2 2 0001

# South Carolina Department of Health and Environmental Control

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2600 Bull Street
Columbia, S.C. 29201

November 5, 1981

Mr. Mike Foulke
Ecology and Environment Corp.
4319 Covington Highway
Decatur, GA 30035

Dear Mr. Foulke:

I appreciated the opportunity to work with you and your firm on the Bluff Road Assessment Project.

However, during the time of your visit to the site, my timing of event was sort of limited, which lessened our opportunity for indepth discussion of the Bluff Road Assessment Project and the whereabouts of the highly reactive materials. I shall make plans for future involvement from start to finish.

Although we did not have time to properly go over the materials at the Bluff Road site, attached is a listing of materials that will be of help and of interest to you concerning the waste at the site.

If I can be of any further assistance to you, please do not hesitate to call.

Sincerely yours,

Harold Seabrook
Waste Identification & Evaluation
Bureau of Solid & Hazardous Waste Management

HS:s

10925773

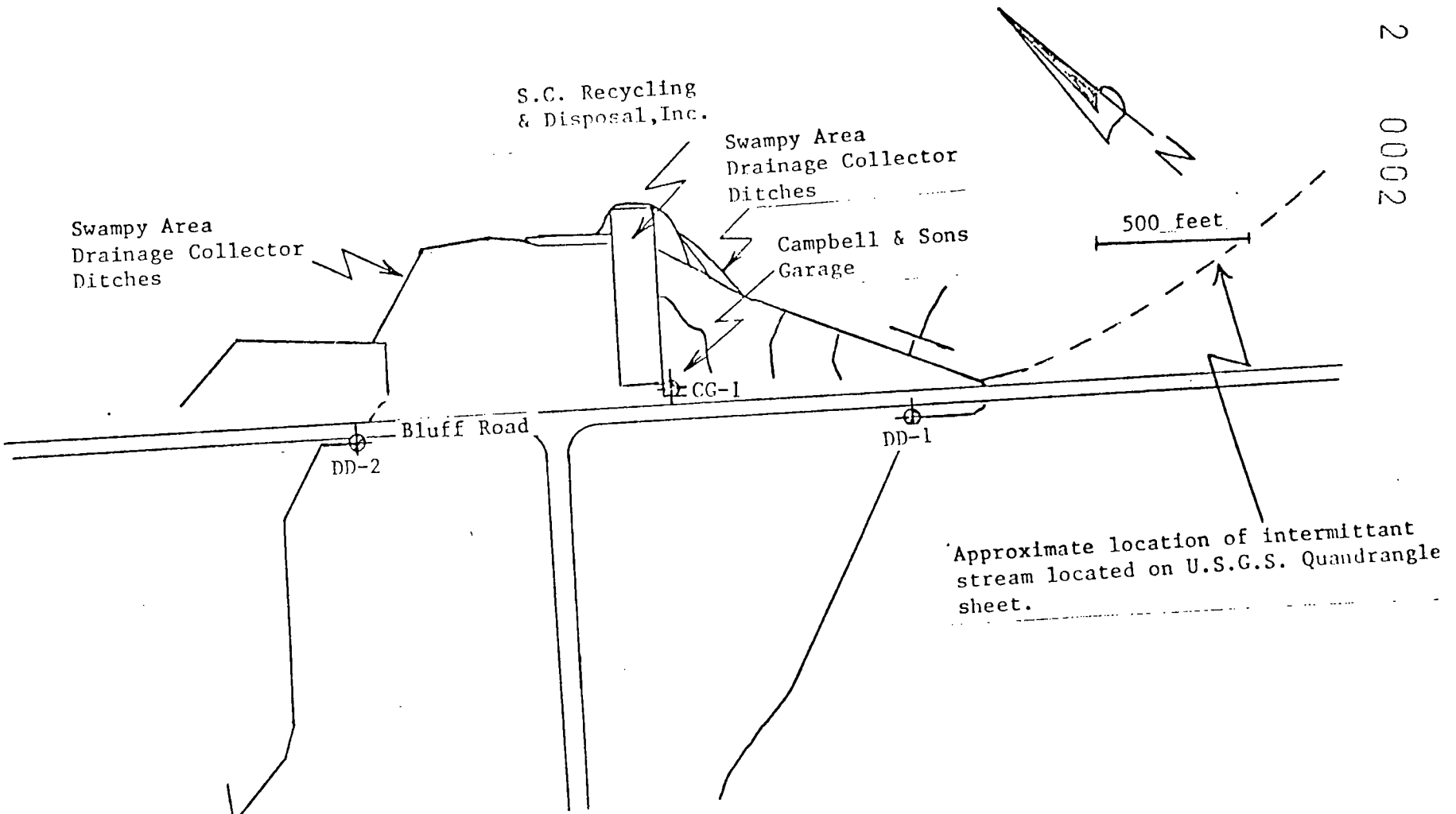



FIGURE III

BLUFF ROAD SITE AND SURROUNDING AREA

SOUTH CAROLINA RECYCLING AND DISPOSAL, INC.

COLUMBIA, S.C.

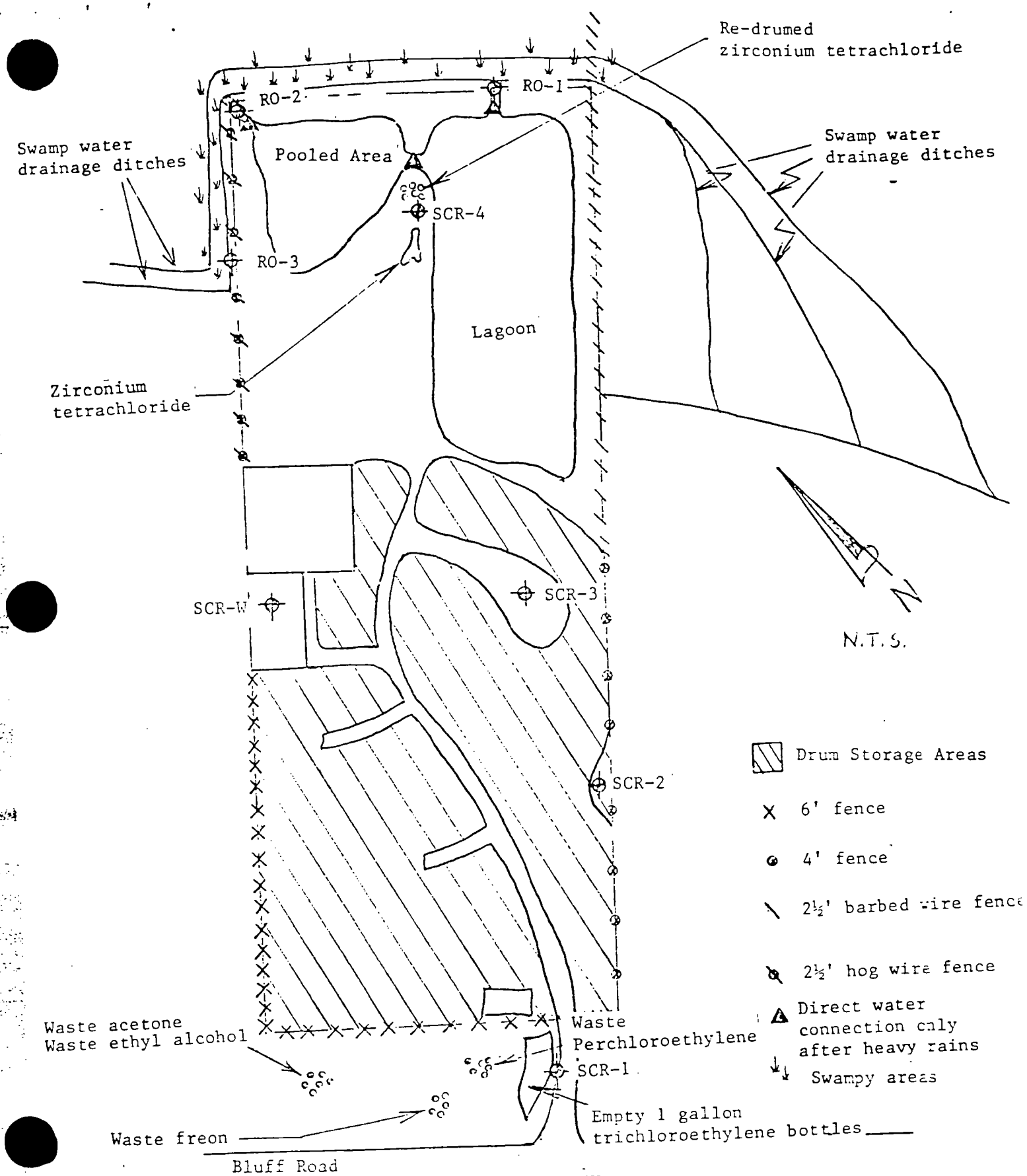
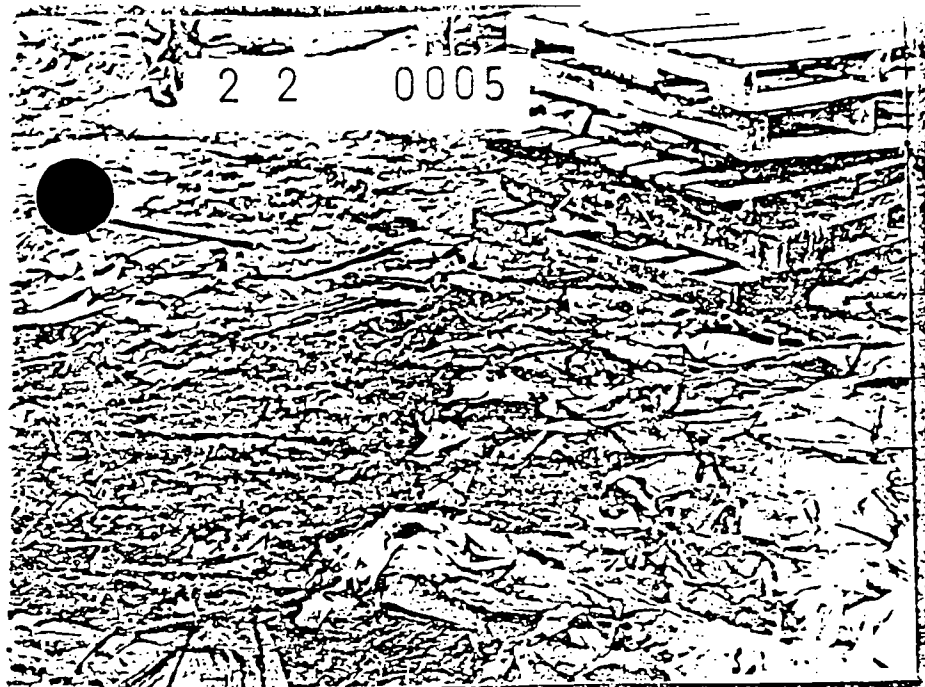



