STATE OF CONNECTICUT
DEPARTMENT OF ENVIRONMENTAL PROTECTION

August 11, 1994

Ms. Cherrie D. Gillis
Manager, Regulatory Affairs
MacDermid, Inc.
526 Huntingdon Avenue
Waterbury, CT 06702

RCRA RECORDS CENTER
FACILITY MACDERMID
I.D. NO. CTD001164599
FILE LOC. R-13
OTHER RDMS# 100826

RECEIVED
AUG 22 1994
CT WASTE REGULATION SECTION

Re: Part B and State 22a-454 Permit Comments
EPA I.D. No. CTD001164599

RDMS DocID 00100826

Dear Ms. Gillis:

The Connecticut Department of Environmental Protection (DEP) acknowledges receipt of your letter dated June 22, 1994 concerning requested changes to the Resource Conservation and Recovery Act (RCRA) Part B permit and the State 22a-454 permit. The comments submitted, as identified in your letter and revised pages to the permit have been addressed and all comments have been accepted and/or clarified by the DEP, Waste Engineering and Enforcement Division. All comments are minor and do not constitute a major change to the permits. Copies of the revised pages to be included in the RCRA Part B and State 22a-454 permits are attached.

The following identifies, as necessary the DEP's rationale for accepting the change.

- Section VI: As "NMP" is not managed at the facility, testing does not apply.

- Attachment F: State 22a-454 Permit;

  "NMP" waste and corresponding tests removed. Electroless Copper, "formaldehyde" test removed as this is not necessary for regulatory purposes (i.e., acceptance, hazard determination or recycling); "sodium hydroxide" test replaced by test for pH. The pH test serves to identify hazard/non-hazard classification of the waste.

  Attachment B: Contingency Plan

  Pages 10-45 and 10-52 are identified in the RCRA Part B permit as pages 10-42 and 10-47, respectively.

  Attachment C: Closure Plan;

  Cleaning waters acceptable for on-site wastewater treatment may be treated in the wastewater treatment system. Closure costs, however, reflect the off-site shipment and disposal based on third party costs as required.

Attachment C: Closure Plan; (Cont.)

This statement is for clarification purposes. All tanks identified in the closure plan are appropriately identified in the corresponding permits (RCRA, 22a-454). The tanks identified in the referenced June 22, 1994 letter are not permitted tanks, therefore, no changes were necessary.

If used equipment, following completion of closure activities meets the closure performance standards, MacDermid, Inc. may choose to re-utilize any such equipment.

Should you have any questions or comments regarding this matter do not hesitate to contact John M. Berg at (203) 566-4869.

Sincerely,

Richard J. Barlow

Richard J. Barlow
Chief
Bureau of Waste Management
Waste Engineering and
Enforcement Division

RJB:jmb
cc: John Podgurski, EPA Region I

STATE OF CONNECTICUT
DEPARTMENT OF ENVIRONMENTAL PROTECTION

PERMIT TO OPERATE
A COMMERCIAL WASTE STORAGE AND TREATMENT FACILITY

Pursuant to Section 22a-6 and 22a-454 of the Connecticut General Statutes (C.G.S.), a permit (permit) is hereby granted to MacDermid, Inc. (permittee) to operate a commercial waste storage and treatment (recycling) facility (facility), located at 526 Huntingdon Avenue, Waterbury, Connecticut.

The facility stores and treats RCRA hazardous and 22a-454 wastes generated from its chemical product manufacturing processes, received from customers and received from other MacDermid facilities. The facility shall be operated by the permittee and shall consist of on-site storage and treatment (recycling) of the waste. The facility capacity for containerized waste storage shall be 88,500 gallons and 26 cubic yards for five permitted container storage areas; for tank storage the capacity shall be 29,000 gallons for four permitted storage tanks; and for tank treatment (recycling) the capacity shall be 15,300 gallons for six permitted treatment (recycling) tanks.

Terms and Conditions

"Commissioner" means the commissioner of the connecticut department of environmental protection or his authorized agent.

"22a-454 Waste" means waste subject to the permit requirements of Section 22a-454 of the Connecticut General Statutes.

"CR02 Waste" means 22a-454 waste oil or petroleum that is no longer suitable for the service for which is was manufactured due to the presence of impurities or a loss of original properties, and is not miscible in water.

"CR04 Waste" means 22a-454 waste liquid, free flowing and/or contains free draining liquids and are toxic, hazardous to handle and/or may cause contamination of ground and/or surface water if improperly managed.

"CR05 Waste" means 22a-454 waste chemical solid or semi-solid from a commercial, industrial, agricultural, or community activity.

"Department or DEP" means the Connecticut Department of Environmental Protection.

"Hazardous Waste" means any waste material which may pose a present or potential hazard to human health or the environment when improperly treated, stored, transported or disposed of or otherwise managed including hazardous waste identified in accordance with section 3001 of the Resource Conservation and Recovery Act of 1976 (42 USC 6901 et seq.).

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"RCRA" means the Resource Conservation and Recovery Act of 1976 (42 USC 6901 et seq.)

"RCSA" means the Regulations of Connecticut State Agencies.

