples will extend two feet below the surface or concrete slab. A TCLP will be run on a composite of samples from each area. An above described professional engineer will evaluate the analytical results compared to clean closure standards and determine if additional samples should be taken.

The sample handling protocol described above will be followed for these core samples.

Representative samples of the contents of the drums to be shipped to an off-site TSDF will be taken using a ~~bottle and string~~ COLIWASA, SAMPLING TUBE or a drum thief, depending on the type of waste, liquid or solid. The sample labeling and chain-of-custody protocol described above will be followed. These samples will then be analyzed using the test methods listed in Section C-4b "Hazardous Waste Analysis and Test Methods".

Final rinseate samples will follow the same sample handling protocol as described above. The final rinseate samples will be analyzed for pH and for the parameters listed in Table 3A, found in the Appendix to this section, using the test methods and "CLEAN" standards in Table 3A.

An independent, qualified, professional engineer, registered in the State of Ohio, will be present to observe the final rinsing and rinseate sampling.

Core samples will be taken outside the north, west and south sides of the Spent Acid Tank Dike and the east and west sides of the tank inside the dike. These five samples will extend two feet below the surface or concrete slab. Core samples will also be taken near any large cracks or any gaps in the containment area slab. A minimum of five samples will be taken for this management unit. A TCLP will be run on a composite of these samples and analyzed for the toxic constituents listed in Table 3A, found in the Appendix to this section. An above described professional engineer will evaluate the analytical results compared to clean closure standards and determine if additional samples should be taken.

The sample handling protocol described above will be followed for the core samples.

If the clean closure standards cannot be met, the professional engineer will prepare a sampling plan and, based on the results of the sampling plan, a remediation plan. The timing for submittal of these plans, if required, is shown in Figure I-1, "SCHEDULE FOR CLOSURE" found in the Appendix of this section.

PLANNED D002 PROCESSING TANKS

The three 4,000 gallon neutralization processing tanks in the Planned D002 Waste Container Processing Building will be closed following the same closure procedure as described above for the Spent Acid Storage Tank. Rinseates will be either discharged to the sanitary sewer, if they meet the limits listed in Table 4, or shipped off site to an approved TSDF after the above described sampling, testing and manifesting.

SECTION I
Closure Plan

SECTION I

CLOSURE PLAN AND CLOSURE COST ESTIMATE

HUKILL CHEMICAL CORPORATION

Introduction

This closure plan covers the existing AND PLANNED hazardous waste storage facility. The methods for decontamination and/or disposal of tank systems, container and storage areas will also apply for future additional hazardous waste systems.

As new storage assessments are submitted by Hukill Chemical Corporation (HCC) to the director for approval, the pertinent parts of this closure plan will be revised.

A closure plan for the Solvent Storage Tank Farm and the Underground Cistern was submitted to the Ohio EPA for HCC by Eder Associates. This plan is titled "Closure Plan For Solvent Storage Tank Farm and Underground Cistern", Revision No.1, April 1991. This closure plan will be referred to as the "EA Closure Plan" in the following Part B application closure plan.

The studies of the HCC site by Eder Associates, beginning in 1986, have determined that the two areas addressed in their closure plan should be closed as a landfill, rather than "Clean Closure". Because of this determination and the associated monitoring required for post closure of the above areas, HCC is providing for the facility to be closed as a landfill for this Part B application closure plan. If the above areas are determined to be "clean" prior to the facility closure date, an ammended closure plan will be submitted to the Ohio EPA.

Facility Description

The general facility description is found in Section B of this application. This section also contains the descriptions of the facility topography and hydrogeological information.

The EA Closure Plan outlines the plans for collection and treatment of contaminated groundwater and perched water.

Detailed descriptions of container storage areas and tank systems are found in Section D, "Process Information", of this application.

Table 1, in the appendix of this section, lists the hazardous waste solvents stored at the facility. The container storage areas and the storage tanks for the H.W. solvents processing side of the facility are considered to have had all of the hazardous wastes, listed under the heading of "H.W. Solvents," stored in them at one time or another. The Spent Acid Tank, in the Acid Plant area, has had only the D002, corrosive wastes, consisting of a mixture of spent sulfuric and hydrofluoric acids. THE PLANNED CORROSIVE H.W. CONTAINER PROCESSING AREA WILL HAVE A MIXTURE OF D002 WASTES. ALL OF THE WASTES AT THE FACILITY MAY CONTAIN MATERIALS THAT ADD THE CHARACTERISTICS OF TOXICITY.

Table 2, in the appendix of this section, lists the container storage areas and the maximum capacity for the areas.

Table 2 also lists the existing hazardous waste storage tanks and their capacities.

TABLE 2A LISTS THE PLANNED HAZARDOUS WASTE CONTAINER AND STORAGE TANK AREAS AND THEIR CAPACITIES.

Planned future storage areas and tanks ~~will~~ MAY require that these tables be updated as the additions are approved and placed into service.

HCC also has ~~an/NPDES/Permit/and~~ Air Permits identified in Form 1 of Section A, "Part A", of this application.

I-1a Closure Performance Standard

Facility Closure

This closure plan is consistent with OAC 3745-55-11, closure performance standard. HCC will close the facility in a manner that will minimize the need for further maintenance and minimize or eliminate the threat to human health and the environment. HCC will also comply with OAC 3745-55-12 as described in the May, 1991 Closure Plan Review Guidelines, outlined in the Ohio EPA "Closure Plan Review Guidance" published May 1, 1991.

Closure procedures for a storage facility will be followed. These procedures consist of removal of all waste in storage to another treatment, storage or disposal facility which is either permitted or operating under interim status.

The EA Closure Plan follows the closure performance standards specified in OAC 3745-66-11. It complies with OAC 3745-66-97 that allows HCC to close the contaminated Solvent Storage Tank Farm and Underground Cistern areas in accordance with requirements that apply to landfills.

THOSE PERMITTED UNITS NOT COVERED IN THE EA CLOSURE PLAN WILL BE CLOSED AS DESCRIBED IN THIS CLOSURE PLAN.

Removal of all waste materials from tanks and container storage will also eliminate any threat to human health and the environment from the current AND PLANNED permitted areas of the closed facility.

I-1b Partial Closure

Partial closure of the container storage areas may be done as operating facility requirements change. The procedure listed under I-1d (1), "Closure of Container Storage and Handling Units." would be followed. Partial closure would also apply

to individual tanks as they may be determined to be unfit for use. We would follow the procedure outlined under the heading below, "I-1d(2) Closure of Tanks."

I-1c Maximum Waste Inventory to be Removed

The current permitted H.W. storage volume is:

Container Storage.....55,000 Gallons

Tanks.....146,000 Gallons

AN ESTIMATED SEVENTY PERCENT OF THE 134,000 GALLONS OF SPENT SOLVENTS IN TANKS AND FIFTY PERCENT OF THE SPENT SOLVENTS IN CONTAINERS IS CONSIDERED RECOVERABLE. THE 12,000 GALLONS OF SPENT ACID CAPACITY, INCLUDED IN THE PERMITTED TANK VOLUME, IS THE TOTAL VOLUME OF THE TANK, WHICH IS NEVER FILLED TO THIS CAPACITY.

THE ESTIMATED VOLUME OF RECOVERABLE SPENT SOLVENTS IS 121,300 GALLONS. THIS RECOVERY WOULD BE DONE ON-SITE USING THE THIN FILM EVAPORATORS AND THE FRACTIONATING COLUMN. THE BOTTOMS FROM THESE PROCESSING UNITS WOULD BE BLENDED INTO H.W. FUELS TO BE USED FOR SUPPLEMENTAL FUEL AT APPROVED THERMAL DESTRUCTION UNITS, USUALLY CEMENT KILNS.

THE ESTIMATED GENERATED VOLUME OF H.W. FUELS (SOLID AND LIQUID) FROM THIS PROCESSING IS 67,700 GALLONS.

THE PLANNED PERMITTED H.W. STORAGE VOLUME IS:

SPENT SOLVENT CONTAINER STORAGE..... 82,500 GALLONS
D002 - CORROSIVE CONTAINER STORAGE.... 27,500 GALLONS
TANKS..... 549,000 GALLONS

AN ESTIMATED SEVENTY PERCENT OF THE 525,000 GALLONS OF SPENT SOLVENTS IN TANKS AND FIFTY PERCENT OF THE SPENT SOLVENTS IN CONTAINERS IS CONSIDERED RECYCLABLE. THE 24,000 GALLONS OF SPENT ACID, INCLUDED IN THE PERMITTED TANK VOLUME, IS THE TOTAL VOLUME OF THE SPENT ACID AND PROCESSING TANKS, WHICH ARE NEVER FILLED TO THIS CAPACITY.

THE ESTIMATED VOLUME OF RECYCLABLE SPENT SOLVENTS IS 408,750 GALLONS. THIS RECYCLING WOULD BE DONE ON-SITE USING THE THIN FILM EVAPORATORS AND THE FRACTIONATING COLUMN. THE BOTTOMS FROM THESE PROCESSING UNITS WOULD BE BLENDED INTO H.W. FUELS TO BE USED FOR SUPPLEMENTAL FUEL AT APPROVED THERMAL DESTRUCTION UNITS, USUALLY CEMENT KILNS. MOST OF THE NON-RECOVERABLE MATERIALS WITH THE CONTAINERIZED SPENT SOLVENTS WOULD ALSO BE PROCESSED INTO H.W. FUELS.

THE ESTIMATED GENERATED VOLUME OF H.W. FUELS (SOLID AND LIQUID) FROM THIS PROCESSING IS 198,750 GALLONS.

THE ESTIMATED VOLUME OF D002 WASTE TO BE PROCESSED ON-SITE IS 50,950 GALLONS OF THE 51,500 GALLONS IN CONTAINERS AND TANKS.

An estimate of the maximum waste inventory to be removed from the site at the closure is substantialy less than the permitted waste capacity since most of the waste would be recyclable. The recyclable waste would be processed and the recovered materials returned to the customers or sold.

An estimate of the maximum quantity of hazardous waste generated that would be required to be shipped off site has been made. These are the wastes which could not be sent to an approved fuels burner for energy recovery after recovery of solvents and generation of HW fuels blends, as done in HCC'S normal operations. This estimate contains contaminated materials generated during the closure activities; scale, dirt, spent blasting sand, contaminated protective clothing and rinseate water.

All of this material, except the D002, corrosive hazardous waste, would have the waste codes listed in Table 1 of this section.

Following is the estimate of the maximum volume to be treated or disposed of at an EPA approved TSDF:

CURRENT PERMITTED H.W. MANAGEMENT UNITS:

H.W. Solvents, Wastes described in Table 1:

Contaminated soil and debris, drums	40 dms.
H. W. process water, bulk	20,000 gal.
Closure rinseate water, bulk	6,000 gal.

Following is the estimate of the maximum volume of D002, corrosive hazardous wastes, to be disposed of at an approved EPA treatment/disposal facility:

Spent acid, D002, corrosive:

H.W. process water, bulk	10,000 gal.
Closure rinseate water, bulk	500 gal.

