WI-0075-04

ROJ-8310-01A

ECOLOGY AND ENVIRONMENT, INC.
FIELD INVESTIGATION TEAM
SITE SAFETY PLAN

US EPA RECORDS CENTER REGION 5
546926

A. GENERAL INFORMATION

SITE: Kitzinger Cooperage Corp. TDD NO: ROJ-8310-01A

WSTS NO: WI 0075

LOCATION: 2529 E. Norwich St. Francis WI 53207 (Milwaukee Co)

PLAN PREPARED BY: Paula Ventura DATE: 5/2/84

APPROVED BY: Paul D. Moss DATE: 7-26-84

OBJECTIVE (include description of work to be performed): To perform an onsite inspection

PROPOSED DATE OF INVESTIGATION: July 31 1984

BACKGROUND REVIEW: Complete: ___ Preliminary: X

DOCUMENTATION/SUMMARY: OVERALL HAZARD: Serious: ___ Moderate: ___

Low: ___ Unknown: X

B. SITE/WASTE CHARACTERISTICS

WASTE TYPES(S): Liquid X Solid ___ Sludge ___ Gas ___ according to EPA notification

CHARACTERISTIC(S): Corrosive X Ignitable X Radioactive ___

Volatile ___ Toxic X Reactive X Unknown ___ Other (Name) persistent

FACILITY DESCRIPTION: Kitzinger Cooperage has many rows of old drums stored on their sides against the length of a RR embankment. Hazardous ashes are temporarily stored on site.

Principal Disposal Method (type and location): Lugger boxes drums

Unusual Features (dike integrity, power lines, terrain, etc.) RR. embankment

Status: (active, inactive, unknown) 1951 - 1984

History: (Worker or non-worker injury; complaints from public; previous agency action): there are no reported injuries or public complaints.

C. HAZARD EVALUATION

(Use Hazard Evaluation of Chemicals sheets for specific or representative chemicals present.): Kitzinger has been reconditioning steel drums since 1951. They recondition bung and open top drums. They are conveyed through an incinerator and afterburner that removes the residuals. The ashes, then hazardous, are moved to lugger boxes which are shipped off site every month. The drums have been stored in an unpaved lot - it was indicated that they would be elevated to trailer storage. At the 1983 inspection (7/6/83) there were strong fumes throughout the facility.

from PA narrative

D. SITE SAFETY WORK PLAN

PERIMETER ESTABLISHMENT: Map/Sketch Attached yes Site Secured? UNK

Perimeter Identified? yes Zone(s) of Contamination Identified? yes

assume entire facility is contaminated

PERSONAL PROTECTION

Level of Protection: A ____ B ____ C ____ D X

Modifications: may be upgraded to Level C if drum storage is not secure. Past storage practices have been poor but they may have been improved. Call RSC.

Surveillance Equipment and Materials: See "Check-off list"

HNU Action levels: 0ppm above background - Level D
1-5 ppm " " - Level C
6-500 ppm " " - Level B
>501 ppm " " - Level A

EXPLOSIMETER: >35% LEL = ABANDON SITE.

O_2 METER: <19.5% O_2 = ABANDON SITE.

DRAEGER TUBES: ANY POSITIVE READING FOR HCN = ABANDON SITE.

RAD-MINI: >BACKGROUND < ABANDON SITE.

DECONTAMINATION PROCEDURES: wash and rinse all contaminated equipment (tools, gloves, boots etc) and leave wash and rinse water onsite. If clothes are splashed, bag them.

Special Equipment, Facilities, or Procedures: If the site safety officer feels there is a hazard - provisions for emergency eye wash should be made.

SITE ENTRY PROCEDURES: Contact owner/manager - follow plant safety procedures if they are adequate.

Team Member	Responsibility
Eileen Stark	team leader
Steve Nelson	site safety officer

WORK LIMITATIONS (Time of day, etc.): Be aware of heat stress. Try to work only in daylight hours.

INVESTIGATION-DERIVED MATERIAL DISPOSAL: All disposable material will be double bagged, labeled as potentially hazardous and left onsite.

E. EMERGENCY INFORMATION

483-1416
OR

LOCAL RESOURCES

Ambulance 342-0225 - Meda-Care (has a South Milwaukee location)
Hospital Emergency Room 647-5165 (414) St. Francis Hosp. ER
Poison Control Center 931-4114
Police Department 481-2232
Fire Department 483-1416
Airport 747-5300 Gen'l Mitchell Field
Explosives Unit 483-1416
EPA Contact Don Josifs (312)/886-0393

SITE RESOURCES

Water Supply To be provided by F.I.T.
Telephone To be determined prior to entry at site
Radio N/A

Other

EMERGENCY CONTACTS

1. Dr. Raymond Harbison (Univ. of Arkansas)....(501) 661-5766 or (501) 661-5767
   MED-TOX.....(501) 370-8263 (24 Hours)
2. Regional Safety Coodinator - Paul Moss .....(312) 663-9415 (office) (312) 358-9342 (home)
3. FIT Leader - Joseph Petrilli.....(312) 561-7639
4. FIT Office.....(312) 663-9415
5. E & E 24 Hour Call Line.....(716) 882-2804 (24 Hours; Call Forwarding)
6. Regional Health Maintenance Program Contact.PMI - (312) 832-8820
   8:00 a.m. - 5:00 p.m.
7. E & E Emergency Paging System.....(716) 882-2804
8. 24 Hour Hot Line for Corporate Response Team (716) 631-9531
9. Dave Dahlstrom.....(716) 741-2384 (home)
   Corporate Safety Director (716) 632-4491 (office)
10. Ecology and Environment, Inc. NPMO .....(703) 522-6065

IF exit is on NORTH side of site (Norwich) turn left & go west until reaching Pennsylvania Ave & going north (right).

F. EMERGENCY ROUTES

(Give road or other directions; attach map)

Hospital: EXIT FROM WEST SIDE OF SITE ONTO PENNSYLVANIA AVE. & GO NORTH UNTIL HOWARD, GO WEST (LEFT) UNTIL 16th STREET. GO NORTH (right) on 16th - St Francis Hosp will be on the left.

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HAZARD EVALUATION OF CHEMICALS

Chemical Name lead (inorganic) Date 5/4/84

DOT Name lead TDD Number R05-8310-01A

CAS Number 7439-921

References Consulted (circle):

NIOSH/OSHA Pocket Guide Verschueren Merck Index Hazardline Chris (Vol. II)

Toxic and Hazardous Safety Manual ACGIH Other: Sax, chemical dictionary

Chemical Properties: (Synonyms: Plumbus)

Chemical Formula Pb Molecular Weight 207.21

Physical State SOLID Solubility (H_2O) insoluable Boiling Point 1620°F

Flash Point ____ Vapor Pressure/Density 1mm@973° Freezing Point 327.43°F

Specific Gravity 11.35 Odor/Odor Threshold ____ Flammable Limits ____

Incompatabilities soluable in weak acids; strong oxidizers

Biological Properties:

TLV-TWA fumes/dust .2mg/m³ / TWA=15mg/m³ PEL ____

IDLH variable Human ____ Aquatic ____ Rat/Mouse LD_{50} 1000 mg/kg

Route of Exposure ingestion or inhalation

Carcinogen suspected poison Teratogen ____ Mutagen ____

Handling Recommendations: (Personal protective measures)

adequate ventilation - NO smoking or eating in the work area.

Disposal/Waste Treatment:

sort, classify and put in properly labeled box. Best disposal method is to salvage profitably for recycling

Health Hazards and First Aid:

consult a physician eyes-irrigate immediately skin-wash with soap ingestion-induce vomiting.

Symptoms: Acute: anorexia, vomiting convulsions

Chronic: weakness, loss of weight, metallic taste, anorexia, headache, dizziness insomnia.