This permit is based upon information submitted by the permittee in a permit application dated November 8, 1988, and revised March 12 and May 11, 1990, as well as additional supplementary submittals dated April 17, May 8, and 24, June 28, 1990; September 16, and October 7 and 23, 1991; February 17, April 10, June 16, and 23, and December 14, 1992; April 5, 16, 30, and May 3, and 10, 1993; and April 22, 1994. The permittee shall keep records of all data used to complete the permit application and any supplemental information submitted for the effective term of this permit and any renewals thereof. The permit application is hereby incorporated by reference as part of the permit. Any inaccuracies found in the information submitted by the permittee may result in revocation, reissuance, or modification of this permit and civil or criminal enforcement action.

The permittee shall comply with all terms and conditions of this permit. This permit consists of the conditions contained herein and the information as specified in the application, except where the application is superseded by the more stringent conditions contained herein. Violations of any provision of this permit are subject to enforcement action pursuant to Section 22a-6a of the C.G.S.

This permit may be revoked, suspended, modified, transferred, or reissued in order to comply with applicable law. Any significant modifications must be approved by the DEP. A revised permit application must be submitted to DEP at least 90 calendar days before making such changes. Significant modifications include but are not limited to:

a. New waste types not previously permitted for;
b. Changes in process activities;
c. Increase in design capacity; and/or
d. Changes in ownership or operational control of the facility.

This permit shall remain in effect and shall expire on the 11th day of August , 1999.

8/8/94
Date

Robert E. Moore
Deputy Commissioner

STATE OF CONNECTICUT
DEPARTMENT OF ENVIRONMENTAL PROTECTION

CONNECTICUT
HAZARDOUS WASTE PERMIT

Pursuant to Chapters 439 and 446k of the Connecticut General Statutes, a permit is issued to:

MacDermid, Inc.
526 Huntingdon Avenue
Bristol, Connecticut 06010

EPA I.D. No. CTD001164599
Town of Waterbury
DEP/HWM-151-028

to operate a hazardous waste treatment and storage facility located at 526 Huntingdon Avenue, Waterbury, Connecticut 06708 in accordance with Sections 22(a)-6 and 22a-449(c) of the Connecticut General Statutes as specified in the conditions and attachments set forth herein.

Connecticut's Hazardous Waste Management Regulations Sections 22a-449(c)-100 to 110 were published in the Connecticut Law Journal and became effective and enforceable on August 14, 1990. Therefore, all regulatory references to Connecticut Hazardous Waste Management Regulations sections 22a-449(c) 1 to 10 and 12 to 43 are hereby replaced by equivalent sections of the Regulations of Connecticut State Agencies ("RCSA") sections 22a-449(c)-100 to 110.

All terms used in the permit are as defined in Section 22a-449(c)-100 of RCSA or if not defined in Connecticut's Regulations as defined in Title 40 of the Code of Federal Regulations ("CFR") Parts 260 and 261; 262; 264; 266; 268; and 270.

This permit is based on the data found in the Part B permit application submitted to the Department of Environmental Protection and as contained herein. MacDermid's permit application consists of two volumes dated November 8, 1988, revised March 12 and May 11, 1990, as well as additional supplementary submittals dated April 17, May 8, May 24, and June 28, 1990; September 16, October 7, and 23, 1991; and February 17, April 10, June 16, and 23, May 26, and December 14, 1992; April 5, 16, and 30, and May 3, and 10, 1993.

The permittee must keep records of all data used to complete the permit application and any supplemental information submitted for the effective term of this permit. Any inaccuracies found in this data could lead to the termination, revocation and reissuance, or modification of this permit and/or civil or criminal enforcement action, depending on the nature of the inaccuracy.

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This permit may be modified, or alternatively revoked and reissued, as provided for in 40 CFR 270.41 and to comply with any applicable standards issued or approved under Section 22a-449(c) of the Connecticut General Statutes if standards so issued or approved:

1. Contain different conditions or are otherwise more stringent than the permit; or

2. Control any material not controlled in the permit.

The permit as modified or reissued under this paragraph shall also contain any other requirements of the Statutes then applicable.

8/8/94
date

Deputy Commissioner
Environmental Protection

This permit shall become effective on August 11, 1994 and shall expire on August 11, 1999.

TABLE 8.1

TRAINING REQUIREMENTS

MACDERMID, INC.
WATERBURY, CONNECTICUT

Job Title	Name	Training Type: General	On-The-Job	Limited	Broad
All Manufacturing Employees		X	X		
Manager, Rrglonal Affairs	Cherrie Gillis	X			X
Emergency Coordinator	Bill Schweickher	X			X
	John Miele	x			x
Alternate Emergency Coordinator	Bob Ardzijauskas	X			X
Driver - Waste Handler	F. Pasquariello 1/93	X	X	X	
	T. Prescott	X	X	X	
	K. Ritucci	X	X	X	
	E. Gray	X	X	X	
Traffic Supervisor for Wastes	L. Montaingne	X		X	
Materials Handler-Recyclable Materials - Group Leader	D. Howell	X		X	
Etchant Production - Group Leader	H. Zembroski	X		X	
Quality Control Department	Mike Millard 1/93	X	X		
Hazardous Waste Coordinator - Canadian Shipments/Non routine Shipments	C. Gillis	X		X	X
Quality Control Manager (Manufacturing)	A. Picha	X		X	
Shipping/Receiving Department - Group Leader	D. LaBeck	X		X	

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HRP

In addition, this plan is intended to describe the actions facility personnel must take to minimize hazards to human health or the environment in the event of fires, explosions, or any unplanned sudden or non-sudden release of hazardous wastes.