PLANNED PERMITTED H.W. MANAGEMENT UNITS:

H.W. SOLVENTS, WASTES DESCRIBED IN TABLE I-1:

CONTAMINATED SOIL AND DEBRIS, DRUMS	100 DMS.
H.W. PROCESS WATER, BULK	20,000 GAL.
CLOSURE RINSEATE WATER, BULK	15,000 GAL.

D002, INCLUDING TOXICITY CHARACTERISTIC WASTES:

CONTAMINATED SOIL AND DEBRIS, DRUMS.....	30 DMS.
H.W. PROCESS WATER, BULK	500 GAL.
CLOSURE RINSEATE WATER, BULK	1,000 GAL.

I-1d (1) Closure of Container Storage and Handling Units

CURRENT AND PLANNED PERMITTED H.W. SOLVENT UNITS

The container section of the storage facility will be closed by pumping containerized wastes to the recovery process or by removal of the entire container to another permitted treatment, storage or disposal facility.

Containers will be decontaminated by the following methods: pumping out the material, dumping out material that will not pump out, and cutting out the head and dumping the solids out. Empty drums will have less that 1" of waste in them. When empty the containers will be forwarded to a container reconditioning facility. The containment system will be inspected and if contamination is observed, it will be decontaminated using standard decontamination procedures for the container storage area. These decontamination procedures include absorbing the spilled liquid with an absorbant media, shoveling the absorbant media into a 55 gallon drum and then rinsing the area with a suitable solvent, absorbing the rinseate in an absorbant media AND shoveling that media into a 55 gallon drum for disposal.

The effectiveness of decontamination will be determined through visual inspection. If any visual contamination or spillage is observed during this inspection, the spilled material will be cleaned up prior to final closure and a rinseate sample taken. The rinseated will be tested and the area will be judged to be "clean" if it meets the Ohio EPA rinseate standards as outlined in the following Section "I-1d(2) Closure of Tanks."

Samples will be sealed by the person taking the sample. A label will be attached to each sample with the identification of the source, time, date, method of sampling and the name of the person taking the sample.

A chain-of-custody protocol will be followed which requires each person handling the samples to sign off and date the form when the sample enters their custody. The chain-of-custody form will be kept with the sample analysis data and be available for review by the professional engineer and the Ohio EPA inspector.

Rinseate samples will be analyzed for the parameters using the test methods listed in Table 3, found in the appendix of this section.

An independent, qualified, professional engineer, registered in the state of Ohio, will be present to observe the rinsing and rinseate sampling for each area.

All empty containers will be forwarded to a container reconditioning facility. Containment linings, contaminated soils, and decontamination washes will be characterized prior to either recovery or transport to another treatment, storage or disposal facility.

CORE SAMPLES WILL BE TAKEN OUTSIDE THE EAST SIDE OF THE H.W. SOLVENT CONTAINER PROCESSING BUILDING AND INSIDE THE BUILDING, EACH DIKE AND STORAGE AREA. THESE SAMPLES WILL EXTEND TWO FEET BELOW THE SURFACE OR CONCRETE SLAB. A TCLP WILL BE RUN ON A COMPOSITE OF THESE SAMPLES. AN ABOVE DESCRIBED PROFESSIONAL ENGINEER WILL EVALUATE THE ANALYTICAL RESULTS COMPARED TO CLEAN CLOSURE STANDARDS AND DETERMINE IF ADDITIONAL SAMPLES SHOULD BE TAKEN.

THE SAMPLE HANDLING PROTOCOL DESCRIBED ABOVE WILL BE FOLLOWED FOR THESE CORE SAMPLES.

IF THE CLEAN CLOSURE STANDARDS CANNOT BE MET, THE PROFESSIONAL ENGINEER WILL PREPARE A SAMPLING PLAN AND, BASED ON THE RESULTS OF THE SAMPLING PLAN, A REMEDIATION PLAN. THE TIMING FOR SUBMITTAL OF THESE PLANS, IF REQUIRED, IS SHOWN IN FIGURE I-1, "SCHEDULE FOR CLOSURE", FOUND IN THE APPENDIX TO THIS SECTION.

PLANNED D002 CONTAINER STORAGE AND HANDLING UNITS

THE CONTAINER STORAGE AREA OF THE PLANNED D002 WASTE CONTANIER PROCESSING BUILDING WILL BE CLOSED BY PUMPING THE WASTES TO THE NEUTRALIZATION PROCESSING TANKS AND NEUTRALIZING THE WASTES. ANY WASTES WHICH CAN NOT BE PROCESSED IN THIS MANNER WILL BE MANIFESTED AND SHIPPED TO AN APPROVED OFF-SITE TSDF.

CONTAINERS WILL BE DECONTAMINATED BY REMOVING THE MATERIAL, WHICH IS NOT PUMPABLE, TO COMPATIBLE CONTAINERS WHICH WILL BE PROPERLY LABELED. THESE CONTAINERS WITH THE REQUIRED DOCUMENTATION WILL THEN BE SENT TO AN APPROVED OFF-SITE TSDF. THE EMPTY CONTAINERS WILL BE RINSED AND THE RINSEATE PUMPED TO THE PROCESSING TANKS FOR NEUTRALIZATION. THE DRUMS WILL THEN BE SENT TO A CONTAINER RECONDITIONING FACILITY.

THE CONTAINMENT SYSTEM WILL BE INSPECTED. IF CONTAMINATION IS OBSERVED, IT WILL BE REMOVED WITH ABSORBENT PADS OR SHOVELED INTO DRUMS. THE PADS WILL BE PLACED INTO DRUMS. ALL DRUMS USED IN THIS CLEAN-UP WILL BE OF COMPATIBLE MATERIAL OF CONSTRUCTION AND PROPERLY SEALED AND LABELED.

THE CONTAINMENT AREA WILL THEN BE RINSED WITH WATER OR A CLEANING SOLUTION WHICH WILL THEN BE COLLECTED AND PLACED INTO CONTAINERS.

THIS RINSEATE WILL BE PROCESSED IN THE NEUTRALIZATION PROCESS TANKS.

THE EFFECTIVENESS OF DECONTAMINATION WILL BE DETERMINED THROUGH CHECKING THE PH OF THE RINSEATE AND VISUAL INSPECTION. IF THE RINSEATE DOES NOT HAVE THE CHARACTERISTIC OF CORROSIVITY AND NO VISIBLE CONTAMINATION EXISTS, A RINSEATE TEST WILL ME MADE. IF CONTAMINATION IS OBSERVED OR THE RINSEATE HAS THE CHARACTERISTIC OF CORROSIVITY, THE RINSING PROCESS WILL BE REPEATED.

A FINAL RINSEATE WILL BE TESTED AND THE AREA WILL BE JUDGED TO BE "CLEAN" IF IT MEETS THE OHIO EPA RINSEATE STANDARDS AS OUTLINED IN THE FOLLOWING SECTION "I-2d(2) CLOSURE OF TANKS".

REPRESENTATIVE SAMPLES OF THE CONTENTS OF THE DRUMS TO BE SHIPPED TO AN OFF-SITE TSDF WILL BE TAKEN USING A BOTTLE AND STRING OR A DRUM THIEF, DEPENDING ON THE TYPE OF WASTE, LIQUID OR SOLID. THE SAMPLE LABELING AND CHAIN-OF CUSTODY PROTOCOL DESCRIBED ABOVE WILL BE FOLLOWED. THESE SAMPLES WILL THEN BE ANALYZED USING THE TEST METHODS LISTED IN SECTION C-4B "HAZARDOUS WASTE ANALYSIS AND TEST METHODS".

FINAL RINSEATE SAMPLES WILL FOLLOW THE SAME SAMPLE HANDLING PROTOCOL AS DESCRIBED ABOVE. THE FINAL RINSEATE SAMPLES WILL BE ANALYZED FOR PH AND FOR THE PARAMETERS LISTED IN TABLE 3, FOUND IN THE APPENDIX TO THIS SECTION, USING THE TEST METHODS IN TABLE 3.

AN INDEPENDENT, QUALIFIED, PROFESSIONAL ENGINEER, REGISTERED IN THE STATE OF OHIO, WILL BE PRESENT TO OBSERVE THE FINAL RINSING AND FINAL RINSEATE SAMPLING.

CORE SAMPLES WILL BE TAKEN OUTSIDE THE EAST, NORTH AND WEST SIDES OF THE DOO2 CONTAINER PROCESSING BUILDING AND INSIDE THE BUILDING, DIKE AND STORAGE AREA. THESE FIVE SAMPLES WILL EXTEND TWO FEET BELOW THE SURFACE OR CONCRETE SLAB. A TCLP WILL BE RUN ON A COMPOSITE OF THESE SAMPLES. AN ABOVE DESCRIBED PROFESSIONAL ENGINEER WILL EVALUATE THE ANALYTICAL RESULTS COMPARED TO CLEAN CLOSURE STANDARDS AND DETERMINE IF ADDITIONAL SAMPLES SHOULD BE TAKEN.

THE SAMPLE HANDLING PROTOCOL DESCRIBED ABOVE WILL BE FOLLOWED FOR THESE CORE SAMPLES.

IF THE CLEAN CLOSURE STANDARDS CANNOT BE MET, THE PROFESSIONAL ENGINEER WILL PREPARE A SAMPLING PLAN AND, BASED ON THE RESULTS OF THE SAMPLING PLAN, A REMEDIATION PLAN. THE TIMING FOR SUBMITTAL OF THESE PLANS, IF REQUIRED, IS SHOWN IN FIGURE I-1, "SCHEDULE FOR CLOSURE".

I-1d (2) Closure of Tanks

CURRENT AND PLANNED H.W. SOLVENT STORAGE TANK SYSTEMS

At closure, all wastes will be discharged from permitted H W storage tanks to either the recovery process or to tanker trailers for transport to another treatment, storage or disposal facility. If hazardous wastes are present within the tank discharge confinement structure, these will be removed according to standard decontamination procedures for a tank storage facility. These procedures include containment of the spill area, removal of spilled liquid into drums or tank trailer, excavation of contaminated soil and replacement with clean soil.

All permitted H W Storage tanks will be decontaminated at closure. The decontamination procedures will be accomplished by rinsing the inside of the tank with a suitable solvent and pumping the solvent either to the recovery process or to a tanker for transport to another permitted or interim status facility.

The effectiveness of decontamination will be determined by visually inspecting the clarity of the decontamination liquid, i.e., acetone. When the liquid appears clean, the tank will be assumed to be decontaminated.

A steam hose will then be attached to the discharge line of tank. The tank will be steamed out for at least an hour to remove any residual cleaning solvents. The condensate will then be either discharged to the sanitary sewer, if it meets acceptable limits, or sent to an approved disposal facility.

In some cases, there may be a significant amount of scale inside the tank to trap small amounts of hazardous waste spent solvents. In these cases, the inside of the tank will either be scraped or sandblasted. Proper precautions will be made to assure that personnel are protected. They will wear protective clothing that can be disposed of and breathing air supplied respirators. After the scraping and/or sandblasting, the residue will be placed into drums and properly labeled as hazardous waste. The protective clothing will be removed and placed in a drum marked hazardous waste. These drums will then be properly disposed of.

There should be no significant air emissions during the Closure activities. The steam applied to the tank should condense inside the tank, on the tank walls, and the condensate will be collected as described above.