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(12/83, DLD)

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HAZARD EVALUATION OF CHEMICALS

Chemical Name Carbon Disulfide Date 5/3/84

DOT Name Flammable liquid, poison TDD Number R05-8310-01A

CAS Number 75-15-0

References Consulted (circle):

NIOSH/OSHA Pocket Guide Verschueren Merck Index Hazardline Chris (Vol. II)

Toxic and Hazardous Safety Manual ACGIH Other: Sax

Chemical Properties: (Synonyms: carbon bisulfide, dithiocarbonic anhydride)

Chemical Formula CS_2 Molecular Weight 76.14

Physical State LIQUID Solubility (H_2O) 0.2 Boiling Point 115°F

Flash Point -22°F Vapor Pressure/Density 300mm/2.6 Freezing Point -168.9°F

Specific Gravity 1.26@20°C Odor/Odor Threshold .21 ppm Flammable Limits LEL 1.3% - UEL - 50%

Incompatabilities strong oxidizers, chemically active metals (such as sodium, potassium, zinc), azides, organic amines.

Biological Properties:

TLV-TWA 10 ppm 30 mg/m³ PEL 20 ppm - 30 ppm ceil [1 ppm 10 ppm ceil - NIOSH]

IDLH 500 ppm Human Aquatic TLM96 1000-100 ppm Rat/Mouse LD_{50} = 0.1 - .99 g/kg

Route of Exposure inhalation (vapor) ingestion, skin & eye contact

Carcinogen Teratogen Mutagen

Handling Recommendations: (Personal protective measures)

Impervious clothing and gloves should be worn. Safety glasses may be necessary. If clothes are splashed, they should be removed and the skin washed.

Disposal/Waste Treatment:

all contact surfaces grounded; absorb on vermiculite, sand or ashes & cover with water. Transfer underwater in buckets to an open area. Ignite from distance w/ excelsior tram. May be recovered by distillation & repackaged for use.

Health Hazards and First Aid:

eyes - hold eyelids open & flush w/ copious amounts of water
skin - wash affected area w/ copious amts. of water - ingestion - use water or milk to induce vomiting. If victim is unconscious - keep victim warm.

inhalation - get victim to fresh air artificial respiration may be necessary

Symptoms: Acute: moderate irritation of skin, eyes & mucous membranes, headache, nausea, garlicky breath, vomiting, diarrhea, abdominal pain, weak pulse, palpitations, fatigue, weakness in legs, unsteady gait, vertigo, hallucinations of sight, hearing, taste & smell in massive vapor exposures central nervous depression, respiratory paralysis, death may occur during coma or after a convulsion.

~~Chronic~~:

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chronic: psychological & behavioral disorders, heart disease

CBB

CARBON BISULFIDE

Common Synonyms
Carbon disulfide

Watery liquid Colorless to yellow Rotten egg to sweet odor

Sinks in water. Flammable, irritating vapor is produced.

Avoid contact with liquid and vapor. Keep people away.
Wear goggles, self-contained breathing apparatus and rubber overclothing (including gloves).
Shut off ignition sources and call fire department.
Stop discharge if possible.
Stay upwind and use water spray to "knock down" vapor.
Isolate and remove discharged material.
Notify local health and pollution control agencies.

Fire

FLAMMABLE.
Flashback along vapor trail may occur.
Vapor may explode if ignited in an enclosed area.
Wear goggles, self-contained breathing apparatus, and rubber overclothing (including gloves).
Extinguish with dry chemical or carbon dioxide.
Water and foam may be ineffective on fire.
Cool exposed containers with water.

Exposure

CALL FOR MEDICAL AID.

VAPOR
Irritating to eyes, nose and throat.
If inhaled, will cause nausea, vomiting, difficult breathing, or loss of consciousness.
Move to fresh air.
If breathing has stopped, give artificial respiration.
If breathing is difficult, give oxygen.

LIQUID
Will burn skin and eyes.
Harmful if swallowed.
Remove contaminated clothing and shoes.
Flush affected areas with plenty of water.
IF IN EYES, hold eyelids open and flush with plenty of water.
IF SWALLOWED and victim is CONSCIOUS, have victim drink water or milk and have victim induce vomiting.
IF SWALLOWED and victim is UNCONSCIOUS OR HAVING CONVULSIONS, do nothing except keep victim warm.

Water Pollution

HARMFUL TO AQUATIC LIFE IN VERY LOW CONCENTRATIONS.
May be dangerous if it enters water intakes.
Notify local health and wildlife officials.
Notify operators of nearby water intakes.

1. RESPONSE TO DISCHARGE

(See Response Methods Handbook, CG 446-4)

Issue warning—high flammability
Restrict access
Evacuate area

2. LABEL

3. CHEMICAL DESIGNATIONS

3.1 **Synonyms:** Carbon disulfide
3.2 **Coast Guard Compatibility Classification:** Carbon disulfide
3.3 **Chemical Formula:** CS_2
3.4 **IMCO/United Nations Numerical Designation:** 3.1/1131

4. OBSERVABLE CHARACTERISTICS

4.1 **Physical State (as shipped):** Liquid
4.2 **Color:** Colorless
4.3 **Odor:** Faint sweetish; disagreeable; offensive, like that of decaying cabbage

5. HEALTH HAZARDS

5.1 **Personal Protective Equipment:** Only self-contained breathing mask with full face, approved by the United States Bureau of Mines, is recommended. If the vapor concentration exceeds 2% by volume or is unknown, supplied-air respiratory equipment of appropriate design with full face masks should be used by all persons entering contaminated area. Masks should be used only for emergency situations and should be located accordingly. Almost any type of industrial clothing is satisfactory. Splashes of small quantity are not harmful to fabrics, and evaporation from clothing is quite rapid. Clothing should, however, be removed and the skin washed with water. Goggles should be used when there is any danger of CS_2 splashes or spray.

5.2 **Symptoms Following Exposure:** ACUTE EXPOSURE: mild to moderate irritation of skin, eyes, and mucous membranes from liquid or concentrated vapors; headache; garlicky breath, nausea, vomiting, diarrhea (even after vapor exposures), and occasionally abdominal pain; weak pulse, palpitations; fatigue, weakness in the legs, unsteady gait, vertigo; mania, hallucinations of sight, hearing, taste, and smell in acute, massive vapor exposures; central nervous depression with respiratory paralysis; death may occur during coma or after a convulsion.

5.3 **Treatment for Exposure:** INHALATION: remove victim promptly from contaminated area. Administer oxygen and artificial respiration if needed. SKIN CONTACT: wash affected areas with copious quantities of water. INGESTION: induce vomiting and follow with gastric lavage and saline cathartics.

5.4 **Toxicity by Inhalation (Threshold Limit Value):** 20 ppm

5.5 **Short-Term Inhalation Limits:** 100 ppm for 30 minutes, 200 ppm for 10 minutes, 100 ppm for 30 minutes and 50 ppm for 60 minutes.

6. FIRE HAZARDS

6.1 **Flash Point:** −22°F C.C.
6.2 **Flammable Limits in Air:** 1.3%—50%
6.3 **Fire Extinguishing Agents:** Dry chemical, carbon dioxide
6.4 **Fire Extinguishing Agents Not to be Used:** Not pertinent
6.5 **Special Hazards of Combustion Products:** Toxic gases are generated; wear self-contained breathing apparatus.
6.6 **Behavior in Fire:** Not pertinent
6.7 **Ignition Temperature:** 212°F
6.8 **Electrical Hazard:** Contact of the liquid or vapor with the surface of a lighted electric light bulb could result in ignition.
6.9 **Burning Rate:** 2.7 mm/min.