Figure IV
Schematic Drawing
South Carolina Recycling and Disposas, Inc.
Bluff Road Site
Columbia, S.C.

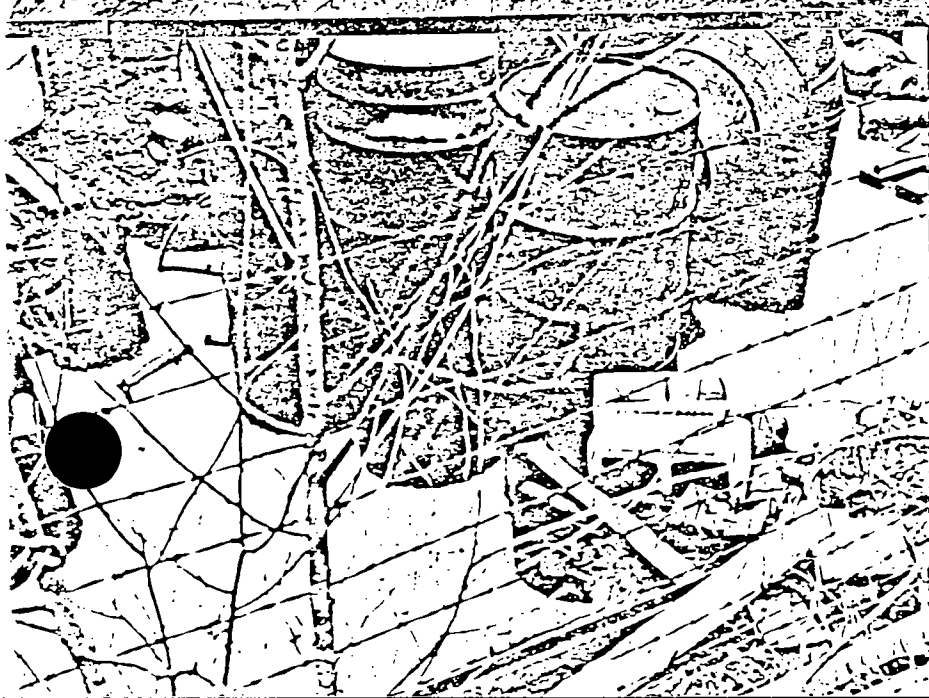
No. 1 - Drums stored along the highway right-of-way between Bluff Road and the fence at South Carolina Recycling and Disposal, Inc. Drums in the foreground reportedly contain waste freon. These in the left background reportedly contain waste acetone and waste ethyl alcohol while those in the right background reportedly contain perchlorethylene.

No. 2 - Empty, one gallon jugs which once contained reagent grade trichlorethylene. These jugs are piled on the highway right-of-way between Bluff Road and the fence at South Carolina Recycling and Disposal, Inc.



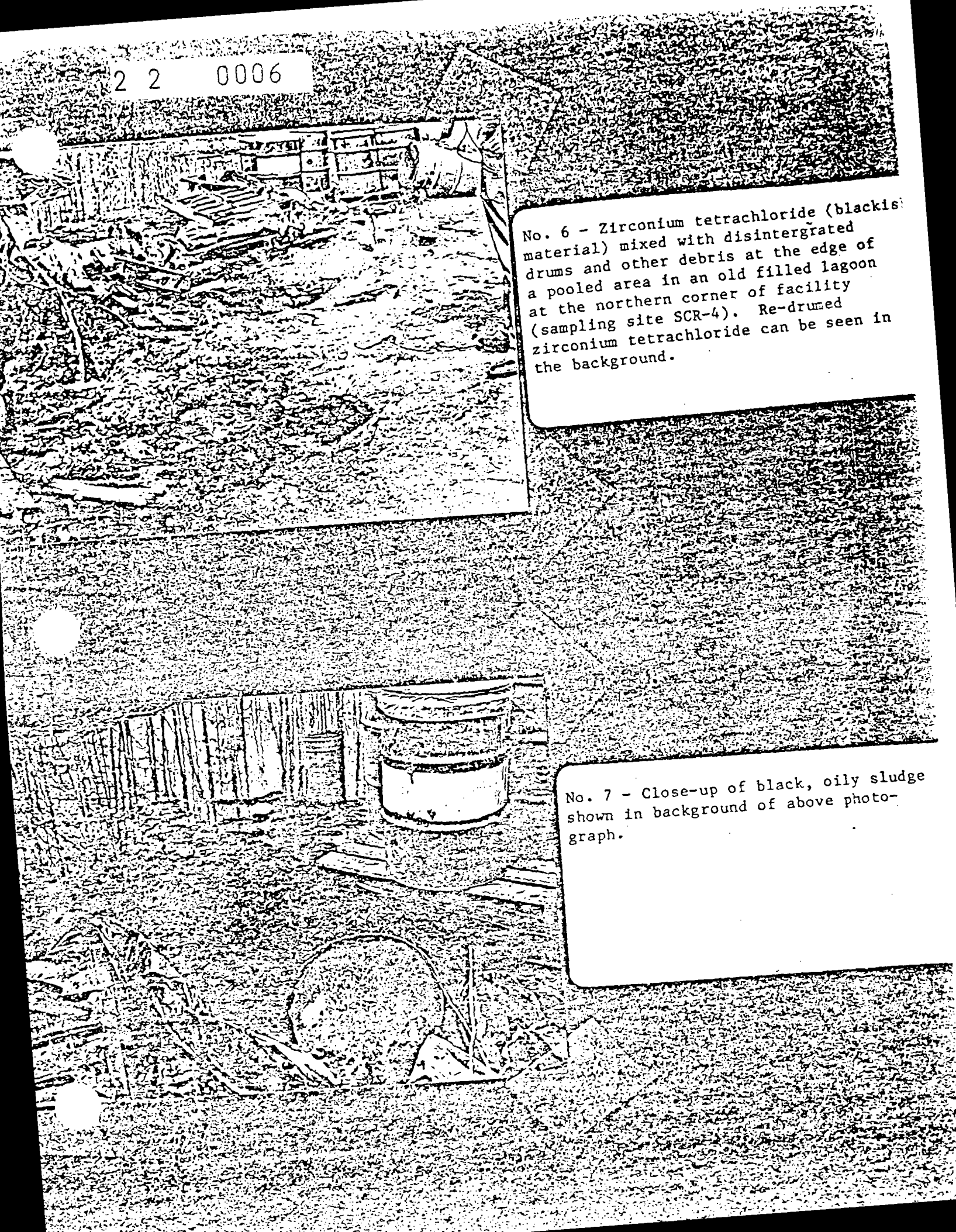
No. 3 - Contaminated soil at South Carolina Recycling and Disposal resulting from spillage and/or leaking drums (sampling site SCR-3).

