NEWARK BAY STUDY AREA

ADDITIONAL SITES AND CANDIDATE PRPS FOR THE NEWARK BAY STUDY AREA

VOLUME II OF III

PRP DATA EXTRACTION FORM AND EVIDENCE CONCERNING:

CENTRAL STEEL DRUM COMPANY, INC.
NEWARK SITE

PREPARED BY:
TIERRA SOLUTIONS, INC.

SUBMITTED TO:
USEPA REGION II

MARCH 2008

100687

Central Steel Drum Site
843 Delancy Street, Newark New Jersey

Response to New Jersey Department of Environmental Protection Comment Letter dated June 24, 2004

Prepared by URS Corporation, June 7, 2006

1.0 INTRODUCTION

The New Jersey Department of Environmental Protection (NJDEP) reviewed the following two URS documents that were prepared after a field investigation in 2001:

- Remedial Investigation Workplan Addendum for Groundwater and Groundwater Screening Sample Results Summary, dated June 1, 2004
- Revised Soil Remedial Investigation Results Summary Report, dated 1 June 2004

The NJDEP prepared a comment letter on these reports, dated June 24, 2004. URS received this letter on June 6, 2006, and provides the following responses. In general however, because much of this material is dated, the project has been idle for several years, and project management for the City of Newark and URS has changed several times, many of these issues and previous decision are "overtaken by events" and possibly not applicable anymore.

2.0 RESPONSE TO NJDEP

The NJDEP Letter, dated June 24, 2006, is attached.

NJDEP Comment 1: Soil Conclusions and Recommendations.

URS Response: Vertical and horizontal soil delineation was proposed for only three AOCs (AOC-2, AOC-3, and AOC-4) at the direction of the NJDEP in their email of August 4, 2003 (Attached). The rationale for investigating only these three AOCs is not known.

NJDEP Comment 2: AOC2 – Drum Conveyor/De-Heading Shed

URS Response: URS does not have any available information to indicate why certain sample locations were excluded from delineation.

NJDEP Comment 3: AOC3 – Abandoned Truck Trailer Area

URS Response: URS does not have any available information to indicate why certain sample locations are excluded from delineation.

NJDEP Comment 4: AOC4 – Drum Flip Operation Area

URS Response: URS does not have any available information to indicate why certain sample locations are excluded from delineation.

NJDEP Comment 5: AOC5 – Drainage Ditch

URS will evaluate the condition of the ditch (i.e., wet or dry) and assess sample results against both NJDEP soil cleanup and ecological screening criteria.

NJDEP Comment 6: Radiological Assessment

The Victoreen 190 Radiation Monitor is now obsolete and no longer manufactured.

The proposed radioactive screening work at the site will be conducted in accordance with N.J.A.C. 7:28-12 "Soil Remediation Standards For Radioactive Materials" and with the provisions of Chapter 12 of the NJDEP 2005 Field Sampling Procedures manual.

The Derived Concentration Guideline Levels (DCGLs – soil remediation standards) for naturally occurring radioactive materials (NORM) are established in N.J.A.C. 7:28-12, *Soil Remediation Standards for Radioactive Materials* for unrestricted, limited restricted, and restricted use. DCGLs for any radioactive material will also be developed by following the methodologies in *Development of Generic Standards for Remediation of Radioactively Contaminated Soils in New Jersey, A Pathways Analysis Approach*.

Specific details of the proposed radiological program will be provided to the NJDEP for review and approval upon notification to proceed.

NJDEP Comment 7 – Cover Material:

URS believes it is premature to discuss engineering controls for the Central Steel Drum site at this time. Details of any engineering control will be provided to the NJDEP for review and concurrence after the proposed remedial investigation.

State of New Jersey

Richard J. Codey
Acting Governor

Department of Environmental Protection

Bradley M. Campbell
Commissioner

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MEMORANDUM

TO: Stephen Kehayes, Case Manager, OBR

FROM: Allan S. Motter, Technical Coordinator, BEERA/EES-1

RE: Central Steel Drum Facility, 843-871 Delancy Street, Newark, New Jersey
Scope of Work for Remedial Investigation, Central Steel Drum Site (RIWP), and Addendum, Scope of Work for Remedial Investigation, Drainage Ditch at the Central Steel Drum Site (RIWPA)
(Referral dated 03/28/05, Completed 04/11/05)

BEERA has reviewed the above referenced Scope of Work for Remedial Investigation, Central Steel Drum Site (RIWP), dated February 4, 2005 and Addendum, Scope of Work for Remedial Investigation, Drainage Ditch at the Central Steel Drum Site (RIWPA), dated March 21, 2005. The RIWP and RIWPA are conditionally acceptable. BEERA's comments are as follows.

Scope of Work for Remedial Investigation, Central Steel Drum Site (RIWP):

General Comment: The Scope of Work (SOW) is generally the same scope of work submitted in the Revised Soil Remedial Investigation Results Summary Report, June 1, 2004 and commented on in BEERA's June 24, 2004 Memorandum (attached). All comments in BEERA's June 24, 2004 Memorandum remain applicable and must be addressed.

4.7 Areas of Concern AOC 2, AOC 3, and AOC 4 Soil Investigation: This section references **Figure** 1 for the location of delineation borings. A figure depicting all exceedences and proposed delineation samples on the same map should be submitted in order to determine if adequate delineation is being achieved.

4.9 Dioxin Investigation of Soil: This section states that "soil action levels for dioxin are not established by NJDEP." NJDEP utilizes the World Health Organization 1997 Toxicity Equivalent Factors (WHO 97 TEFs). This section further states that "URS proposes to conduct a dioxin 'screening' assessment to cover the entire site." This is acceptable; however, based on the findings, further delineation may be required.

Addendum, Scope of Work for Remedial Investigation, Drainage Ditch at the Central Steel Drum Site (RIWPA):

4.3 Collection of Soil/Sediment Samples Along the Drainage Ditch: This section references **Figure 3** for horizontal delineation. **Figure 3** does not depict any horizontal delineation in the

north-south direction for the width of the stream. Dependent on the results, delineation in the north-south direction may be required.

c: Greg Bakeman (BGWPA)
Teruo Sugihara (BEERA)

Scope of Work for Remedial Investigation
The City of Newark, New Jersey

Central Steel Drum Site
843 Delancy Street, Newark New Jersey
Prepared by URS Corporation, February 4, 2005

1.0 BACKGROUND

URS Corporation, on behalf of the City of Newark, submitted the following two documents for the former Central Steel Drum Facility (site) to the New Jersey Department of Environmental Protection (NJDEP) for review, comment, and approval:

- Remedial Investigation Workplan Addendum for Groundwater and Groundwater Screening Sample Results Summary Report (URS, June 2004a)

- Revised Soil Remedial Investigation Results Summary Report (URS, June 2004b)

These documents described the results of previous investigations at the site and provided summary recommendations for additional work. The NJDEP approved the proposed scope of work in both documents and requested a formal detailed scope of work and cost estimate for the remaining soil, sediment, and groundwater remedial investigation. Accordingly, this document summarizes the approved scope of work and provides a detailed cost estimate to continue the remedial investigation at the site.

2.0 SITE DESCRIPTION

The site is located in Essex County, Newark, New Jersey, at the intersection of Doremus Avenue and Delancy (or Delancey) Street, and occupies Block 5074, Lot 1 on the City of Newark tax maps. The NJDEP known contaminated site list (KCSL) identification number for the former Central Steel Drum Facility is NJD011482577.

3.0 PROJECT OBJECTIVES

The results of the most recent site characterization work (URS, June 1, 2004a; June 1, 2004b) indicate that data gaps in the remedial investigation still exist. Additional vertical and horizontal soil delineation is required at the following areas of concern:

- AOC 2: Drum Conveyor/De-heading Shop
- AOC 3: Abandoned Truck Trailer Area
- AOC 4: Drum Flip Operation Area

Also, dioxin impacts to soil and sediment are documented, although the extent and magnitude of the problem are not defined. Characterization of historic fill is required, as

well as completion of an ecological evaluation of the site. Groundwater quality in the shallow and deeper water-bearing zones is not well characterized.