7. CHEMICAL REACTIVITY

7.1 **Reactivity with Water:** No reaction
7.2 **Reactivity with Common Materials:** No reaction
7.3 **Stability During Transport:** Stable
7.4 **Neutralizing Agents for Acids and Caustics:** Not pertinent
7.5 **Polymerization:** Not pertinent
7.6 **Inhibitor of Polymerization:** Not pertinent

8. WATER POLLUTION

8.1 **Aquatic Toxicity:** 35 ppm/48 hr/mosquito fish/TL_m/fresh water
8.2 **Waterfowl Toxicity:** Data not available
8.3 **Biological Oxygen Demand (BOD):** Data not available
8.4 **Food Chain Concentration Potential:** None

9. SELECTED MANUFACTURERS

1. FMC Corp.
   Inorganic Chemicals Div.
   633 Third Ave.
   New York, N. Y. 10017
2. PPG Industries Inc.
   Industrial Chemicals Div.
   Barberton, Ohio 44203
3. Stauffer Chemical Co.
   Industrial Chemicals Div.
   Delaware City, Delaware 19706

10. SHIPPING INFORMATION

10.1 **Grades or Purity:** Commercial; technical; USP
10.2 **Storage Temperature:** Ambient
10.3 **Inert Atmosphere:** Inerted
10.4 **Venting:** Pressure-vacuum

11. HAZARD ASSESSMENT CODE

(See Hazard Assessment Handbook, CG 446-3)

A-X-Y

12. HAZARD CLASSIFICATIONS

12.1 **Code of Federal Regulations:** Flammable liquid

12.2 **NAS Hazard Rating for Bulk Water Transportation:**

Category	Rating
Fire	4*
Health	
Vapor Irritant	2
Liquid or Solid Irritant	2
Poisons	3
Water Pollution	
Human Toxicity	1
Aquatic Toxicity	2
Aesthetic Effect	3
Reactivity	
Other Chemicals	2
Water	0
Self-Reaction	0

12.3 **NFPA Hazard Classifications:**

Category	Classification
Health Hazard (Blue)	2
Flammability (Red)	3
Reactivity (Yellow)	0

13. PHYSICAL AND CHEMICAL PROPERTIES

13.1 **Physical State at 15°C and 1 atm:** Liquid
13.2 **Molecular Weight:** 76.14
13.3 **Boiling Point at 1 atm:** 115°F = 46.3°C = 319.5°K
13.4 **Freezing Point:** −168.9°F = −111.6°C = 161.6°K
13.5 **Critical Temperature:** 523°F = 273°C = 546°K
13.6 **Critical Pressure:** 1100 psia = 76 atm = 7.7 MN/m^2
13.7 **Specific Gravity:** 1.26 at 20°C (liquid)
13.8 **Liquid Surface Tension:** 32 dynes/cm = .032 N/m at 20°C
13.9 **Liquid-Water Interfacial Tension:** 48.4 dynes/cm = .0484 N/m at 20°C
13.10 **Vapor (Gas) Specific Gravity:** 2.6
13.11 **Ratio of Specific Heats of Vapor (Gas):** 1.292
13.12 **Latent Heat of Vaporization:** 153 Btu/lb = 85 cal/g = 3.559×10^5 J/kg
13.13 **Heat of Combustion:** −5814 Btu/lb = −3230 cal/g = -135.2×10^5 J/kg
13.14 **Heat of Decomposition:** Not pertinent
13.15 **Heat of Solution:** Not pertinent
13.16 **Heat of Polymerization:** Not pertinent

(Continued on pages 5 and 6)

5. HEALTH HAZARDS (Cont'd.)

5.6 **Toxicity by Ingestion:** Grade 2; rat LD_{50} = 0.1 - 0.99 g/kg

5.7 **Late Toxicity:** Non-specific liver cell damage in rats; higher incidence of upper respiratory disease in humans.

5.8 **Vapor (Gas) Irritant Characteristics:** Vapors cause moderate irritation such that personnel will find high concentrations unpleasant. The effect is temporary.

5.9 **Liquid or Solid Irritant Characteristics:** Causes smarting of the skin and first-degree burns on short exposure and may cause secondary burns on long exposure.

5.10 **Odor Threshold:** 0.21 ppm

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HAZARD EVALUATION OF CHEMICALS

Chemical Name METHYL ETHYL KETONE Date 6/6/84

DOT Name MEK TDD Number RS 8310-1A

CAS Number 78-93-3

References Consulted (circle):

NIOSH/OSHA Pocket Guide Verschueren Merck Index Hazardline Chris (Vol. II)

Toxic and Hazardous Safety Manual ACGIH Other: RTECS

Chemical Properties: (Synonyms: MEK, 2 BUTANONE, ETHYL METHYL KETONE)

Chemical Formula $CH_3COCH_2CH_3$ Molecular Weight 72.11

Physical State LIQUID Solubility (H_2O) 27% Boiling Point 175.3°F

Flash Point 20°F Vapor Pressure/Density 70 mm Freezing Point -123.3°F

Specific Gravity 0.806 @ 20°C Odor/Odor Threshold SWEET/10 ppm Flammable Limits 1.8 - 11.5%

Incompatabilities VERY STRONG OXIDIZERS

Biological Properties:

TLV-TWA 200 ppm PEL 200 ppm

IDLH 3000 ppm Human Aquatic Rat/Mouse 2737 mg/kg (ORAL)

Route of Exposure DERMAL, INHALATION, INGESTION.

Carcinogen Teratogen Mutagen

Handling Recommendations: (Personal protective measures)

APR, PLASTIC GLOVES, GOGGLES/FACESHIELD WELL VENTILATED.

See PAGE 2 FOR ACTION LEVELS.

Disposal/Waste Treatment:

ABSORB w/ PAPER THEN INCINERATE.

Health Hazards and First Aid:

INHALATION — MOVE TO FRESH AIR, CPR EYES WASH WITH H_2O FOR 15 MIN

Symptoms: Acute: EYE BURNS, HEADACHE, DIZZINESS, NAUSEA, WEAKNESS. IRRITANT UPPER RESP.

Chronic: CNS, LUNGS.

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(12/83, DLD)

TOL	TOLUENE

Common Synonyms
Toluol
Methylbenzene
Methylbenzol

Watery liquid — Colorless — Pleasant odor

Floats on water. Flammable, irritating vapor is produced.

Stop discharge if possible. Keep people away.
Shut off ignition sources and call fire department.
Stay upwind and use water spray to "knock down" vapor.
Avoid contact with liquid and vapor.
Isolate and remove discharged material.
Notify local health and pollution control agencies.

Fire

FLAMMABLE.
Flashback along vapor trail may occur.
Vapor may explode if ignited in an enclosed area.
Wear goggles and self-contained breathing apparatus.
Extinguish with dry chemical, foam, or carbon dioxide.
Water may be ineffective on fire.
Cool exposed containers with water.

Exposure

CALL FOR MEDICAL AID.

VAPOR
Irritating to eyes, nose and throat.
If inhaled, will cause nausea, vomiting, headache, dizziness, difficult breathing, or loss of consciousness.
Move to fresh air.
If breathing has stopped, give artificial respiration.
If breathing difficult, give oxygen.

LIQUID
Irritating to skin and eyes.
If swallowed, will cause nausea, vomiting or loss of consciousness.
Remove contaminated clothing and shoes.
Flush affected areas with plenty of water.
IF IN EYES, hold eyelids open and flush with plenty of water.
IF SWALLOWED and victim is CONSCIOUS, have victim drink water or milk.
DO NOT INDUCE VOMITING.

Water Pollution

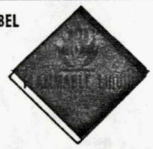
Dangerous to aquatic life in high concentrations.
Fouling to shoreline.
May be dangerous if it enters water intakes.
Notify local health and wildlife officials.
Notify operators of nearby water intakes.