No. 4 - Leaking drums near sampling site SCR-3.



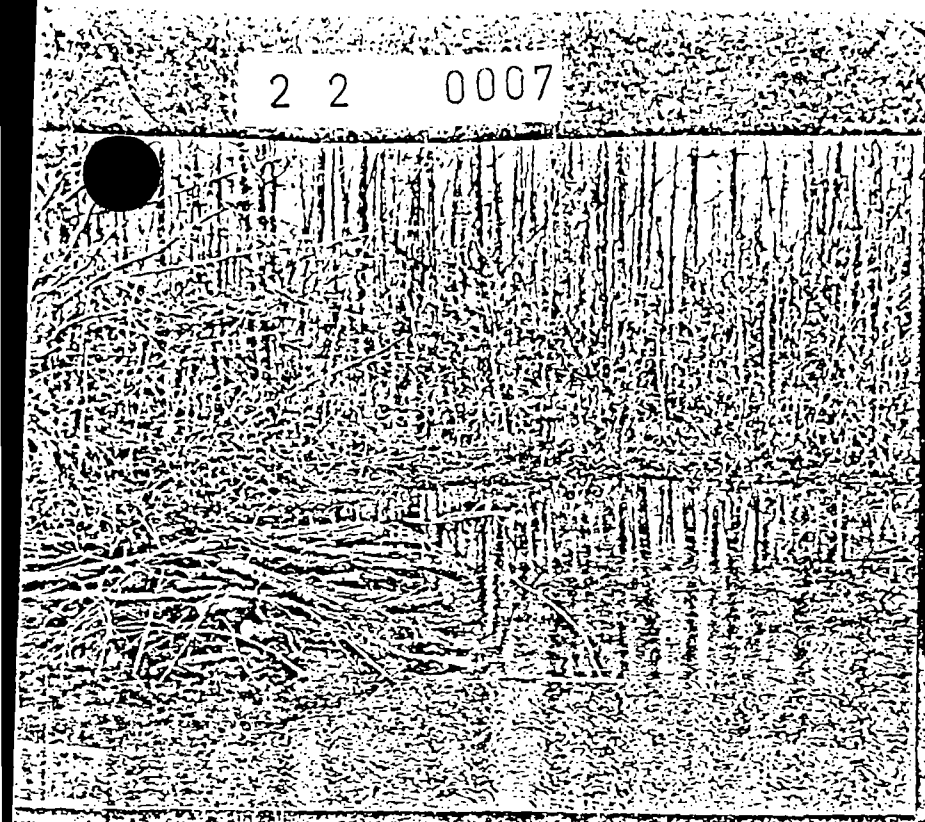
No. 5 - Pooled water in drum storage area near fence between South Carolina Recycling and Disposal, Inc. and Campbell and Sons Garage (sampling site SCR-2).

2 2 0006

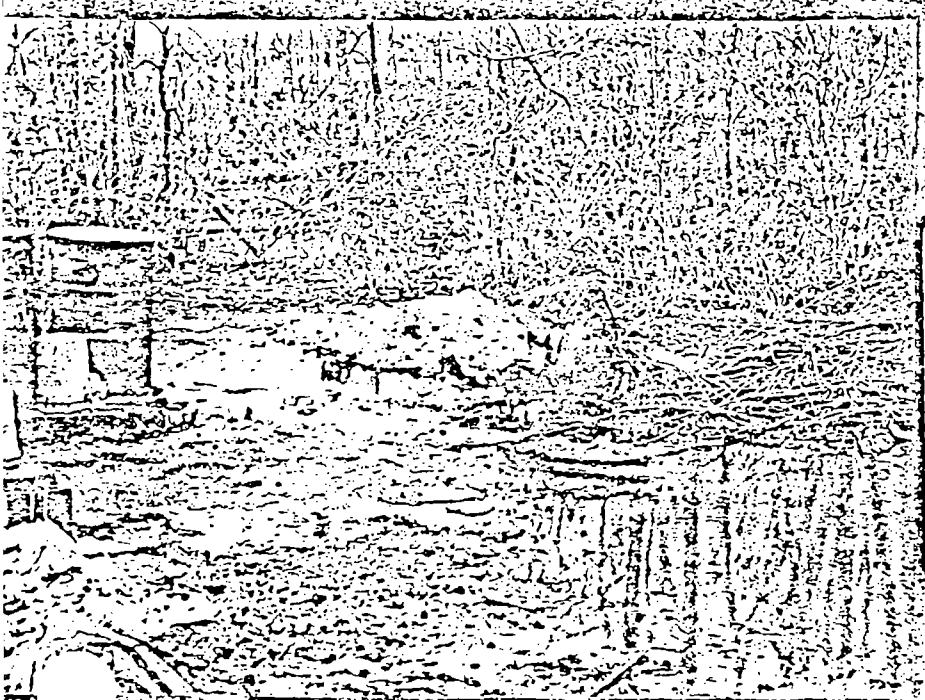


No. 6 - Zirconium tetrachloride (blackis material) mixed with disintergrated drums and other debris at the edge of a pooled area in an old filled lagoon at the northern corner of facility (sampling site SCR-4). Re-drumed zirconium tetrachloride can be seen in the background.

No. 7 - Close-up of black, oily sludge shown in background of above photograph.

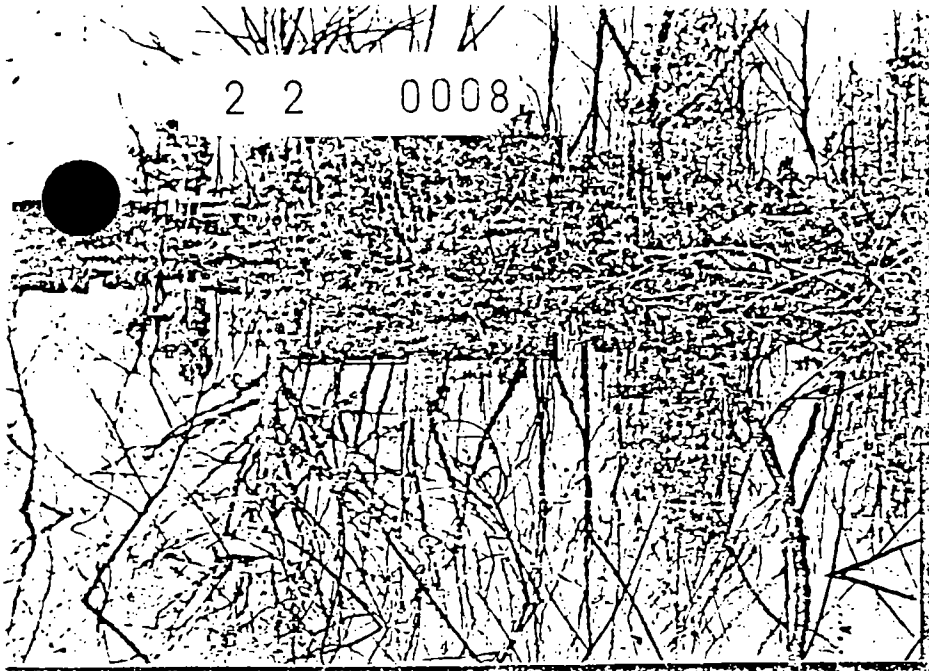


No. 8 - Pooled area in an old filled lagoon at the northern corner of facility. Direct runoff from this area to the local swamp-water drainage ditch system occurs near the middle of the photograph at the curve in the low dike (sampling site RO-2).