Therefore, the objective of this project is to complete the remedial investigation, fill the remaining environmental data gaps, and develop remedial strategies for the site.

4.0 NJDEP-APPROVED SCOPE OF WORK

URS proposes to continue the remedial investigation at the site in accordance with the approved work scope described in the documents listed above in Section 1.0 and with NJDEP regulations and guidelines.

URS will perform the following activities for this project:

- Obtain Site Access
- Contractor procurement, well permitting, and contacting "call-before-you-dig" services for utility markouts
- Site reconnaissance for access and layout of site sampling grid
- Preparation of a site-specific health and safety plan
- Radiation and organic vapor monitoring during site work
- Well sealing of four existing shallow wells and four deep wells
- Collection of subsurface soil samples from areas of concern
- Historic fill investigation
- Dioxin Investigation of soil and sediment? see pg 6
- Installation of 12 shallow and 12 deep monitoring wells.
- Collection of 24 monitoring well groundwater samples – two separate rounds of sampling
- Laboratory analyses of soil and groundwater samples
- Waste characterization and disposal of soil cuttings
- Land survey of monitoring wells
- Conduct an ecological assessment

- Data compilation and evaluation of field and laboratory data, and preparation of a Remedial Investigation Report

- Preparation of a Deed Notice (deferred until after the field program)

A summary description of these activities is provided in the sections below.

4.1 Site Access

The site is currently unoccupied with restricted access to the public established by fences and concrete barriers. The City of Newark will provide access for URS, the NJDEP, and project contractors when the field work begins.

4.2 Contractor Procurement

URS will contract with an established New Jersey licensed driller, a certified New Jersey laboratory, and a New Jersey Licensed Land surveyor for this project. Bids will be requested from firms known to be experienced and qualified by URS to obtain competitive prices. A qualified Waste Disposal Contractor will also be contracted to remove and dispose of drill cuttings generated during this investigation. The drilling contractor will alert the New Jersey One Call (800-272-1000) for utility markouts before subsurface work begins.

4.3 Site Reconnaissance and Site Grid

URS will conduct a site reconnaissance to observe access conditions, assess logistics for drilling operations, and to establish a site grid. The site grid will be referenced to site features such as building corners or fence posts, using a tape measure and compass, so that sampling points and other site features can be accurately located. After the field work, a land surveyor will formally survey certain sampling points (e.g., monitoring well locations) to enhance the site grid (see Section 4.13, below). The location and condition of the eight existing monitoring wells installed in 1984 will be assessed and the wells will be sealed.

4.4 Health and Safety Plan

A site-specific health and safety plan will be prepared before site activities in accordance with Occupational Safety and Health Administration (OSHA) 29 CFR 1910 and 29 CFR 1926. The results of previous investigations, as well as discussions with NJDEP, indicate that dioxin and radiological material in soil are potential constituents of concern. The health and safety plan will address these concerns.

4.5 Radiation and Organic Vapor Monitoring

At previous meetings, the NJDEP requested that radiological monitoring of soil and ambient air be conducted at the site. A Victoreen 190 model (or equivalent) survey meter

will be used to conduct radiation screening. A photoionization detector (PID) will be used to screen ambient air and environmental samples for organic vapors.

4.6 Well Sealing

The eight existing monitoring wells, installed in 1984, are reportedly in bad condition and are no longer usable (URS, June 1, 2004a – Section 3.1). The wells will be sealed in accordance with N.J.A.C. 7:9D "Well Construction and Maintenance; Sealing of Abandoned Wells". Two of the wells (MW-103 and MW-203), however, are reportedly destroyed (Environics, 1987). If the wells can be found, they will be sealed. If the wells cannot be found, the City of Newark will notify the NJDEP Bureau of Water Allocation at (609) 292-2957.

4.7 Areas of Concern AOC 2, AOC 3, and AOC 4 Soil Investigation

URS will advance a total of 20 soil borings at the following areas of concern (Figure 1):

- AOC 2: Drum Conveyor/De-heading Shop – 7 borings
- AOC 3: Abandoned Truck Trailer Area – 8 borings
- AOC 4: Drum Flip Operation Area – 5 borings

Soil samples will be collected to delineate the horizontal and vertical extent of soil contamination detected previously in these areas. The samples will be analyzed for VOCs, pesticides, and PCBs (Table 1).

The samples collected for the analysis of VOCs will be collected following the methodology provided in N.J.A.C. 7:26E-3.6(a)4 "Soil Samples Analyzed for Volatile Organics". VOC soil samples will also be collected and preserved using NJDEP (February 1997) methanol extraction/preservation procedures.

The soil scope of work (URS, June 1, 2004b) specified that the following three samples will be collected from each boring:

1. directly above the depth at which the previous sample being delineated was collected (using visual observations and PID readings)

2. the depth at which the previous sample being delineated was collected

3. in the 6-inch interval above the shallow groundwater

Because of the relatively shallow depth (less than 2.5 ft) to the water table, however, there may not be sufficient soil volume to collect three discrete samples from any one sample boring. If so, a second or third boring will be advanced immediately adjacent to the primary boring in the event that additional soil volume is needed. VOC samples will only be collected from the primary boring. An estimated total of 60 soil samples will be collected from the three areas of concern

The location, composition, and other relevant features of the soil samples will be logged and described using the Unified Soil Classification System (USCS). Samples will be screened in the field using a survey meter for radiation and a photoionization detector (PID or equivalent) for organic vapors (see Section 4.5).

A direct push drill rig and macrocore samplers with dedicated acetate liners will be used to advance the borings and collect the soil samples. Based on the anticipated shallow depth to groundwater, URS anticipates that each boring will be advanced to about 2-3 ft below grade.

4.8 Historic Fill Investigation

URS will advance four soil borings for every acre of site in accordance with N.J.A.C. 7:26E-4.6(b) "Remedial Investigations of Landfills and Historic Fill Material." The locations of the historic fill borings are shown in Figure 1. The borings will extend to native soils below the fill layer (to establish the thickness of historic fill across the site) and one sample will be collected from each boring, biased toward depth intervals with observed contamination or high PID readings. If PID reading above background levels or other signs of obvious contamination are not observed, the fill sample will be collected from immediately above the water table, or immediately above the native clay layer if groundwater is not encountered. If the composition of the fill changes significantly in any one boring (e.g., ash versus demolition debris), then samples of both fill types will be collected for analysis.

The samples will be analyzed for expedited total petroleum hydrocarbon (TPH) and normal priority pollutant (PP) metals analyses. Polynuclear aromatic hydrocarbons (PAHs) and polychlorinated biphenyls (PCBs) will be analyzed on 25% of the total number of fill samples (estimated 9 samples), biased toward those samples with the highest TPH concentrations. An estimated 34 samples will be collected for the historic fill investigation (Table 2).

The location, composition, and other relevant features of the soil fill samples will be logged and described using the USCS. Samples will be screened in the field using a survey meter for radiation and a photoionization detector (PID or equivalent) for organic vapors (see Section 4.5).

A direct push drill rig and macrocore samplers with dedicated acetate liners will be used to advance the borings and collect historic fill samples. Based on descriptions of the local geology (Environics, 1987), URS anticipates that each boring will be advanced to between 4 and 8 feet below grade.

4.9 Dioxin Investigation of Soil

Soil action levels for dioxin are not established by NJDEP, but some human health risk-based levels (industrial scenarios) published by the US Environmental Protection Agency

(EPA) vary from 0.019 parts per billion (EPA Region III, October 2004) to 20 parts per billion (EPA, April 1998).