The Independent Qualified Professional Engineer, registered in the State of Ohio, will observe a water rinsing of the interior surfaces of the tanks and contaminated storage surfaces and sampling of the final rinse water. The rinse water will be managed as hazardous waste and either sent to the sanitary sewer, if it meets the limits, or sent to an Approved Disposal Facility.

Approximately 100 gallons will be used to rinse the inside of each tank.

Samples will be sealed by the person taking the sample. A label will be attached to each sample with the identification of the source, time, date, method of sampling and the name of the person taking the sample.

A chain-of-custody protocol will be followed which requires each person handling the samples to sign off and date the form when the sample enters their custody. The chain-of-custody form will be kept with the sample analysis data and be available for review by the professional engineer and the Ohio EPA inspector.

Rinseate samples will be analyzed for the parameters using the test methods listed in Table 3, found in the appendix of this section.

The final rinse water will be sampled and either analyzed at HCC's lab, if it meets testing method and QA/QC requirements for the constituents to be quantified, or sent to an outside Testing Laboratory which has a formal QA/QC Program.

We will request that the rinseate be tested for those wastes which appear in Table 1 of this section or, as in the case of the Spent Acid Tank, for those contaminants previously stored in the tank.

The rinse water will be judged to be clean if the toxic metals detected are below fifteen times the maximum contaminate levels (MCL) for public drinking water as outlined in 40 CFR Part 141.11, OAC 3745-81-11 or, if no MCL exists, below fifteen times the maximum contaminant level goal (MCLG) as outlined in 40 CFR 141.50. if the product of fifteen times the MCL or MCLG exceeds 1 mg/l or if neither an MCL or MCLG exists for a contaminant, 1 mg/l will be used as a clean standard.

The rinse water will be judged to be clean if the organics detected are below fifteen times the maximum contaminate levels for organic chemicals as outlined in 40 CFR Part 141.12, OAC 3745-81-12 or, if no MCL exists, are below the MCLG as outlined in 40 CFR Part 141.50. If the product of fifteen times the MCL or MCLG exceeds 1 mg/l or if neither an MCL or MCLG exists for a contaminant, 1 mg/l will be used as a clean standard.

The flame arrester, vent relief valve, level probes and any valves and piping attached to the tank will be steamed out with the condensate managed as hazardous waste. If the piping valves, relief vents, or probes are still contaminated, they will be labeled as Hazardous Waste and sent to an approved thermal destruction facility.

All hazardous waste and decontamination washes generated at closure will either be:

1. run through the recovery process and the clean solvent sold, the residue disposed at a proper facility, or,

2. the hazardous wastes and decontamination washes will be transported to another hazardous waste facility capable of handling this material.

All solid waste residues removed from tanks and associated structure and contaminated soils will be characterized prior to transport to an appropriate hazardous waste facility, i.e. incinerator or an approved thermal destruction facility.

Any soils contaminated during the closure will be transferred to properly labeled containers, analyzed for contaminants and sent to an approved thermal destruction facility.

All hazardous wastes shipped off-site will be properly manifested and a land disposal restriction notification will be sent with the shipment. The transporter will be a licensed hazardous waste transporter.

The tanks will be either sold or scrapped after the Ohio EPA has reviewed the final closure activity documents and approved the closure.

THREE CORE SAMPLES WILL BE TAKEN INSIDE THE DIKE. THE SAMPLES WILL BE TAKEN AT EQUAL DISTANCES WITHIN THE DIKE WALLS ALONG THE LONGEST CENTERLINE OF THE DIKE. ONE CORE SAMPLE WILL BE TAKEN ON EACH SIDE OF THE DIKE UNLESS THAT SIDE ABUTS ANOTHER H.W. MANAGEMENT UNIT WHICH HAS ALREADY BEEN SAMPLED. THESE CORE SAMPLES WILL EXTEND TWO FEET BELOW THE SURFACE OR CONCRETE SLAB. A TCLP WILL BE RUN ON A COMPOSITE OF THESE SAMPLES. AN ABOVE DESCRIBED PROFESSIONAL ENGINEER WILL EVALUATE THE ANALYTICAL RESULTS COMPARED TO CLEAN CLOSURE STANDARDS AND DETERMINE IF ADDITIONAL SAMPLES SHOULD BE TAKEN.

THE SAMPLE HANDLING PROTOCOL DESCRIBED ABOVE WILL BE FOLLOWED FOR THESE CORE SAMPLES.

IF THE CLEAN CLOSURE STANDARDS CANNOT BE MET, THE PROFESSIONAL ENGINEER WILL PREPARE A SAMPLING PLAN AND, BASED ON THE RESULTS OF THE SAMPLING PLAN, A REMEDIATION PLAN. THE TIMING FOR SUBMITTAL OF THESE PLANS, IF REQUIRED, IS SHOWN IN FIGURE I-1, "SCHEDULE FOR CLOSURE", FOUND IN THE APPENDIX TO THIS SECTION.

SPENT ACID STORAGE TANK SYSTEM

THE SPENT ACID STORAGE TANK WILL BE CLOSED BY PUMPING THE WASTES TO THE NEUTRALIZATION PROCESSING TANKS AND NEUTRALIZING THE WASTES. ANY WASTES WHICH CAN NOT BE PROCESSED IN THIS MANNER WILL BE MANIFESTED AND SHIPPED TO AN OFF-SITE TSDF.

THE TANK WILL BE DECONTAMINATED BY REMOVING THE MATERIAL WHICH IS NOT PUMPABLE TO CONTAINERS WHICH WILL BE PROPERLY LABELED. THESE CONTAINERS, WITH THE REQUIRED DOCUMENTATION, WILL BE SENT TO AN APPROVED OFF-SITE TSDF. THE TANK WILL BE RINSED WITH A SOLUTION OF DILUTE SODIUM HYDROXIDE FOLLOWED BY WATER RINSES UNTIL THE RINSEATE NO LONGER MEETS THE DEFINITION OF CORROSIVITY AND DOES NOT HAVE THE CHARACTERISTIC OF TOXICITY. THE RINSEATE WILL BE PUMPED TO THE PROCESSING TANKS FOR NEUTRALIZATION.

THE CONTAINMENT SYSTEM WILL BE INSPECTED. IF CONTAMINATION IS OBSERVED, IT WILL BE SHOVELED INTO DRUMS. ALL DRUMS USED IN THIS CLEAN-UP WILL BE OF COMPATIBLE MATERIAL OF CONSTRUCTION AND PROPERLY SEALED AND LABELED.

THE CONTAINMENT AREA WILL THEN BE RINSED WITH WATER OR A CLEANING SOLUTION WHICH WILL THEN BE COLLECTED AND PLACED INTO CONTAINERS. THIS RINSEATE WILL BE PROCESSED IN THE NEUTRALIZATION PROCESS TANKS.

THE EFFECTIVENESS OF DECONTAMINATION OF THE CONTAINMENT AREA WILL BE DETERMINED THROUGH CHECKING THE PH OF THE RINSEATE AND VISUAL INSPECTION. IF THE RINSEATE DOES NOT HAVE THE CHARACTERISTIC OF CORROSIVITY AND NO VISIBLE CONTAMINATION EXISTS, A RINSEATE TEST WILL ME MADE. IF CONTAMINATION IS OBSERVED OR THE RINSEATE HAS THE CHARACTERISTIC OF CORROSIVITY, THE RINSING PROCESS WILL BE REPEATED.

A FINAL TANK RINSEATE WILL BE TESTED AND THE TANK WILL BE JUDGED TO BE "CLEAN" IF IT MEETS THE OHIO EPA RINSEATE STANDARDS AS OUTLINED ABOVE.

THE TANK WILL EITHER BE SOLD OR SCRAPPED AFTER APPROVAL OF THE CLOSURE BY OHIO EPA.

REPRESENTATIVE SAMPLES OF THE CONTENTS OF THE DRUMS TO BE SHIPPED TO AN OFF-SITE TSDF WILL BE TAKEN USING A BOTTLE AND STRING OR A DRUM THIEF, DEPENDING ON THE TYPE OF WASTE, LIQUID OR SOLID. THE SAMPLE LABELING AND CHAIN-OF CUSTODY PROTOCOL DESCRIBED ABOVE WILL BE FOLLOWED. THESE SAMPLES WILL THEN BE ANALYZED USING THE TEST METHODS LISTED IN SECTION C-4B "HAZARDOUS WASTE ANALYSIS AND TEST METHODS".

FINAL RINSEATE SAMPLES WILL FOLLOW THE SAME SAMPLE HANDLING PROTOCOL AS DESCRIBED ABOVE. THE FINAL RINSEATE SAMPLES WILL BE ANALYZED FOR PH AND FOR THE PARAMETERS LISTED IN TABLE 3, FOUND IN THE APPENDIX TO THIS SECTION, USING THE TEST METHODS IN TABLE 3.

AN INDEPENDENT, QUALIFIED, PROFESSIONAL ENGINEER, REGISTERED IN THE STATE OF OHIO, WILL BE PRESENT TO OBSERVE THE FINAL RINSING AND FINAL RINSEATE SAMPLING.

CORE SAMPLES WILL BE TAKEN OUTSIDE THE NORTH, WEST AND SOUTH SIDES OF THE SPENT ACID TANK DIKE AND THE EAST AND WEST SIDES OF

THE TANK INSIDE THE DIKE. THESE FIVE SAMPLES WILL EXTEND TWO FEET BELOW THE SURFACE OR CONCRETE SLAB. A TCLP WILL BE RUN ON A COMPOSITE OF THESE SAMPLES. AN ABOVE DESCRIBED PROFESSIONAL ENGINEER WILL EVALUATE THE ANALYTICAL RESULTS COMPARED TO CLEAN CLOSURE STANDARDS AND DETERMINE IF ADDITIONAL SAMPLES SHOULD BE TAKEN.

THE SAMPLE HANDLING PROTOCOL DESCRIBED ABOVE WILL BE FOLLOWED FOR THESE CORE SAMPLES.

IF THE CLEAN CLOSURE STANDARDS CANNOT BE MET, THE PROFESSIONAL ENGINEER WILL PREPARE A SAMPLING PLAN AND, BASED ON THE RESULTS OF THE SAMPLING PLAN, A REMEDIATION PLAN. THE TIMING FOR SUBMITTAL OF THESE PLANS, IF REQUIRED, IS SHOWN IN FIGURE I-1, "SCHEDULE FOR CLOSURE", FOUND IN THE APPENDIX TO THIS SECTION.

I-1d (3) Closure of H.W. Handling Equipment

The decontamination procedure for H.W. processing equipment and HCC owned transport trailers used in the shipment of hazardous waste is the same as outlined above for tanks in I-1d (2).

I-1d (4) Closure of Contaminated Site Areas as a Landfill

As discussed under "I-1a Closure Performance Standard", those areas determined to be contaminated, as outlined in the EA Closure Plan, will be closed as a landfill unless monitoring and testing prior to the site closure has determined that the areas meet the required "clean" closure standards.

If these areas do not meet the "clean" standards, the EA Closure Plan Groundwater Monitoring and Testing Procedure will be followed as outlined in Section "5.0 Post-Closure Care" of the EA Closure Plan.