A general description of the facility, including the location of hazardous waste storage areas and emergency equipment and communications, are shown on Figure 10.1.

Provided in the following sections of this plan are:

10.2 Initial Notifications
10.3 Implementation of the Contingency Plan
10.4 Emergency Procedures
10.5 Control Procedures
10.6 Emergency Equipment/Containment Structures
10.7 Evacuation Plan
10.8 Reporting of Emergency Incidents
10.9 Contingency Plan Review/Location
10.10 Arrangements with Local Authorities

A. Introduction

MacDermid, Inc. is located on two parcels of property north and south of Huntingdon Avenue in the Fairmont section of Waterbury, Connecticut. The southern parcel is approximately 11 acres in area on which one building houses both manufacturing and laboratory facilities. The northern parcel is approximately 42 acres in size.

The principle business of MacDermid, Inc. is the blending or compounding of chemical materials used in metal finishing, plating on plastics, and printed circuit industries. As an adjunct to the principle business, MacDermid reprocesses used surface finishing chemicals received from their customers and off-site MacDermid facilities for recycling. As a result of these operations, hazardous and CT- regulated wastes are generated, stored temporarily on-site and/or recycled. Ultimately all hazardous and CT-regulated wastes are removed from the site by certified waste haulers and disposed of at permitted hazardous waste disposal facilities.

The remainder of the Plan describes necessary actions and procedures to be employed in the event of an emergency at MacDermid, Inc.

Presented on Figure 10.1 is a site plan of the facility.

B. Handling Emergencies for MacDermid Incorporated

As the quantity and variety of hazardous materials increase, the likelihood of emergencies grow. Also, even relatively minor incidents, from a technical viewpoint, may seem to be major emergencies from the public's stand point. It is imperative that emergencies involving MacDermid materials be handled in a safe and organized manner so as to protect persons, property, and the environment from whatever hazards may be involved.

MacDermid's role in an emergency should be to advise and assist by providing technical information and material resources as necessary and appropriately to enable emergency personnel to reduce the hazard as much as possible.

For the safety of all concerned, it is essential that an incident be properly reported and documented, such that appropriate MacDermid personnel can be contacted as soon as possible. How to report such an emergency, how to contact appropriate MacDermid personnel, and MacDermid's responsibilities at the incident scene, are the subjects discussed in the following section of this guideline.

C. Types of Wastes Received for Recycling

The hazardous and CT-regulated wastes listed below are received from MacDermid customers or off-site MacDermid facilities for reclamation (recycling):

- Copper etchant
- Solder stripper
- Solder conditioner (stored on-site only at this time)
- Electroless Copper (stored on-site only at this time)

a. Copper Etchant:

Copper etchant is received either in bulk or in containers, and stored temporarily prior to reclamation.

Recyclable solution received in bulk is stored temporarily in the waste storage tanks, and later reclaimed on-site, or re shipped off-site for reclamation.

Recyclable solution received in containers is stored temporarily in the main container storage area, and later reclaimed on-site or reshipped off-site for reclamation.

b. Solder Stripper/Conditioner Solution/Electroless Copper

Solder stripper is received in containers, and stored temporarily prior to being reclaimed on-site. The Solder conditioner and electroless copper is sent to MacDermid, Inc., Ferndale, MI for on-site reclamation. These materials are stored in the main container storage area, and later transferred for recovery on-site or transferred to MI.

c.

Not Applicable

d. Other Waste Streams

The remaining wastes generated on-site or received from MacDermid's 245 Freight Street facility are stored on-site in containers prior to being shipped off-site for final treatment/disposal at a permitted hazardous waste facility. These waste streams are primarily by-products generated from the manufacturing and development of surface finishing chemicals.

10.2 Initial Notifications

At the facility, the following personnel must be notified in case of a sudden or non-sudden release of hazardous wastes, fire or explosion. The phone number at the plant to be used by persons outside the facility (e.g. fire, police, spill contractors, etc.) is (203) 575-5700.

NAME	HOME LOCATION	HOME PHONE	PLANT PHONE
John Miele EMERGENCY. COOR.	23 Partridge Drive Waterbury, CT 06708		575-5851
Bill Schweiker Emerg. Coor.	19 Juniper Dr. Wolcott, CT	879-2837	575-5998
Bob Ardzijauskas (Alternate)	58 Delhurst Dr. Waterbury, CT	757-6953	575-5849

The emergency coordinator and/or his alternates provide 24-hour coverage for the Huntingdon Avenue facility.