Three soil and three sediment samples were collected during the 2001 investigation for dioxin analyses (URS, June 1, 2004b) and each of the six samples had toxic equivalent dioxin values (WHO, 1998) ranging between 0.011 parts per billion (ppb) to 0.66 ppb (Table 3 and Table 4). The relatively widespread distribution of the samples and the fact that 6 out of 6 samples tested positive for dioxin suggests that this constituent could exist across the site and extend to off-site areas in the south ditch area (Figure 1). Therefore, a focused dioxin delineation strategy is not proposed at this time. Instead, URS proposes to conduct a dioxin "screening" assessment to cover the entire site.

Six surface soil samples (0 to 6 inches) will be collected near property boundaries (Figure 1) to evaluate the distribution of the dioxin across the site, assess the potential for off-site migration, and to investigate a potential incinerator/smokestack source or use of incinerator ash as backfill for the distribution of this chemical across the site. The samples will be submitted for the analysis of dioxin using method 8290.

4.10 Installation of Monitoring Wells

Twelve shallow (water table) monitoring wells will be installed in the fill unit, which based on information from Environics (1984; 1987), ranges in thickness from 4 ft to 12 ft. The water table is reportedly between 1.0 and 2.5 ft below the ground. A NJDEP variance will be required for the installation of protective casings for the shallow monitoring wells because of the shallow depth of water table (i.e., above the frost line) and the inability to set a concrete collar to a depth of 3 ft below grade.

Twelve deep wells will be installed in the red-brown silty sand unit directly below the confining clay/silt layer (Environics, 1984; 1987). The top of the red-brown silty sand unit is estimated to be between 17 ft and 22 ft below grade. Six inch casings will be grouted into the clay unit, as shown in the NJDEP Field Sampling Procedures Manual (May 1992), before installation of each deep monitoring well.

Installation and development of the monitoring wells will follow the procedures described in Section 4.1.2 of the Workplan Addendum (URS, June 2004a) and work will be performed in accordance with NJDEP requirements (e.g., NJDEP 1992). The locations of the proposed monitoring wells are shown in Figure 1.

4.11 Collection of groundwater Samples

Two rounds of groundwater samples will be collected from the twenty-four new monitoring wells using the conventional three-purge technique, as described in Section 4.2 of the Workplan Addendum (URS, June 1, 2004a).

The first round of groundwater samples (Round 1) will be analyzed for volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), PCBs, pesticides,

chlorophenoxy herbicides, TPH, and PP metals. Round 2 samples will be analyzed for VOCs, SVOCs, and PP metals only, if the results of the Round 1 samples indicate that the other parameters (i.e., PCBs, pesticides, etc.) are not affecting groundwater quality (Table 5). URS will inform the NJDEP of the Round 1 analytical results through a summary report before collecting Round 2 samples.

Measurements of pH, specific conductance, turbidity, dissolved oxygen, and temperature will be made on groundwater samples in the field.

4.12 Laboratory Analyses

The samples will be analyzed for TCL/TAL parameters using SW-846 methodologies and established chain of custody protocols. Quality assurance and quality control (QA/QC) samples (e.g., trip blanks, blind duplicates, etc.) will be collected for this investigation in accordance with NJDEP (1992, 1997) guidance (Table 6 and Table 7)

The laboratory deliverables will be the Reduced Laboratory Data Deliverables –Non-USEPA/CLP Methods. The laboratory will deliver the analytical results in a standard turnaround time (TAT) of 3 to 4 weeks, with the exception of expedited (3 day) TPH analyses of historic fill samples (see Section 4.8).

4.13 Waste characterization and disposal of soil cuttings

Soil cutting generated using the direct push method for the Area of Concern Investigation (Section 4.7) and Historic Fill Investigation (Section 4.8) will be returned to their respective boreholes.

Soil cuttings generated from the fill layer during installation of monitoring wells will be segregated and contained in DOT-approved 55 gallon drums and removed off site for disposal. Drill cuttings from the native soils (i.e., clay layer and underlying silty sand unit) will be assumed to be uncontaminated (after field screening) and will be left on site.

The drummed fill material will be sampled in accordance with NJDEP requirements and in accordance with the acceptance requirements of a Resource Conservation and Recovery Act (RCRA) permitted disposal or recycling facility. PCB and dioxin analyses of the contained material will be required. The NJDEP will be provided with the name of the facility before material is moved off site. Typical acceptance requirements include performing Toxicity Characteristic Leachate Procedure (TCLP) analysis and analyses of other RCRA characteristics at a frequency of one test per 1,000 tons of material. For costing purposes, the material is assumed to be RCRA non hazardous.

After the sample results have been obtained and the material has been accepted at the disposal facility, load out of the material will begin. The soil will be loaded onto trucks and the loads will be tracked with a bill of lading. An agent of the City of Newark will sign the bill of lading.

4.14 Land survey of monitoring wells

A New Jersey-licensed surveyor will conduct a survey to locate the new monitoring wells and other sampling points both horizontally and vertically. The features will be mapped using the 1983 New Jersey State Plane Coordinate System (North American Datum in feet) and the National American Vertical Datum of 1988 (NAVD 88). The data will be plotted on computerized (AutoCAD) maps.

4.15 Ecological Evaluation

A baseline ecological evaluation will be performed by an experienced ecologist in accordance with the requirements of N.J.A.C. 7:26E-3.11. A reconnaissance-level site visit will be made to confirm and document any environmentally sensitive natural resources on or near the site. The NJDEP Geographical Information Systems (GIS) database (NJDEP, 1996) indicates that herbaceous wetlands, associated with a drainage ditch, extend eastward from the site to Newark Bay. PCB and dioxin compounds were previously detected in the ditch sediments (URS, 2001b). A qualitative risk assessment will be made by comparing risk-based screening criteria to chemicals detected in soil, sediment, surface water, and groundwater. An assessment of the potential risks to ecological receptors will be documented.

4.16 Reporting

URS will evaluate the field and analytical data and prepare a remedial investigation report in accordance with N.J.A.C. 7:26E – 4.8 "Remedial Investigation Report". The report will contain an evaluation of the data, as well as a compilation of the backup data (e.g., field logs, laboratory summary reports, chain of custody forms, etc.). Chemical data will be compared against appropriate NJDEP standards, criteria, and guidance (i.e., NJDEP 1993; 1999). The remedial investigation report will present conclusions and recommendations for the site.

Laboratory reports containing the raw analytical data will be submitted to the NJDEP under separate cover. The analytical data will also be submitted as an electronic deliverable (Hazsite deliverable) using the format outlined in detail in the NJDEP Electronic Data Interchange (EDI) Manual (April, 1999).

4.17 Deed Notice

The horizontal and vertical extent of soil contamination is not completely defined, a remedial strategy for the site is not developed, and implementation or construction of any engineering control has not begun. A deed notice, therefore, will be prepared in accordance with N.J.A.C. 7:27E – 8. "Engineering and Institutional Controls" after "restricted areas" are defined for the site and after any soil remedial actions or soil remedies are completed.

5.0 SCHEDULE

URS estimates that the remedial investigation will require nearly eight months from the time of notice to proceed to submittal of a draft remedial investigation report to the NJDEP. The critical path for this investigation consists of the installation of 24 monitoring wells (including 12 double-cased wells) and the collection and analyses of two separate rounds of groundwater samples. The estimated project schedule is shown in Figure 2.

6.0 COST ESTIMATE

The NJDEP previously approved certain work items at the site, which were not conducted while awaiting NJDEP approval of the Revised RI Workplan. The current remaining budget, consisting of URS professional service fees and NJDEP oversight fees, is $37,700.

The total estimated cost for this project following the scope of work described above is **$241,381.85**. This total amount also reflects the $37,700 debit of the remaining project budget. A detailed cost breakdown is shown Table 8.