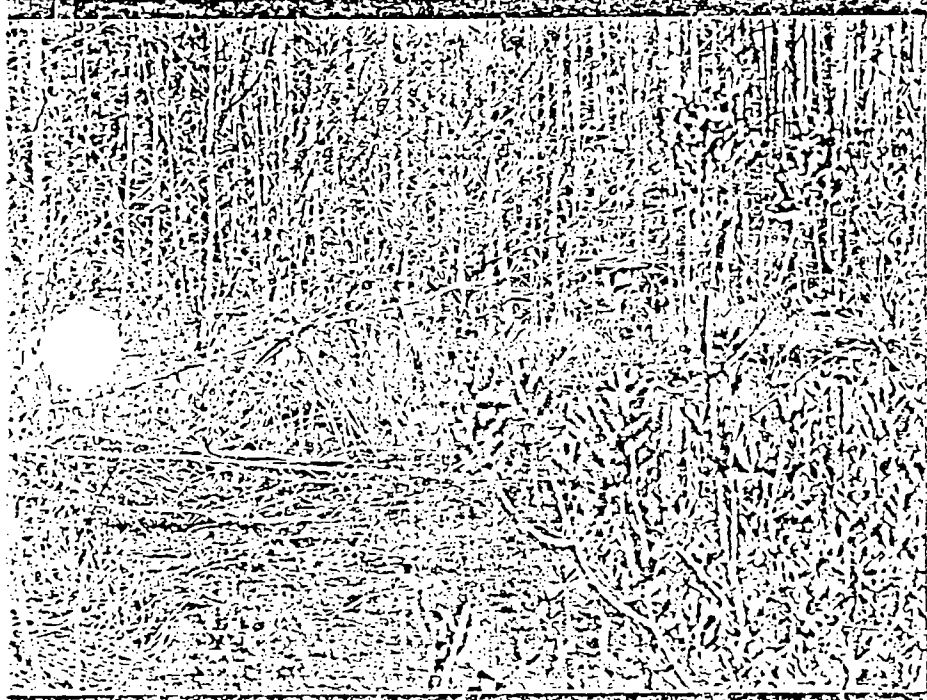


No. 9 - Point of potential runoff from northwestern corner of pooled area shown in above photograph. Part of the swamp-water drainage collector ditch system can be seen in the background (sampling site RO-1).

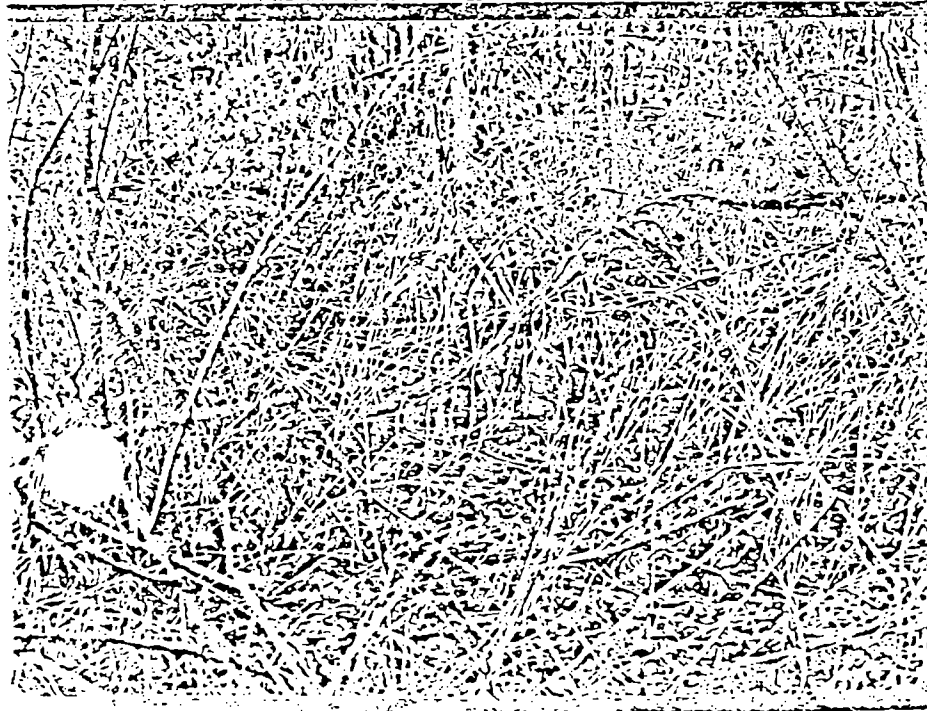
2 2 0008



No. 10 - Existing lagoon at eastern corner of facility showing proximity of lagoon to drum storage area.



No. 11 - Northeastern end of lagoon shown in above photograph. Direct runoff from the lagoon to the swamp-water drainage collector ditch system occurs near the middle of the photograph.



No. 12 - Close-up of drainage from lagoon shown in the above photograph (sampling site RO-3).

2. 2 0009


South Carolina Recycling and Disposal, Inc.

925 ~~912~~ Drake Street ★ ~~P.O. Box 9977~~

Columbia, South Carolina 29290

(803) 776-5507

RECYCLING RESEARCH

DISPOSAL DEVELOPMENT


October 2, 1979

Mr. John T. Buchanan
South Carolina Department of Health
and Environmental Control
2600 Bull Street
Columbia, S. C. 29201

Subject: Disposal of drums from Clover now at Bluff Road site.

Dear Mr. Buchanan:

We have previously discussed, but not resolved, the disposition of approximately 400 drums now at our Bluff Road site which came from the cleanup of the Clover site of Southeastern Pollution Control, Inc.

At the time of the cleanup of the Clover site, we had expected to be authorized to bury all waste then on both the Fort Lawn and Clover sites at Fort Lawn. Some of the Clover material was taken to Fort Lawn to await burial, and for logistic reasons some was taken to Bluff Road to await burial at Fort Lawn.

Subsequent developments have precluded any burial at Fort Lawn and that site is now being cleared of Southeastern Pollution Control waste under a consent order to South Carolina Recycling and Disposal.

We now seek some extention of this consent order to accommodate the Clover material at Bluff Road. Primary benefit to South Carolina Recycling and Disposal under such an arrangement would be burial of drums containing solids only - in a sanitary land fill.

Will you please give this matter your consideration and authorize burial of acceptable materials in a sanitary landfill within the state? We would want to start this work as soon as work at Fort Lawn is complete, thus releasing our equipment.