Upon approval of the Part B Permit Application, all employees at the Huntingdon Avenue facility will receive copies of the Contingency Plan, and will be briefed on any changes as they arise. Within 24-hours after a spill event, MacDermid emergency personnel will meet to discuss the actions taken and recommend remedial action changes, if necessary.

In case of an imminent or actual emergency at the plant, the Emergency Coordinator or his alternate shall be contacted first. The Emergency Coordinator shall carry out the emergency plan agreed to

TABLE 10.1 (continued)

WASTE IN STORAGE

Substance in Storage	Contingency Data
Flammable Solvents (chlorinated and non-chlorinated)	Life Hazard: Incoordination and impaired judgement may occur at vapor exposures from 300-1,000 ppm. Dizziness, loss of consciousness and even death can occur at increasing levels of exposure. When involved in fire, emits highly toxic and irritating fumes. Eye and respiratory irritant. Extreme inhalation of vapors may cause death by paralysis of the respiratory center. Personal Protection: Wear full protective clothing including safety goggles. Storage: Store in a cool, dry, well ventilated location, away from any area where the fire hazard may be acute. Fire Fighting: Use dry chemical foams, or carbon dioxide since water may be ineffective. But water should be used to keep fire exposed containers cool. If leak or spill has not ignited use water spray to disperse the vapors and to protect personnel attempting to stop a leak. Water spray may be used to flush spill away from exposures.
Metal Hydroxide/Sulfide Sludge	Life Hazard: Ingestion can cause intestinal disorders and even death. Metal constituents can cause dermatitis with skin contact. May emit toxic fumes during fire. Personal Protection: Wear full protective clothing including goggles, apron and gloves. Storage: Store in cool, dry, well-ventilated area, away from acute fire hazards. Fire Fighting: Use water spray to keep fire-exposed containers cool. Essentially non-flammable; if ignited, use water.
Electroless Copper and Conditioner	Life Hazard: Toxic by ingestion. Ingestion causes burning in the stomach and vomiting. Large doses can be fatal. Can be a skin irritant. Personal Protection: Wear full protective clothing including safety goggles and gloves. Storage: Store in leak proof containers or tanks. Protect against physical damage.

TABLE 10.1 (continued)

WASTE IN STORAGE

Substance in Storage	Contingency Data
Electroless Copper and Conditioner (cont.)	Fire Fighting: Use media appropriate to surrounding fire conditions. Use a water spray to cool exposed containers. Essentially non-flammable. Life Hazard: Low order of toxicity; minor irritant to skin. Ingestion may cause gastric disturbance. Personal Protection: Wear goggles, gloves and apron. Storage: Store in leak proof containers away from acute fire hazards. Fire Fighting: Use alcohol foam, CO^2 or dry chemical. Use a water spray to cool exposed containers. Self contained breathing equipment should be used in a fire situation in enclosed areas.
Waste Acid Plating Solutions	Life Hazard: Ingestion is corrosive to digestive tract. Irritating and corrosive to body tissues. Excessive inhalation of vapors is irritating to the mucous membranes of the respiratory tract and can result in headache, coughing, lung congestion and difficulty in breathing. Liquid contact with eyes can result in eye damage. Personal Protection: Use splash-proof, chemical resistant safety goggles, and where needed, a face shield. Use rubber suit, boots, gloves, apron, or other protective clothing to prevent contact. Storage: Store in leak-proof containers or tanks. Protect against physical damage. Fire Fighting: Use media appropriate to surrounding fire conditions. Use cold water spray to control vapors and cool fire-exposed containers. When heated, material will emit vapors which necessitates respiratory and eye protection for fire fighters. Use protective clothing.
Waste Plating Solutions (non-acidic)	Life Hazard: Ingestion can cause intestinal disorders and even death. Metal constituents can cause dermatitis with skin contact. May emit toxic fumes during fire. Personal Protection: Wear full protective clothing including goggles, apron and gloves.

TABLE 10.1 (continued)

WASTE IN STORAGE

Substance in Storage	Contingency Data
Waste Plating Solutions (non-acidic) (cont.)	Storage: Store in cool, dry, well-ventilated area, away from acute fire hazards. Incompatible with alkalies. Fire Fighting: Use water spray to keep fire-exposed containers cool. Essentially non-flammable; if ignited, use water.

EMERGENCY PROCEDURE

FIRE AND/OR EXPLOSION

CONTACT EMERGENCY COORDINATOR AND/OR ALTERNATES.

1) Emergency Cor:- Bill Schweiker PLANT PHONE: 575-5998 HOME PHONE: 879-2837
2) ALTERNATE - Bob Ardzijauskas PLANT PHONE: 575-5849 HOME PHONE: 757-6953
3) Emergency Coor.- John Miele PLANT PHONE: 575-5891

BEEPER NUMBERS:

1.) 1-800- 802-8761
2) 1-800- 802-0458
3) 1-203-369-7337

PERSONNEL INJURED?