References:

Environics, Inc., June 1, 1984, Soil Borings & Monitoring Wells, Central Steel Drum Company, 704 Doremus Avenue, Newark, NJ 07105.

Environics, Inc., 1987, [only sections of the report in URS files], report provides geologic and hydrogeologic data for the Central Steel Drum Site.

New Jersey Administrative Code, 1993, Chapter 7:9-6, Water Technical Programs, Groundwater Quality Standards, Adopted January 7.

New Jersey Administrative Code, Amended February 2003, Chapter 7:26E, Technical Requirements for Site Remediation.

New Jersey Department of Environmental Protection, May 1992, Field Sampling Procedures Manual.

New Jersey Department of Environmental Protection, March 7, 1996, New Jersey Geographic Information System CD-ROM Series 1, Volume 3.

New Jersey Department of Environmental Protection, February 1997, Methodology for the Field Extraction/Preservation of Soil Samples with Methanol for Volatile Organic Compounds.

New Jersey Department of Environmental Protection, April 1999, Site Remediation Program, Electronic Data Interchange Manual.

New Jersey Department of Environmental Protection, last revised May 12, 1999, Soil Cleanup Criteria: Residential Direct Contact, Non-residential Direct Contact, and Impact to Groundwater.

New Jersey Department of Environmental Protection, August 4, 2003, Electronic mail from NJDEP to URS Corporation, City of Newark, and others, re: Preliminary comments on Central Steel Drum May 1, 2003 RIR.

Occupational Safety and Health Administration (OSHA), Title 29 Code of Federal Regulations (CFR), Part 1910.120, Hazardous Waste Operations and Emergency Response Standard and 29 CFR 1926, Safety and Health Regulations for Construction.

URS Corporation, June 1, 2004a, Remedial Investigation Workplan Addendum for Groundwater and Groundwater Screening Sample Results Summary Report, Central Steel Drum Facility, 843-871 Delancy Street, Newark, New Jersey.

URS Corporation, June 1, 2004b, Revised Soil Remedial Investigation Results Summary Report, Central Steel Drum Facility, 843-871 Delancy Street, Newark, New Jersey.

US Environmental Protection Agency, April 13, 1998, Approach for Addressing Dioxin in Soil at CERCLA and RCRA Sites, OSWER Directive 9200.4-26.

US Environmental Protection Agency, updated October 2004, Human Health Risk Assessment, Risk Based Concentration Table.

World Health Organization (WHO), European Centre for Environment and Health, International Programme on Chemical Safety, May 25-29, 1998, Executive Summary, Assessment of the Health Risk of Dioxins: Re-evaluation of the Tolerable Daily Intake (TDI).

Table 1
Former Central Steel Drum Facility
Summary of AOC Soil Sample Analyses

October-November 2001 Data							
Area	**Previous Sample Identification**	**Previous Sample Depth**	**Nominal Depth to Water**	**Proposed Delineation Sample**	**Proposed Delineation Sample Depth**	**Proposed Analyses**	**Method**
Area of Concern 2	A2-SS-9	1 ft	2 ft	A2-SS-9-B1-A	0-5 ft	TCL VOCs + 10 TCL pesticides TCL PCBs	8260B 8081A 8082
				A2-SS-9-B1-B	1.0-1.5 ft		
				A2-SS-9-B1-C	1.5-2.0 ft		
				A2-SS-9-B2-A	0-5 ft		
				A2-SS-9-B2-B	1.0-1.5 ft		
				A2-SS-9-B2-C	1.5-2.0 ft		
				A2-SS-9-B3-A	0-5 ft		
				A2-SS-9-B3-B	1.0-1.5 ft		
				A2-SS-9-B3-C	1.5-2.0 ft		
				A2-SS-9-B4-A	0-5 ft		
				A2-SS-9-B4-B	1.0-1.5 ft		
				A2-SS-9-B4-C	1.5-2.0 ft		
	A2-SS-11	1 ft	2 ft	A2-SS-11-B1-A	0-5 ft	TCL VOCs + 10 TCL pesticides TCL PCBs	8260B 8081A 8082
				A2-SS-11-B1-B	1.0-1.5 ft		
				A2-SS-11-B1-C	1.5-2.0 ft		
				A2-SS-11-B2-A	0-5 ft		
				A2-SS-11-B2-B	1.0-1.5 ft		
				A2-SS-11-B2-C	1.5-2.0 ft		
				A2-SS-11-B3-A	0-5 ft		
				A2-SS-11-B3-B	1.0-1.5 ft		
				A2-SS-11-B3-C	1.5-2.0 ft		

Table 1 (concluded)
Former Central Steel Drum Facility
Summary of AOC Soil Sample Analyses

October-November 2001 Data							
Area	Previous Sample Identification	Previous Sample Depth	Nominal Depth to Water	Proposed Delineation Sample	Proposed Delineation Sample Depth	Proposed Analyses	Method
Area of Concern 3	A3-SS-6 A3-SS-7 A3-SS-10 A3-SS-11 A3-SS-15 A3-SS-18	2 ft 1 ft 1.5 ft 2 ft 2 ft 0.75 ft	2.5 ft 2.5 ft 2 ft 2.5 ft 2.5 ft 1.25 ft	A3-B1-A A3-B1-B A3-B1-C A3-B2-A A3-B2-B A3-B2-C A3-B3-A A3-B3-B A3-B3-C A3-B4-A A3-B4-B A3-B4-C A3-B5-A A3-B5-B A3-B5-C A3-B6-A A3-B6-B A3-B6-C A3-B7-A A3-B7-B A3-B7-C A3-B8-A A3-B8-B A3-B8-C	0.5-1.0 ft 1.5-2.0 ft 2.0-2.5 ft 0.5-1.0 ft 1.5-2.0 ft 2.0-2.5 ft 0.5-1.0 ft 1.5-2.0 ft 2.0-2.5 ft 0.5-1.0 ft 1.5-2.0 ft 2.0-2.5 ft 0.5-1.0 ft 1.5-2.0 ft 2.0-2.5 ft 0.5-1.0 ft 1.5-2.0 ft 2.0-2.5 ft 0.5-1.0 ft 1.5-2.0 ft 2.0-2.5 ft 0.5-1.0 ft 1.5-2.0 ft 2.0-2.5 ft	TCL VOCs + 10 TCL pesticides TCL PCBs	8260B 8081A 8082
Area of Concern 4	A4-SS-3	2 ft	2.75 ft	A4-SS-3-B1-A A4-SS-3-B1-B A4-SS-3-B1-C A4-SS-3-B2-A A4-SS-3-B2-B A4-SS-3-B2-C A4-SS-3-B3-A A4-SS-3-B3-B A4-SS-3-B3-C	0.5-1.0 ft 1.5-2.0 ft 2.0-2.5 ft 0.5-1.0 ft 1.5-2.0 ft 2.0-2.5 ft 0.5-1.0 ft 1.5-2.0 ft 2.0-2.5 ft	TCL VOCs + 10 TCL pesticides TCL PCBs	8260B 8081A 8082
	A4-SS-4	2 ft	3 ft	A4-SS-4-B1-A A4-SS-4-B1-B A4-SS-4-B1-C A4-SS-4-B2-A A4-SS-4-B2-B A4-SS-4-B2-C	0.5-1.0 ft 1.5-2.0 ft 2.0-2.5 ft 0.5-1.0 ft 1.5-2.0 ft 2.0-2.5 ft	TCL VOCs + 10 TCL pesticides TCL PCBs	8260B 8081A 8082

Proposed scope of work from URS, June 1, 2004b and NJDEP, August 4, 2003

Previous Data from URS, June 1, 2004b

AOC = Area of concern

TCL= Target compound list

PP = Priority pollutant

PCB = Polychlorinated biphenyl

PAH = polynuclear aromatic hydrocarbon

TPH = total petroleum hydrocarbon

Table 2
Former Central Steel Drum Facility
Summary of Historic Fill (Soil) and Dioxin Soil Sample Analyses