THOSE H.W. MANAGEMENT UNITS NOT COVERED IN THE EA COSURE PLAN WILL BE SAMPLED AS DISCUSSED UNDER ABOVE CLOSURE SECTIONS. IF CONTAMINATION IS DETERMINED, A SAMPLING PLAN FOR THE RESPECTIVE AREA WILL BE SUBMITTED. BASED ON THE RESULTS OF THE SAMPLING PLAN, A REMEDIATION PLAN WILL BE SUBMITTED, IF REQUIRED. THE SCHEDULES FOR SUBMITTAL OF THE SAMPLING PLANS AND REMEDIATION PLANS FOR THE RESPECTIVE MANAGEMENT UNITS IS SHOWN IN FIGURE I-1, FOUND IN THE APPENDIX TO THIS SECTION.

I-1e Schedule for Closure

The life expectancy of this solvent recovery facility cannot be determined at this time. The facility owner and operator expects to remain in business for an indefinite period. However, for purposes of compliance with the closure requirement, Hukill Chemical proposes the following: The closure date for Hukill

Chemical will be June of the year 2010. Within 90 days of the receipt of the final volume of hazardous waste, final closure activities will be initiated. These activities will be completed as indicated in Figure I-1, "Schedule for Closure". All costs will be updated annually. Closure will be accomplished in accordance with the time line in Figure I-1. The final closure will be supervised and certified by an Independent, Qualified, Professional Engineer, registered in the State of Ohio and the owner/operator.

The district Ohio EPA inspector will be contacted to determine if notification of critical closure activities may be required. The five business day notification would be provided prior to implementing each of those activities.

I-1f (1) Description of Security System

The working area of the HCC site is completely surrounded by a seven foot high chain link fence topped by barbed wire. Gates are locked when the site is unattended.

Visitors and contractors are required to sign a log book.

Signs, which are visible from at least 25 feet, are posted at the gates and around the fenced area which read "Danger - Unauthorized Personnel Keep Out".

During closure, active areas for closure operations will be sectioned off with warning signs to keep personnel not involved with closure activities out of those areas.

I-1f (2) Personnel Safety and Fire Prevention

Section H, "Personnel Training", of the Part B Application covers the training requirements for the closure of this facility. Particular attention will be given to the training of outside contractors involved in the closure activities. The confined space entry procedures and the procedures for lock-out and tag-out of potential sources of energy release will be reviewed by all personnel involved in the closure activities.

Explosion, Oxygen and OVA meters will be provided for those activities that are non-standard to the daily activities of the current operations. Each closure activity will be reviewed to determine the level of personnel protection required. As discussed in the closure details in section I-1D, above, disposable clothing will be used and disposed of, when contaminated, as hazardous waste.

All safety equipment checks and contingency plan check lists will be followed during the closure period.

The fire prevention equipment inspections and tests will be maintained throughout the closure period. The fire department will be advised that the facility is going through closure activities and a schedule of closure activities will be provided for them.

I-1g Certification of Closure

Hukill Chemical will send a Certification Document of Final Closure, or Partial Closure in the case of one tank taken out of service, to the Director of the Ohio EPA and to the Director of the U.S. EPA by Registered Mail within 60 days after the completion of final or partial closure. The certification will state that the closure has been completed according to the specifications of an approved Closure Plan. The certification will be signed by the President of Hukill Chemical and by an Independent, Qualified, Registered, Professional Engineer.

The certifications for the closure will read as follows:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

The certification document of final or partial closure will contain the following:

1. The certification statement.
2. The approved closure plan or reference to the approved plan.
3. The volume of waste removed.
4. All correspondence regarding closure activity after Ohio EPA approval.
5. Details of sampling and analysis methods.
6. Laboratory records.
7. A narrative describing all activities during closure.
8. Details and drawings pertaining to the area(s) closed as a landfill.
9. Post-closure clean-up documentation.
10. The signature of the owner/operaror and of a qualified, independent, registered, professional engineer.

I-4 Closure Cost Estimate

Figure I-2, "Cost Estimates for Closure -CURRENT UNITS", provides the detailed format for presenting the annually revised closure cost estimates. Upon approval of this Part B Application, HCC will begin providing the closure cost estimates in this format.

As per the review guidance document, it is not necessary to include the cost estimates in the closure plan. HCC will continue to provide the annual revised cost estimates and financial assurances required by the Ohio EPA and reference them to the current approved closure plan.

I-5 Financial Assurance Mechanism for Closure Letter of Credit

Hukill Chemical has chosen a Letter of Credit and Standby Trust as financial assurance mechanisms for closure. (See Appendix B Exhibit 1, 2, & 3)

I-6 Post - Closure Cost Estimate

The "Post-Closure Care Cost Estimate", Table 6, of the EA Closure Plan provides the estimate for those areas of the facility that are expected to be closed as a landfill.

I-7 Financial Assurance Mechanism for Post - Closure

This will probably consist of a letter of credit payable to a blind trust. Details will be provided after approval of the EA Closure Plan.

SCHEDULE FOR CLOSURE

(Schedule Begins After Approval of Closure Plan by Ohio EPA)

TIME SCHEDULE (MONTHS)

CLOSURE ACTIVITY	1	2	3	4	5	6	7	8	9	10 thru 12	13	14	15
1. Closure of Permitted H.W. Solvent Tank Systems:													
a. On-site processing of solvents & fuels	****	****	**										
b. Decontamination of H.W. storage tanks				****	****								
c. Rinseate testing with Registered P.E. present						**							
d. Decon. of storage tank system piping, etc.						****							
e. Decontamination of storage tank dikes							****						
f. Rinseate testing with Registered P E present								**					
g. Sampling and testing of contam. soil & debris								****					
h. Labeling and shipment of soil and debris									**				
i. Allowance for inclement weather										*---------*			
2. Closure of Container Storage and Handling Units:													
a. On-site processing of solvents & fuels			****										
b. Decon. of storage areas and handling equip.				****	****								
c. Rinseate testing with Registered P E present						**							
d. Sampling and testing of contam. soil & debris							****						
e. Labeling and shipment of soil and debris								*					
3. Closure of Processing Equipment and Transports:													
a. Decon. of Processing Equipment						****							
b. Decon. of H.W. transport trailers							****						
c. Rinseate testing with Registered P E present								*					
d. Sampling and testing of contam. soil & debris								***					
e. Labeling and shipment of soil and debris									*				
4. Closure of Corrosives Container Storage Area:													
a. On-site processing - neutralization of corrosiv			****										
b. Decon. of storage areas and handling equip.				**									
c. Rinseate testing with Registered P E present						**							
d. Sampling and testing of contam. soil & debris							****						
e. Labeling and shipment of soil and debris								**					
5. Closure of H.W. Corrosives Tank Systems:													
a. Processing of Spent Corrosives			****										
b. Decontamination of tanks & piping				**									
c. Decontamination of dike areas					**								
d. Rinseate testing with Registered P.E. Present						**							
e. Labeling and prep. for shipment, if required						**							
f. Ship rinseate to TSDF, if required							*						
g. Allowance for inclement weather							***	****	****	*			
6. Testing to Detect H.W Migration from Units:													
a. Core samples - areas around and under units										**			
b. Analysis of samples and report										****			
c. Review of report by Registered P.E.										****			
d. Allowance for inclement weather											****	****	****
7. If Required. Submit Sampling Plan to OEPA	Within 60 days after core sample review by P.E.												
8. If Required. Submit Remediation Plan to OEPA			Within 90 days after approval of Sampling Plan by OEPA										
9. Submittal of Closure Certification signed by Owner and Reg. P. E.	Within sixty days of completion of closure.												

Note: Ohio EPA to be notified 5 days prior to commencement of major activities as agreed upon prior to implementation of Closure Plan.

* Equals approx. one week. *------* Equals three months.

COST ESTIMATES FOR CLOSURE - CURRENT UNITS				
Costs to be supplied and updated annually after approval of this format.				
Refer to I-1c "Maximum Waste Inventory to be Removed" and Figure I-1				
"SCHEDULE FOR CLOSURE" for details.				
	(All costs in Dollars.)			
		COST	NO. OF	COST
CLOSURE COST ITEM	UNITS	PER UNIT	UNITS	PER ITEM
---	---	---	---	---
Permitted H.W. Solvent Tank Systems:				
Solvent Rinsing of Tanks	Tank		10	
Steam-out of Tanks	Tank		10	
Scrape and Sand Blast Tanks	Tank		9	
Registered P.E. on Site	Days		1	
Analysis of Rinseate for Tanks	Sample		10	
Decontamination of System, Piping, etc.	Tank		10	
Decontamination of Dikes	Days		4	
Registered P.E. on Site	Days		1	
Analysis of Rinseate for Dikes	Sample		3	
Clean-up and Sampling of Debris	Days		2	
Analysis of Clean-up Debris	Sample		4	
Labeling and Preparation for Shipment	Lot		3	
Ship to Approved Incinerator Facility	Drum		20	
Ship Rinseate and Condensate to TSDF	Gal.		5,000	
Ship Process Water to TSDF	Gal.		20,000	
Subtotal for H.W. Solvent Tank Systems				
Container Storage and Handling Units:				
Clean Storage Areas and Equip.	Days		4	
Registered P.E. on Site	Days		1	
Analysis of Rinseate for Storage Areas	Sample		4	
Clean-up and Sampling of Debris	Days		2	
Analysis of Clean-up Debris	Sample		2	
Labeling and Preparation for Shipment	Lot		1	
Ship to Approved Incinerator Facility	Drum		10	
Ship Rinseate and Condensate to TSDF	Gal.		500	
Subtotal for Storage and Handling Units				
Processing Equipment and Transports:				
Clean Equipment and Transports	Days		4	
Registered P.E. on Site	Days		1	
Analysis of Rinseate for Transports	Sample		4	
Clean-up and Sampling of Debris	Days		1	
Analysis of Clean-up Debris	Sample		2	
Labeling and Preparation for Shipment	Lot		1	
Ship to Approved Incinerator Facility	Drum		10	
Ship Rinseate and Condensate to TSDF	Gal.		500	
Subtotal for Storage and Handling Units				

Cost Est. For Closure, Cont'd.				
	(All costs in Dollars.)			
		COST	NO. OF	COST
CLOSURE COST ITEM	UNITS	PER UNIT	UNITS	PER ITEM
---	---	---	---	---
H.W. Corrosives Tank System:				
Transfer Spent Corrosives to TSDF	Gal.		10,000	
Clean & Neut. Storage Tank and Piping	Days		2	
Registered P.E. on Site	Days		1	
Analysis of Rinseate	Sample		2	
Labeling and Preparation for Shipment	Lot		1	
Ship Rinseate to TSDF	Gal.		500	
Subtotal for Corrosive Tank System				
Testing for Migration from Units:				
Core Samples Around and Under Units	Sample		20	
Analysis of Samples and Reports	Sample		20	
Review of Reports by Registered P.E.	Days		2	
Subtotal for Testing for Migration				
Subtotal for Facility Closure				
Contingency at 10%				
TOTAL COST ESTIMATE FOR CLOSURE				
\PARTB-5\CLCOSTSA.XLS				

Table 1

List of Hazardous Waste Solvents Stored at the Facility.

H.W. Solvents:

D001 - General ignitable waste solvents, flash point less than 140 degrees F, not listed as a hazardous waste in Subpart D of 40 CFR Part 261. MAY CONTAIN ANY OF THOSE WASTE CODES LISTED BELOW AS WELL AS WASTES HAVING THE CHARACTERISTIC OF TOXICITY.