YES

NO

EMERGENCY COORDINATOR OR ALT. CONTACTS THE FOLLOWING:
HOSPITAL: Waterbury (573-6000)
HOSPITAL: St. Mary's (574-6000)
AMBULANCE: Champion (754-3179)
POISON CONTROL CENTER: (574-6011)

IF NECESSARY, THE EMERGENCY COORDINATOR SHOULD ACTIVATE INTERNAL FACILITY ALARMS AND/OR COMMUNICATION SYSTEMS TO NOTIFY ALL PERSONNEL OF EVACUATION.

1) FIRE DOORS IN BUILDING WILL BE CLOSED.
2) HAZARDOUS WORK IN ALL AREAS WILL BE SHUT DOWN IMMEDIATELY.
3) ALL FEED LINES AND ADDITIONAL EQUIPMENT WILL BE SHUT DOWN, AS NECESSARY AND PRACTICAL.
4) THE AREA WILL BE CLEARED OF ALL PERSONNEL NOT ACTIVELY INVOLVED IN FIGHTING THE FIRE. THESE PERSONS ARE TO REPORT TO THE DESIGNATED RALLY POINTS FOR ACCOUNTABILITY.

(CONTINUED ON NEXT PAGE)

10.5.3 Spills

In the event of a major emergency involving a chemical spill, the following general procedures will be used for rapid and safe response and control of the situation.

A. Response

Each of the group leaders has been informed of the following procedures and everyone should be familiar with them.

1. In the event of a spill of any type or quantity, the group leader is to be informed immediately, if possible.

2. The group leader will dial 7998 for the switchboard operator and tell her to page "Code Red-Huntingdon" or "Code Red-Freight Street".

3. This page will be given first priority; nothing will precede it. The group leaders, every one of them, will report to the Production Manager's office whether or not he is there.

4. People who will respond are 24-Hour Hazwoper Team Members. While everyone may not be needed, we will at least have established a command post and a reserve of knowledge to respond to the spill and if notification of appropriate outside agencies is required.

5. The person responsible for the spill has several objectives:

   First - Contain the spill as best as possible and determine, if possible, product involved.

   Second - Block the area to prevent tracking the material. If spill occurs near a storm drain, emergency personnel will cover

Response Coordinator will direct all clean-up operations. All clean-ups will be conducted in accordance with all federal, state and local regulations. All clean-up personnel will be required to use the proper protective clothing and equipment during clean-up operations.

a. Make sure all unnecessary persons are removed from the hazard area.

b. Put on protective clothing and equipment.

c. If flammable waste is involved, remove all ignition sources, and use spark and explosion proof equipment and clothing in containment and clean-up.

d. If possible, try to stop the leak. Special materials will be kept on-hand for temporary repairs.

e. Remove all surrounding materials that could be especially reactive with the materials in the waste. Determine the major components in the waste at the time of the spill.

f. Use absorbent pads, booms, earth, sandbags, sand, and other inert materials to contain, divert and clean up a spill if it has not been contained by a dike or sump. Most spills contained within a dike or sump can be pumped back into the appropriate storage tank or drum. All clean up residues will be stored in a UN Performance (HM181) open head drum and transferred to the appropriate waste storage area, if characteristic of waste is known. Unknown waste material will be stored in the container storage area and isolated from all containers by surrounding the drum(s) with temporary dike of booms, sandbags, etc.

g. <u>Procedure for Organic Solvent Spills (includes halogenated solvents)</u>

(1) Soak up small spills with Speedi-Dri or Vermiculite.

EMERGENCY PROCEDURE

SPILL AND/OR RELEASE OF HAZARDOUS MATERIAL

CONTACT EMERGENCY COORDINATOR AND/OR ALTERNATES.

1) Emergency Cor - Bill Schwieker PLANT PHONE: 575-5998 HOME PHONE: 879-2837
2) ALTERNATIVE - Bob Ardzijauskas PLANT PHONE: 575-5849 HOME PHONE: 757-6953
3) Emergency Coor.- John Miele PLANT PHONE: 575-5851

BEEPER NUMBERS:

1) 1-800- 802-8761
2) 1-800- 802-0458
3) 1-203-369-7337

PERSONNEL INJURED?

YES

NO

EMERGENCY COORDINATOR OR ALT. CONTACTS THE FOLLOWING:

HOSPITAL:	WATERBURY	(573-6000)
HOSPITAL:	ST MARY'S	(574-6000)
AMBULANCE:	CHAMPION	(754-3179)
POISON CONTROL CENTER:		(574-6011)

IDENTIFY CHARACTER OF SPILLED CHEMICAL, CHECK INITIAL EMERGENCY PROCEDURE FOR PARTICULAR CHEMICAL IN TABLE 10.1

IS SPILL SMALL ENOUGH TO BE HANDLED ON-SITE?

(CONTINUED ON NEXT PAGE)

POTENTIAL FOR FLOOD

CONTACT EMERGENCY COORDINATOR AND/OR ALTERNATES.