1. RESPONSE TO DISCHARGE

(See Response Methods Handbook, CG 446-4)

Issue warning—high flammability
Evacuate area

2. LABEL



3. CHEMICAL DESIGNATIONS

3.1 **Synonyms:** Methylbenzene, Methylbenzol, Toluol

3.2 **Coast Guard Compatibility Classification:** Aromatic hydrocarbon

3.3 **Chemical Formula:** $C_6H_5CH_3$

3.4 **IMCO/United Nations Numerical Designation:** 3.2/1294

4. OBSERVABLE CHARACTERISTICS

4.1 **Physical State (as shipped):** Liquid

4.2 **Color:** Colorless

4.3 **Odor:** Pungent; aromatic, benzene-like; distinct, pleasant

5. HEALTH HAZARDS

5.1 **Personal Protective Equipment:** Air-supplied mask; goggles or face shield; plastic gloves.

5.2 **Symptoms Following Exposure:** Vapors irritate eyes and upper respiratory tract; cause dizziness, headache, anesthesia, respiratory arrest. Liquid irritates eyes and causes drying of skin. If aspirated, causes coughing, gagging, distress, and rapidly developing pulmonary edema. If ingested causes vomiting, griping, diarrhea, depressed respiration.

5.3 **Treatment for Exposure:** INHALATION: remove to fresh air, give artificial respiration and oxygen if needed; call a doctor. INGESTION: do NOT induce vomiting; call a doctor. EYES: flush with water for at least 15 min. SKIN: wipe off, wash with soap and water.

5.4 **Toxicity by Inhalation (Threshold Limit Value):** 100 ppm

5.5 **Short-Term Inhalation Limits:** 600 ppm for 30 min.

5.6 **Toxicity by Ingestion:** Grade 2; LD_{50} 0.5 to 5 g/kg

5.7 **Late Toxicity:** Kidney and liver damage may follow ingestion.

5.8 **Vapor (Gas) Irritant Characteristics:** Vapors cause a slight smarting of the eyes or respiratory system if present in high concentrations. The effect is temporary.

5.9 **Liquid or Solid Irritant Characteristics:** Minimum hazard. If spilled on clothing and allowed to remain, may cause smarting and reddening of the skin.

5.10 **Odor Threshold:** 0.17 ppm

6. FIRE HAZARDS

6.1 **Flash Point:** 40°F C.C.; 55°F O.C.

6.2 **Flammable Limits in Air:** 1.27%—7%

6.3 **Fire Extinguishing Agents:** Carbon dioxide or dry chemical for small fires, ordinary foam for large fires.

6.4 **Fire Extinguishing Agents Not to be Used:** Water may be ineffective

6.5 **Special Hazards of Combustion Products:** Not pertinent

6.6 **Behavior in Fire:** Vapor is heavier than air and may travel a considerable distance to a source of ignition and flash back.

6.7 **Ignition Temperature:** 997°F

6.8 **Electrical Hazard:** Class I, Group D

6.9 **Burning Rate:** 5.7 mm/min.

7. CHEMICAL REACTIVITY

7.1 **Reactivity with Water:** No reaction

7.2 **Reactivity with Common Materials:** No reaction

7.3 **Stability During Transport:** Stable

7.4 **Neutralizing Agents for Acids and Caustics:** Not pertinent

7.5 **Polymerization:** Not pertinent

7.6 **Inhibitor of Polymerization:** Not pertinent

8. WATER POLLUTION

8.1 **Aquatic Toxicity:** 1180 mg/l /96 hr/sunfish/TL_m/fresh water

8.2 **Waterfowl Toxicity:** Data not available

8.3 **Biological Oxygen Demand (BOD):** 0%, 5 days; 38% (theor.), 8 days

8.4 **Food Chain Concentration Potential:** None

9. SELECTED MANUFACTURERS

1. Exxon Chemical Co.
   Houston, Tex. 77001
2. Shell Chemical Co.
   Petrochemicals Division
   Houston, Tex. 77001
3. Sun Oil Co.
   St. Davids, Pa. 19087

10. SHIPPING INFORMATION

10.1 **Grades or Purity:** Research, reagent, nitration—all 99.8+%; industrial: contains 94+%, with 5% xylene and small amounts of benzene and nonaromatic hydrocarbons; 90/120: less pure than industrial.

10.2 **Storage Temperature:** Ambient

10.3 **Inert Atmosphere:** No requirement

10.4 **Venting:** Open (flame arrester) or pressure-vacuum

11. HAZARD ASSESSMENT CODE

(See Hazard Assessment Handbook, CG 446-3)

A-T-U

12. HAZARD CLASSIFICATIONS

12.1 **Code of Federal Regulations:** Flammable liquid

12.2 **NAS Hazard Rating for Bulk Water Transportation:**

Category	Rating
Fire	3
Health	
Vapor Irritant	1
Liquid or Solid Irritant	1
Poisons	2
Water Pollution	
Human Toxicity	1
Aquatic Toxicity	3
Aesthetic Effect	2
Reactivity	
Other Chemicals	1
Water	0
Self-Reaction	0

12.3 **NFPA Hazard Classifications:**

Category	Classification
Health Hazard (Blue)	2
Flammability (Red)	3
Reactivity (Yellow)	0

13. PHYSICAL AND CHEMICAL PROPERTIES

13.1 **Physical State at 15°C and 1 atm:** Liquid

13.2 **Molecular Weight:** 92.14

13.3 **Boiling Point at 1 atm:** 231.1°F = 110.6°C = 383.8°K

13.4 **Freezing Point:** −139°F = −95.0°C = 178.2°K

13.5 **Critical Temperature:** 605.4°F = 318.6°C = 591.8°K

13.6 **Critical Pressure:** 596.1 psia = 40.55 atm = 4.108 MN/m²

13.7 **Specific Gravity:** 0.867 at 20°C (liquid)

13.8 **Liquid Surface Tension:** 29.0 dynes/cm = 0.0290 N/m at 20°C

13.9 **Liquid-Water Interfacial Tension:** 36.1 dynes/cm = 0.0361 N/m at 25°C

13.10 **Vapor (Gas) Specific Gravity:** Not pertinent

13.11 **Ratio of Specific Heats of Vapor (Gas):** 1.089

13.12 **Latent Heat of Vaporization:** 155 Btu/lb = 86.1 cal/g = 3.61×10^5 J/kg

13.13 **Heat of Combustion:** −17,430 Btu/lb = −9686 cal/g = -405.5×10^5 J/kg

13.14 **Heat of Decomposition:** Not pertinent

13.15 **Heat of Solution:** Not pertinent

13.16 **Heat of Polymerization:** Not pertinent

(Continued on pages 5 and 6)

NOTES

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HAZARD EVALUATION OF CHEMICALS

Chemical Name CHROMIUM Date JUNE 21, 1984

DOT Name — TDD Number RCS -

CAS Number 7440-47-3 ELEMENTAL

References Consulted (circle):

NIOSH/OSHA Pocket Guide Verschueren (Merck Index) Hazardline Chris (Vol. II)

Toxic and Hazardous Safety Manual ACGIH Other: SAX, HANDBOOK OF TOXIC AND HAZARDOUS CHEMICALS.

Chemical Properties: (Synonyms: CHROME)

Chemical Formula Cr Molecular Weight 51.996

Physical State SOLID Solubility (H_2O) — Boiling Point 2200° MP = 1890°

Flash Point — (Vapor Pressure)/Density 1mm @ 1616° Freezing Point —

Specific Gravity — Odor/Odor Threshold — Flammable Limits —

Incompatabilities STRONG OXIDIZERS.

Biological Properties:

Cr METAL NO INSOLUBLE SALTS

TLV-TWA — PEL 0.5 mg/m³ TWA

IBLH 500 mg/m³ Human — Aquatic — Rat/Mouse —

Route of Exposure INHALATION, INGESTION, EYE AND SKIN CONTACT

Carcinogen X (ANIMAL) Teratogen — Mutagen —

Handling Recommendations: (Personal protective measures)

WEAR PROTECTIVE CLOTHING TO PREVENT CONTACT. RESPIRATOR WORN TO PREVENT INHALATION. REMOVE AND DISPOSE OF CONTAMINATED CLOTHING.