F001 - The spent halogenated solvents used in degreasing and other applications; Tetrachloroethylene, Trichloroethylene, Methylene Chloride, 1,1,1-Trichloroethane, Carbon Tetrachloride, the chlorinated flourocarbons and still bottoms from the recovery of these solvents.

F002 - The spent halogenated solvents; Tetrachloroethylene, Trichloroethylene, Methylene Chloride, 1,1,1-Trichloroethane, Chlorobenzene, 1,1,2-Trichloro-1,2,2-Trifluoroethane, Ortho-Dichlorobenzene, Trichlorofluoromethane, 1,1,2-Trichloroethane and still bottoms from the recovery of these solvents.

F003 - The spent non-halogenated solvents; Xylene, Acetone, Ethyl Acetate, Ethyl Benzene, Ethyl Ether, Methyl Isobtyl Ketone, Methanol, N-Butyl Alcohol, Cyclohexanone and the still bottoms from the recovery of these solvents.

F004 - The following spent non-halogenated solvents; Cresols and Cresylic Acid, Nitrobenzene and the still bottoms from the recovery of these solvents.

F005 - The spent non-halogenated solvents; Toluene, Methyl Ethyl Ketone, Carbon Disulfide, Isobutanol, Pyridine, Benzene, 2-Ethoxyethanol, 2-Nitropropane and the still bottoms from the recovery of these solvents.

K086 - Solvent washes from ink formulations containing Chromium and Lead.

U002 - Acetone	U019 - Benzene
U031 - N-Butyl Alcohol	U037 - Chlorobenzene
U052 - Cresylic Acid	U080 - Methylene Chloride
U112 - Ethyl Acetate	U121 - Trichlorofluoromethane
U140 - Isobutyl Alcohol	U154 - Methyl Alcohol
U159 - Methyl Ethyl Ketone	U161 - Methyl Isobutyl Ketone
U213 - Tetrahydrofuran	U220 - Toluene
U226 - 1,1,1-Trichloroethane	U239 - Xylene

PERMITTED HAZARDOUS WASTE STORAGE

This table lists the current maximum storage capacity for the respective areas. The total for the container storage areas excedes the current permitted container storage of 1,000 drums because not all areas are operated at the maximum capacity at any one time. Refer to Table 2A for planned permitted H.W. storage.

PERMITTED CONTAINER STORAGE AREAS:

LOCATION	AREA (sq. ft.)	MAXIMUM STORAGE DRUMS	BINS	H. W. MATERIAL TYPE
East Warehouse	6,808	916		H.W. Solvents, ref.Table 1
			229	H.W. Solvents, ref.Table 1
Processing Building	1,200	240		H.W. Solvents, ref.Table 1
			60	H.W. Solvents, ref.Table 1
East Pad, No-Free-Liquids	676	360		H.W. Solvents, ref.Table 1
			90	H.W. Solvents, ref.Table 1

PERMITTED STORAGE TANKS:

DIKE IDENTIFICATION	DIKE AREA (sq. ft.)	TANK I.D.	TANK CAPAC. (gallons)	H. W. MATERIAL TYPE
East Pad H.W. Tank Dike	2,972	V-114	14,000	H.W. Solvents, ref.Table 1
		V-214	14,000	"
		V-314	14,000	"
		V-414	14,000	"
		V-514	14,000	"
		V-614	14,000	"
		V-120	21,000	"
Feed & Bottoms Tank Dike	606	V-6000E	6,000	H.W. Solvents, ref.Table 1
		V-6000W	6,000	"
		V-117	17,000	"
F-1 Dike *	918	V-110M	9,500	H.W. Solvents, ref.Table 1
		V-210M	10,000	"
Acid Tank Dike	1,254	Spent Acid	12,000	D002 & Tox. Char. Wastes
Total Permitted Tank Storage			165,500	

* Two tanks in F-1 were previously 90-day generator tanks. Now considered permitted tanks by OEPA.

\PARTB-5\TABLEI-2 Rev. 2/1/92

PLANNED PERMITTED HAZARDOUS WASTE STORAGE

This table lists the planned maximum permitted storage capacity for the respective areas. The total for the solvent container storage areas excedes the planned permitted container storage of 1,500 drums because not all areas are operated at the maximum capacity at any one time.

PERMITTED CONTAINER STORAGE AREAS:

LOCATION	AREA (sq. ft.)	MAXIMUM STORAGE As DRUMS	As BINS	H. W. MATERIAL TYPE
East Warehouse	6,808	916		H.W. Solvents, ref.Table 1
			229	H.W. Solvents, ref.Table 1
Processing Building	1,200	240		H.W. Solvents, ref.Table 1
			60	H.W. Solvents, ref.Table 1
East Pad, No-Free-Liquids	676	360		H.W. Solvents, ref.Table 1
			90	H.W. Solvents, ref.Table 1
H.W. Solv. Cont. Proc. Bldg	5,120	1,500		H.W. Solvents, ref.Table 1
			375	H.W. Solvents, ref.Table 1
Corrosive Cont. Proc. Bldg.	3,450	500		D002 & Tox. Char. Wastes
			125	D002 & Tox. Char. Wastes

Note:
Total Planned H.W. Solvent Storage is 1,500 As Drums
Total Planned D002 H.W. Storage is 500 As Drums

PERMITTED STORAGE TANKS:

DIKE IDENTIFICATION	DIKE AREA (sq. ft.)	TANK I.D.	TANK CAPACITY (gallons)	H. W. MATERIAL TYPE
East Pad H.W. Tank Dike	2,972	N/A	25,000	H.W. Solvents, ref.Table 1
		N/A	25,000	"
		N/A	25,000	"
		N/A	25,000	"
		N/A	25,000	"
		N/A	21,000	"
		V-120	21,000	"
Feed & Bottoms Tank Dike	606	V-6000E	6,000	H.W. Solvents, ref.Table 1
		V-6000W	6,000	"
		V-117	16,000	"
Rail Siding Dike - R-1	1500	N/A	25,000	H.W. Solvents, ref.Table 1
		N/A	25,000	"
		N/A	25,000	"
		N/A	15,000	"

PERMITTED STORAGE TANKS (Cont'd):

DIKE IDENTIFICATION	DIKE AREA (sq. ft.)	TANK I.D.	TANK CAPACITY (gallons)	H. W. MATERIAL TYPE
Feed Tk. Dike (9 Tks) B-4	3035	N/A	25,000	H.W. Solvents, ref.Table 1
		N/A	25,000	"
		N/A	15,000	"
		N/A	15,000	"
		N/A	15,000	"
		N/A	15,000	"
		N/A	15,000	"
		N/A	15,000	"
		N/A	15,000	"
H.W Fuels Dike - F-1	918	U-110M	9,500	H.W. Solvents, ref.Table 1
		U-210M	10,000	"
H.W. Fuels Dike - F-2	2244	N/A	15,000	H.W. Solvents, ref.Table 1
(West Section Only)		N/A	15,000	"
		N/A	15,000	"
		N/A	15,000	"
East Warehouse Dike	280	N/A	1,000	H.W. Solvents, ref.Table 1
		N/A	1,000	"
		N/A	750	"
		N/A	750	"
Solv. Container Proc. Dike	660	N/A	1,000	H.W. Solvents, ref.Table 1
		N/A	1,000	"
D002 Container Proc. Dike	567	N/A	4,000	D002 & Tox. Char. Wastes
		N/A	4,000	"
		N/A	4,000	"
Acid Tank Dike	1,254	Spent Acid	12,000	D002 & Tox. Char. Wastes
Total Planned Permitted Tank Storage			549,000	

\PARTB-4\TBLI-2A Rev. 1/20/92

SECTION J

OTHER FEDERAL LAWS

Information will be provided in accordance with the requirement of OAC 3745-50-44(A)(20) (40 CFR 270.14 (b) (20)) at the request of the OHIO EPA ~~Region/V Office~~ At this time, however, we believe this facility is in compliance with the following Federal laws; Wild and Scenic Rivers Act, National Historic Preservation Act of 1966, Endangered Species Act, Coastal Zone Management Act, and the Fish and Wildlife Coordination Act.

CERTIFICATION

I certify under penalty of law that THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. Based on my inquiry of THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING the information, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment FOR KNOWING VIOLATIONS.

DATE: 9/20/90

Signature: by Robert L. Hukill

Robert L. Hukill, President
for Hukill Chemical Corporation

Appendix A

APPENDIX A

INSPECTION LOG SHEETS

INSPECTION LOG SHEET - A
Operating, Structural Equip & Tank Storage Area

Key: Status
✓ - present
X - not present

DATE: _____ MILITARY TIME: _____

INSPECTED BY: _____

COMMENTS : _____

Condition
✓ - operable
M - in need of maint. operable
X - un-operable

-See back for details-

ITEM	STATUS	CONDITION	OBSERVATIONS	CORRECTIVE ACTION TAKEN	CORRECTIVE ACTION DATE SIGNED
Sumps					
Pump					
Ramp					
Dike					
Foundation					
Holding Tanks					
Piping					
Supports					
Spent Acid Tank Sump					
Pump					
Dike					
Foundation					
Tank					
Piping					
Supports					
Spray Booth					

Area/Equipment	Items Inspected	Conditions
Operating and Structural equipment	Sump areas	Erosion, uneven settlement, cracks and spalling in concrete, wet spots
	Pump	Power, clogging
	Ramps	Erosion, uneven settlement, cracks and spalling in concrete
	Dikes	Cracks, deterioration
	Bases or foundation	Erosion; uneven settlement; cracks and spalling in concrete pads, base rings and piers; deterioration of water seal between tank bottom and foundation, wet spots.

