

CLOSURE PLAN
FOR
HAZARDOUS WASTE MANAGEMENT UNITS
AT
INLAND FISHER GUIDE DIVISION
GENERAL MOTORS CORPORATION
TRENTON, NEW JERSEY

13, MARCH 1991

CLOSURE PLAN

SECTION 1

CONTENTS OF THE PLAN

This closure plan includes the following sections which provides appropriate site information regarding closure of hazardous waste management units.

Section 2 -- Introduction

Section 3 -- Facility Information

Section 4 -- Spent Dichlorobenzene Cleaner Solution Tanks

Section 5 -- Waste Oil Storage Tank

Section 6 -- Drum Storage Area

Section 7 -- Health and Safety

Section 2

INTRODUCTION

The general purpose of this closure plan is to confirm the effective closure of the RCRA hazardous waste management units. Specifically, the closure plan will result in the appropriate characterization of residues, treatment methodology of aqueous residues, offsite disposal of sludges and spent solutions, effective decontamination methodology and analytical methods/sampling procedures to verify the degree of decontamination.

The Soil, Sampling, and Analysis plan (SSAP) which is on file with the Department of Environmental Protection, will be used in conjunction with the closure plan to confirm that no releases have occurred from the waste oil storage tank and drum storage area.

The general scope of the plan is to properly remove all hazardous residues, conduct a suitable method of decontamination and verify the degree of cleanliness.

SECTION 3

FACILITY INFORMATION

Name: Inland Fisher Guide Division,
General Motors Corporation

Location: 1445 Parkway Avenue
Trenton, New Jersey

Phone: (609) 771-6276

RCRA Permit No. NJD 002 353 951

Facility No. 1102F1

CP No. 85-24

NJPDES SIU/DSW Permit No. NJ 0053295

NJPDES DGW Permit No. NJ 0075469

Facility Contact: Roy J. Curley, Superintendent
Plant & Process Engineering

George H. Hollerbach, Jr., P.E.
Plant Environmental Engineer

SECTION 3

FACILITY INFORMATION

BACKGROUND:

The Inland Fisher Guide Division manufacturing facility has been engaged in the production of automobile parts for over 50 years. The products of this hardware plant include a wide variety of moldings, door handles, window knobs, and seat adjusters for all General Motors Vehicles. These parts are produced in a variety of finishes and colors. Major processes in this plant consist of stamping, metal assembly, plating, painting, die casting, injection molding and phosphating. The major categories of hazardous constituents or materials subject to environmental control at the facility which may have been stored in the units being closed are oils, solvents (volatile organic compounds or VOCs), metals from metal bearing solutions or rinses including cyanide solutions, acids, and caustics. Inland Fisher Guide is not a user of pesticides or herbicides or a user of significant quantities of polynuclear aromatic compounds. Inland Fisher Guide uses small quantities of numerous other materials which are either completely consumed during use or which constitute minor contributors to waste streams and which do not serve well as indicator parameters for closure. This would include plasticizers, mold release compounds and maintenance and housekeeping materials.

Section 4

SPENT DICHLOROBENZENE CLEANER SOLUTION TANKS

Waste Characterization: Spent alkali dichlorobenzene (DCB)
1,2 - Dichlorobenzene-2.0%
1,3-Dichlorobenzene -0.1%
1,4 - Dichlorobenzene -0.3%
EPA ID No. U070, U071, U072

Tank Capacity: Two tanks - 3,000 gallons each
One tank - 20,000 gallons

Description and Location: All three tanks are above ground steel tanks. Two are 13.5 feet X 7 feet in diameter, the third is 28 feet X 10 feet in diameter. They are all located outside of the main manufacturing building on the south apron, in a contained storage area.

Waste Generation: The copper, nickel, chrome plater for interior parts uses the dichlorobenzene cleaner solution as its initial cleaner tank. This tank has a capacity of 4,300 gallons. Approximately every two months, six times annually, this solution is entirely removed as spent and a new cleaner solution is made to replace it. This routine generates approximately 25,800 gallons of spent solution annually. As of June 10, 1985, no spent dichlorobenzene solution will be placed in the storage tanks. All future spent solutions generated will be discharged or transported directly to the waste treatment facility for treatment and disposal.

Treatment of Spent Cleaner Solution: The cleaner solution is discharged to the wastewater treatment facility by opening the bottom valves on the tank and washing, using city water, any remaining solution or residue. These drains discharge to the sewer which in turn discharges directly to the waste treatment facility. The cleaner solution is isolated in one of eight 150,000 gallon treatment cells and diluted with normal plant effluent to achieve better air agitation and mixture. The cell is then batch treated with activated carbon to remove the dichlorobenzene. Treatment requires approximately 250 pounds of activated carbon for each 4,300 gallons of cleaner solution to completely remove the dichlorobenzene.

The carbon is allowed to mix for a period of not less than 48 hours using air agitation. At the end of the mixture period the water is treated for any other pollutants and pH adjusted. Prior to discharge from the treatment cell, a sample is analyzed by a certified laboratory for 1,2-, 1,3-, and 1,4-dichlorobenzene. If the analysis is satisfactory, and well below the T10 limit established by our NJPDES permit, it is discharged into a clarifying system. This system consists of a flocculating agent, retention in a settling tank, and filtering through a series of three sand filters.

Section 4

SPENT DICHLOROBENZENE CLEANER SOLUTION TANKS

Disposal of Sludge: The sludge and carbon residue will be mixed with the total volume of sludge accumulated in the waste treatment clarifiers. It is then taken from the clarifiers and dewatered by vacuum filter or a plate and frame filter press. It is then transported to a sludge thickening station, Delaware Container Company, West 11th and Valley Road, Coatesville, Pennsylvania, EPA ID No. PAD 064 375 470. It is transported from there to a landfill for permanent disposal, Fondessy Enterprises Incorporated, 876 Otter Creek Road, Oregon, Ohio, EPA ID No. OHD 045 243 706.

Presently, transportation is conducted by National Waste Disposal, 432 Stokes Avenue, Trenton NJ, EPA ID No. NJD 096 839 154. Treatment and disposal is provided by Envirite, 1600 Pennsylvania Avenue, York, PA, EPA ID No. PAD 010 154 045. Effective July 1988, the dichlorobenzene cleaner solution was discontinued.