1) EMERGENCY COORD. - Bill Schweik PLANT PHONE: 575-5998 HOME PHONE: 879-2837
2) 1ST ALTERNATE - Bo Ardzijauskas PLANT PHONE: 575-5849 HOME PHONE: 757-6953
3) EMERGENCY COOR. - John Miele PLANT PHONE: 575-5851 HOME PHONE: . -

BEEPER NUMBERS:

1) 1-800-802-8761
2) 1-800-802-0458
3) 1-203-369-7337

CHECK WITH THE NATIONAL WEATHER SERVICE FOR A PROJECTED FLOOD CREST.

NAT'L WEATHER SERVICE (RIVER FORECAST) (203) 240-3514

IF THE CREST WILL RESULT IN LESS THAN ONE FOOT OF WATER IN THE WASTE STORAGE AREA(S), THE AREA WILL BE DIKED WITH SANDBAGS UP TO A LEVEL OF ONE FOOT OVER THE PROJECTED LEVEL.

IF THE CREST WILL RESULT IN MORE THAN ONE FOOT OF WATER IN THE WASTE STORAGE AREA(S), THE WASTE WILL BE REMOVED TO A SECURE LOCATION.

IF THE WASTE CANNOT BE CONTAINED, SEE THE SPILL FLOW CHART

TABLE 10.2

EMERGENCY EQUIPMENT

Item (Amount on Hand)	Description/Capabilities	Location
Absorbent Material (50-40 lb bags)	Clay-like material used to absorb and contain spill of liquid material.	See Figure 10.1
Fire Extinguishers (114)	Wall-mounted portable fire fighting apparatus. The following types of fire extinguishers are used: ABC Dry Chemical - for all types of fires.	See Figure 10.1
Telephone System/Paging System/Beepers (9 in hazardous waste storage areas)	Capable of internal and external communication.	See Figure 10.1
Rubber Gloves (30 pairs in spill boxes)	Rubber gloves for protection against harmful materials	Throughout Facility, including spill boxes
Goggles and Protective Glasses	Plastic eye covering used for protection from splashes and flying objects	Throughout Facility, including spill boxes
Shovels (6)	Tool having a broad blade or scoop attached to a long handle, used for spill clean up	See Figure 10.1 (in spill boxes)
Scott Air Pack (10)	NIOSH approved; self-contained breathing apparatus providing 30 minutes of portable oxygen for working in toxic environments	See Figure 10.1 Emergency Spill Control Coordination Room
Emergency Shower (31) Eye Wash (33)	Provide flooding sprays of potable water from a height of approximately 7' to flush chemicals splashed onto body	See Figure 10.1
Respirators (4) Cartridges (12)	Disposable cartridges of fiber and charcoal filters to remove particulates and certain toxics from air before inhalation. Acid gas, ammonia, formaldehyde gas and organic vapor cannisters are available.	See Figure 10.1 (in spill boxes)

accessible route. There is no one specific route for a given employee, thus there are no specific alternate routes. Emergency escape routes are posted in all hazardous waste areas.

10.7.2 Off-Site Notification/Evacuation Procedures

To notify the neighboring properties in an emergency, MacDermid, Inc. will contact the Local Emergency Planning Committee (LEPC).

10.8 Shut-Down of Operations

PRODUCTION BUILDING

Reclaim Department:	Shut off transfer operations, valves and pumps.
Bulk Etch Storage:	Turn off valves and pumps before leaving area.
Liquid Department:	Turn off all operations involving transfer pumping or filtration and mixtures. Turn off all heaters and mixing equipment.
Macuplex Department:	Same as Liquid Dept.
Pilot Department:	Same as Liquid Dept.
Dry Mix:	Shut down blending operation. LEAVE BLOWERS ON. Shut down pump transfer operations.

Shipping/Receiving:	Pull out trucks.
Office Areas:	Electrical Blackouts
	Turn off all typewriters and copier machines.
Computer Equipment:	Turn off all computer terminals to avoid power surge.
Q.C./Lab:	Turn off all gas burners and electric heaters.
	LEAVE HOOD VENTS ON.

NOTE: ELECTRICITY AND SCRUBBERS, UNLESS TOLD OTHERWISE BY PLANT MANAGER, FIRE CHIEF OR OTHER FIRE DEPARTMENT OFFICIAL, KEEP SCRUBBERS AND ELECTRICITY ON.

GEAR STREET

Office Area:	Turn off typewriter and copier machine including during electrical blackouts.
Ink Lab:	Bunsen burners, solder pot, pressure chamber (pressure cooker).
Ink Production:	Shut down any transfers; turn off equipment.
Pilot Lab Area:	Shut off all transfer pumps. If reactor in use - turn it to cooling. DO NOT TURN REACTOR OFF.

NOTE: ELECTRICITY AND SCRUBBERS, UNLESS TOLD OTHERWISE BY PLANT MANAGER, FIRE CHIEF OR OTHER FIRE DEPARTMENT OFFICIAL, KEEP SCRUBBERS AND ELECTRICITY ON.

- Primary emergency authority
- Immediate response
- Emergency transport services
- Crowd control assistance
- Communications support
- Security to affected area
- Evacuation of surrounding areas, if required.