Area	Sample Identification	Nominal Sample Depth	Nominal Depth to Water	Proposed Analyses	Method
Historic fill across the site	HF-1 through HF-34	4-12 ft	2.5 ft	TPH PP metals TCL PCBs (25%) TCL PAHs (25%)	418.1 6010B/7471A 8082 8270C
Along site perimeter	D-1 through D-6	0-6 inches	2.5 ft	Dioxin	8290

Proposed scope of work from URS, June 1, 2004b; NJDEP, August 4, 2003; URS communication with NJDEP regarding dioxin analyses, January 26, 2005

TCL= Target compound list

PP = Priority pollutant

PCB = Polychlorinated biphenyl

PAH = polynuclear aromatic hydrocarbon

TPH = total petroleum hydrocarbon

PCB and PAH analyses will be performed on 25% of the samples, biased toward those showing highest TPH concentrations

Table 3
Former Central Steel Drum Facility
Summary of Dioxin Sample Analysis of Soil

LABORATORY DATA					TEQ FACTOR From WHO, 1998	RECALCULATED TOXICITY EQUIV.		
Sample ID	Units	A5-SS-6	A5-SS-8	A5-SS-12				
Lab ID		AB44872	AB44873	AB44871				
Sample Collection Date		10/18/2001	10/18/2001	10/18/2001		A5-SS-6	A5-SS-8	A5-SS-12
Depth (ft bgs)		1.5'	1'	1'				
Matrix		Soil	Soil	Soil				
		CONC	CONC	CONC				
Dioxins/Furans								
2,3,7,8-Cl4-Dibenzo-p-dioxin	pg/g	60	0.77	19	1	60	0.77	19
1,2,3,7,8-Cl5-Dibenzo-p-dioxin	pg/g	13	0.94	9	1	13	0.94	9
1,2,3,4,7,8-Cl6-Dibenzo-p-dioxin	pg/g	24	1.2	17	0.1	2.4	0.12	1.7
1,2,3,6,7,8-Cl6-Dibenzo-p-dioxin	pg/g	250	5.3	170	0.1	25	0.53	17
1,2,3,7,8,9-Cl6-Dibenzo-p-dioxin	pg/g	110	3.1	53	0.1	11	0.31	5.3
1,2,3,4,6,7,8-Cl7-Dibenzo-p-dioxin	pg/g	8300	160	8700	0.01	83	1.6	87
1,2,3,4,6,7,8,9-Cl8-Dibenzo-p-dioxin	pg/g	67000	3800	85000	0.0001	6.7	0.38	8.5
2,3,7,8-Cl4-Dibenzofuran (DB5)	pg/g	48	10	75	0.1	4.8	1	7.5
1,2,3,7,8-Cl5-Dibenzofuran	pg/g	18	2.9	19	0.05	0.9	0.145	0.95
2,3,4,7,8-Cl5-Dibenzofuran	pg/g	28	6.6	42	0.5	14	3.3	21
1,2,3,4,7,8-Cl6-Dibenzofuran	pg/g	120	9.3	100	0.1	12	0.93	10
1,2,3,6,7,8-Cl6-Dibenzofuran	pg/g	28	3	27	0.1	2.8	0.3	2.7
1,2,3,7,8,9-Cl6-Dibenzofuran	pg/g	3	--	3.4	0.1	0.3		0.34
2,3,4,6,7,8-Cl6-Dibenzofuran	pg/g	38	4.3	24	0.1	3.8	0.43	2.4
1,2,3,4,6,7,8-Cl7-Dibenzofuran	pg/g	1200	30	790	0.01	12	0.3	7.9
1,2,3,4,7,8,9-Cl7-Dibenzofuran	pg/g	71	2.5	51	0.1	7.1	0.25	5.1
1,2,3,4,6,7,8,9-Cl8-Dibenzofuran	pg/g	3800	95	2400	0.0001	0.38	0.0095	0.24
					Total TEQ	**259.18**	**11.31**	**205.63**

pg/g = part per trillion
1,000 pg/g = 1 part per billion

Table 4
Former Central Steel Drum Facility
Summary of Dioxin Sample Analysis of Sediment

LABORATORY DATA					TEQ FACTOR	RECALCULATED TOXICITY EQUIV.		
Sample ID		A11-SED-9A	A11-SED-6	A11-SED-3A				
Lab ID	Units	AB46790	AB46791	AB46792				
Sample Collection Date								
Depth (ft bgs)		0-6 inches	0-6 inches	0-6 inches	From	A11-SED-9A	A11-SED-6	A11-SED-3A
Matrix		Sediment	Sediment	Sediment	WHO, 1998			
Dioxins/Furans								
2,3,7,8-Cl4-Dibenzo-p-dioxin	pg/g	84	66	130	1	84	66	130
1,2,3,7,8-Cl5-Dibenzo-p-dioxin	pg/g	47	27	35	1	47	27	35
1,2,3,4,7,8-Cl6-Dibenzo-p-dioxin	pg/g	82	37	46	0.1	8.2	3.7	4.6
1,2,3,6,7,8-Cl6-Dibenzo-p-dioxin	pg/g	280	150	170	0.1	28	15	17
1,2,3,7,8,9-Cl6-Dibenzo-p-dioxin	pg/g	210	110	140	0.1	21	11	14
1,2,3,4,6,7,8-Cl7-Dibenzo-p-dioxin	pg/g	9600	3100	4100	0.01	96	31	41
1,2,3,4,6,7,8,9-Cl8-Dibenzo-p-dioxin	pg/g	130000	28000	44000	0.0001	13	2.8	4.4
2,3,7,8-Cl4-Dibenzofuran (DB5)	pg/g	450	280	440	0.1	45	28	44
2,3,7,8-TCDF (DB225)	pg/g	220	170	180		---	---	---
1,2,3,7,8-Cl5-Dibenzofuran	pg/g	89	62	96	0.05	4.45	3.1	4.8
2,3,4,7,8-Cl5-Dibenzofuran	pg/g	280	170	240	0.5	140	85	120
1,2,3,4,7,8-Cl6-Dibenzofuran	pg/g	690	350	430	0.1	69	35	43
1,2,3,6,7,8-Cl6-Dibenzofuran	pg/g	200	110	160	0.1	20	11	16
1,2,3,7,8,9-Cl6-Dibenzofuran	pg/g	7.4	7.2	12	0.1	0.74	0.72	1.2
2,3,4,6,7,8-Cl6-Dibenzofuran	pg/g	300	150	240	0.1	30	15	24
1,2,3,4,6,7,8-Cl7-Dibenzofuran	pg/g	2900	1500	1600	0.01	29	15	16
1,2,3,4,7,8,9-Cl7-Dibenzofuran	pg/g	290	120	130	0.1	29	12	13
1,2,3,4,6,7,8,9-Cl8-Dibenzofuran	pg/g	7900	1900	2500	0.0001	0.79	0.19	0.25
					Total TEQ	**665.18**	**361.51**	**528.25**

pg/g = part per trillion

1,000 pg/g = 1 part per billion

Table 5
Former Central Steel Drum Facility
Summary of Round 1 and Round 2 Groundwater Analyses

Area	Sample Identification	Sample Location	Estimated Sample Depth	Proposed Analysis	Method
Round 1	MW-1 MW-2 MW-3 MW-4 MW-5 MW-6 MW-7 MW-8 MW-9 MW-10 MW-11 MW-12	Across the water table	About 2.5 ft below the ground surface	TCL VOCs + 10 TCL SVOCs TCL pesticides TCL PCBs Chlorophenoxy herbicides TPH PP metals	8260B 8270C 8081A 8082 8151 418.1 6010B/7470A
Area of Concern 12	MW-1D MW-2D MW-3D MW-4D MW-5D MW-6D MW-7D MW-8D MW-9D MW-10D MW-11D MW-12D	Deeper water-bearing zone	About 25 ft below the ground surface	TCL VOCs + 10 TCL SVOCs TCL pesticides TCL PCBs Chlorophenoxy herbicides TPH PP metals	8260B 8270C 8081A 8082 8151 418.1 6010B/7470A