Current Waste Inventory: At present there is no dichlorobenzene cleaner solution in any of the three storage tanks. On June 10 and 11, 1985 the solution was transferred to one of the waste treatment facilities treatment cells for treatment and disposal. As of June 10, 1985 no further spent solution has been placed in any of the three storage tanks. The solution was transferred by two tanker trucks to the facility. The trucks and pumps were supplied by Clean Venture Incorporated, 1160 State Street, Perth Amboy, New Jersey, EPA ID No. NJD 085 634 335. Following transfer of the solution, the two tanker trucks and pumps were triple rinsed by Clean Venture. The rinse water was also placed in the same waste treatment cell. The cell was further diluted with normal plant effluent. Approximately 1500 pounds of activated carbon was added to the cleaner solution for batch treatment. It was air agitated for 8 hours. After carbon treatment it was treated for any other pollutants and pH adjusted. A sample was analyzed by a certified laboratory for 1,2-, 1,3-, and 1,4-dichlorobenzene. It was found to have < 10 ppb for total dichlorobenzene. It was then discharged through the normal clarification, sludge removal and disposal process.

Decontamination of Storage Tanks: Decontamination will be accomplished by spraying "FOAM OFF" a biodegradable alkaline (pH 14) cleaner (see Appendix). The "Foam Off" cleaner would entail a spray application and subsequent mopping in accordance with the manufacturers instructions. "Foam Off" would then be wet vacuumed from the tank transported to waste treatment and neutralized at the waste treatment facility. A triple rinse using high pressure water would be applied to the tanks and wet vacuumed. The rinsewaters would also be discharged to the waste treatment facility for neutralization. The wastewater generated by the decontamination process will also be treated for dichlorobenzene. If needed, it will be treated with activated carbon for its removal. It will also be treated for other parameters and pH adjusted.

Section 4

SPENT DICHLOROBENZENE CLEANER SOLUTION TANKS

Other Areas of Potential Contamination: The area in which the storage tanks are located has a sound concrete floor and retention wall. It will therefore be unnecessary to conduct an investigation for adjacent soil contamination. The enclosed area will be thoroughly decontaminated in a similar fashion to the storage tanks and all rinsewaters discharged to the waste treatment facility, utilizing the same methods as for the storage tanks decontamination.

Quantity of Residues and Wastewater Generated: Approximately 12,000 gallons of wastewater will be generated in the decontamination of the three storage tanks, associated piping, wet vacuum and retention area. This waste will be contaminated with trace amounts of dichlorobenzene and sodium hydroxide.

Decontamination Analysis: Surficial sampling is used to assess the existence and/or the extent of dichlorobenzene contamination. Wipe samples will be used as a method for monitoring surficial contamination of the steel tanks. A maximum of two (2) random wipe samples will be obtained for each tank. Chip samples will be used as a method for monitoring surficial contamination of the concrete containment area. A maximum of two (2) random chip samples will be obtained from the concrete containment area. Target compound list (TCL) volatile and semivolatile analysis for dichlorobenzenes will be utilized. All sampling will be done in accordance with guidelines established in the Hazardous Waste Programs Field Sampling Procedures Manual, Section 8-E (February 1988).

Future Usage of Storage Tanks: These tanks will not be used for any type of solution storage at the present time. Future use may include the storage of virgin hydraulic or water soluble oils. The tanks will be labeled as "Abandoned in Place" until future use is decided. When disposed, all removed tanks will be rendered unusable before leaving General Motors' property and recycled by an approved smelter.

Professional Engineered Inspections: The decontamination and closure procedures will be inspected at least monthly and during critical procedures by an independent New Jersey licensed professional engineer. The closure report will include all characterization data and disposition of associated waste streams generated during the closure of the dichlorobenzene tanks.

Section 4

SPENT DICHLOROBENZENE CLEANER SOLUTION TANKS

Closure Chart for Dichlorobenzene Storage Tanks

- Day 1 - Begin decontamination of the DCB Storage Tanks
- Day 30 - Completion of "Foam Off" caustic cleaning of DCB tanks and removal and treatment of cleaner at waste treatment facility.
- Day 60 - Completion of triple rinsing of DCB tanks and removal and treatment of rinsings at waste treatment facility
- Day 90 - Decontamination of DCB storage tank area, pumps, piping and wet vacuum. Completed analytical results and degree of decontamination approved by the Department. DCB storage tanks closure completed and certified by an independent New Jersey licensed professional engineer

SECTION 5

WASTE OIL STORAGE TANK

Waste Characterization: Waste lubrication, hydraulic, quench and metal working oils. DEP ID No. X726

Tank Capacity: 30,000 Gallons

Description and Location: Underground concrete tank, located in southeast portion of the property. It is approximately 250 feet west of the waste treatment facilities building and adjacent to the primary treatment tanks. The waste oil tank shares a common wall with the east primary treatment tank.

Waste Generation: Waste oil is generated by removal of insoluble (floating) oils from process wastewater prior to further wastewater pretreatment. The oils consist of spent lubricating or metal working fluids and contaminated hydraulic oils. All oils are either transported to the waste oil storage tank by a honey wagon specifically designated for this purpose, or discharged to the sewer.

All oils discharged directly to the sewer are removed at two (2) primary treatment tanks. At the south end of these two tanks is an isolated "calm" zone. In this zone a skimming apparatus is used to remove any oil from the surface of the water and gravity discharged directly through a sheet metal screen to the storage tank. This facility generates approximately 75,000 gallons of oil per year.

Treatment of Waste Oil: This facility does not treat or directly reclaim any of the waste oil. However, large foreign objects are filtered from the removed oil by a steel mesh prior to storage. All waste oil was recycled through Environmental Waste Control Inc. 27140 Princeton Avenue, Inkster, Michigan, EPA ID No. MID 057 002 602 at the time of the Closure Plan submission. Environmental Waste Control reclaims the oil.

Presently, oil is recycled by the Booth Oil Company, Katherine Street, Buffalo, NY, EPA ID No. NYD 980 593 842. Booth Oil stores the oil on site and ultimately transports the oil to a sister reclamation facility.

Disposal of Sludge: Since this facility does not treat or reclaim the oil, there is no sludge or sediment generated.