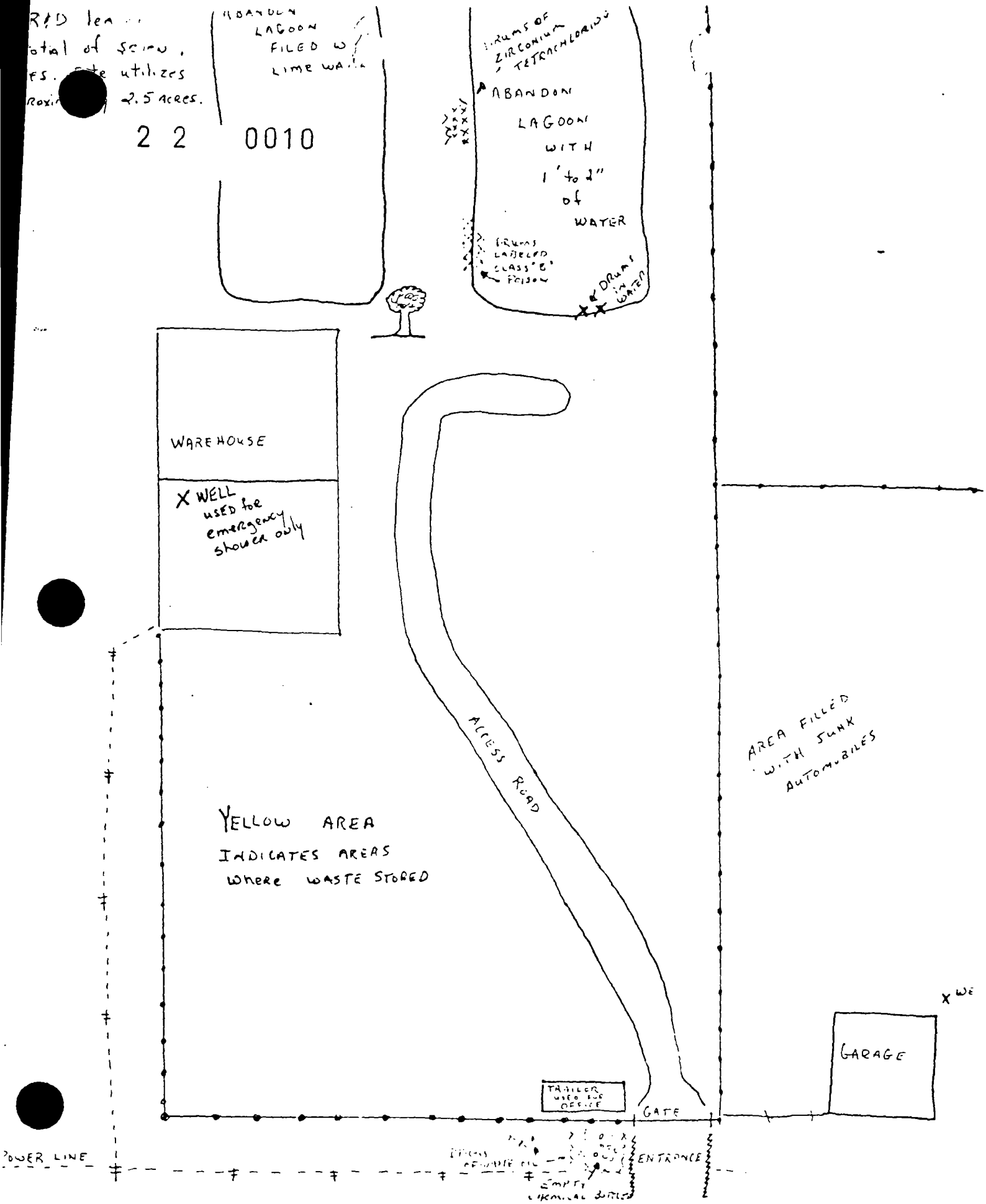
Sincerely,

James Q. A. McClure
President


RECEIVED
OCT 9 1979
S. C. DEPT. OF HEALTH AND ENVIRONMENTAL CONTROL
SOLID WASTE


cc/HMT
MGG

JQAMcC/lh


R&D lea...
otal of scien,
es. ...e utilizes
roxi... 2.5 acres.
2 2 0010
ABANDON LAGOON FILED W LIME WA...
DRUMS OF ZIRCONIUM TETRACHLORIDE
ABANDON LAGOON WITH 1' to 2" of WATER
DRUMS LABELED CLASS "B" POISON
DRUMS IN WATER
WAREHOUSE
X WELL used for emergency shower only
ACCESS ROAD
AREA FILLED WITH JUNK AUTOMOBILES
YELLOW AREA INDICATES AREAS where WASTE STORED
X WE
GARAGE
TRAILER USED FOR OFFICE
GATE
POWER LINE
ENTRANCE
EMPTY CHEMICAL BOTTLES
BLUFF ROAD
ENTRANCE TO WESTINGHOUSE

2 2 0611

South Carolina Recycling and Disposal, Inc.
925 ~~912~~ Drake Street ★ ~~P.O. Box 9671~~
Columbia, South Carolina 29290
(803) 776-5507

RECYCLING RESEARCH

DISPOSAL DEVELOPMENT

October 2, 1979

Mr. John T. Buchanan
South Carolina Department of Health
and Environmental Control
2600 Bull Street
Columbia, S. C. 29201

Subject: Zirconium Tetrachloride

Dear Mr. Buchanan:

We have at our Bluff Road site a quanity (about 40-55 gal. part full drums) of Zirconium tetrachloride which we have been holding for resale.

Condition of the drums in which this material has been stored is bad and we seek authorization to dispose this material as follows since further storage appears impractical.

We are presently redrumming this material into open top type steel drums with plastic liners and lids, but this is only a temporary measure to properly contain the material until we have approval for our proposed disposal. We expect to complete redrumming by October 19, 1979. Past experience with this material indicates that even repacked as described it will not be well contained beyond 2 to 3 months.

We obtained this material originally from a plant which had ceased operation. It was not a waste material, but was an intermediate in the production of Zirconium metal from Zircon sand ($ZrO_2$). It was 99.9% pure $ZrCl_4$ when received, the only impurity being oxygen. $ZrCl_4$ is highly reactive with water, or water vapor in the air, and in the passage of time some air got into the drums reacting with the $ZrCl_4$ and releasing HCL vapor which quickly corroded the steel drums thus exposing the $ZrCl_4$ to additional water vapor. The reaction is $ZrCl_4 + 2H_2O \rightarrow 4HCL + ZrO_2$. Thus the drums will presently contain only the following in varying proportions:

$ZrCl_4$
$ZrO_2$
HCL
$H_2O$

RECEIVED
OCT 9 1979

We propose and ask authorization for the following disposition in the lime $C_a(OH)_2$ pit where the drums are now stored.

1. Dig holes in the lime sufficient to accommodate.

2. Place a solution of caustic (NaOH) or soda ash ($Na_2CO_3$) in the hole.

3. Add the contents of the drums directly into the solution in the hole. This has been tried experimentally in a container. There is no evolution of HCL vapor since the HCL immediately reacts with the caustic in solution. Reactions are as follow:

   $ZrCL_4 + 2H_2O \rightarrow 4HCL + ZrO_2$ (Zircon sand)
   Then with NaOH solution.
   $4HCL + 4NaOH \rightarrow 4H_2O + 4NaCL$ (table salt)
   or with $Na_2CO_3$.
   $4HCL + 2Na_2CO_3 \rightarrow 2H_2O + 2CO_2 + 4NaCL$.

As can be seen none of the reaction products are "Hazardous" and there is no evolution of hazardous gas (non hazardous $CO_2$ only in the case of the use of $Na_2CO_3$). We propose when the reactions are complete, to backfill the holes with the lime which has been removed from them.

I will be happy to discuss this proceedure with anyone whom you designate.

We would appreciate the earliest possible affirmative decision on this proposal.

Sincerely,

James Q. A. McClure
President

JQAMcC/lh

cc: Henry M. Tischler
Max G. Gergel

2 2 0013

| | | Hazard Rating | Flammability | Recommended Container |
|---|---|---|---|---|
| | Sodium Bromide | Moderately toxic | Not very flammable | Bottles Boxes Barrels Drums |
| ✓ | Butyraldehyde | Moderately toxic | Extremely Flammable | Drums |
| | Methacrylonitrile | Highly toxic | Dangerous Fire Risk | |
| ✓ | Valeric Acid | Moderately toxic | Small Fire Risk | Drums |
| | Cresyl Mercaptan | | | |
| | Miscellaneous Organics chemicals in glass with Vermiculite | | | |
| | | | | |

| | | Hazard Rating | Flammability | Recommended Container |
|---|---|---|---|---|
| ✓ | Sodium Borohydride containing Cobalt | Highly toxic when contacted with water | Dangerous Fire Risk | Bottles, polyethylene bags in drum |
| ✓ | p-Nitrobenzoic Acid | Moderate toxicity | Combustible | Fiber Drums |
| ✓ | Sodium Iodide | Moderately toxic | Not very flammable | Drums |
| ✓ | Maleic Anhydride | Highly toxic | Combustible | Fiber and iron drums |
| ✓ | Butyric Acid | Low toxicity | not very flammable; Combustible | Drums |
| ✓ | Acetonyl Acetone | Irritant to eyes and skin | Combustible; Not very flammable | Cans. drums |
| | | | | |

2 2 0015

| | Hazard Rating | Flammability | Recommended Container |
|---|---|---|---|
| Vinyl Magnesium Chloride<br>Used as a Grignard reagent | Highly toxic | Highly Flammable | Drums |
| 1.5 Sp Gr. Hydriodic Acid | highly toxic | not very Flammable | Drums |
| Tetrabutyl tin | toxic | Combustible | |
| Iodoform | moderately toxic | not very Flammable | Drums |
| Woods Metal | | Non Flammable | |
| Trifluoroacetic Acid | Highly toxic | Non Flammable | Custom packed |
| | | | |

2 2 0016

| | | Hazard Rating | Flammability | Recommended Container |
|---|---|---|---|---|
| ✓ | Tetrachloroethylene | Highly toxic | non Flammable | Drums |
| | Deuterochloroform | highly toxic | Non Flammable | Drums |
| | Heavy Water | | Non Flammable | Drums |
| | Bromopropionitrile | | | |
| | ~~Chloroethylene~~ | ~~[illegible]~~ | ~~[illegible]~~ | |
| ✓ | Vinyl Acetate | low toxicity | Highly Flammable | Drums |
| | | | | |

2 2 0017

| | | Hazard Rating | Flammability | Recommended Container |
|---|---|---|---|---|
| | Sodium Fluoride | Highly toxic | | paper bag / drums |
| ✓ | Reclaimed 1-1-1 Trichloroethane | Moderately toxic | Non Flammable | Drums |
| ✓ | ~~[illegible]~~ Reclaimed ~~[illegible]~~ Acetone | Moderately toxic | Highly Flammable | Cans, drums |
| ✓ | Reclaimed Chloroform | Highly toxic | Non Flammable | Drums |
| ✓ | Reclaimed Carbon Tetrachloride | Highly toxic | Not Flammable | Drums |
| | 1-4 Butane Diol Distillation Heads | | | |
| | | | | |