Disposal/Waste Treatment:

PRECIPITATE AND DISPOSE OF IN CHEMICAL WASTE LANDFILL. ALSO RECOVERY AND RECYCLING.

Health Hazards and First Aid:

EYES: IRRIGATE IMMEDIATELY. SKIN CONTACT: FLUSH W/SOAP AND WATER. INHAL: REMOVE TO FRESH AIR AND GIVE ARTIFICIAL RESPIRATION. INGEST: MEDICAL ATTENTION AND WATER. INDUCE VOMITING!

Symptoms: Acute: DERMATITIS, PULMONARY SENSITIZATION, COUGHING WHEEZING, HEADACHE, DYSPNEA, FEVER, LOSS OF WEIGHT.

Chronic: LUNG CANCER, RESPIRATORY SYSTEM

375103

(12/83, DLD)

ecology and environment, inc.

HAZARD EVALUATION OF CHEMICALS

Chemical Name sodium cyanide Date 5/1/84

DOT Name POISON B TDD Number R5-8310-1A

CAS Number 143-33-9

References Consulted (circle):

NIOSH/OSHA Pocket Guide Verschueren Merck Index Hazardline Chris (Vol. II)

Toxic and Hazardous Safety Manual ACGIH Other: Hndbk of Tox & Haz Chem (Sittig) RTECS

Chemical Properties: (Synonyms: SODIUM SALT, HYDROCYANIC ACID)

Chemical Formula NaCN Molecular Weight 49.01

Physical State SOLID Solubility (H_2O) 58% Boiling Point 2732 °F

Flash Point N/A Vapor Pressure/Density ≈0 mm Freezing Point 1047°F

Specific Gravity 1.60@25°C Odor/Odor Threshold _____ Flammable Limits N/A

Incompatabilities strong oxidizers - nitrates, chlorates, acids, acid salts

Biological Properties:

.015 ppm/96 hr/bluegill/TLm/fresh water
.025 ppm/48 hr/prawn/LC50/salt water

TLV-TWA inhalation N/A ingestion - > 50 mg/kg PEL 5 mg/m³ (NIOSH - 10 min ceil) 5 mg/m³

IDLH 50 mg/m³ Human N/A Aquatic _____ Rat/Mouse ORAL-LD50: 6440 mg/kg (PPD)

Route of Exposure inhalation, skin absorption, ingestion, eye, skin contact

Carcinogen N/A Teratogen N/A Mutagen N/A

Handling Recommendations: (Personal protective measures)

Protective rubber gloves, eye protection and a dust respirator. Emergency showers and eyewash should be provided.

Disposal/Waste Treatment:

According to Sittig - add strong alkaline hypochlorite & react for 24 hours. Flush to sewer w/ large volumes of water.

Health Hazards and First Aid:

Ingestion - start treatment immediately - call a physician. If victim is conscious - induce vomiting w/ warm water & salt until vomit is clear, then have victim drink 1% solution of sodium thiosulfate. Artificial respiration or O_2 from an inhalator may be necessary.

Symptoms: Acute: Skin contact - severe irritant, pain and second degree burns. other symptoms - weakness, headaches, confusion, nausea, vomiting, eye irritation, slow grasping respiration

~~Chronic:~~ N/A

375103
(12/83, DLD)

Break nitrite pearl in a cloth under the nose.
Eyes - irrigate immediately
skin - wash with soap immediately

SCN — SODIUM CYANIDE

Common Synonyms	Solid granules, flakes or lumps — White — Almond odor Sinks and mixes with water.

AVOID CONTACT WITH SOLID, DUST, AND SOLUTION. Keep people away.
Wear chemical protective suit with self-contained breathing apparatus.
Isolate and remove discharged material.
Notify local health and pollution control agencies.

Fire	Not flammable. Wear chemical protective suit with self-contained breathing apparatus.
Exposure	CALL FOR MEDICAL AID. DUST POISONOUS IF INHALED OR IF SKIN IS EXPOSED. Move to fresh air. If breathing has stopped, give artificial respiration. If breathing is difficult, give oxygen. SOLID POISONOUS IF SWALLOWED OR IF SKIN IS EXPOSED. Will burn eyes. Remove contaminated clothing and shoes. Flush affected areas with plenty of water. IF IN EYES, hold eyelids open and flush with plenty of water. IF SWALLOWED and victim is CONSCIOUS, have victim drink water or milk and have victim induce vomiting. IF SWALLOWED and victim is UNCONSCIOUS OR HAVING CONVULSIONS, do nothing except keep victim warm.
Water Pollution	HARMFUL TO AQUATIC LIFE IN VERY LOW CONCENTRATIONS. May be dangerous if it enters water intakes. Notify local health and wildlife officials. Notify operators of nearby water intakes.

1. RESPONSE TO DISCHARGE

(See Response Methods Handbook, CG 446-4)

Issue warning—poison
Restrict access
Evacuate area
Chemical and physical treatment

2. LABEL

3. CHEMICAL DESIGNATIONS

3.1 **Synonyms:** Hydrocyanic acid, sodium salt
3.2 **Coast Guard Compatibility Classification:** Not applicable
3.3 **Chemical Formula:** NaCN
3.4 **IMCO/United Nations Numerical Designation:** 6.1/1689

4. OBSERVABLE CHARACTERISTICS

4.1 **Physical State (as shipped):** Solid
4.2 **Color:** White
4.3 **Odor:** Odorless when dry. When moist it has a slight odor of hydrocyanic acid.

5. HEALTH HAZARDS

5.1 **Personal Protective Equipment:** Protective gloves when handling solid sodium cyanide; rubber gloves when handling cyanide solutions (wash hands and rubber gloves thoroughly with running water after handling cyanides); U. S. Bureau of Mines approved dust respirator; approved chemical safety goggles.

5.2 **Symptoms Following Exposure:** As little as 180 milligrams is a rapidly fatal poison if ingested. Non-lethal doses may cause toxic symptoms. Strong water solutions, or the solid itself, can be absorbed by the skin and cause deep ulcers which heal slowly.

5.3 **Treatment for Exposure:** INGESTION: start treatment immediately; call a physician; carry victim to fresh air; have him lie down; keep him quiet and warm until physician arrives.

- If victim is conscious and breathing: induce vomiting by giving emetic of warm salt water (1 tablespoon salt/cup water); repeat until vomit fluid is clear; then have victim drink one pint of 1% solution of sodium thiosulfate, to be repeated in 15 min.
- If victim has stopped breathing: give artificial respiration until breathing starts.
- If victim is unconscious but breathing: give oxygen from an inhalator.

For all of above conditions, have victim breathe amyl nitrite. Break nitrite pearl in a cloth and hold lightly under victim's nose for 15 sec., repeating 5 times at about 15-sec. intervals. If necessary, repeat this procedure every 3 min. with fresh pearls until 3 or 4 have been given. (Pearls must not be over 2 years old. Avoid breathing amyl nitrite while administering it to victim.)