Current Waste Inventory: At present, approximately 20,000 gallons of waste oil is stored in the storage tank. The entire volume will be recycled by the Booth Oil Company prior to decontamination.

SECTION 5

WASTE OIL STORAGE TANK

Decontamination of Storage Tank: Decontamination will be accomplished by spraying "FOAM OFF" a biodegradable alkaline cleaner (see Appendix). "Foam Off" would entail a spray application and subsequent brushing on all concrete surfaces associated with the waste oil tank in accordance with the manufacturers instructions. A triple rinse using high pressure water would be applied to the tanks and the Foam Off/water mixture would then be pumped from the tank to waste treatment for further treatment.

A light sand blasting would follow on the three independent walls, bottom floor, and top wall of the waste oil tank. The common wall of the waste oil tank/primary treatment tank will not be sandblasted, since the primary treatment side of wall would certainly contain high amounts of metals and be impossible to decontaminate due to the porosity of the concrete. After proper characterization, this wall will be disposed at a secured hazardous waste landfill in conjunction with the closure of the primary treatment tanks. In addition, all grit and residue will be properly characterized, drummed, and disposed at a secured hazardous waste landfill.

The decontaminated concrete associated with the waste oil tank will be demolished after decontamination/verification and properly characterized. After characterization, the concrete will be disposed as an ID#27 waste in accordance with Mercer County waste flow laws or recycled through an approved concrete recycle facility. If thorough decontamination cannot be accomplished, the concrete will be characterized and disposed in a hazardous waste landfill.

Other Areas of Potential Contamination: Since the storage tank is underground, a potential exists for soil contamination. Inclusive in the closure at the underground waste oil storage tank will be the Soil Sampling and Analytical plan (SSAP) submitted to the Department for approval. Specifically, the SSAP was developed to confirm that no releases have occurred from the underground waste oil tank. If releases have occurred, the SSAP will serve to define removal requirements and for the scope of the subsequent investigations. Upon receipt of soil samples results, the Department will be provided a commercial deliverable package in accordance with the SSAP. The backfill operations and project will not proceed until the Department has determined if contamination is present and the soils comply with the cleanup standards established in accordance with SSAP guidelines. Upon Department approval, the contractor will initiate backfill operations and continue with the construction project in accordance with the closure plan.

SECTION 5

WASTE OIL STORAGE TANK

If the soils do not comply with cleanup standards, the soils will be removed by the remedial contractor, properly characterized, and transported offsite to a secured landfill.

In addition, the steel mesh filtering device and the concrete containment area above the storage tank will be decontaminated. This area will be thoroughly decontaminated in a similar fashion to the waste oil tank. The "Foam Off"/wastewater mixture would then be pumped from this area and discharged to waste treatment for further treatment.

The containment concrete will be disposed in a similar fashion to the concrete associated with the waste oil tank. The steel mesh filtering device will be placed in the facility scrap metal bin after decontamination.

Quantity of Residues and Wastewater Generated: Approximately 50,000 gallons of wastewater will be generated in the decontamination of the storage tank, discharge pumps and hoses. This water will be contaminated with small amounts of oil and grease and approximately 500 gallons of "Foam Off". Also, approximately ten drums (55 gallons) of grit and residue will be generated. The residue will be properly characterized and transported offsite to a secured landfill.

Decontamination Analysis: Surficial sampling is used to assess the existence and/or the extent of oil contamination on the interior surface of the concrete waste oil tank. Chip samples will be used as a method for monitoring surficial contamination. TCL volatile and semivolatile, chromium, copper, nickel, lead, PCB and cyanide analysis will be utilized. A maximum of two (2) chip samples will be obtained for each tank wall and the containment concrete above the waste oil tank. All sampling will be done in accordance with guidelines established in the Hazardous Waste Programs Field Sampling Procedures Manual, Section 8-E (February 1988).

Soil Contamination: In the event the soils do not comply with cleanup standards established in accordance with SSAP guidelines, additional samples will be collected until successful delineation of contamination is clearly outlined. Following excavation and removal of contaminated soils, samples will be collected to assure the remaining soils comply with cleanup standards.

Future Usage of the Storage Tank: The storage tank involves demolition and removal of the tank after decontamination. A backhoe with a hydraulic hammer, doser, torch, front end loader, and dump trailer would be utilized to complete demolition. Upon Department approval of decontamination, demolition will commence and the material will be properly characterized and transported offsite to a secured landfill.

SECTION 5

WASTE OIL STORAGE TANK

Professional Engineering Inspections: The decontamination and closure procedures will be inspected at least monthly and during critical procedures by an independent New Jersey licensed Professional Engineer. The closure report will include all characterization data and disposition of associated waste streams generated during the closure of the waste oil tank.

Closure Chart for Waste Oil Storage Tank

- Day 1 - Remove oil and residues from the waste oil tank
- Day 30 - Completion of "Foam Off" caustic cleaning of waste oil tank and removal and treatment of cleaner at waste treatment facility.
- Day 45 - Completion of triple rinsing of waste oil tank and removal and treatment of rinsings at waste treatment facility
- Day 60 - Completion of sand blasting of waste oil tank and disposal of grit and residue at secured landfill
- Day 90 - Decontamination of waste oil tank area, filter mesh, pump, and piping. Completed analytical results and degree of decontamination approved by the Department. Waste oil tank closure completed and certified by an independent New Jersey licensed professional engineer

SECTION 6

DRUM STORAGE AREA

Waste Characterization: Various drummed quantities of hazardous and non-hazardous wastes

Drum Storage Area: 100 feet X 75 feet

Description and Location: This area is located northeast of the wastewater treatment plant and south of the fuel oil storage tank. It is irregular in shape. Its dimensions are approximately 100' by 75'. This area has been used to store drummed quantities of hazardous and non-hazardous waste including oils, solvents, adhesives, paints, and metal bearing sludges. This area was provided containment in 1985 and is inspected regularly as part of the facility RCRA compliance program.

Waste Generation: Drummed quantities of waste are brought to the drum storage pad for processing. Here drums can be sampled, properly identified, marked, and arranged for shipment to an offsite approved Treatment, Storage, and Disposal (TSD) facility. All drums are stored in this area for "less than ninety (90) days".