Area/Equipment	Items Inspected	Conditions
Tank Storage Area	Holding tanks	Corrosion, discoloration, cracks, buckles, and bulges
	Piping to holding tanks	Loss of metal thickness, leaks, corrosion or deterioration
	Tank structural supports	Concrete deterioration and corrosion of pipe supports
	Paint Spray Booth	Sprinkler Head, filter condition, air flow

INSPECTION LOG SHEET - B
Operating, Structural Equip & Tank Storage Area

Key: Status
✓ - present
X - not present

DATE: _____ MILITARY TIME: _____

INSPECTED BY: _____

COMMENTS : _____

Condition
✓ - operable
M - in need of maint. operable
X - un-operable

-See back for details-

ITEM	STATUS	CONDITION	OBSERVATIONS	CORRECTIVE ACTION TAKEN	CORRECTIVE ACTION DATE SIGNED
Base					
Sump					
Dike					
Pumps					
Debris					
Pallets					
Waste Segregation					
Containers:					
Stacking					
Sealing					
Labeling					
Condition					
Ramps					
Warning Signs					
Shar Mixer					
Catwalk					
Hydraulic Systems					
Raw Materials					
Leaks					
Spills					

Area/Equipment	Items Inspected	Conditions
Container Storage Area	Container placement and stacking	Aisle space, height of stack
	Sealing of containers	Open lids
	Labeling of containers	Improper identification, dat missing
	Containers	Corrosion, leakage, structur defects
	Ramps	Cracks, spalling, uneven settlement, erosion
	Warning signs	Damaged
	Base or foundation	Cracks, spalling, uneven settlement, erosion, wet spots
	Sump area	Cracks, spalling, uneven settlement, erosion, wet spots
	Dikes	Cracks, deterioration
	Pumps (automatic)	Setting adjustment, power, clogging, leakage
	Debris and refuse	Clog sump pump, aesthetics, possible reaction with leaks
	Pallets	Damaged (e.g., broken wood, warping, nails missing)
	Segregation of incompatible wastes	Storage of incompatible wastes in area
	Shar Mixer	hydraulic system, is in operation condition
	Hydraulic System	Is in operating condition
	Raw Materials	Stacked Properly/No spilled material
	Leaks	No leaking of Hazardous Wast
	Spills	No spills of Hazardous Waste
	Containers	Containers are covered and in good condition

INSPECTION LOG SHEET - C

Safety & Emergency Equipment

Key: Status
✓ - present
X - not present

Condition
✓ - operable
M - in need of maint. operable
X - un-operable
L - Low Supplies
OK - Supplies OK

DATE: _____ MILITARY TIME: _____

INSPECTED BY: _____

COMMENTS : _____

-See back for details-

ITEM	STATUS	CONDITION	OBSERVATIONS	CORRECTIVE ACTION TAKEN	CORRECTIVE ACTION DATE SIGNED
Blanket					
Air Pacs					
Hydrant					
Main Switch					
First aid					
Hoses					
Sprinklers					
Firewall					
Fire skid					
Spill skid					
Oxygen					
Intercom					
Respirators					
Stretcher					
Water Tank					
Vent Switch					
Eye Wash					
Extinguishers					
Torch					
Foam Concentrate					

Area/Equipment	Items Inspected	Condition
Safety & Emergency Equipment	Fire Alarm	Broken glass
	Fire Blanket	Missing
	Scot Air Packs	Will not operate
	Fire Hydrant	Leak
	Main electric switch	Will not operate
	First aid station	Out of supplies
	Hoses	Holes
	Sprinker System	Temperature low air, leaking pumps or valves
	Firewall	Cracks, cement points
	API Separator	#1 manhole liquid level
	Fire Skid	Out of supplies/non-operable equipment
	Spill Skid	Out of supplies/non-operable equipment
	Oxygen	Non functional
	Intercom	Non operable
	Respirator	Missing/needs filters
	Stretcher	Missing/broken
	250,000 gal water tank	Empty, frozen
	Vent swith	Non-operable
	Eye wash	Non-operable
	Fire extinguishers	No pressure
	Cutting torch	No pressure in tanks, hose broken
	Foam concentrate	leaking containers, past shelf life date

INSPECTION LOG SHEET - D

Security Devices and Monitoring

Key: Status
✓ - present
X - not present

Condition
✓ - operable
M - in need of maint. operable
X - un-operable

DATE: _____ MILITARY TIME: _____

INSPECTED BY: _____

COMMENTS : _____

-See back for details-

ITEM	STATUS	CONDITION	OBSERVATIONS	CORRECTIVE ACTION TAKEN	CORRECTIVE ACTION DATE SIGNED
Fence					
Gates					
Night Lights					
Alarm					
Tank Gauges					
Water table					
High level alarm					

Area/Equipment	Item Inspected	Condition
Security Devices	Fence	Broken
	Gates	Won't open & close
	Night Lights	Burned out
	Alarm	Check circuit test
Monitoring	Tank level gauges	Dirty - not floating, freeze
	Water table level	Flooding
	Water table level	Flooding
	High Level alarm	check annunciator activate alarm & reset

Appendix B

APPENDIX B

FINANCIAL RESPONSIBILITY AGREEMENT

Ohio EPA
State of Ohio Environmental Protection Agency
P.O. Box 1049, 1800 WaterMark Dr.
Columbus, Ohio 43266-0149

Richard F. Celeste
Governor

September 19, 1989

Re: Hukill Chemical Corporation
OHD001926740/02-18-0315

James P. Hukill
Executive Vice President
Hukill Chemical Corporation
3013 Krick Road
Bedford, OH 44146-4493

Dear Mr. Hukill:

I am in receipt of Irrevocable Standby Letter of Credit No. STB-85614 issued by Society National Bank ("Society") in the amount of $130,000.00 for the Hukill Chemical Corporation ("Hukill"). This Letter of Credit is submitted for the benefit of Ohio EPA to meet the hazardous waste facility closure requirements of rule 3745-66-43 of the Ohio Administrative Code (OAC). This Letter of Credit, effective August 1, 1989, is also submitted to replace Irrevocable Standby Letter of Credit No. 23748 issued by Ameritrust Company, N.A. ("Ameritrust"), originally used to meet the requirements of this rule.

My staff has reviewed the Letter of Credit issued by Society and all supporting documentation and finds that it meets the requirements of OAC rule 3745-66-43. Therefore, it is adequate replacement financial assurance for the Letter of Credit issued by Ameritrust. I am addressing cancellation of the latter with Ameritrust under separate cover.

If you have any questions concerning this matter, please contact Carolyn Reierson of the Division of Solid and Hazardous Waste Management at (614)644-2944.

Sincerely,

Richard L. Shank, Ph.D.
Director

RLS/CR/drr
1829S/69

cc: Paul Anderson, NEDO
Carolyn Reierson, DSHWM
Mike Savage, DSHWM

Exhibit 1
Appendix B

IRREVOCABLE STANDBY LETTER OF CREDIT

NATIONAL BANK
INTERNATIONAL OPERATIONS
800 SUPERIOR AVENUE
CLEVELAND, OHIO 44114 U.S.A.

TELEPHONE (216) 344-3000
CABLE ADDRESS:
"SOCIETY-CLEVELAND"
TELEX NO. 98-5517
ANSWER BACK: SOCIETY CLV

EXCEPT SO OTHERWISE EXPRESSLY STATED THIS CREDIT IS SUBJECT TO THE CURRENT UNIFORM CUSTOMS AND PRACTICE FOR DOCUMENTARY CREDITS FIXED BY THE INTERNATIONAL CHAMBER OF COMMERCE

L/C No. STB-85614

August 18, 1989

dlm

Director, State of
Ohio Environmental Protection Agency
361 East Broad Street
Columbus 43216-1047

Account Party:
Hukill Chemical Corporation
7013 Krick Road
Bedford, Ohio 44146

Amount: US$130,000.00

Expiry: August 1, 1990

COPY

Re: Hukill Chemical Corporation

Gentlemen:

We hereby establish our Irrevocable Standby Letter of Credit No. STB-85614 in your favor, at the request and for the account of Hukill Chemical Corporation, an Ohio corporation with a place of business located at 7013 Krick Road, Bedford, Ohio 44146, up to the aggregate amount of One Hundred Thirty Thousand U.S. Dollars (US$130,000.00) available upon presentation of:

1. Your sight draft, bearing reference to this Letter of Credit No. STB-85614, and

2. Your signed statement reading as follows: "I certify that the amount of the draft is payable pursuant to regulations issued under the authority of Chapter 3734 of the Ohio Revised Code as amended".

This Letter of Credit is effective as of August 1, 1989 and will expire August 1, 1990, but such expiration date will be automatically extended for a period of one year on August 1, 1990 and on each successive expiration date, unless, at least one hundred twenty (120) days before the current expiration date, we notify both you and Hukill Chemical Corporation by certified mail that we have decided not to extend this Letter of Credit beyond the current expiration date. In the event that you are so notified, any unused portion of the Credit will be available upon presentation of your sight draft for one hundred twenty days after the date of receipt by both you and Hukill Chemical Corporation as shown on the signed return receipts.

Whenever this Letter of Credit is drawn on under and in compliance with the terms of this Credit, we will duly honor such draft upon presentation to us, and we will deposit the amount of the draft directly into the standby trust fund of Hukill Chemical Corporation in accordance with your instructions.

This Letter of Credit is subject to the Credit and Security Agreement by and between Hukill Chemical Corporation and the undersigned dated as of August 1, 1989 (the "Credit Agreement") and the terms and conditions set forth therein; provided, however, that in the event of any conflict between the terms and conditions of this Letter of Credit and the Credit Agreement, the terms and conditions of this Letter of Credit will take precedence.

We certify that, except for the immediately preceding paragraph, the wording of this Letter of Credit is identical to the wording specified in paragraph (D) of rule 3745-55-51 of the Administrative Code as such regulations were constituted on the date shown immediate below.

This Credit is subject to the most recent edition of the Uniform Customs and Practice for Documentary Credits, (1983 Revision), published by the International Chamber of Commerce.

****

Society NATIONAL BANK

AUTHORIZED SIGNATURE

Society NATIONAL BANK

AUTHORIZED SIGNATURE

FORM NO. 83-107 REV. 10/88

Exhibit 2
Appendix B

IRREVOCABLE STANDBY
LETTER OF CREDIT

Society
NATIONAL BANK
INTERNATIONAL OPERATIONS
800 SUPERIOR AVENUE
CLEVELAND, OHIO 44114 U.S.A.

SWIFT ADDRESS: SNBCUS33
TELEPHONE (216) 344-3000
CABLE ADDRESS:
"SOCIETY-CLEVELAND"
TELEX NO. 98-5517
ANSWER BACK SOCIETY CLV

EXCEPT SO FAR AS OTHERWISE EXPRESSLY STATED THIS CREDIT IS SUBJECT TO THE CURRENT UNIFORM CUSTOMS AND PRACTICE FOR DOCUMENTARY CREDITS FIXED BY THE INTERNATIONAL CHAMBER OF COMMERCE

AMENDMENT NO. ONE

TO OUR IRREVOCABLE STANDBY LETTER OF CREDIT NO. STB-85614

April 2, 1990 lm

Beneficiary:
The Director
State of Ohio Environmental Protection Agency
1800 Watermark Drive
Columbus, Ohio 43266-1049
Attention: Caroly Reieirson

Account Party:
Hukill Chemical Corporation
7013 Krick Road
Bedford, Ohio 44146

Gentlemen:

The above subject Credit is hereby amended as follows:

(1) Credit Validity is extended to August 1, 1991.

All other terms and conditions of this credit remain unchanged.

* * * * * * * * * * * * * * * * * * * *

'90 APR -6 P1:53
OFFICE OF THE ... OHIO EPA

RECEIVED
APR 11 1990
OHIO EPA
DIV OF SOLID &
HAZ WASTE MGMT

Appendix B, Exhibit 2, page 2

Society NATIONAL BANK

Society NATIONAL BANK

TRUST AGREEMENT

Trust Agreement. The "Agreement", entered into as of this 4th day of August, 1989 by and between Hukill Chemical Corporation, an Ohio corporation, the "Grantor", and Society National Bank, a national banking association organized under the laws of the United States, the "Trustee".

WHEREAS, the Ohio Environmental Protection Agency, "Ohio EPA", has established certain rules applicable to the Grantor, requiring that the owner or operator of a hazardous waste management facility must provide assurance that funds will be available when needed for closure and/or post-closure care of the facility;

WHEREAS, the Grantor has elected to establish a trust to provide all or part of such financial assurance for the facilities identified herein;

WHEREAS, the Grantor, acting through its duly authorized officers, has selected the Trustee to be the trustee under this agreement, and the Trustee is willing to act as trustee;

NOW, THEREFORE, the Grantor and the Trustee agree as follows:

Section 1. Definitions. As used in this Agreement:

(a) The term "Grantor" means the owner or operator who enters into this Agreement and any successors or assigns of the Grantor.