Table 5 (concluded)
Former Central Steel Drum Facility
Summary of Round 1 and Round 2 Groundwater Analyses

Area	Sample Identification	Sample Location	Estimated Sample Depth	Proposed Analysis	Method
Round 2 Area of Concern 12	MW-1 MW-2 MW-3 MW-4 MW-5 MW-6 MW-7 MW-8 MW-9 MW-10 MW-11 MW-12	Across the water table	About 2.5 ft below the ground surface	TCL VOCs + 10 TCL SVOCs PP metals	8260B 8270C 6010B/7470A
	MW-1D MW-2D MW-3D MW-4D MW-5D MW-6D MW-7D MW-8D MW-9D MW-10D MW-11D MW-12D	Deeper water-bearing zone	About 25 ft below the ground surface	TCL VOCs + 10 TCL SVOCs PP metals	8260B 8270C 6010B/7470A

Proposed scope of work from URS, June 1, 2004b

Round 1 and Round 2 samples will be collected at least one month apart

TCL= Target compound list

PP = Priority pollutant

PCB = Polychlorinated biphenyl

TPH = Total petroleum hydrocarbon

SVOCs = Semivolatile organic compounds

VOCs = Volatile organic compounds

Table 6
Former Central Steel Drum Facility
Summary of Proposed Soil Sample QA/QC Analysis

SOIL

SITE LOCATION	TCL VOCs	TCL Pesticides	TCL PCBs	TPH	PP Metals	TCL PAHs	Dioxin
Areas of Concern	60	60	60	0	0	0	0
Historic Fill	0	0	9	34	34	9	0
Dioxin Delineation	0	0	0	0	0	0	6
Total	60	60	69	34	34	9	6

Quality Assurance and Quality Control Samples *

Trip Blank	5	0	0	0	0	0	0
Field Blank	5	5	5	5	5	0	0
Duplicate	3	3	3	2	2	1	0
Matrix Spike	3	3	3	2	2	1	0
Matrix Spike Duplicate	3	3	3	2	2	1	0
Total	19	14	14	11	11	3	0
Estimated Grand Total	79	74	83	45	45	12	6

* QA/QC Sample Assumptions:
One trip blank for each cooler containing VOC samples.
One field blank for each day of sampling for each matrix.
One duplicate sample for every 20 samples of each matrix.
One MS sample and one MSD sample for every 20 samples of each matrix.

TCL= Target compound list
PP = Priority pollutant
PCB = Polychlorinated biphenyl
PAH = polynuclear aromatic hydrocarbon
QA/QC = Quality Assurance and Quality Control
TPH = total petroleum hydrocarbon

Table 7
Former Central Steel Drum Facility
Summary of Proposed Groundwater Sample Analysis

GROUNDWATER

SITE LOCATION	TCL VOCs	TCL SVOCs	TCL Pesticides	TCL PCBs	Chlorophenoxy Herbicides	PP Metals	TPH
Round 1 Samples	24	24	24	24	24	24	24
Round 2 Samples	24	24	0	0	0	24	0
Total	48	48	24	24	24	48	24

Quality Assurance and Quality Control Samples *

Trip Blank	14	0	0	0	0	0	0
Field Blank	14	14	7	7	7	14	7
Duplicate	3	3	2	2	2	3	2
Matrix Spike	3	3	2	2	2	3	2
Matrix Spike Duplicate	3	3	2	2	2	3	2
Total	37	23	13	13	13	23	13

Estimated Grand Total	85	71	37	37	37	71	37

* QA/QC Sample Assumptions:
One trip blank for each cooler containing VOC samples.
One field blank for each day of sampling for each matrix.
One duplicate sample for every 20 samples of each matrix.
One MS sample and one MSD sample for every 20 samples of each matrix.

TCL= Target compound list
PP = Priority pollutant
PCB = Polychlorinated biphenyl
TPH = total petroleum hydrocarbon

Scope of Work for Remedial Investigation
The City of Newark, New Jersey

Central Steel Drum Site
843 Delancy Street, Newark New Jersey
Prepared by URS Corporation, February 4, 2005

1.0 BACKGROUND

URS Corporation, on behalf of the City of Newark, submitted the following two documents for the former Central Steel Drum Facility (site) to the New Jersey Department of Environmental Protection (NJDEP) for review, comment, and approval:

- Remedial Investigation Workplan Addendum for Groundwater and Groundwater Screening Sample Results Summary Report (URS, June 2004a)
- Revised Soil Remedial Investigation Results Summary Report (URS, June 2004b)

These documents described the results of previous investigations at the site and provided summary recommendations for additional work. The NJDEP approved the proposed scope of work in both documents and requested a formal detailed scope of work and cost estimate for the remaining soil, sediment, and groundwater remedial investigation. Accordingly, this document summarizes the approved scope of work and provides a detailed cost estimate to continue the remedial investigation at the site.

2.0 SITE DESCRIPTION

The site is located in Essex County, Newark, New Jersey, at the intersection of Doremus Avenue and Delancy (or Delancey) Street, and occupies Block 5074, Lot 1 on the City of Newark tax maps. The NJDEP known contaminated site list (KCSL) identification number for the former Central Steel Drum Facility is NJD011482577.

3.0 PROJECT OBJECTIVES

The results of the most recent site characterization work (URS, June 1, 2004a; June 1, 2004b) indicate that data gaps in the remedial investigation still exist. Additional vertical and horizontal soil delineation is required at the following areas of concern:

- AOC 2: Drum Conveyor/De-heading Shop
- AOC 3: Abandoned Truck Trailer Area
- AOC 4: Drum Flip Operation Area

Also, dioxin impacts to soil and sediment are documented, although the extent and magnitude of the problem are not defined. Characterization of historic fill is required, as

well as completion of an ecological evaluation of the site. Groundwater quality in the shallow and deeper water-bearing zones is not well characterized.

Therefore, the objective of this project is to complete the remedial investigation, fill the remaining environmental data gaps, and develop remedial strategies for the site.

4.0 NJDEP-APPROVED SCOPE OF WORK

URS proposes to continue the remedial investigation at the site in accordance with the approved work scope described in the documents listed above in Section 1.0 and with NJDEP regulations and guidelines.

URS will perform the following activities for this project:

- Obtain Site Access
- Contractor procurement, well permitting, and contacting "call-before-you-dig" services for utility markouts
- Site reconnaissance for access and layout of site sampling grid
- Preparation of a site-specific health and safety plan
- Radiation and organic vapor monitoring during site work
- Well sealing of four existing shallow wells and four deep wells
- Collection of subsurface soil samples from areas of concern
- Historic fill investigation
- Dioxin Investigation of soil and sediment? per pg 6
- Installation of 12 shallow and 12 deep monitoring wells.
- Collection of 24 monitoring well groundwater samples – two separate rounds of sampling
- Laboratory analyses of soil and groundwater samples
- Waste characterization and disposal of soil cuttings
- Land survey of monitoring wells
- Conduct an ecological assessment

- Data compilation and evaluation of field and laboratory data, and preparation of a Remedial Investigation Report

- Preparation of a Deed Notice (deferred until after the field program)

A summary description of these activities is provided in the sections below.

4.1 Site Access

The site is currently unoccupied with restricted access to the public established by fences and concrete barriers. The City of Newark will provide access for URS, the NJDEP, and project contractors when the field work begins.