The drum storage area is equipped with containment and a blind storm water sump. The sump is periodically emptied during rainfall events. In case of accidental spillage of drummed wastes, the spilled materials can be directed to waste treatment for further treatment, or collected and placed in a drum for proper disposal.

Treatment of Drummed Waste: This facility does not treat or directly reclaim any of the waste sent to the drum storage pad. All waste generated and brought to the drum storage pad for temporary storage is sent to an approved TSD for further treatment and disposal.

Disposal of Sludge: Since this facility does not treat or reclaim the drummed quantities of waste, there is no sludge or sediment generated.

Current Waste Inventory: At present, approximately 30 drums of hazardous and non-hazardous waste are stored in the drum storage area. The entire volume will be transported to various approved TSD's prior to decontamination of the drum storage area.

SECTION 6

DRUM STORAGE AREA

Decontamination of Drum Storage Area: Decontamination will be accomplished by spraying "FOAM OFF" a biodegradable alkaline cleaner (see Appendix). "Foam Off" would entail a spray application and subsequent brushing on all concrete surfaces associated with the drum storage area in accordance with the manufacturers instructions. A triple rinse using high pressure water would be applied to the pad and the Foam Off/water mixture would then be pumped from the pad to waste treatment for further treatment. Sampling will commence in accordance with the Soil, Sampling, and Analysis Plan on file with the Department.

Other Areas of Potential Contamination: Since the storage pad was not contained, a potential exists for soil contamination. Inclusive in the closure of the drum storage pad will be the Soil Sampling and Analytical plan (SSAP) submitted to the Department for approval. Specifically, the SSAP was developed to confirm that no releases have occurred from the drum storage pad. If releases have occurred, the SSAP will serve to define removal requirements and for the scope of the subsequent investigations. Upon receipt of soil samples results, the Department will be provided a commercial deliverable package in accordance with the SSAP. The project will not proceed until the Department has determined if contamination is present and the soils comply with the cleanup standards established in accordance with SSAP guidelines. Upon Department approval, the contractor will continue with the closure project in accordance with the closure plan.

If the soils do not comply with cleanup standards, the soils will be removed by the remedial contractor, properly characterized, and transported offsite to a secured landfill. Further soil removal may not be technically or economically feasible or appropriate considering site conditions.

No concrete cores will be cut or subsurface samples collected from the drum storage pad unless cracks or gaps are found which could have caused a release. If found, cracked areas will be cut or cored and the subsurface soils will be core sampled in accordance with the SSAP.

Quantity of Residues and Wastewater Generated: Approximately 25,000 gallons of wastewater will be generated in the decontamination of the storage tank, discharge pumps, piping, and hoses. This water will be contaminated with trace amounts of contaminants and approximately 250 gallons of "Foam Off".

SECTION 6

DRUM STORAGE AREA

Decontamination Analysis: Surficial sampling is used to assess the existence and/or the extent of contamination on the exterior surface of the concrete drum storage pad. Wipe samples will be used as a method for monitoring surficial contamination. TCL volatile and semivolatile, chromium, copper, nickel, lead, PCB and cyanide analysis will be utilized. A maximum of six (6) random wipe samples will be obtained drum storage pad. All sampling will be done in accordance with guidelines established in the Hazardous Waste Programs Field Sampling Procedures Manual, Section 8-E (February 1988).

Soil Contamination: In the event the soils do not comply with cleanup standards established in accordance with SSAP guidelines, additional samples will be collected until successful delineation of contamination is clearly outlined. Following excavation and removal of contaminated soils, samples will be collected to assure the remaining soils comply with cleanup standards. Further soil removal may not be technically or economically feasible or appropriate considering site conditions.

Future Usage of the Drum Storage Pad: The storage pad will be returned to service as a "less than ninety (90) day" storage area.

Professional Engineering Inspections: The decontamination and closure procedures will be inspected at least monthly and during critical procedures by an independent New Jersey licensed Professional Engineer. The closure report will include all characterization data and disposition of associated waste streams generated during the closure of the drum storage pad.

Closure Chart for Drum Storage Pad

- Day 1 - Remove drums from the drum storage pad
- Day 30 - Completion of "Foam Off" caustic cleaning of drum storage pad and removal and treatment of cleaner at waste treatment facility.
- Day 45 - Completion of triple rinsing of drum storage pad and removal and treatment of rinsings at waste treatment facility
- Day 60 - Decontamination of drum storage area, pump, and piping. Completed analytical results and degree of decontamination approved by the Department. Drum storage pad closure completed and certified by an independent New Jersey licensed professional engineer

SECTION 7

HEALTH AND SAFETY

A health and safety plan has been prepared and is submitted as part of this closure plan. Missing information (site safety officer, personnel, etc.) will be filled in by the closure contractor prior to start-up of closure activities. All hazardous site work will be conducted in accordance with 29CFR 1910. Inland Fisher Guide expects this closure activity to be Level D activity, with possible Level C or B upgrade due to confined space activity.

An example of the health and safety plan is included in the appendix.

CHAIN-OF-CUSTODY FORM

HEALTH AND SAFETY PLAN



WORK LOCATION PERSONNEL PROTECTION
AND SAFETY EVALUATION FORM

Attach Pertinent Documents/Data

Fill in Blanks As Appropriate

WO # _____

Division Weston Services, Inc.

Office Bannockburn, Il.

Prepared by Curt A. Beutler

Date June 2, 1989

Reviewed by _____

Date _____

Approved by _____

Date _____

A. Work Location Description

1. Name Fisher Guide Division

General Motors Corporation

2. Location _____

1445 Parkway Avenue

Trenton, New Jersey

3. Type: HW Site ()

Spill ()

() Existing WESTON Work Location

(X) Existing Client Work Location

Other () Describe _____

Industrial (X)

Construction ()

4. Status Waiting for closure plan approval, Active facility

5. Anticipated activities: Hazardous waste removal and decontamination
of the RCRA units and verification sampling/analysis

6. Size 50 acres

7. Surrounding Population 10,000+

8. Buildings/Homes/Industry Industrial / Residential



Describe _____

C. Radiation (N/A)

Describe _____

4. Nature of Hazards:

Air (X) Describe Potential for vapors in air.

Soil (X) Describe May come in contact with tainted soils.