The Waterbury Fire Department will provide:

- Primary emergency authority
- Immediate response
- Primary fire fighting services
- Rescue and emergency transport services
- Communications support

Waterbury and St. Mary's Hospitals have received a copy of the Contingency Plan and will provide:

- Primary medical services
- Rescue services

10.12 Training/Experience of Emergency Coordinators

The training/experience of the Emergency Coordinator and his alternates is as follows:

John Miele (Emergency Coordinator)	Bachelor of Science in Chemical Engineering 20 years on the job training 24-hour OSHA 1910.120 Training Program Lion Technology, Inc.'s. Hazardous/Toxic Waste Management Seminar
Bill Schweiker EMERGENCY COORDINATOR	• Bachelor of Science in Chemistry • 17 years on the job training • 24-hour OSHA 1910.120 Training Program

		5,000 gallon Stainless Steel Reactor
	(1)	3,800 gallon Stainless Steel Reactor
Not regulated	(6)	3,500 gallon FRP tanks
Not regulated	(2)	4,000 gallon FRP tanks
Not regulated	(3)	6,300 gallon Storage tanks

*Note: These tanks are already included under the total tank storage capacity of 29,000 gallons listed under page 13-14.

13.4.2.2 Waste Disposal

For the purpose of this plan, it has been assumed that all bulk waste will require off-site disposal and the storage tanks are at their maximum storage capacities. All bulk waste will be disposed of off-site at a permitted hazardous waste facility.

13.4.2.3 Closure Procedures

The procedures for closing the bulk waste storage and recycling tanks and the storage areas are as follows:

Step 1: Dispose of all left over waste stored on-site at a permitted hazardous waste facility.

Step 2: Remove any loose dirt or dust using a dry vacuum. All dirt/dust collected in this operation will be placed in a 55 gallon drum, and disposed of off-site at a permitted hazardous waste facility.

Step 3: Collect a concrete sample from the floor area which exhibits the greatest contamination (staining, spalling, etc.) and submit for Appendix IX analysis. Sampling and analysis procedures are provided under Section 13.4.3. Any parameter determined under this analysis will be added to Table 13.1.

Step 4: Using a high pressure steam cleaner with an alkaline industrial cleaner (phosphate free) wash the inside of the tanks, the outside of the tanks, piping, structure supports and the floor of the storage area.

Step 5: Steam clean the tanks (inside and outside) piping, structural supports and floor after Step 5 using clean water only.

Step 6: Collect all cleaning water generated in Steps 4 and 5 (55 gallon drums or vacuum truck) and ship to a permitted hazardous waste facility for final treatment/disposal or treated on-site.

Step 7: Collect 1 wipe sample from the inside and outside of each storage and recycling tank using the sampling procedure described under Section 13.4.3. The sampling areas will be located in the areas exhibiting the greatest contamination.

TABLE 1 (continued)

USED SURFACE FINISHING CHEMICALS RECEIVED
FROM CUSTOMERS OR OFF-SITE MACDERMID FACILITIES FOR RECYCLING

EPA Hazardous Waste Number/CT Regulated Waste Number	Material Decsription	Waste Constituent	Allowable Conc. Range[4]	Hazard	Handling Method
CR04/(D001/D002/D008)[5]	Solder[a] Stripper	Water[2]	Balance	Ignitable	S01
		Hydrogen Peroxide[2]	0-190 g/l	Corrosive	
		Ammonium Bifluoride[2]	90-300 g/l	Toxic	
		Chloride	0-1,000 ppm		
		Copper	0-8,000 ppm		
		Tin	2,000-75,000 ppm		
		Lead (soluble)	5-100 ppm		
		Iron	0-200 ppm		
		Nickel	0-20 ppm		
		pH[3]	3.5 to 6		
		Chlorinated Hydrocarbons	Non-detect (EPA SW-846 method 8010)		
CR04	Electroless[1] Copper	Water[2]	500-1,000 g/l	Toxic	S01
		pH	4-8		
		Chealator (EDTA)[2]	.5-30 g/l		
		Copper	0-50,000 ppm		
		Nickel	0-20 ppm		
		TOX	0-10 ppm		
		Chloronated Hydrocarbons	Non-dectect (EPA SW-846 Method 8010)		

TABLE 1 (continued)

USED SURFACE FINISHING CHEMICALS RECEIVED
FROM CUSTOMERS OR OFF-SITE MACDERMID FACILITIES FOR RECYCLING

EPA Hazardous Waste Number/CT Regulated Waste Number	Material Decsription	Waste Constituent	Allowable Conc. Range[4]	Hazard	Handling Method

[a] Note: Meets the definition of an oxidizer and, therefore, is also defined as a D001 hazardous waste.

1 Solder Conditioner and Electroless Copper are not currently recycled at the Huntingdon Avenue facility. These materials are stored on-site only.

2 These constituents which are the major components of the raw products will not be analyzed for when waste shipments are received. They have been provided solely for the purpose to determine compatibility with other waste streams.

3 Meets the definition of corrosivity listed under 40 CFR 261.22 (a)(2).

4 The used surface finishing chemicals received from customers are generated almost exclusively from printed circuit manufacturing facilities. Printed circuit manufacturing facilities do not use cyanide plating baths, therefore, cyanide has not been listed under the column "Waste Constituent".