2 2 0018

| | Hazard Rating | Flammability | Recommended Container |
|---|---|---|---|
| Inlewell S-43 Soluble Oil | | | |
| Gulf Senate # 135 Oil | | | |
| Kaolin | non toxic | non flammable | Cotton paper bags drums |
| Sludge - animal fat - copper residue - water | | | |
| Petrolatum (2-5% 1-1-1 Trichlor) | a known carcinogen | | |
| Cesco 501 and 550 (Vinyl Bumper) | | | |
| | | | |

2 2 0019

| | Hazard Rating | Flammability | Recommended Container |
|---|---|---|---|
| Phosphate Slimes | | | |
| Water Wash — traces of Trichlorobenzene | | | |
| Waste Catalyst | | | |
| Ethyl Acetate zinc Chloride | Moderately toxic | Dangerous Fire Risk | Drums |
| Filter Cake (Sodium salts) | highly toxic | Severe Fire Risk | |
| Flocculated Wastes | | | |
| | | | |

2 2 0020

| | Hazard Rating | Flammability | Recommended Container |
|---|---|---|---|
| Altox Emulsifier | Unknown toxicity | | |
| Contaminated Speedidry | | | |
| Toluene, Sodium Chloride, Sodium Hydroxide | highly toxic | Dangerous Fire Risk | Drums |
| Toluene, Acetone, Xylene, Heptane | Moderately toxic | Dangerous Fire Risk | Drums |
| Spent Caustics (Polymers) | | | |
| Spent Caustic ~~Cr~~ Chromium | Toxic by inhalation | Moderately Fire Hazard | Drums |
| Water, Trichlorobenzene, Caustic | Moderately toxic | Not very Flammable | Cans, drums |

2 2 0001

| | Hazard Rating | Flammability | Recommended Container |
|---|---|---|---|
| ✓ Chlorothiophene Toluene | Highly toxic | Highly Flammable | Drums |
| Water Methanol trace of Sodium Bromide | | | |
| Printing ink, trash Paper Gloves Etc | Slight toxicity | Dangerous Fire Risk | Cartons, Bottles Drums |
| Alumina, Paper Hexane Trichloroethylate | Moderately toxic | Dangerous Fire Risk | Drums |
| Pesticides in Vermiculite | | | |
| Lab chemicals in vermiculite | | | |
| | | | |

2 2 0022

| | | Hazard Rating | Flammability | Recommended Container |
|---|---|---|---|---|
| ✓ | Water and Sodium Chloride | Non toxic | Not a fire risk | Glass bottle cans, drum |
| ✓ | Water and chlorothene (water and industrial solvent) | Moderately toxic | Non Flammable | Drums |
| ✓ | Acrylonitrile and Water | Highly toxic | Dangerous Fire Risk | Tank Cars |
| ✓ | Acrylonitrile | Highly toxic | Dangerous Fire Risk | Tank Cars |
| ✓ | Acetone & Trace of N Nitroso of "Prowl" | Moderately toxic | Highly Flammable | Cans, Drums |
| | Chloroform and Hexane | Highly toxic | Dangerous Fire Hazard | Drums |
| | Water, Acetic Acid and N nitroso of "Prowl" | | | |

2 2 0023

| | Hazard Rating | Flammability | Recommended Container |
|---|---|---|---|
| ✓ Dibutyl Phthallate | Toxic | Not very Flammable | Drums |
| Chromic Acid Sludge | Highly Toxic | Dangerous Fire Hazard | Drums |
| Pesticides in glass - vermiculite | Highly Toxic | | Drums |
| | | | |
| | | | |
| | | | |
| | | | |

2 2 0024

| | Hazard Rating | Flammability | Recommended Container |
|---|---|---|---|
| Dichlorobutane | Moderately toxic | Moderate Fire Risk | Drums |
| Formaldehyde | Highly toxic | Moderate Fire Risk | Drums Bottles |
| Surfactant | | | |
| Resin (ion exchange) | Low toxicity | Non Flammable | Drums |
| Acetonitrile containing HCL | Highly toxic | Highly Flammable | Drums |
| Trichlorobenzene & Caustic | Moderately Toxic | Not very Flammable | Cans Drums |
| Formulated Foamer | | | |

BLUFF ROAD

2 2 0025 UPPER BUILDING

Ferricacne - 200 net

Magnesium o.n. W.C.P.

Zn - Act/Fe-No3 Mixed - 2

Manganese Citrate - 100 Net

Ledate

Catechol

Sulfa, quinoxaline

Arocl 1332,1gal.

SG 432-165/SG 432163

Manganese Pyro - phos.

Sodium Sulfathinzole

Sulfathinzole

Mang Benz - 4 Drums

Zinc Benz - 6 Drums

Magnesium - OH2 WPC - 5 drums

Magnesium Chloride

2N A C 2/FEND Mixed

2- Amino, Quinoxaline

Polystyrene

Ferric AC, AC - Bad

Amocoresioue

~~Magnax~~

Maganse, citrate - 100 net

Cyanuric Acid Powder - 2

MN- Monomethytlene Phthalate

Resitron - 100 net H94 Hardner - 4

Amino Thiazole -2

Mag. Hyd..

~~Xxxxxxxx~~

Z, Amino Thiazole

Sodium -~~X~~ Phenoxyacetate - 4

Mn. Benz. - 4

Bromide/Copper Iodide 4

Hyoloquinone Monomethyl Eith. ~~3~~ 4

Colodide - Co Bromide

Hurcules Compound

mn - (mmt)

Electroless nickel-NL 63

Phosphorus Pentasaltide

Mercury in glass

Benzoin - 100 ~~pt~~ net

Rohco Roplatenit

2 2 0026

| | Hazard Rating | Flammability | Recommended Container |
|---|---|---|---|
| FERRICACNC - 200 net | | | |
| MAGNESIUM O.M. WCP | | | |
| Zn - Act/Fe - $NC_3$ Mixed | | | |
| MANGANESE CITRATE<br>use: medicines, feed additive dietary supplement | low toxicity | | |
| LEDATE | Highly toxic | Light Fire Hazard | |
| ✓ CATECHOL | Highly toxic | low Flammability | DRUMS |
| SULFA, QUINOXALINE | | | |

2 2 0027

| | Hazard Rating | Flammability | Recommended Container |
|---|---|---|---|
| AROCL 1332 "AROCLOR" Trademark for a series of polychlorinated polyphenyls | Highly toxic | | |
| SG 432-165/SG 432168 could be a name for a decolorizing carbon | | | |
| MANGANESE Pyro-phos | | | |
| SODIUM SULFATHIAZOLE | | | |
| SULFATHIAZOLE | | | |
| MANG BENZ | | | |
| ZINC BENZ | | | |

2 2 0028

| | | Hazard Rating | Flammability | Recommended Container |
|---|---|---|---|---|
| | MAGNESIUM – $OH_2$ WPC | | | |
| | MAGNESIUM CHLORIDE | Moderately toxic | | Bags, Drums |
| | 2N A C 2/FEND (Mixed) | | | |
| | 2-AMINO, QUINOXALINE | | | |
| ✓ | POLYSTYRENE | NON TOXIC | NON-FLAMMABLE | BOTTLES, DRUMS ETC |
| | FERRIC AC, AC-BAD | | | |
| | AMOCORESIQUE | | | |

2 2 0029

| | Hazard Rating | Flammability | Recommended Container |
|---|---|---|---|
| MANGANESE CITRATE | LOW TOXICITY | | |
| CYANURIC ACID | Highly toxic | | |
| MONOETHYLENE PHTHALATE | | | |
| RESITRON | | | |
| AMINO THIAZOLE | low toxicity | | |
| MAGNESIUM HYDROXIDE | NON TOXIC | | |
| 2, AMINO THIAZOLE 2-2 amino thiazole | | | |

2 2 0030

| | Hazard Rating | Flammability | Recommended Container |
|---|---|---|---|
| SODIUM PHENOXYACETATE | | | |
| MANGENESE BENZ | | | |
| BROMIDE/COPPER IODIDE | | | |
| HYDROQUINONE MONOMETHYL ETHER | MODERATELY TOXIC | | FIBER DRUMS |
| COLODIDE — CO BROMIDE | | | |
| HERCULES COMPOUND | | | |
| MN - MMT | | | |

2 2 0031

| | Hazard Rating | Flammability | Recommend Container |
|---|---|---|---|
| ELECTROLESS NICKEL | | | |
| PHOSPHOROUS PENTASALTIDE | | | |
| MERCURY IN GLASS | | | |
| BENZOIN | | | |
| ROHCO ROPLATENIT | | | |
| | | | |
| | | | |

1- Acetaldehyde

2- Acrylic Acid, Glacial

3- Adipic Acid

4- Aerglonitrile

5- Aerotex Rgt.