5.4 **Toxicity by Inhalation (Threshold Limit Value):** Not pertinent
5.5 **Short-Term Inhalation Limits:** Not pertinent
5.6 **Toxicity by Ingestion:** Grade 4; below 50 mg/kg

6. FIRE HAZARDS

6.1 **Flash Point:** Not flammable
6.2 **Flammable Limits in Air:** Not flammable
6.3 **Fire Extinguishing Agents:** Not pertinent
6.4 **Fire Extinguishing Agents Not to be Used:** Not pertinent
6.5 **Special Hazards of Combustion Products:** Not pertinent
6.6 **Behavior in Fire:** Not pertinent
6.7 **Ignition Temperature:** Not flammable
6.8 **Electrical Hazard:** Not pertinent
6.9 **Burning Rate:** Not flammable

7. CHEMICAL REACTIVITY

7.1 **Reactivity with Water:** When sodium cyanide dissolves in water, a mild reaction occurs and some poisonous hydrogen cyanide gas is released. This gas is not hazardous except in an enclosed space. If the water is acidic, however, toxic amounts of the gas will form at once.
7.2 **Reactivity with Common Materials:** No reaction
7.3 **Stability During Transport:** Stable
7.4 **Neutralizing Agents for Acids and Caustics:** Not pertinent
7.5 **Polymerization:** Not pertinent
7.6 **Inhibitor of Polymerization:** Not pertinent

8. WATER POLLUTION

8.1 **Aquatic Toxicity:** 0.15 ppm/96 hr/bluegill/TL_m/fresh water
0.25 ppm/48 hr/prawn/LC_{50}/salt water
8.2 **Waterfowl Toxicity:** Data not available
8.3 **Biological Oxygen Demand (BOD):** (theor.) 6%, 7 days
8.4 **Food Chain Concentration Potential:** None

9. SELECTED MANUFACTURERS

1. E. I. duPont de Nemours & Co., Inc.
Electrochemicals Dept.
Wilmington, Del. 19898
2. Mallinckrodt Chemical Works
Industrial Chemicals Division
2nd and Mallinckrodt Sts.
St. Louis, Mo. 63160

10. SHIPPING INFORMATION

10.1 **Grades or Purity:** 99+%
10.2 **Storage Temperature:** Ambient
10.3 **Inert Atmosphere:** No requirement
10.4 **Venting:** Sealed containers must be stored in well-ventilated area.

11. HAZARD ASSESSMENT CODE

(See Hazard Assessment Handbook, CG 446-3)

SS

12. HAZARD CLASSIFICATIONS

12.1 **Code of Federal Regulations:** Poisonous liquid or solid, Class B
12.2 **NAS Hazard Rating for Bulk Water Transportation:** Not listed
12.3 **NFPA Hazard Classifications:**

Category	Classification
Health Hazard (Blue)	3
Flammability (Red)	0
Reactivity (Yellow)	0

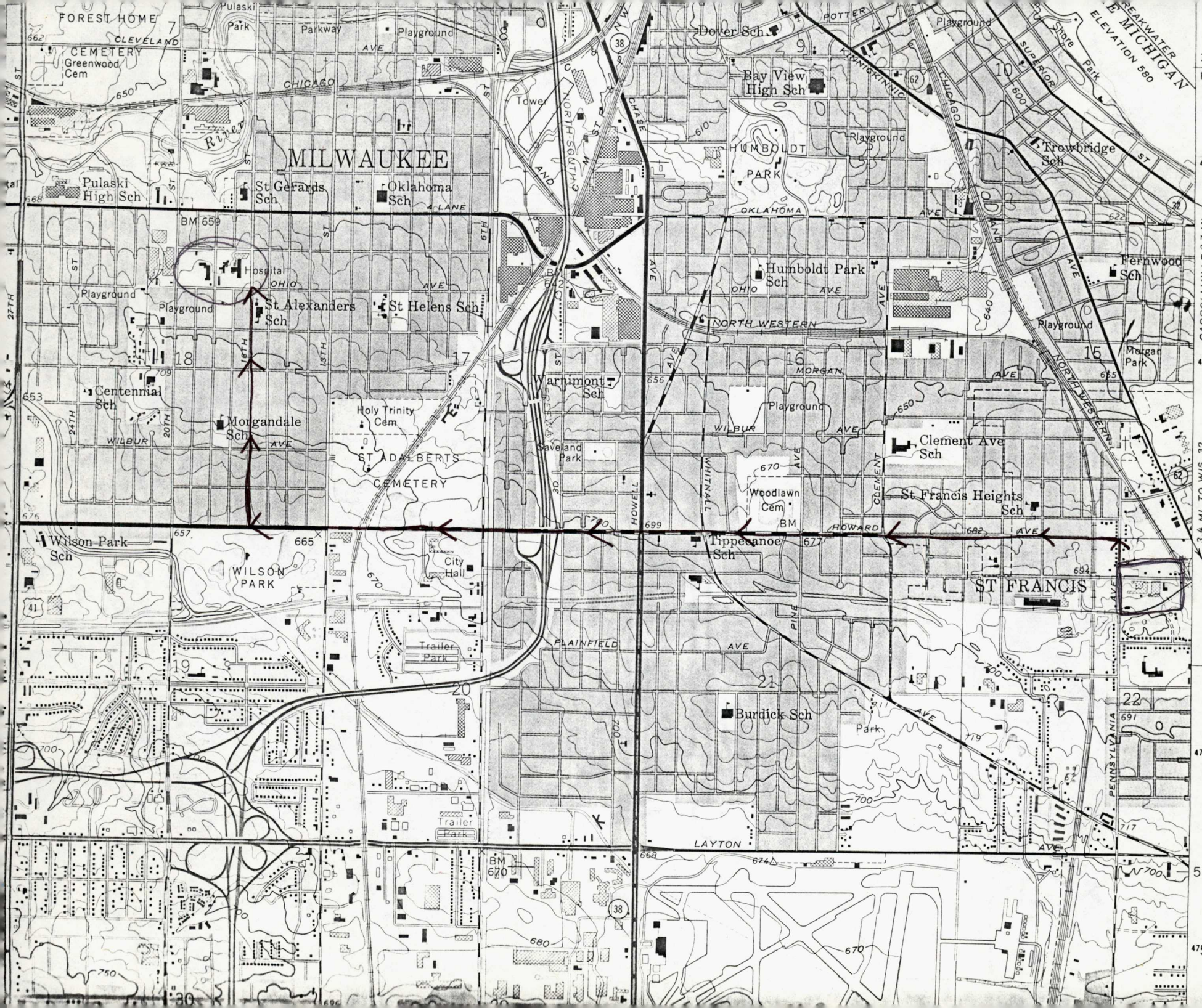
13. PHYSICAL AND CHEMICAL PROPERTIES

13.1 **Physical State at 15°C and 1 atm:** Solid
13.2 **Molecular Weight:** 49.01
13.3 **Boiling Point at 1 atm:** Very high
13.4 **Freezing Point:** 1047°F = 564°C = 837°K
13.5 **Critical Temperature:** Not pertinent
13.6 **Critical Pressure:** Not pertinent
13.7 **Specific Gravity:** 1.60 at 25°C (solid)
13.8 **Liquid Surface Tension:** Not pertinent
13.9 **Liquid-Water Interfacial Tension:** Not pertinent
13.10 **Vapor (Gas) Specific Gravity:** Not pertinent
13.11 **Ratio of Specific Heats of Vapor (Gas):** Not pertinent
13.12 **Latent Heat of Vaporization:** Not pertinent
13.13 **Heat of Combustion:** Not pertinent
13.14 **Heat of Decomposition:** Not pertinent
13.15 **Heat of Solution:** Not pertinent
13.16 **Heat of Polymerization:** Not pertinent

(Continued on pages 5 and 6)

5. HEALTH HAZARDS (Cont'd.)

5.7 **Late Toxicity:** None
5.8 **Vapor (Gas) Irritant Characteristics:** Non-volatile, but moisture in air can liberate some lethal hydrogen cyanide gas.
5.9 **Liquid or Solid Irritant Characteristics:** Fairly severe skin irritant; may cause pain and second-degree burns after a few minutes' contact.
5.10 **Odor Threshold:** Not pertinent