(b) The term "Trustee" means the Trustee who enters into this Agreement and any successor Trustee.

(c) The term "Director" means the Director of the Ohio EPA, or his designee.

Section 2. Identification of Facilities and Cost Estimates. This Agreement pertains to the facilities and cost estimates identified on attached Schedule A.

Section 3. Establishment of Fund. The Grantor and the Trustee hereby establish a trust fund, the "Fund", for the benefit of the Ohio EPA. The Grantor and the Trustee intend that no third party have access to the Fund except as herein provided. The Fund is established initially as consisting of the property, which is acceptable to the Trustee, described in Schedule B attached hereto. Such property and any other property subsequently transferred to the Trustee is referred to as the Fund, together with all earnings and profits thereon, less any payments or distributions made by the Trustee pursuant to this Agreement. The Fund will be held by the Trustee, IN TRUST, as hereinafter provided. The Trustee shall not be responsible nor shall it undertake any responsibility for the amount or adequacy of, nor any duty to collect from the Grantor, any payments necessary to discharge any liabilities of the Grantor established by the Ohio EPA.

Section 4. Payment for Closure and Post-Closure Care. The Trustee will make such payments from the Fund as the Director will direct, in writing, to provide for the payment of the costs of closure and/or post-closure care of the facilities covered by this Agreement. The Trustee will reimburse the Grantor or other persons as specified by the Director from the Fund for closure and post-closure expenditures in such amounts as the Director will direct, in writing. In addition, the Trustee will refund to the Grantor such amounts as the Director specifies in writing. Upon refund, such funds will no longer constitute part of the Fund as defined herein.

Section 5. Payments Comprising the Fund. Payments made to the Trustee for the Fund will consist of cash or securities acceptable to the Trustee.

Section 6. Trustee Management. The Trustee will invest and reinvest the principal and income of the Fund and keep the Fund invested as a single fund, without distinction between principal and income, in accordance with general investment policies and guidelines which the Grantor may communicate in writing to the Trustee from time to time, subject, however, to the provisions of this Section. In investing, reinvesting, exchanging, selling and managing the Fund, the Trustee will discharge his duties with respect to the trust fund solely in the interest of the beneficiary and with the care, skill, prudence, and diligence under the circumstances then prevailing which persons of prudence, acting in a like capacity and familiar with such matters, would use in the conduct of an enterprise of a like character and with like aims; except that:

(a) Securities or other obligations of the Grantor, or any other owner or operator of the facilities, or any of their affiliates, as defined in the Investment Company Act of 1940, as amended, 15 U.S.C. §80a-2(a), will not be acquired or held, unless they are securities or other obligations of the Federal or a State government;

(b) The Trustee is authorized to invest the Fund in time or demand deposits of the Trustee, to the extent insured by an agency of the Federal or State government; and

(c) The Trustee is authorized to hold cash awaiting investment or distribution uninvested for a reasonable time and without liability for the payment of interest thereon.

Section 7. Commingling and Investment. The Trustee is expressly authorized in its discretion:

(a) To transfer from time to time any or all of the assets of the Fund to any common, commingled, or collective trust fund created by the Trustee in which the Fund is eligible to participate, subject to all of the provisions thereof, to be commingled with the assets of other trusts participating therein; and

(b) To purchase shares in any investment company registered under the Investment Company Act of 1940, 15 U.S.C. §80a-1 et seq., including one which may be created, managed, underwritten, or to which investment advice is rendered or the shares of which are sold by the Trustee. The Trustee may vote such shares in its discretion.

Section 8. Express Powers of Trustee. Without in any way limiting the powers and discretions conferred upon the Trustee by the other provisions of this Agreement or by law, the Trustee is expressly authorized and empowered:

(a) To sell, exchange, convey, transfer, or otherwise dispose of any property held by it, by public or private sale. No person dealing with the Trustee will be bound to see to the application of the purchase money or to inquire into the validity or expediency of any such sale or other disposition;

(b) To make, execute, acknowledge, and deliver any and all documents of transfer and conveyance and any and all other instruments that may be necessary or appropriate to carry out the powers herein granted;

(c) To register any securities held in the Fund in its own name or in the name of a nominee and to hold any security in bearer form or in book entry, or to combine certificates representing such securities with certificates of the same issue held by the Trustee in other fiduciary

capacities, or to deposit or arrange for the deposit of such securities in a qualified central depositary even though, when so deposited, such securities may be merged and held in bulk in the name of the nominee of such depositary with other securities deposited therein by another person, or to deposit or arrange for the deposit of any securities issued by the United States Government, or any agency or instrumentality thereof, with a Federal Reserve Bank, but the books and records of the Trustee will at all times show that all such securities are part of the Fund;

(d) To deposit any cash in the Fund in interest-bearing accounts maintained or savings certificates issued by the Trustee, in its separate corporate capacity, or in any other banking institution affiliated with the Trustee, to the extent insured by an agency of the Federal or State government; and

(e) To compromise or otherwise adjust all claims in favor of or against the Fund.

Section 9. Taxes and Expenses. All taxes of any kind that may be assessed or levied against or in respect of the Fund and all brokerage commissions incurred by the Fund will be paid from the Fund. All other expenses incurred by the Trustee in connection with the administration of this Trust, including fees for legal services rendered to the Trustee, the compensation of the Trustee to the extent not paid directly by the Grantor, and all other proper charges and disbursements of the Trustee will be paid from the Fund.

Section 10. Annual Valuation. Except as otherwise provided in Paragraph (D)(3)(b)(iii) of Rule 3745-55-43 or Paragraph (C)(3)(b)(iii) of Rule 3745-66-43 of the Ohio Administrative Code dispensing with valuations of

unfunded standby trust funds, the Trustee will annually, at least thirty (30) days prior to the anniversary date of establishment of the Fund furnish to the Grantor and to the Director a statement confirming the value of the Trust. Any securities in the Fund will be valued at market value as of no more than sixty (60) days prior to the anniversary date of establishment of the Fund. The failure of the Grantor to object in writing to the Trustee within ninety (90) days after the statement has been furnished to the Grantor and the Director will constitute a conclusively binding assent by the Grantor, barring the Grantor from asserting any claim or liability against the Trustee with respect to matters disclosed in the statement.

Section 11. Advice of Counsel. The Trustee may from time to time consult with counsel, who may be counsel to the Grantor, with respect to any question arising as to the construction of this Agreement or any action to be taken hereunder. The Trustee will be fully protected, to the extent permitted by law, in acting upon the advice of counsel.

Section 12. Trustee Compensation. The Trustee will be entitled to reasonable compensation for its service as agreed upon in writing from time to time with the Grantor.

Section 13. Successor Trustee. The Trustee may resign or the Grantor may replace the Trustee, but such resignation or replacement shall not be effective until the Grantor has appointed a successor Trustee and this successor accepts the appointment. The successor Trustee will have the same powers and duties as those conferred upon the Trustee hereunder. Upon the successor Trustee's acceptance of the appointment, the Trustee will assign, transfer, and pay over to the successor Trustee the funds and properties then constituting the Fund. If for any reason the Grantor cannot or does not act

in the event of the resignation of the Trustee, the Trustee may apply to a court of competent jurisdiction for the appointment of a successor Trustee or for instructions. The successor Trustee shall specify the date on which it assumes administration of the trust in a writing sent to the Grantor, the Director, and the present Trustee by certified mail ten (10) days before such change becomes effective. Any expenses incurred by the Trustee as a result of any of the acts contemplated by this Section will be paid as provided in Section 9.

Section 14. Instructions to the Trustee. All orders, requests, and instructions by the Grantor to the Trustee will be in writing, signed by such persons as are designated in the attached Exhibit A or such other designees as the Grantor may designate by amendment to Exhibit A. The Trustee will be fully protected in acting without inquiry in accordance with the Grantor's orders, requests and instructions. All orders, requests and instructions by the Director to the Trustee will be in writing, signed by the Director, and the Trustee will act and will be fully protected in acting in accordance with such orders, requests, and instructions. The Trustee will have the right to assume, in the absence of written notice to the contrary, that no event constituting a change or a termination of the authority of any person to act on behalf of the Grantor or the Director hereunder has occurred. The Trustee will have no duty to act in the absence of such orders, requests, and instructions from the Grantor and/or the Director, except as provided for herein.

Section 15. Notice of Nonpayment. Except as other wise provided in Paragraph (D)(3)(b)(iv) of Rule 3745-55-43 or Paragraph (C)(3)(b)(iv) of Rule 3745-66-43 of the Ohio Administrative Code dispensing with notices of

nonpayment of contributions to unfunded standby trust funds, the Trustee will notify the Grantor and the Director, by certified mail within 10 days following the expiration of the thirty-day period after the anniversary of the establishment of the Trust, if no payment is received from the Grantor during that period. After the pay-in period is completed, the Trustee is not required to send a notice of nonpayment.

Section 16. Amendment of Agreement. This Agreement may be amended by an instrument in writing executed by the Grantor, the Trustee and the Director or by the Trustee and the Director if the Grantor ceases to exist.

Section 17. Irrevocability and Termination. Subject to the right of the parties to amend this Agreement as provided in Section 16, this Trust will be irrevocable and will continue until terminated at the written agreement of the Grantor, the Trustee, and the Director, or by the Trustee and the Director if the Grantor ceases to exist. Upon termination of the Trust, all remaining trust property, less final trust administration expenses, will be delivered to the Grantor.

Section 18. Immunity and Indemnification. The Trustee will not incur personal liability of any nature in connection with any act or omission, made in good faith, in the admini-stration of this Trust, or in carrying out any directions by the Grantor or the Director issued in accordance with this Agreement. The Trustee will be indemnified and saved harmless by the Grantor or from the Trust Fund, or both, from and against any personal liability to which the Trustee may be subjected by reason of any act or conduct in its official capacity, including all expenses reasonably incurred in its defense in the event the Grantor fails to provide such defense.

Section 19. Choice of Law. This Agreement will be administered, construed and enforced according to the laws of the State of Ohio.

Section 20. Interpretation. As used in this Agreement, words in the singular include the plural and words in the plural include the singular. The descriptive headings for each Section of this Agreement will not affect the interpretation or the legal efficacy of this Agreement.

IN WITNESS WHEREOF, the parties have caused this Agreement to be executed by their respective officers duly authorized and their corporate seals to be hereunto affixed and attested as of the date first above written. The parties below certify that, except for modifications made to the first sentence of Sections 10 and 15, respectively, of this Agreement (to conform this Agreement to the provisions of Paragraph (D)(3)(b) of Rule 3745-55-43 and Paragraph (C)(3)(b) of Rule 3745-66-43 of the Ohio Administrative Code relating to unfunded standby trust funds), the wording of this Agreement is

identical to the wording specified in Paragraph (A)(1) of Rule 3475-55-51 of the Ohio Administrative Code as such regulations were constituted on the date first above written.