6- Amino Propyl Morpholine

7- Aquablack-S

8- Arschlor

9- Atomic Aluminum

10-Benzene

11- Benzoin

12-Benzophenone

13-Benzylamine

14-Bromochlorobenzene

15-1-Bromo-4-chlorobenzene

16-Butyl Benzoate

17-Butyl Cellosolve

18-Cardina E

19-Cascaval FA 401

20-Chloramine

21-Chlorobenzyl

22-Chloroform

23-o-Chloro-p-Nitroaniline

24-Color Base

25-p-Cresol

26-Darco

27-p-Dibromobenzene

28-Diethyl Oxalacetate Sodium Salt

29-Dihydrazine Sulfate

30-Di-Isopropyl Pentaldehyde

31-Dimethoxybenzene

32-2,3-Dimethyl Pentaldehyde

33-2,2-Dimethyl Succinic Acid

34-Dimethyl Sulfate

35-2,4-Dinitrophenylhydrazine

36-Diphenyl Phosphinous Chloride

37-Diphenylphosphorous chloride

38-Di-n-Propylamine

39-DuPont 325M

40-ECD 2682

41-Elvacite

42-Epoxy

43-Ethylene Chlorhydrin

44-2-Ethylhexaldehyde

45-Ethylidene Norbornene

46-Ethyl Methacrylate

47-ExKin 2 Nuodex

48-Filling, Adhesive

49-Firesorb-Jefferson

50-Formaldehyde

51-Freon C

52-G 540

53-Green Chemosol

54-Hydrazine Hydrate

55-Hydrobenzamine

56-Hydroxyethyl Hydroquinone

57-Imidozole

58-Isonate

59-Isopropyl Alcohol

60-Isopropyl Chloride

61-Kingston Carbon

62-LCH 16627

63-Lacquer Liquid

64-Manganese Benzoate

65-Mercurial Liquid

66-Yellow Oxide (Mercuric oxide yellow)

67-Mercury Tubes

68-Meta Sap Metallic Caap

69-Methyldiethanolamine

70-Methylene bis o Chloroaniline

71-Methyl ethyl Hydroquinone

72-2-Methyl Thiopseudo Urea

73-Nickel, Electroless

74-Nickel Powder

75-Niklad 792A

76-o-Nitrochlorobenzene

77-b-Nitro diphenylamine

78-p-Nitrophenylacetic acid

79-Organosol Resin

80-PDS

81-~~XXXXXXXX~~ Perfluorodimethylcyclobutane

82-Pet Ether

83-p-Phenylene Diamine

84-Phosphorous Pentasulfide

85-Polyglycol

2 2 0035

86-Pomer DMM

87-Positive Sol

88-Potassium Iodide

89-n-Propanol

90-Propasol

91-Propargyl Alcohol

92-n-Propyl

93-Quinoline

94-Regal Oil B

95-Roplate N 12

96-Rosin

97-Rust Ban

98-Silica-Ludox Colloidal

99-Slag-Aluminum

100-Sodium Hydride

101-Sodium Methylate

102-4,4'Sufonyl dibenzoic acid

103-Sulfaquinoxalide

104-Tetraethylene Glycol

105-Thiophene

106-Trichloroethylene

107-meta-Toluic acid

108-Victoria Refined CDDT

109-Violet Dispersion

110-p-Xylidine Dichloride

111-Zelecu n

2 2 0036

| | Hazard Rating | Flammability | Recommended Container |
|---|---|---|---|
| ACETALDEHYDE<br>MANUFACTURE OF ACETIC ACID AMONG OTHER PRODUCTS | Highly toxic | FLASH POINT<br>−40°F (open cup) | STEEL DRUMS |
| ACRYLIC ACID, GLACIAL | Highly toxic | Flash point<br>130°F (oc) | Bottles, Drums |
| ADIPIC ACID<br>manufacture of nylon and polyurethane foams; insecticides | low toxicity | Flash point<br>385°F (OC) | Glass bottles, drum |
| AERGLONITRILE | | | |
| AEROTEX<br>Trademark for a group of synthetic resins used in finished textile products | | | |
| AMINO PROPYL MORPHOLINE<br>Use: fiber synthesis | low toxicity | Flash point<br>220°F (OC)<br>Moderate Fire Risk. | |
| AQUABLACK<br>Trade name for carbon black used in latex paints etc | | | |

| | Hazard Rating | Flammability | Recommende Container |
|---|---|---|---|
| AROCHLOR (Chlorinated Diphenyls) | High toxicity | Low Fire Risk | |
| Atomic ALUMINUM | | | |
| ✓ BENZENE Uses: styrene, synthetic detergents DDT, insecticides, paint removers, rubber cement, antiknock gasoline | Highly toxic | Flash Point 12° F (cc) | DRUMS |
| ✓ BENZOIN | low toxicity | Melting point 137° C; Combustible | |
| ✓ BENZOPHENONE Uses: perfumes; flavoring; inhibitor for styrene | UNKNOWN TOXICITY | Boiling pt 305° C; Combustible | TIN CANS; FIBERBOARD CONTAINERS DRUMS |
| BENZYLAMINE Uses: dyes, pharmaceuticals, polymers | Highly toxic | Boiling pt 184.5° C; Combustible | |
| BROMOCHLOROBENZENE | ~~[illegible]~~ ~~TOXICITY~~; ~~[illegible]~~ | | |

| | Hazard Rating | Flammability | Recommended Container |
|---|---|---|---|
| 1-BROMO-4-CHLOROBENZENE | UNKNOWN TOXICITY; DANGEROUS DISASTER HAZARD | | |
| BUTYL BENZOATE<br>Uses: dyeing of textiles, perfumes | LOW toxicity | Flash Point 225° F (0 C) | |
| BUTYL CELLOSOLVE<br>Trademark for ethyline glycol monobutyl ether | | | |
| CARDINA E | | | |
| CASCAVAL FA 401 | | | |
| CHLORAMINE | LOW TOXICITY; DANGEROUS DISASTER HAZARD | Melting point -66° C | |
| CHLOROBENZYL | | | |

2 2 0039

| | Hazard Rating | Flammability | Recommended Container |
|---|---|---|---|
| ✓ CHLOROFORM<br>Uses: dyes, drugs, refrigerants, propellants insecticides | Highly toxic | NON-FLAMMABLE BUT WILL BURN ON PROLONGED EXPOSURE TO FLAME | DRUMS (KEEP AWAY FROM LIGHT) |
| ✓ O-CHLORO-P-NITROANILINE | Highly toxic | Melting pt 107°C; WHEN HEATED DANGEROUS FUMES ARE EMITTED | MUST HAVE POISON LABEL ON CONTAINER |
| COLOR BASE | | | |
| ✓ p-CRESOL<br>Uses: disinfectant; herbicide; surfactant | MODERATE TO HIGH TOXICITY | Flash point 187°F Combustible | DRUMS |
| DARCO<br>Trade name for activated carbon | | | |
| p-DIBROMOBENZENE<br>USES: synthesis of dyestuffs and drugs | MODERATELY TOXIC | Boiling Point 219°C | |
| DIETHYL OXALACETATE SODIUM SALT | | | |

2 2 0040

| | Hazard Rating | Flammability | Recommended Container |
|---|---|---|---|
| DIHYDRAZINE SULFATE<br>Use: Reducing Agent | MODERATE TOXICITY | Melting pt 104°C | DRUMS |
| DI-ISOPROPYL PENTALDEHYDE | | | |
| ,4, DIMETHOXYBENZENE<br>USES: wetting agent in paints and plastics used in perfumes, dyes, cosmetics | LOW toxicity | | GLASS BOTTLES FIBER DRUM |
| 2,3 DIMETHYL PENTALDEHYDE | UNKNOWN TOXICITY | Flash pt 94°F Highly Flammable Dangerous | |
| 2,2 DIMETHYL SUCCINIC ACID | | | |
| ✓ DIMETHYL SULFATE | Highly toxic | Flash pt 182°F (cc) | DRUMS |
| 2,4 DINITROPHENYLHYRAZINE<br>Uses: Explosive; reagent | Severe explosion and fire risk | Melting pt 200°C | |