Surface Water () Describe _____

Groundwater () Describe _____

Other (X) . Describe Hazardous waste inventory in the waste oil storage tank and stored in drums in the drum storage area.

5. Chemical Contaminants of Concern () N/A

<u>Contaminant</u>	<u>TLV (PPM)</u>	<u>I.D.L.H. (PPM)</u>	<u>Source/Quantity Characteristics</u>	<u>Route of Exposure</u>	<u>Symptoms of Acute Exposure</u>	<u>Instruments Used to Monitor Contaminant</u>
Chromium	0.0001 mg/m ³			Inhalation Ingestion	Histologic fibrosis of lungs	RAM
Copper	1.0 mg/m ³			Inhalation Ingestion	Irritant to mucus membranes, eye irritant	RAM
Nickel	0.1 mg/m ³			Inhalation Ingestion	Sensitization dermatitis allergic asthma, pneumonitis	RAM
Lead	0.15 mg/m ³			Inhalation Ingestion	Lassitude, insomnia, anorexia, weight loss, abdominal pain, gingival lead line	RAM
PCB	0.5 mg/m ³			Inhalation Ingestion Skin absorption Skin and/or eye contact	Irritant to eyes and skin, chloroacne, jaundice, dark urine	RAM
Cyanide	5 mg/m ³	50 mg/m ³		Inhalation Ingestion Skin absorption	Asphyxiation and death can occur; slow gasping respiration; eye and skin irritation; confusion and nausea	Drager tube mono-tox
TOC's	50-500 ppm	CA		Inhalation Ingestion Skin and/or eye contact	Irritant to eyes, nose, and throat, dizziness, nausea, fatigue	



7. Work Location Instrument Readings (X) N/A

Location _____

% O₂ _____

Radioactivity _____

FID _____

Other _____

% LEL _____

PID _____

Other _____

Other _____

Location _____

% O₂ _____

Radioactivity _____

FID _____

Other _____

% LEL _____

PID _____

Other _____

Other _____

Location _____

% O₂ _____

Radioactivity _____

FID _____

Other _____

% LEL _____

PID _____

Other _____

Other _____

Location _____

% O₂ _____

Radioactivity _____

FID _____

Other _____

% LEL _____

PID _____

Other _____

Other _____

8. Hazards expected in preparation for work assignment. () N/A

Describe: _____



C. Personnel Protective Equipment

1. Level of Protection

A () B () C () D (X) Location/Activity:

For all sampling activities

A () B () C (X) D () Location/Activity:

Upgrade if necessary

2. Protective Equipment (specify probable quantity required)

Respiratory () N/A

- () SCBA, Airline
- (X) Full Face Respirator
(Cart. GMC-H)
- () Escape Mask
- (X) None
- () Other _____
- () Other _____

Head & Eye () N/A

- (X) Hard Hat
- () Goggles
- () Face Shield
- (X) Chemical Eyeglasses
- () None
- () Other _____

Clothing () N/A

- () Fully Encapsulating Suit
- () Chemically Resistant
Splash Suit
- () Apron, Specify _____
- (X) Tyvek Coverall
- () Saranex Coverall
- (X) Coverall, Specify Cotton
- () Other _____
- () Other _____

Hand Protection () N/A

- (X) Undergloves Vinyl
Type
- (X) Gloves Nitrile
Type
- () Overgloves _____
Type
- () None
- () Other _____



Foot Protection () N/A

- (X) Safety Boots
- (X) Disposable Overboots
- () Other _____

3. Monitoring Equipment () N/A

- () CGI (X) PID
- () O₂ Meter () FID
- () Rad Survey (X) Other Mono-tox
- (X) Detector Tubes _____
- Type: Cyanide () Other _____

D. Personnel Decontamination (Attach Diagram)

Required (X) (Of upgrade to C) Not Required ()

Equipment Decontamination (Attach Diagram)

Required (X) Not Required ()

If required, describe and list equipment _____

Decon Termination:	Equipment Decon
1. Remove boots - dispose	1. Power wash bucket before
2. Remove outer gloves - wash	sampling and in between
3. Remove tyvek - dispose	sampling locations
4. Remove mask - wash	
5. Remove inner gloves - dispose	
6. Wash hands	

E. Personnel (X) N/A

<u>NAME</u>	<u>WORK LOCATION TITLE/TASK</u>	<u>MEDICAL CURRENT</u>	<u>FIT TEST CURRENT</u>	<u>CERTIFICA LEVEL</u>
1.		()	()	()
2.		()	()	()
3.		()	()	()
4.		()	()	()
5.		()	()	()
6.		()	()	()
7.		()	()	()
8.		()	()	()
9.		()	()	()
10.		()	()	()

Site Safety Coordinator _____

P. Activities Covered Under this Plan

Task No. Description

1. Verification
 sampling

Preliminary
Schedule

2 days

G. Subcontractor's Health and Safety Program Evaluation (X) N/A

Name and Address of Subcontractor: _____

Activities to be Conducted by Subcontractor: _____

EVALUATION CRITERIA

<u>Item</u>	<u>Adequate</u>	<u>Inadequate</u>	<u>Comments</u>
Medical Surveillance Program	()	()	
Personal Protective Equipment Availability	()	()	
In-Site Monitoring Equipment Availability	()	()	
Safe Working Procedures Specification	()	()	
Training Protocols	()	()	
Incillary Support Procedures (if needed)	()	()	
Emergency Procedures	()	()	
Evacuation Procedures Contingency Plan	()	()	
Decontamination Procedures Equipment	()	()	
Decontamination Procedures Personnel	()	()	

GENERAL HEALTH AND SAFETY PROGRAM EVALUATION: ADEQUATE () INADEQUATE ()