4.2 Contractor Procurement

URS will contract with an established New Jersey licensed driller, a certified New Jersey laboratory, and a New Jersey Licensed Land surveyor for this project. Bids will be requested from firms known to be experienced and qualified by URS to obtain competitive prices. A qualified Waste Disposal Contractor will also be contracted to remove and dispose of drill cuttings generated during this investigation. The drilling contractor will alert the New Jersey One Call (800-272-1000) for utility markouts before subsurface work begins.

4.3 Site Reconnaissance and Site Grid

URS will conduct a site reconnaissance to observe access conditions, assess logistics for drilling operations, and to establish a site grid. The site grid will be referenced to site features such as building corners or fence posts, using a tape measure and compass, so that sampling points and other site features can be accurately located. After the field work, a land surveyor will formally survey certain sampling points (e.g., monitoring well locations) to enhance the site grid (see Section 4.13, below). The location and condition of the eight existing monitoring wells installed in 1984 will be assessed and the wells will be sealed.

4.4 Health and Safety Plan

A site-specific health and safety plan will be prepared before site activities in accordance with Occupational Safety and Health Administration (OSHA) 29 CFR 1910 and 29 CFR 1926. The results of previous investigations, as well as discussions with NJDEP, indicate that dioxin and radiological material in soil are potential constituents of concern. The health and safety plan will address these concerns.

4.5 Radiation and Organic Vapor Monitoring

At previous meetings, the NJDEP requested that radiological monitoring of soil and ambient air be conducted at the site. A Victoreen 190 model (or equivalent) survey meter

will be used to conduct radiation screening. A photoionization detector (PID) will be used to screen ambient air and environmental samples for organic vapors.

4.6 Well Sealing

The eight existing monitoring wells, installed in 1984, are reportedly in bad condition and are no longer usable (URS, June 1, 2004a – Section 3.1). The wells will be sealed in accordance with N.J.A.C. 7:9D "Well Construction and Maintenance; Sealing of Abandoned Wells". Two of the wells (MW-103 and MW-203), however, are reportedly destroyed (Environics, 1987). If the wells can be found, they will be sealed. If the wells cannot be found, the City of Newark will notify the NJDEP Bureau of Water Allocation at (609) 292-2957.

4.7 Areas of Concern AOC 2, AOC 3, and AOC 4 Soil Investigation

URS will advance a total of 20 soil borings at the following areas of concern (Figure 1):

- AOC 2: Drum Conveyor/De-heading Shop – 7 borings
- AOC 3: Abandoned Truck Trailer Area – 8 borings
- AOC 4: Drum Flip Operation Area – 5 borings

Soil samples will be collected to delineate the horizontal and vertical extent of soil contamination detected previously in these areas. The samples will be analyzed for VOCs, pesticides, and PCBs (Table 1).

The samples collected for the analysis of VOCs will be collected following the methodology provided in N.J.A.C. 7:26E-3.6(a)4 "Soil Samples Analyzed for Volatile Organics". VOC soil samples will also be collected and preserved using NJDEP (February 1997) methanol extraction/preservation procedures.

The soil scope of work (URS, June 1, 2004b) specified that the following three samples will be collected from each boring:

1. directly above the depth at which the previous sample being delineated was collected (using visual observations and PID readings)

2. the depth at which the previous sample being delineated was collected

3. in the 6-inch interval above the shallow groundwater

Because of the relatively shallow depth (less than 2.5 ft) to the water table, however, there may not be sufficient soil volume to collect three discrete samples from any one sample boring. If so, a second or third boring will be advanced immediately adjacent to the primary boring in the event that additional soil volume is needed. VOC samples will only be collected from the primary boring. An estimated total of 60 soil samples will be collected from the three areas of concern

The location, composition, and other relevant features of the soil samples will be logged and described using the Unified Soil Classification System (USCS). Samples will be screened in the field using a survey meter for radiation and a photoionization detector (PID or equivalent) for organic vapors (see Section 4.5).

A direct push drill rig and macrocore samplers with dedicated acetate liners will be used to advance the borings and collect the soil samples. Based on the anticipated shallow depth to groundwater, URS anticipates that each boring will be advanced to about 2-3 ft below grade.

4.8 Historic Fill Investigation

URS will advance four soil borings for every acre of site in accordance with N.J.A.C. 7:26E-4.6(b) "Remedial Investigations of Landfills and Historic Fill Material." The locations of the historic fill borings are shown in Figure 1. The borings will extend to native soils below the fill layer (to establish the thickness of historic fill across the site) and one sample will be collected from each boring, biased toward depth intervals with observed contamination or high PID readings. If PID reading above background levels or other signs of obvious contamination are not observed, the fill sample will be collected from immediately above the water table, or immediately above the native clay layer if groundwater is not encountered. If the composition of the fill changes significantly in any one boring (e.g., ash versus demolition debris), then samples of both fill types will be collected for analysis.

The samples will be analyzed for expedited total petroleum hydrocarbon (TPH) and normal priority pollutant (PP) metals analyses. Polynuclear aromatic hydrocarbons (PAHs) and polychlorinated biphenyls (PCBs) will be analyzed on 25% of the total number of fill samples (estimated 9 samples), biased toward those samples with the highest TPH concentrations. An estimated 34 samples will be collected for the historic fill investigation (Table 2).

The location, composition, and other relevant features of the soil fill samples will be logged and described using the USCS. Samples will be screened in the field using a survey meter for radiation and a photoionization detector (PID or equivalent) for organic vapors (see Section 4.5).

A direct push drill rig and macrocore samplers with dedicated acetate liners will be used to advance the borings and collect historic fill samples. Based on descriptions of the local geology (Environics, 1987), URS anticipates that each boring will be advanced to between 4 and 8 feet below grade.

4.9 Dioxin Investigation of Soil

Soil action levels for dioxin are not established by NJDEP, but some human health risk-based levels (industrial scenarios) published by the US Environmental Protection Agency

(EPA) vary from 0.019 parts per billion (EPA Region III, October 2004) to 20 parts per billion (EPA, April 1998).

Three soil and three sediment samples were collected during the 2001 investigation for dioxin analyses (URS, June 1, 2004b) and each of the six samples had toxic equivalent dioxin values (WHO, 1998) ranging between 0.011 parts per billion (ppb) to 0.66 ppb (Table 3 and Table 4). The relatively widespread distribution of the samples and the fact that 6 out of 6 samples tested positive for dioxin suggests that this constituent could exist across the site and extend to off-site areas in the south ditch area (Figure 1). Therefore, a focused dioxin delineation strategy is not proposed at this time. Instead, URS proposes to conduct a dioxin "screening" assessment to cover the entire site.

Six surface soil samples (0 to 6 inches) will be collected near property boundaries (Figure 1) to evaluate the distribution of the dioxin across the site, assess the potential for off-site migration, and to investigate a potential incinerator/smokestack source or use of incinerator ash as backfill for the distribution of this chemical across the site. The samples will be submitted for the analysis of dioxin using method 8290.

4.10 Installation of Monitoring Wells

Twelve shallow (water table) monitoring wells will be installed in the fill unit, which based on information from Environics (1984; 1987), ranges in thickness from 4 ft to 12 ft. The water table is reportedly between 1.0 and 2.5 ft below the ground. A NJDEP variance will be required for the installation of protective casings for the shallow monitoring wells because of the shallow depth of water table (i.e., above the frost line) and the inability to set a concrete collar to a depth of 3 ft below grade.

Twelve deep wells will be installed in the red-brown silty sand unit directly below the confining clay/silt layer (Environics, 1984; 1987). The top of the red-brown silty sand unit is estimated to be between 17 ft and 22 ft below grade. Six inch casings will be grouted into the clay unit, as shown in the NJDEP Field Sampling Procedures Manual (May 1992), before installation of each deep monitoring well.