Attest:

Title: Asst. Sec

Seal:

HUKILL CHEMICAL CORPORATION

By: James P. Hukill

Title Executive Vice President

SOCIETY NATIONAL BANK

Attest:

Title: VICE PRESIDENT

Seal:

By: R. Barker R. BARKER

Title: VICE PRESIDENT

And: Nancy Grove NANCY E. GROVE

Title: TRUST OFFICER

State of Ohio)
) SS:
County of Cuyahoga)

On this 17th day of August, 1989, before me personally came James P. Hukill to me known, who, being by me duly sworn, did depose and say that he resides at 2550 Edgewood Rd., Cleveland Heights, Ohio 44118, that he is Executive Vice President to Hukill Chemical Corporation, the corporation described in and which executed the above instrument; that he knows the seal of said corporation; that the seal affixed to such instrument is such corporate seal; that it was so affixed by order of the Board of Directors of said corporation, and that he signed his name thereto by like order.

Notary Public

GARY R. MARTZ, Attorney
NOTARY PUBLIC - STATE OF OHIO
My commission has no expiration date.
Section 147.03 R. C.

Exhibit 3, cont'd.

Appendix B

EXHIBIT A

Designated Persons

Orders, requests and instructions by the Grantor to the Trustee shall be in writing and signed by one or more of the following:

1. Emory G. Hukill
2. Robert L. Hukill
3. James P. Hukill

or such other designees as the Grantor may designate by amendment to this Exhibit A.

Exhibit 3, cont;d.
Appendix B

SCHEDULE A

Facility Name and Address:	Hukill Chemical Corporation 7013 Krick Road Bedford, Ohio 44146
EPA Identification Number of Facility:	OH D 001926740
Ohio Hazardous Waste Facility Installation and Operation Permit Number:	02-18-0315
Current closure cost estimate for which financial assurance is demonstrated by this Agreement:	$_____ as of _____, 19___, all as set forth on page A-3 of this Schedule A.
Post-closure cost estimate for which financial assurance is demonstrated by this Agreement:	Not applicable.

Exhibit 3 cont'd.
Appendix B

EXHIBIT SHEET FIGURE I-1 HUKILL ~~CLOSURE~~ CHEMICAL CLOSURE SCHEDULE

1-4 Closure Cost Estimate

Schedule A Continued

CURRENT COST ESTIMATE FOR FACILITY CLOSURE
HUKILL CHEMICAL CORPORATION
December, 1989

TANKS

Number	Capacity in Gallons	Total Gallons
1	21,000	21,000
6	14,000	84,000
1	17,000	17,000
2	6,000	12,000
		134,000
1 (Spent Acid)	12,000	12,000
		146,000

Disposal Cost

Solids	3,000 gallons	-clean out tanks	-$ 2.00/gal.	$ 6,000
		-fuels mix, 55 drum	@ 50 each	2,727
Liquids	130,000 Gallons		@.25 each	32,500
	133,000 Gallons			
Spent Acid	12,000 Gallons		@1.80	21,600
				$ 62,827

CONTAINERS

Number	Capacity in Gallons	Total Gallons
1,000	55	55,000

Disposal Cost

Solids	1,375 Gallons	- Fuels mix,	- @ 50.00/each	$1,250
Solids	2,750 Gallons	- Solids for fuel	300.00/each	15,000
Liquid	50,875 Gallons	- Fuels blend - @	.25/gal.	12,719
	55,000			$28,969

DECONTAMINATION

Contaminated Soil	$5,000
Clean Up Contaminated Soil	$3,000
Decontamination of Equipment	$2,000
	$10,000

CONTINGENCY $10,000

CLOSURE COST $111,196

Appendix B
Exhibit 3, cont'd

SCHEDULE B

No property is held in trust as of the date of execution of this Agreement, however, amounts may become payable to the Trustee for deposit in the Fund pursuant to an Irrevocable Standby Letter of Credit ("Letter of Credit") from Society National Bank in favor of the Director and for the account of the Grantor.

No obligation shall rest on the Trustee to pay or see to the payment of any fees due or to become due on the Letter of Credit, nor to collect all or any part of the proceeds payable thereunder. The Trustee's responsibility shall be to accept funds payable under the Letter of Credit at the direction of the Director and to administer them in accordance with this Agreement.

General Investment Policies And Guidelines

Pursuant to Section 6 of the Trust Agreement to which this Schedule B is attached, the Trustee is authorized to invest the Fund in:

(a) Obligations issued or guaranteed as to interest or principal by the government of the United State or any agency or instrumentality thereof;

(b) Obligations (including certificates of deposit and bankers' acceptances) of U.S. banks which at the date of investment have capital, surplus and undivided profits (as of the date of their most recently published annual financial statements) in excess of Fifty Million Dollars ($50,000,000);

(c) Commercial paper which at the date of investment is rated A-1 by Standard & Poor's Corporation or Prime-1 by Moody's Investment Service, Inc. or, if not rated, is of equivalent quality;

(d) Short-term (one year or less) corporate obligations which at the date of investment are rated AAA or AA by Standard & Poor's or Aaa by Moody's;

(e) Repurchase agreements fully secured by obligations of any of the kinds specified in clauses (a) through (d) above; or

(f) Interests in any money market fund or trust the investments of which are restricted to obligations of any of the kinds specified in clauses (a) through (e) above.

ACORD. CERTIFICATE OF INSURANCE

ISSUE DATE (MM/DD/YY) 10/5/89

PRODUCER

The G. F. Hoch Company
The Diamond Bldg., Suite 1111
1100 Superior Avenue E
Cleveland, Ohio 44114

CODE SUB-CODE

INSURED

HUKILL CHEMICAL CORPORATION
7013 Krick Road
Bedford, Ohio 44146-4493

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW

COMPANIES AFFORDING COVERAGE

COMPANY LETTER A Environmental Protection Insurance Company

COMPANY LETTER B

COMPANY LETTER C

COMPANY LETTER D

COMPANY LETTER E

COVERAGES

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

CO LTR	TYPE OF INSURANCE	POLICY NUMBER	POLICY EFFECTIVE DATE (MM/DD/YY)	POLICY EXPIRATION DATE (MM/DD/YY)	ALL LIMITS IN THOUSANDS
	GENERAL LIABILITY				GENERAL AGGREGATE $
	COMMERCIAL GENERAL LIABILITY				PRODUCTS-COMP/OPS AGGREGATE $
	CLAIMS MADE OCCUR.				PERSONAL & ADVERTISING INJURY $
	OWNER'S & CONTRACTOR'S PROT.				EACH OCCURRENCE $
					FIRE DAMAGE (Any one fire) $
					MEDICAL EXPENSE (Any one person) $
	AUTOMOBILE LIABILITY				COMBINED SINGLE LIMIT $
	ANY AUTO				
	ALL OWNED AUTOS				BODILY INJURY (Per person) $
	SCHEDULED AUTOS				
	HIRED AUTOS				BODILY INJURY (Per accident) $
	NON-OWNED AUTOS				
	GARAGE LIABILITY				PROPERTY DAMAGE $
	EXCESS LIABILITY				EACH OCCURRENCE $ / AGGREGATE $
	OTHER THAN UMBRELLA FORM				
	WORKER'S COMPENSATION AND EMPLOYERS' LIABILITY				STATUTORY
					$ (EACH ACCIDENT)
					$ (DISEASE—POLICY LIMIT)
					$ (DISEASE—EACH EMPLOYEE)
	OTHER				
A	Pollution Liability	EIL 0801014	10/1/89	10/1/90	$1,000,000/$2,000,000

DESCRIPTION OF OPERATIONS/LOCATIONS/VEHICLES/RESTRICTIONS/SPECIAL ITEMS

CERTIFICATE HOLDER

Ms. Carolyn Reierson, Environmental Scientist
RCRA Enforcement Section
Division of Solid & Hazardous Waste Mgmnt.
State of Ohio Environmental Protection Agcy
1800 Watermark Drive
Columbus, Ohio 43266-0149

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, THE ISSUING COMPANY WILL ENDEAVOR TO MAIL 30 DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED TO THE LEFT, BUT FAILURE TO MAIL SUCH NOTICE SHALL IMPOSE NO OBLIGATION OR LIABILITY OF ANY KIND UPON THE COMPANY, ITS AGENTS OR REPRESENTATIVES.

AUTHORIZED REPRESENTATIVE

© ACORD CORPORATION 1988

HAZARDOUS WASTE FACILITY CERTIFICATE OF LIABILITY INSURANCE

1. Environmental Protection Insurance Company (the "Insurer") of 111 North Canal Street - Chicago, Illinois 60606 hereby certifies that it has issued liability insurance covering bodily injury and property damage to HUKILL CHEMICAL CORPORATION (Address of Insured) 7013 KRICK ROAD BEDFORD, OHIO 44146-4493 in connection with the Insured's obligation to demonstrate financial responsibility under Rules 3745-55-47 and 3745-66-47 of the Administrative Code: The coverage applies at:

A. EPA #OHD 001926740 - SAME AS ABOVE

B. _____

C. _____

(EPA Identification #, name, and address of facility)

for SUDDEN AND ACCIDENTAL OCCURENCES. The limits of liability are primary and the company shall not be liable for amounts in excess of $ 1,000,000 for each occurrence and annual aggregate limits of $ 2,000,000, exclusive of legal defense costs. The coverage is provided under policy number EIL 0801014 issued on OCTOBER 1, 1989.

The limits of liability are excess and the company shall not be liable for amounts in excess of $_____ each occurrence $_____ aggregate exclusive of defense costs. The coverage is provided under policy number _____ issued on _____.

2. The Insurer further certifies the following with respect to the insurance described in Paragraph 1:

a. Bankruptcy or insolvency of the Insured shall not relieve the Insurer of its obligations under the policy.

b. The Insurer is liable for the payment of amounts within any deductible applicable to the policy, with a right of reimbursement by the Insured for any such payment made by the Insurer. This provision does not apply with respect to that amount of any deductible for which coverage is demonstrated as specified in Paragraph (F) of Rule 3745-55-47 and Paragraph (F) of Rule 3745-66-47 of the Administrative Code.

c. Whenever requested by the Director of the Ohio Environmental Protection Agency, the Insurer agrees to furnish to the Director a signed duplicate original of the policy and all endorsements.

HAZARDOUS WASTE FACILITY CERTIFICATE OF LIABILITY INSURANCE

PAGE TWO

d. Cancellation of the insurance, whether by the Insurer or the Insured, will be effective only upon written notice and only after the expiration of sixty (60) days after a copy of such written notice is received by the Director.

e. Any other termination of the insurance will be effective only upon written notice and only after the expiration of the thirty (30) days after a copy of such written notice is received by the Director.

I hereby certify that the wording of this instrument is identical to the wording specified in Paragraph (J) of 3745-55-51 of the Administrative Code as such regulation was constituted on the date first above written, and that the Insurer is licensed to transact the business of insurance, or eligible to provide insurance as an excess of surplus lines Insurer, in one or more states.

(Signature of Authorized Representative of Insurer

THOMAS J. COYLE

(Type Name of Representative)

VICE PRESIDENT

(Title)

Berkley Risk Retention Group Managers, Inc.
(Name of Agency)

Authorized Representative of:

Environmental Protection Insurance Company
(Name of Insurer)

111 North Canal Street - Chicago, Illinois 60606
(Address of Insurer)

Plan Sheet