ADDITIONAL COMMENTS: _____

EVALUATION CONDUCTED BY: _____ DATE: _____



H. Contingency Contacts

<u>Agency</u>	<u>Contact</u>	<u>Phone Number</u>
Fire Department	<u>On duty personnel</u>	<u>989-4000</u>
Police Department	<u>On duty personnel</u>	<u>989-4170</u>
Health Department	<u>N/A</u>	<u> </u>
Poison Control Center	<u>On duty personnel</u>	<u>1-800-425-5969</u>
State Environmental Agency	<u>Brenda Jogan</u>	<u>609-292-0424</u>
EPA-Regional Office	<u>N/A</u>	<u> </u>
EPA-ERT. ICOM	<u>N/A</u>	<u> </u>
Spill Contractor	<u>N/A</u>	<u> </u>
State Police	<u>N/A</u>	<u> </u>
F.A.A.	<u>N/A</u>	<u> </u>
Civil Defense	<u>N/A</u>	<u> </u>
On Site Coordinator	<u>N/A</u>	<u> </u>
Site Telephone	<u>Terry Senich</u>	<u>609-771-6275</u>
Nearest Telephone	<u> </u>	<u> </u>
	<u>(Location)</u>	<u> </u>
Other	<u> </u>	<u> </u>

I. Contingency Plans

Spill, Accidental Release; Describe N/A

Fire Explosion; Describe N/A

Other; Describe

Exit Routes, Communication Systems; Describe Will be established first day in the field



MEDICAL EMERGENCY

Name of Hospital Mercer Medical Center

Address: 446 Bellview Ave.

Phone No. 609-394-4000

Name of Contact Dr. Kressler

Address: As above

Phone No. As above

Route to Hospital: (Attach Map) _____

Parkway Ave. right to Prospect Ave. Turn right on Prospect to

Bellview. Follow signs.

Travel Time
From Site (Minutes) 8-10 minutes

Distance to
Hospital (Miles) 5

Name/Number of 24 Hr. Ambulance Service Paramedics

F.D.



HEALTH AND SAFETY PLAN
APPROVAL/SIGN OFF FORMAT

I have read, understood, and agreed with the information set forth in this Health and Safety Plan (and attachments) and discussed in the Personnel Health and Safety briefing.

_____ Name	_____ Signature	_____ Date
_____ Name	_____ Signature	_____ Date
_____ Name	_____ Signature	_____ Date
_____ Name	_____ Signature	_____ Date
_____ Name	_____ Signature	_____ Date
_____ Site Safety Co-ordinator	_____ Signature	_____ Date
_____ Director, Corporate Health and Safety	_____ Signature	_____ Date
_____ Project Manager	_____ Signature	_____ Date
_____ Project Director/ Department Manager	_____ Signature	_____ Date
Personnel Health and Safety Briefing Conducted By:		
_____ Name	_____ Signature	_____ Date

RCRA ATTACHMENT III

RCRA ATTACHMENT III

Laboratory Procedures

The laboratory SOP must be submitted with the proposed Sampling Plan unless the SOP is already on file with the Office of Quality Assurance.

Parameters for analysis must be from the Target Compound List (TCL) plus thirty and the Target Analyte List (TAL). Any facility specific compounds not included on the TCL or TAL should have the analytical SOP included with the plan.

The laboratory conducting the soil analysis must utilize CLP SOW for Organics and Inorganics Analysis or SW-846, 3rd edition methodologies. SW-846 methods to be utilized include: Method 8240 for volatiles; Method 8270 for semivolatiles; methods for other parameters should be specified. For soil analysis of TPHC, EPA method 418.1 as modified by NJDEP should be utilized. Minimum detection limits for both CLP and SW-846 analytical protocols are provided as pages C-1 through C-6.

Data results must be reported according to the Regulatory Deliverable format (Appendix 1) that is to be utilized for analyses conducted by SW-846 3rd Edition. The NJDEP-CLP Format (Appendix 3) is to be utilized for analyses of samples analyzed by Contract Laboratory Program Protocol. The 3rd edition SW-846 is utilizing CLP type deliverables for the analysis of samples by certain methods. The use of NJDEP-CLP format for these methods is acceptable. (Examples of Appendix 1 and Appendix 3 may be obtained from BHWE.)

The submittal of Inorganics data must include all raw data and the QA/QC data required for the method. Submittal of only the results and the summary sheet information is not acceptable. Information reported by the laboratory for TPHC analysis should include: calibration data, method blank results, samples results, date of analysis, and IR spectra for calibration standards, all blanks, all samples.

To ensure that the proper level of extraction and analysis is conducted, the laboratories should screen all samples prior to analyses. The screening results must be maintained by the laboratory until the analytical results are approved by NJDEP. NJDEP may require the submittal of the screening analytical results if the laboratory utilized the high level extraction procedure or analyses and reports all analytical results as "Non Detect". If NJDEP determines that the use of the high level extraction and analyses was inappropriate, resampling will be required and analysis conducted utilizing the low level procedures.

The use of GPC procedure for semivolatile analysis is not permitted.

The use of non-aqueous method blanks (except for dioxin in soils) is unacceptable to NJDEP. A volume of deionized/distilled laboratory water should be utilized instead as per requirements of the USEPA SOW for Organics Analysis.

Target Compound List (TCL) and
Contract Required Quantitation Limits (CROL)*

Volatiles	CAS Number	Quantitation Limits**	
		Water ug/L	Low Soil/Sediment ^a ug/Kg
1. Chloromethane	74-87-3	10	10
2. Bromomethane	74-83-9	10	10
3. Vinyl Chloride	75-01-4	10	10
4. Chloroethane	75-00-3	10	10
5. Methylene Chloride	75-09-2	5	5
6. Acetone	67-64-1	10	10
7. Carbon Disulfide	75-15-0	5	5
8. 1,1-Dichloroethene	75-35-4	5	5
9. 1,1-Dichloroethane	75-34-3	5	5
10. 1,2-Dichloroethene (total)	540-59-0	5	5
11. Chloroform	67-66-3	5	5
12. 1,2-Dichloroethane	107-06-2	5	5
13. 2-Butanone	78-93-3	10	10
14. 1,1,1-Trichloroethane	71-55-6	5	5
15. Carbon Tetrachloride	56-23-5	5	5
16. Vinyl Acetate	108-05-4	10	10
17. Bromodichloromethane	75-27-4	5	5
18. 1,2-Dichloropropane	78-87-5	5	5
19. cis-1,3-Dichloropropene	10061-01-5	5	5
20. Trichloroethene	79-01-6	5	5
21. Dibromochloromethane	124-48-1	5	5
22. 1,1,2-Trichloroethane	79-00-5	5	5
23. Benzene	71-43-2	5	5
24. trans-1,3-Dichloropropene	10061-02-6	5	5
25. Bromoform	75-25-2	5	5
26. 4-Methyl-2-pentanone	108-10-1	10	10
27. 2-Hexanone	591-78-6	10	10
28. Tetrachloroethene	127-18-4	5	5
29. Toluene	108-88-3	5	5
30. 1,1,2,2-Tetrachloroethane	79-34-5	5	5