FOREST HOME
CEMETERY
Greenwood Cem
Pulaski Park
Parkway
Playground
CLEVELAND AVE
CHICAGO ST
River
MILWAUKEE
Pulaski High Sch
St Gerards Sch
Oklahoma Sch
BM 659
Hospital
Playground
OHIO AVE
St Alexanders Sch
St Helens Sch
Centennial Sch
Morgandale Sch
WILBUR AVE
Holy Trinity Cem
ST ADALBERTS CEMETERY
Wilson Park Sch
WILSON PARK
City Hall
Trailer Park
Tower
NORTH & SOUTH
Warnimont Sch
Saveland Park
HOWELL AVE
CHASE AVE
Dover Sch
Bay View High Sch
HUMBOLDT PARK
Playground
OKLAHOMA AVE
Humboldt Park Sch
NORTH WESTERN
MORGAN AVE
Playground
WHITNALL AVE
Woodlawn Cem
BM
Tippecanoe Sch
HOWARD AVE
PLAINFIELD AVE
Burdick Sch
Park
LAYTON AVE
POTTER
KINNICKINNIC
CHICAGO
SUPERIOR
Playground
Trowbridge Sch
Fernwood Sch
Morgan Park
Clement Ave Sch
St Francis Heights Sch
ST FRANCIS
PINE
CLEMENT
PENNSYLVANIA AVE
BREAKWATER
ELEVATION 580
LAKE MICHIGAN
State Park
370 000 FEET
4760
4759
4757
4756
57'30"
CARROLLVILLE 8.7 MI.
RACINE (CH.) 19 MI.
3.4 MI. TO WIS. 32

REM/FIT EMERGENCY MED-TOX PLAN

FOREWORD

The purpose of this document is to explain the response mechanism within E & E for dealing with accidental injuries or chemical exposures which may occur in the course of REM/FIT work. All REM/FIT personnel are responsible for following the provisions of this plan as part of the Corporate Health and Safety Program. In addition, each regional FIT office will draw up emergency telephone contact lists where indicated in this plan and disseminate them to their team members. A copy of this plan should accompany each team when working in the field.

EMERGENCY MED-TOX SYSTEM

The emergency MED-TOX system consists of the following response elements:

(1) Field Team

(2) Local REM/FIT Office

(3) REM/FIT ZPMO

(4) E & E Corporate Headquarters

(5) MED-TOX Hotline

(6) Health and Safety Advisory Committee

Figure 1 summarizes the activation process for this system.

EMERGENCY ACTIONS

A. Types of Emergencies

Emergencies that may occur during REM/FIT work include physical injury caused by motor vehicle accidents, falls, fires, etc. and chemical exposures caused by splashes, reactions, etc. Such incidents may involve one person or many on the REM/FIT team and could potentially involve the public offsite. For example, a fire could generate a sudden cloud or toxic vapors or gases.

The level of mobilization of the corporate-wide MED-TOX system will depend on the severity of the injury or exposure. For example, a sprained ankle does not have to be reported to the respective ZPMO until it is convenient during normal business hours. Traumatic physical injuries are considered severe and thereby require immediate reporting when they result in:

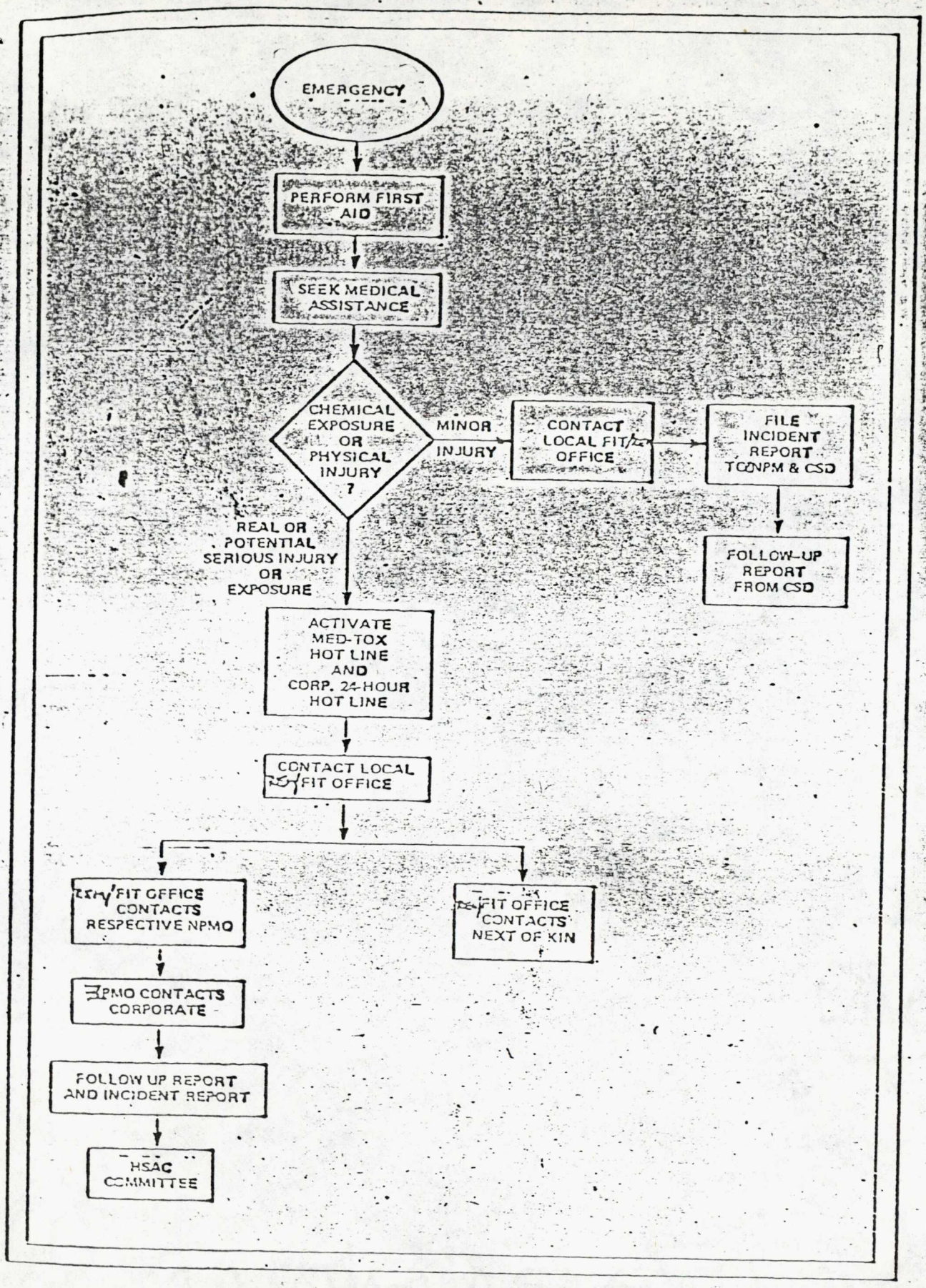


Figure 1 EMERGENCY MED–TOX SYSTEM

- o Death
- o Loss of consciousness
- o Medical treatment other than first aid

All Chemical exposures should be reported through the emergency system. However, any chemical exposure will be reported to the ZPMO as soon as possible after it occurs. The ZPMO will then decide whether it is necessary to pass the report on to corporate as an emergency or handle it through routine reporting procedures.

Responsibilities

B. (1) The REM/FIT project site leader at the work site has prime responsibility for activating the emergency MED-TOX system onsite. If he or she is unable to do so, the responsibiity will follow the order predetermined in the Site Safety Plan beginning with the Site Safety Officer. This person is responsible for:

(a) Initiating first aid (It may first be necessary to evacuate the person from the site if he is in imminent danger. Follow standard first aid procedure.) Normally the Site Safety Coordinator will be available to begin emergency first aid.

(b) Obtaining medical assistance by either transporting the victim to a hospital or medical center as determined under the Site Safety Plan, or obtaining an ambulance. The problem of contaminating medical assistance personnel must be considered.

(c) Activating the MED-TOX System in case of a chemical exposure or potential exposure.

(d) Contacting the local REM/FIT office

If no one is available to help, the project team leader will carry out the first two responsibilities first with the remaining two to be completed as soon as practical. All four actions may be carried out simultaneously if help is available.

(2) The REM/FIT Leader at the local office is the prime contact for the project team leader. If he is unavailable, the responsibility follows the following line:

(a) Assistant REM/FIT Leader

(c) Regional Safety Coordinator

The office contact is responsible for:

(a) Contacting the injured/exposed party's designated next-of-kin, with programmed information.