2 2 0041

| | Hazard Rating | Flammability | Recommended Container |
|---|---|---|---|
| DIPHENYL PHOSPHINOUS CHLORIDE | | | |
| DIPHENYL PHOSPHOROUS CHLORIDE | | | |
| ✓ Di - n - PROPYLAMINE | low toxicity | Flash pt 63 F Dangerous fire risk | cans, drums |
| DUPONT 325M | | | |
| ECD 2682 | | | |
| ELVACITE | | | |
| EPOXY ? RESINS | IRRITANT TO SKIN | | |

| | Hazard Rating | Flammability | Recommended Container |
|---|---|---|---|
| √ ETHYLENE CHLOROHYDRIN<br>Use: mfg of ethylene glycol among others | highly toxic | Flash pt 140°F (oc)<br>Moderate fire hazard | 30 Co 40% bottles; jugs, carboys |
| ~~[illegible]~~<br>2, ETHYLHEXALDEHYDE<br>USE: perfumes | UNKNOWN toxicity | Moderate fire risk | |
| ETHYLIDENE NORBORNENE | | | |
| √ ETHYL METHACRYLATE | Moderately toxic | dangerous fire hazard<br>Flash pt 70°F (oc) | Drums |
| EXKIN 2 NUODEX<br>(EXKIN 1,2,3)<br>Use: paints | | | |
| ADHESINE, ALLINT | | | |
| FIRESORB - JEFFERSON | | | |

| | Hazard Rating | Flammability | Recommended Container |
|---|---|---|---|
| ✓ FORMALDEHYDE | highly toxic | Moderate Fire Risk Flash point 122°F | Drums Bottles |
| FREON C 51-12 USE: EVAPORATIVE COOLANT FOR ELECTRONIC EQUIPMENT | LOW TOXICITY; WHEN HEATED DANGEROUS VAPORS ARE PRODUCED | Stable to 500°F | |
| G - 540 | | | |
| GREEN CHEMOSOL | | | |
| ✓ HYDRAZINE HYDRATE | highly toxic Severe explosion hazard when exposed to heat | Flash pt 165°F (CC) | Steel or Aluminum DRUM |
| HYDROBENZAMINE | ~~[illegible]~~ | Dangerous Fire Risk | |
| HYDROXYETHYL HYDROQUINONE | low toxicity | Combustible | LINED STEEL DRUMS |

| | Hazard Rating | Flammability | Recommended Container |
|---|---|---|---|
| IMIDAZOLE<br>USE: Biological control of pests | DANGEROUS HAZARD DISASTER | WHEN HEATED. DANGEROUS VAPORS ARE PRODUCED | |
| ISOMATE<br>Trademark for a spray foam | | NON FLAMMABLE | |
| ✓ ISOPROPYL ALCOHOL | Moderately toxic | Dangerous Fire risk Flash pt 59° F | DRUMS |
| ISOPROPYL CHLORIDE | LOW TOXICITY | Flash pt −26°F. Highly flammable | |
| KINGSTON CARBON | | | |
| LCH 16627 | | | |
| LAQUER (LIQUID) | | | |

2 2 0045

| | | Hazard Rating | Flammability | Recommended Container |
|---|---|---|---|---|
| | ~~MAGNESIUM~~ BENZOATE MAGNESIUM<br>USE: medicine | | | |
| ✓ | MERCURIAL LIQUID | HIGHLY TOXIC | | Bottles FLASKS |
| ✓ | MERCURIC OXIDE (YELLOW) | highly toxic | Fire risk when comes in contact with organic materials | DRUMS |
| | MERCURY TUBES | | | |
| | METASAP<br>Trade name for a series of heavy metal soaps<br>Use: paints, greases, inks etc | | | |
| ✓ | METHYLDIETHANOLAMINE<br>USE: ACID NEUTRALIZER | TOXICITY UNKNOWN | SLIGHT FIRE HAZARD | |
| | METHYLENE bis-o-CHLOROANILINE<br>USE: CURING AGENT - FOR EPOXY RESINS | HIGHLY TOXIC | Flash pt 158° F (cc) | BOTTLES; DRUMS |

2 2 0046

| | | Hazard Rating | Flammability | Recommended Container |
|---|---|---|---|---|
| | METHL ETHYL HYDROQUINONE | | | |
| | 2-METHYL THIOPSEUDO UREA | | | |
| | NICKEL, ELECTROLESS | LOW TOXICITY | NOT VERY FLAMMABLE | |
| | NICKEL, POWDER | HIGH TOXICITY | FLAMMABLE | |
| | NIKLAD 792A | | | |
| ✓ | O-NITROCHLOROBENZENE | Highly toxic | Flash pt 261° F Combustible | DRUMS. |
| | 6- NITRODIPHENYLAMINE | Highly toxic | Highly Flammable | |

2 2 0047

| | Hazard Rating | Flammability | Recommended Container |
|---|---|---|---|
| P-NITROPHENYL ACETIC ACID<br>Use: dyestuffs, pharmaceuticals | May be toxic | | |
| ORGANOSOL RESIN | | | |
| PDS | | | |
| DERFLUORODIMETHYLCYCLOBUTANE<br>AN INERT FLUOROCARBON<br>USE: evaporative coolant for electronic devices | | STABLE TO 500°F | |
| PET ETHER | | | |
| P-PHENYLENE DIAMINE<br>USE: photographic developing agent | Highly toxic | flash pt 312°F Combustible | |
| PHOSPHOROUS PENTASULFIDE | highly toxic | Dangerous fire risk | KEEP IN SEALE CONTAINERS (ODOR IS BAD) FIBER OR STEE DRUMS |

| | | Hazard Rating | Flammability | Recommended Container |
|---|---|---|---|---|
| | POLYGLYCOL (polyethylene glycol) | Non-Toxic | Heat stable. | |
| | POMER DMM | | | |
| | POSITIVE SOL | | | |
| | POTASSIUM IODIDE | Low toxicity | | Bottles, Drum |
| ✓ | N-PROPANOL (propyl alcohol) | Low toxicity | Dangerous Fire Risk | TANK CARS |
| | PROPASOL Trade mark for a series of solvents for water based enamels | | | |
| ✓ | PROPARGYL ALCOHOL | Highly toxic | Dangerous Fire Risk | ~~[illegible]~~ Up to tank cars |

2 2 0049

| | Hazard Rating | Flammability | Recommended Container |
|---|---|---|---|
| QUINOLINE | Highly toxic | Slight fire hazard | GLASS BOTTLE DRUMS |
| REGAL OIL B | | | |
| ROPLATE N 12 | | | |
| ROSIN | Low toxicity | May ignite spontaneously with air | Drums, Multi wall paper bag |
| RUST BAN<br>Trademark for a series of protective coatings | | | |
| SILICA - LUDOX COLLOIDAL | | | |
| SLAG - ALUMINUM | LOW TOXICITY | LOW FIRE HAZARD | BOTLES DRUMS ETC |

2 2 0050

| | | Hazard Rating | Flammability | Recommended Container |
|---|---|---|---|---|
| ✓ | SODIUM HYDRIDE | Highly toxic<br>Reacts violently with water | Dangerous Fire Risk | metal cans with polyethylene liners |
| ✓ | SODIUM METHYLATE | UNKNOWN TOXICITY | SOLID – FLAMMABLE<br>25% METHANOL SOLUTION – MODERATE FIRE RISK | DRUMS |
| | 4,4 SUFONYL DIBENZOIC ACID | | | |
| | SULFAQUINOXALIDE | | | |
| ✓ | TETRAETHYLENE GLYCOL | LOW TOXICITY | LOW FIRE RISK | CANS DRUMS |
| | THIOPHENE | MODERATELY TOXIC | DANGEROUS FIRE RISK | |
| ✓ | TRICHLOROETHYLENE | Highly toxic | Moderate Fire Risk | CANS, DRUM |

2 2 0051

| | Hazard Rating | Flammability | Recommended Container |
|---|---|---|---|
| META TOLUIC ACID | ~~[illegible]~~ TOXICITY UNKNOWN | | |
| VICTORIA REFINED CDDT | | | |
| VIOLET DISPERSION | | | |
| p-XYLIDINE DICHLORIDE | | | |
| ZELECU N | | | |
| | | | |
| | | | |

2 2 0052

TRAIL Disposal of Zirconium Tetrachloride