(continued)

Target Compound List (TCL) and
Contract Required Quantitation Limits (CROL)*

Semivolatiles	CAS Number	Quantitation Limits**	
		Water ug/L	Low Soil/Sediment ^o ug/Kg
35. Phenol	108-95-2	10	330
36. bis(2-Chloroethyl) ether	111-44-4	10	330
37. 2-Chlorophenol	95-57-8	10	330
38. 1,3-Dichlorobenzene	541-73-1	10	330
39. 1,4-Dichlorobenzene	106-46-7	10	330
40. Benzyl alcohol	100-51-6	10	330
41. 1,2-Dichlorobenzene	95-50-1	10	330
42. 2-Methylphenol	95-48-7	10	330
43. bis(2-Chloroisopropyl) ether	108-60-1	10	330
44. 4-Methylphenol	106-44-5	10	330
45. N-Nitroso-di-n- dipropylamine	621-64-7	10	330
46. Hexachloroethane	67-72-1	10	330
47. Nitrobenzene	98-95-3	10	330
48. Isophorone	78-59-1	10	330
49. 2-Nitrophenol	88-75-5	10	330
50. 2,4-Dimethylphenol	105-67-9	10	330
51. Benzoic acid	65-85-0	50	1600
52. bis(2-Chloroethoxy) methane	111-91-1	10	330
53. 2,4-Dichlorophenol	120-83-2	10	330
54. 1,2,4-Trichlorobenzene	120-82-1	10	330
55. Naphthalene	91-20-3	10	330
56. 4-Chloroaniline	106-47-8	10	330
57. Hexachlorobutadiene	87-68-3	10	330
58. 4-Chloro-3-methylphenol (para-chloro-meta-cresol)	59-50-7	10	330
59. 2-Methylnaphthalene	91-57-6	10	330
60. Hexachlorocyclopentadiene	77-47-4	10	330
61. 2,4,6-Trichlorophenol	88-06-2	10	330
62. 2,4,5-Trichlorophenol	95-95-4	50	1600
63. 2-Chloronaphthalene	91-58-7	10	330
64. 2-Nitroaniline	88-74-4	50	1600
65. Dimethylphthalate	131-11-3	10	330
66. Acenaphthylene	208-96-8	10	330
67. 2,6-Dinitrotoluene	606-20-2	10	330
68. 3-Nitroaniline	99-09-2	50	1600
69. Acenaphthene	83-32-9	10	330

(continued)

Target Compound List (TCL) and
Contract Required Quantitation Limits (CRQL)*

Pesticides/PCBs	CAS Number	Quantitation Limits**	
		Water ug/L	Low Soil/Sediment ^c ug/Kg
100. alpha-BHC	319-84-6	0.05	8.0
101. beta-BHC	319-85-7	0.05	8.0
102. delta-BHC	319-86-8	0.05	8.0
103. gamma-BHC (Lindane)	58-89-9	0.05	8.0
104. Heptachlor	76-44-8	0.05	8.0
105. Aldrin	309-00-2	0.05	8.0
106. Heptachlor epoxide	1024-57-3	0.05	8.0
107. Endosulfan I	959-98-8	0.05	8.0
108. Dieldrin	60-57-1	0.10	16.0
109. 4,4'-DDE	72-55-9	0.10	16.0
110. Endrin	72-20-8	0.10	16.0
111. Endosulfan II	33213-65-9	0.10	16.0
112. 4,4'-DDD	72-54-8	0.10	16.0
113. Endosulfan sulfate	1031-07-8	0.10	16.0
114. 4,4'-DDT	50-29-3	0.10	16.0
115. Methoxychlor	72-43-5	0.5	80.0
116. Endrin ketone	53494-70-5	0.10	16.0
117. alpha-Chlordane	5103-71-9	0.5	80.0
118. gamma-Chlordane	5103-74-2	0.5	80.0
119. Toxaphene	8001-35-2	1.0	160.0
120. Aroclor-1016	12674-11-2	0.5	80.0
121. Aroclor-1221	11104-28-2	0.5	80.0
122. Aroclor-1232	11141-16-5	0.5	80.0
123. Aroclor-1242	53469-21-9	0.5	80.0
124. Aroclor-1248	12672-29-6	0.5	80.0
125. Aroclor-1254	11097-69-1	1.0	160.0
126. Aroclor-1260	11096-82-5	1.0	160.0

^c Medium Soil/Sediment Contract Required Quantitation Limits (CRQL) for Pesticide/PCB TCL compounds are 15 times the individual Low Soil/Sediment CRQL.

* Specific quantitation limits are highly matrix dependent. The quantitation limits listed herein are provided for guidance and may not always be achievable.

** Quantitation limits listed for soil/sediment are based on wet weight. The quantitation limits calculated by the laboratory for soil/sediment, calculated on dry weight basis as required by the contract, will be higher.

FOAM OFF MSDS

82C047
PE-0411
FOAM-OUT
9031
0176-2270
3F50350-55
3F50355-BULK
*0176-XM28
82L047
729225

MANUFACTURER INFORMATION

(*) MID:#518416
PIONEER CHEMICAL CO
DUNS ACCOUNT #: 05-504-4535
EMERGENCY TELEPHONE #: 313/962-2117
3324 W FORT ST
DETROIT, MI 48216

FORMULA INFORMATION

OWNER LAST UPDATE DATE : 071785
FORMULA STATUS : Incomplete
MSDS ON FILE IN CSIS : Yes
SAFE USE CATEGORY: Corrosives - Concentrated Base - pH > 10

SHIPPING INFORMATION

SID #04521 Name: COMPOUND, CLEANING LIQUID (CONTAINING SODIUM HYDROXIDE)
Hazard Class: Corrosive Material
U.N. Code: NA1760
Flash Point : T.C.C. NONE

INGREDIENTS

CAS#	Formulation	Chemical Name
989953309	= 3.75% BY WT	NONIONIC-CATIONIC BLEND
001310732	= 2.30% BY WT	Sodium hydroxide
006834920	= 2.80% BY WT	Sodium metasilicate
000060004	= 5.50% BY WT	EDTA
989953310	Trace Amount	ANTI-FOAM AGENT(SILICONE TYPE) & DYE(ORGANIC)
007732185	= 86.0% BY WT	Water

REGULATORY CONSIDERATIONS

(Information compiled by TMCA. See bulletin board file 'CRITLIST' for expanded key.)