5 These materials also meet the definition of RCRA hazardous wastes, and as such are fully regulated under the hazardous waste permit EPA I.D. No. CTD001164599. They are included here solely for the purpose of complying with the requirements of C.G.S. Section 22a-454 which requires the issuance of a permit for the commercial storage and treatment of these materials.

TABLE 2

DESCRIPTION OF WASTES RECEIVED
FROM MACDERMID'S 245 FREIGHT STREET FACILITY

EPA Hazardous Waste Number/CT Regulated Waste Number	Material Decsription	Waste Constituent	Allowable Conc. Range	Hazard	Handling Method
CR04	Electoless[1] Copper	Water[2]	500-1,100 g/l	Toxic	S01
		pH	4-8		
		Chelator (EDTA)[2]	.5-30 g/l		
		Copper	0-50,000 ppm		
		Nickel	0-20 ppm		
CR04/(D002)[3]	Stanous Sulfate Solution	Water[1]	Balance	Toxic Corrosive	S01
		Tin	1-10%		
		pH	≤2.0		
CR04/(D002)[3]	Chelated Waste Cleaner	Water[1]	Balance	Toxic Corrosive	S01
		Copper	1-20 g/l		
		EDTA	1-25%		
		pH	≤2.0		
CR04/(D002)[3]	Palladium Solution	Water[2]	Balance	Toxic Corrosive	S01
		Palladium	0-100,000 ppm		
		pH	≤2.0		
CR04	Palladium Solution	Water[2]	Balance	Toxic Corrosive	S01
		Palladium	0-100,000 ppm		
		pH	>2.0 - 6.0		

TABLE 3

DESCRIPTION OF WASTES GENERATED ON-SITE

EPA Hazardous Waste Number/CT Regulated Waste Number	Material Decsription	Waste Constituent	Allowable Conc. Range	Hazard	Handling Method
CR04/(D002/D004/D007/D008)[4]	Copper Etcchant	Water			
		Ammonia[2]	40-200 g/l	Toxic	
		Chloride[2]	100-250 g/l		
		Copper	0-200,000 ppm		
		Zinc	0-2,000 ppm		
		Tin	0-200 ppm		
		Lead	5-200 ppm		
		Iron	0-30 ppm		
		Nickel	0-20 ppm		
		pH[3]	8-10		
		Arsenic	5-100		
		Chromium	5-200		
CR04/(D002/D008)[4]	Solder[1] Conditioner	Water[2]	500-850 g/l	Corrosive	S01
		Ammonium Chloride[2]	60-200 g/l	Toxic	
		Hydrochloric Acid[2]	80-175 g/l		
		Fluoride	0-20 ppm		
		Copper	0-3,000 ppm		
		Iron	0-500 ppm		
		pH	$\leq$2.0		
		Lead	5-200 ppm		

TABLE 3 (continued)

DESCRIPTION OF WASTES GENERATED ON-SITE

EPA Hazardous Waste Number/CT Regulated Waste Number	Material Decsription	Waste Constituent	Allowable Conc. Range	Hazard	Handling Method
CR04/(D001/D002/D008)[4]	Solder[a] Stripper	Water[2]	Balance	Ignitable	S01
		Hydrogen Peroxide[2]	0-190 g/l	Corrosive	
		Ammonium Bifluoride[2]	90-300 g/l	Toxic	
		Chloride	0-1,000 ppm		
		Copper	0-8,000 ppm		
		Tin	2,000-75,000 ppm		
		Lead (soluble)	5-100 ppm		
		Iron	0-200 ppm		
		Nickel	0-20 ppm		
		pH[3]	3.5 to 6.0		
CR04	Electroless Copper	Water[2]	500-1,000 g/l		
		Ph	4-8		
		Chelated(EDTA)[2]	.5-30 g/l		
		Cooper	0-50,000 ppm		
		Nickel	0-20 ppm		
CR04/(D002)[4]	Acid Zinc Solution	Water[2]	Balance	Toxic	S01
		Zinc	0-50,000 ppm	Corrosive	
		pH	$\leq$2.0		
CR04	Acid Zinc Solution	Water[2]	Balance	Toxic	S01
		Zinc	0-50,000 ppm	Corrosive	
		pH	>2.0-6.0		

TABLE 4

SPOT TESTS FOR USED SURFACE FINISHING CHEMICALS

MacDermid Waste Stream	Parameter	Allowable Specification
Copper Etchant	Appearance	Deep blue homogeneous liquid at 75°F
	Specific Gravity	1.13 minimum at 75°F
	Ammonia (Free)	Positive
Solder Conditioner	Appearance	Yellow to water white homogenous liquid at 75°F
	pH	<3.0
	Ammonia (Liberated)	Positive
Solder Stripper	Appearance	Light brown or blue to blue green (not green) homogeneous liquid at 75°F
	pH	3.5 to 6.0
	Ammonia (Free)	Negative
	Ammonia (Liberated)	Positive
Etectroless Copper	Appearance	Light blue, homogeneous liquid at 75°F
	pH	4-8
	Ammonia (Liberated)	Negative