(b) Contacting the respective ZPMO with information updates.

(c) Setting up a command post in the office if necessary to monitor the situation and provide assistance as needed to the field team. The severity of the accident will indicate the degree to which the command post is operated.

(d) Acting as a clearing center for information on the accident, status of individual, background on site both to EPA and within the project.

(3) The respective ZPMO will provide any assistance required by the Regional office such as information on chemicals. The line of responsibility in the ZPMO follows this line:

(a) FIT

i) Assistant Zone Project Manager for Health and Safety (For FIT) D. Dahlstrom (Corp. Safety Director)

ii) Assistant Zone Project Manager for Technical Performance (For FIT) L. Welzel

(b) Remedial Programs (CH_2m Hill)

i) Corporate Safety Director (M. Chillingsworth)

ii) Assistant Zone Project Manager (REM) B. Agesteno

The ZPMO is responsible for:

(a) Contacting corporate headquarters

(b) Contacting EPA headquarters as necessary

(c) Serving as a clearinghouse for information for the regional office

(4) (d) Coordinating preparation of followup reports

E & E corporate headquarters will monitor incidents and bring the resources of the corporation to bear as needed. The callout line is:

(a) 24-hr call line

(b) Corporate Safety Director

(c) Assistant Corporate Safety Director (P. Gorton)

MED-TOX Hot-Line

A. The purpose of the MED-TOX Hot-Line is to provide the physician attending an E & E Ch_2M Hill employee who is exposed or injured:

(1) Toxicological information on the chemicals that may be involved

(2) Quick access to the individual's medical records for use in treating the person.

(3) A Communications Channel to Corporate Headquarters for further assistance.

B. The MED-TOX System is activated by the project site leader or other senior team member at the site of the exposure or injury A.S.A.P. This person calls

(501) 370-8263

which is a 24-hour line to an answering service. The answering service will contact one of three toxicologists in the MED-TOX System. (Drs. Raymond Harbison, Richard Freeman, or Morris Cramer.) One of these Toxicologists will contact you.

C. When the first call is made to MED-TOX, give the person answering the following information:

(1) State: This is an emergency

(2) Your name and region

(3) Telephone number to reach you

(4) Your location

(5) Name of person injured or exposed

(6) Nature of emergency

Give the same information to the toxicologist calling back, and answer any questions he has.

D. If the toxicologist does not return your call within 15 minutes, call the Corporate 24-hour pager for assistance and then go to the following callout list for toxicological information at E & E headquarters in Buffalo. Start with the first and continue calling them in order until contact is made:

	Office	Home
	(EST to 8:30-5:30)	
(1) David Dahlstrom	(716) 632-4491	(716) 741-2384
(2) Dr. Edward Carr	(716) 831-2803	(716) 434-7384
(3) Dr. James Nolan	(716) 898-4814	(716) 839-4276

WHAT TO REPORT

In all cases of contact made in the chain of reporting within E & E, the following information will be the minimum provided:

1. Name and REM/FIT region of person making call
2. Telephone number and location of person making call
3. Name of person(s) exposed or injured
4. Nature of emergency
5. Actions taken

DEALING WITH THE PRESS

If an accident attracts the attention of the media, and if EPA has an OSC, direct all media contact to him. If an OSC is not present, direct all media contact to the respective REM/FIT ZPMO. Nothing is to be said about the cause of the incident, the people involved, or the extent of injury or exposure.

INCIDENT REPORTS

Any exposure or injury to REM/FIT personnel will require that an incident report be filed by the affected individual. In addition, the person in charge at each reporting level will prepare a report on the actions taken at his/her location during the emergency and followup. This report will be submitted to E & E Corporate Safety Director for collection and preparation of the final report on the incident.

LIST OF TELEPHONE NUMBERS

Regional Office

Office Phone Number: (312) 663-9415

	Name	Home
Team Leader	Joe Petrilli	(312) 663-9415
Assistant Team Leader	Bill Goode	(312) 564-8344
Regional Safety Coordinator	Paul Moss	(312) 358-9342

REM/FIT NATIONAL ZONE MANAGEMENT OFFICES

Office Phone Number: (703) 522-6055 - FIT (303) 620-5200 - REM

	Name	Home	Office
Assistant Zone Project Manager for Health and Safety	David Dahlstrom	(716) 741-2384	(716) 632-4491
CH_2M Hill's Corporate Safety Director	Mary Anne Chillinsworth		
Assistant Zone Project Manager (FIT)	Roger Gray	(703) 534-8584	
Assistant Zone Project Manager (REM)	Bob D'Agastero		

E & E's CORPORATE HEADQUARTERS

Office Phone Number: (716) 632-4491

	Name	Home
Corporate Safety Director	David Dahlstrom	(716) 741-2384
Assistant Corporate Safety Director	Peter Gorton	(716) 877-2761
Vice President for Special Projects	Gerry Gallagher	(716) 652-0134
24-hour call line	(716) 882-2804	

SITE DOSIMETER LOG

TDD# R05-8310-04 SITE NAME Fitzinger Co-operage

SITE SAFETY OFFICER _____ WEEK OF _____

NAME AND DOSIM. #	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY

To the nearest half-hour, record time spent downrange as "S" (e.g., S: 2.5 hrs), time spent in active PDS operation as "P", and any time spent downrange in rescue activity as "R".

NAME: Black, E. TDD: 05-8310-01A DATES 7-31-84

Place a check in front of each item taken, and circle the letter that corresponds to the letter affixed to the instrument taken.

2. Indicate the quantity of each item taken.

____	Airdrive Pump (Geofilter)	A
____	Air Powered Respiration	A B C D E
✓	Canon AEL Camera	A B C
____	Conductivity Meter	A B C D
✓	Drager Pump	A B C
____	Ear Plugs	
✓	Eyewash Bottle	
✓	Explosimeter	A B C
✓	First Aid Kit	1 2 3 4 5 6 7 8
____	HCN Detector	A
✓	HNU	A B
✓	Lamp Type (10.2)	
____	Level/Tripod and Rod	A B
____	Lifevests	
____	Masterflex Pump and Filter	A B
____	Metal Detector	A B C
✓	O_2 Indicator	A B C
____	Organic Vapor Analyses	A B
____	pH Meter	A B C D
____	Polaroid 1-step	A B C D
✓	Radiation Det. - Mini	A B C D
____	Radiation - Survey Meter	A B C
____	Radiation - Tad.	A B C
____	Radiation - Thyac III/Probe	A B C
____	Resistivity Meter	A
____	Resusciator	A B C
____	Robair Pump System	A
✓	Safety Glasses	
____	VAN	A B C
____	Walkie-Talkie	A B C
____	Water-Level Indicator	A B C

SAMPLE BOTTLES:

1/2 gallon ____

1 Liter ____

8 oz. Jar ____

VOA ____

Metal cans, lids and clips ____

PRESERVATIVES:

NaOH ____

HN_3 ____

H_2SO_4 ____

Other ____

BAILERS:

Stainless ____

Copper ____

PVC ____

DECONTAMINATION EQUIPMENT

(LIST ALL ITEMS TAKEN)

3. Indicate the quantity and type of each item taken.

OUTERWARE (INCLUDE TYVEK, APRONS, etc.)

Type: TYVEK

Gloves Qty._____

Type: DISPOSABLE

Boots Qty._____

Type: - STEEL-TOE
- DISPOSABLE LATEX

TLD Badges Qty. 2

Drager Tubes Qty. 1 pkg.

Type: HCN

Respirator Cartridges Qty. 1 CARTON

Type: GMC-H

Fully-Encapsulated Suits Qty._____

I.D. Letters:

Air-Cylinders Qty._____

I.D. Letters:

S.C.B.A.'s Qty._____

I.D. Letters:

Rohert Shaws Qty._____

I.D. Letters:

KS:4W

4. List all other equipment taken into the field. Include generators, pumps, shovels, etc.