CAS# LISTS

001310732 = 01, 03, 09, 15, 17, 19, 23, 31, 32, 38, 39, 42, 46, 48, 56, 59,
61, 63, 65.
000060004 = 09, 17, 32, 46, 48, 61, 65.

- REGULATORY LIST KEY -

01 - OSHA-PEL	;	03 - ACGIH-TLV	;	09 - FWPC-Sec 311;	15 - Sup Tax Chem;		
17 - CA Haz Subst;		19 - MA Subst	;	23 - MD Class II	;	31 - Allghny Cty	;
32 - IL-RTK	;	38 - MO-RTK	;	39 - ONT 654/86	;	42 - WI TABLE 1	;
46 - SARA312HzSub;		48 - CERCLASEC103;		56 - CT 29-3	;	59 - CA Air Tox 1;	
61 - PA RTK	;	63 - PELs REVISED;		65 - NJ W&C RTK	.		

48069 (D)48086 48075(D) 94003
18111 94377 48200 48097
19017 48065 19605 94017
37007

DISPLAY G.M. MATERIAL SAFETY DATA SHEET? y
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FID: 179513

SECTION 0 -- EFFECTIVE & LAST UPDATE DATES, COMMENTS

1 -->Effective Date: 053185
2 -->MSDS signed by: CHARLES GENTELIA
3 -->Title: TECHNICAL DIRECTOR
4 -->Comments: -
5 -->Safe Use Category: 11 - CONCENTRATED BASE - pH > 10
6 -->Last Date Updated: 100886

SECTION 1 -- SHIPPING INFORMATION

1 -->Chemical Family: ALKALINE DETERGENT
2 -->Formula: BLEND OF NONIONIC SURFACTANTS AND ALKALINE BUILDERS

SECTION 3 -- PHYSICAL DATA

1 -->Boiling Point: 212 F
2 -->Specific Gravity: 1.058
3 -->Vapor Pressure: NA
4 -->% Volatile by Volume: 86.1
5 -->% Solid by Weight: -
6 -->Vapor Density: NA
7 -->Evaporation Rate: NEAR WATER
8 -->Solubility in H2O: INF.
9 -->pH: -
10 -->Appearance & Odor: CLEAR LIQUID-BLEND
11 -->State: LIQUID

SECTION 4 -- FIRE AND EXPLOSION DATA

1 -->Flammable Limits - LEL: -
2 -->Flammable Limits - UEL: -
3 -->Extinguishing Media: NO SPECIAL REQUIREMENTS
4 -->Special Fire Fighting Procedures: NO SPECIAL REQUIREMENTS
5 -->Unusual Fire & Explosion Hazards: -

SECTION 5 -- HEALTH HAZARD DATA

1 -->Effects of Overexposure: SEVERE SKIN & EYE IRRITANT. POSSIBLE BURNS OF LIPS, MOUTH, THROAT & ESOPHAGEAL DAMAGE IF INGESTED.
2 -->Threshold Limit Value: NO HAZARDOUS FUMES
3 -->Permissible Exposure Limit: -
4 -->Other limit: -
5 -->Primary routes of entry: -
6 -->Emergency First Aid Procedures: IF SPLASHED IN EYES OR ON SKIN, WASH WITH MUCH COLD WATER. IF INGESTED, IMMEDIATELY DRINK LARGE VOLUMES OF WATER OR MILK. THEN ATTEMPT TO DRINK DILUTED VINEGAR OR LEMON JUICE. GET MED. ATTENTION!

SECTION 6 -- REACTIVITY DATA

- 1 -->Stable: YES
- 2 -->Conditions to Avoid: -
- 3 -->Incompatible Materials: DO NOT MIX WITH ACIDS
- 4 -->Hazardous Decomposition Products: NONE
- 5 -->Can Hazardous Polymerization Occur: WILL NOT OCCUR
- 6 -->Conditions to Avoid: -

SECTION 7 -- SPILL OR LEAK PROCEDURES

- 1 -->Steps to be taken in case material is released or spilled: WATER FLUSH TO FLOOR DRAIN.
- 2 -->Waste Disposal Method: STANDARD METHOD OF DISPOSING OF CLEANING SOLUTIONS.
- 3 -->CERCLA (Superfund) Reportable quantity (lbs): -
- 4 -->RCRA Hazardous Waste No. (40 CFR 261.33): -
- 5 -->Volatile Organic Compound (VOC) Theoretical: -
- 6 -->Volatile Organic Compound (VOC) Analytical: -

SECTION 8 -- SPECIAL PROTECTION INFORMATION

- 1 -->Respiratory Protection: -
- 2 -->Local Exhaust: -
- 3 -->Special: -
- 4 -->Mechanical: -
- 5 -->Other: -
- 6 -->Protective Gloves (Specify type): YES
- 7 -->Eye Protection (Specify type): YES
- 8 -->Other Protective Equipment: -

SECTION 9 -- SPECIAL PRECAUTIONS

- 1 -->Precautions to be taken in Handling & Storage: SAFETY APRON-FACE SHIELD
- 2 -->Other Precautions: AVOID WIDE TEMPERATURE FLUCTUATIONS DURING STORAGE.

SECTION 10 -- ADDITIONAL DATA

- 1 -->Additional Health Hazard Data: Not Provided

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DISPLAY SAFE USE INSTRUCTIONS? n

COMMAND? sel tn =
TRADE NAME? #118374

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- FID : 118374 -

(P) FOAM X-IT
PUREX
X-IT
KC37
20002
C-206
C

MANUFACTURER INFORMATION

(*) MID:#503090
PUREX INDUSTRIAL
EMERGENCY TELEPHONE #: 614/387-6200
7300 BOLSA AVENUE