Installation and development of the monitoring wells will follow the procedures described in Section 4.1.2 of the Workplan Addendum (URS, June 2004a) and work will be performed in accordance with NJDEP requirements (e.g., NJDEP 1992). The locations of the proposed monitoring wells are shown in Figure 1.

4.11 Collection of groundwater Samples

Two rounds of groundwater samples will be collected from the twenty-four new monitoring wells using the conventional three-purge technique, as described in Section 4.2 of the Workplan Addendum (URS, June 1, 2004a).

The first round of groundwater samples (Round 1) will be analyzed for volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), PCBs, pesticides,

chlorophenoxy herbicides, TPH, and PP metals. Round 2 samples will be analyzed for VOCs, SVOCs, and PP metals only, if the results of the Round 1 samples indicate that the other parameters (i.e., PCBs, pesticides, etc.) are not affecting groundwater quality (Table 5). URS will inform the NJDEP of the Round 1 analytical results through a summary report before collecting Round 2 samples.

Measurements of pH, specific conductance, turbidity, dissolved oxygen, and temperature will be made on groundwater samples in the field.

4.12 Laboratory Analyses

The samples will be analyzed for TCL/TAL parameters using SW-846 methodologies and established chain of custody protocols. Quality assurance and quality control (QA/QC) samples (e.g., trip blanks, blind duplicates, etc.) will be collected for this investigation in accordance with NJDEP (1992, 1997) guidance (Table 6 and Table 7)

The laboratory deliverables will be the Reduced Laboratory Data Deliverables –Non-USEPA/CLP Methods. The laboratory will deliver the analytical results in a standard turnaround time (TAT) of 3 to 4 weeks, with the exception of expedited (3 day) TPH analyses of historic fill samples (see Section 4.8).

4.13 Waste characterization and disposal of soil cuttings

Soil cutting generated using the direct push method for the Area of Concern Investigation (Section 4.7) and Historic Fill Investigation (Section 4.8) will be returned to their respective boreholes.

Soil cuttings generated from the fill layer during installation of monitoring wells will be segregated and contained in DOT-approved 55 gallon drums and removed off site for disposal. Drill cuttings from the native soils (i.e., clay layer and underlying silty sand unit) will be assumed to be uncontaminated (after field screening) and will be left on site.

The drummed fill material will be sampled in accordance with NJDEP requirements and in accordance with the acceptance requirements of a Resource Conservation and Recovery Act (RCRA) permitted disposal or recycling facility. PCB and dioxin analyses of the contained material will be required. The NJDEP will be provided with the name of the facility before material is moved off site. Typical acceptance requirements include performing Toxicity Characteristic Leachate Procedure (TCLP) analysis and analyses of other RCRA characteristics at a frequency of one test per 1,000 tons of material. For costing purposes, the material is assumed to be RCRA non hazardous.

After the sample results have been obtained and the material has been accepted at the disposal facility, load out of the material will begin. The soil will be loaded onto trucks and the loads will be tracked with a bill of lading. An agent of the City of Newark will sign the bill of lading.

4.14 Land survey of monitoring wells

A New Jersey-licensed surveyor will conduct a survey to locate the new monitoring wells and other sampling points both horizontally and vertically. The features will be mapped using the 1983 New Jersey State Plane Coordinate System (North American Datum in feet) and the National American Vertical Datum of 1988 (NAVD 88). The data will be plotted on computerized (AutoCAD) maps.

4.15 Ecological Evaluation

A baseline ecological evaluation will be performed by an experienced ecologist in accordance with the requirements of N.J.A.C. 7:26E-3.11. A reconnaissance-level site visit will be made to confirm and document any environmentally sensitive natural resources on or near the site. The NJDEP Geographical Information Systems (GIS) database (NJDEP, 1996) indicates that herbaceous wetlands, associated with a drainage ditch, extend eastward from the site to Newark Bay. PCB and dioxin compounds were previously detected in the ditch sediments (URS, 2001b). A qualitative risk assessment will be made by comparing risk-based screening criteria to chemicals detected in soil, sediment, surface water, and groundwater. An assessment of the potential risks to ecological receptors will be documented.

4.16 Reporting

URS will evaluate the field and analytical data and prepare a remedial investigation report in accordance with N.J.A.C. 7:26E – 4.8 "Remedial Investigation Report". The report will contain an evaluation of the data, as well as a compilation of the backup data (e.g., field logs, laboratory summary reports, chain of custody forms, etc.). Chemical data will be compared against appropriate NJDEP standards, criteria, and guidance (i.e., NJDEP 1993; 1999). The remedial investigation report will present conclusions and recommendations for the site.

Laboratory reports containing the raw analytical data will be submitted to the NJDEP under separate cover. The analytical data will also be submitted as an electronic deliverable (Hazsite deliverable) using the format outlined in detail in the NJDEP Electronic Data Interchange (EDI) Manual (April, 1999).

4.17 Deed Notice

The horizontal and vertical extent of soil contamination is not completely defined, a remedial strategy for the site is not developed, and implementation or construction of any engineering control has not begun. A deed notice, therefore, will be prepared in accordance with N.J.A.C. 7:27E – 8. "Engineering and Institutional Controls" after "restricted areas" are defined for the site and after any soil remedial actions or soil remedies are completed.

5.0 SCHEDULE

URS estimates that the remedial investigation will require nearly eight months from the time of notice to proceed to submittal of a draft remedial investigation report to the NJDEP. The critical path for this investigation consists of the installation of 24 monitoring wells (including 12 double-cased wells) and the collection and analyses of two separate rounds of groundwater samples. The estimated project schedule is shown in Figure 2.

6.0 COST ESTIMATE

The NJDEP previously approved certain work items at the site, which were not conducted while awaiting NJDEP approval of the Revised RI Workplan. The current remaining budget, consisting of URS professional service fees and NJDEP oversight fees, is $37,700.

The total estimated cost for this project following the scope of work described above is **$241,381.85**. This total amount also reflects the $37,700 debit of the remaining project budget. A detailed cost breakdown is shown Table 8.

References:

Environics, Inc., June 1, 1984, Soil Borings & Monitoring Wells, Central Steel Drum Company, 704 Doremus Avenue, Newark, NJ 07105.

Environics, Inc., 1987, [only sections of the report in URS files], report provides geologic and hydrogeologic data for the Central Steel Drum Site.

New Jersey Administrative Code, 1993, Chapter 7:9-6, Water Technical Programs, Groundwater Quality Standards, Adopted January 7.

New Jersey Administrative Code, Amended February 2003, Chapter 7:26E, Technical Requirements for Site Remediation.

New Jersey Department of Environmental Protection, May 1992, Field Sampling Procedures Manual.

New Jersey Department of Environmental Protection, March 7, 1996, New Jersey Geographic Information System CD-ROM Series 1, Volume 3.

New Jersey Department of Environmental Protection, February 1997, Methodology for the Field Extraction/Preservation of Soil Samples with Methanol for Volatile Organic Compounds.

New Jersey Department of Environmental Protection, April 1999, Site Remediation Program, Electronic Data Interchange Manual.

New Jersey Department of Environmental Protection, last revised May 12, 1999, Soil Cleanup Criteria: Residential Direct Contact, Non-residential Direct Contact, and Impact to Groundwater.

New Jersey Department of Environmental Protection, August 4, 2003, Electronic mail from NJDEP to URS Corporation, City of Newark, and others, re: Preliminary comments on Central Steel Drum May 1, 2003 RIR.

Occupational Safety and Health Administration (OSHA), Title 29 Code of Federal Regulations (CFR), Part 1910.120, Hazardous Waste Operations and Emergency Response Standard and 29 CFR 1926, Safety and Health Regulations for Construction.

URS Corporation, June 1, 2004a, Remedial Investigation Workplan Addendum for Groundwater and Groundwater Screening Sample Results Summary Report, Central Steel Drum Facility, 843-871 Delancy Street, Newark, New Jersey.

URS Corporation, June 1, 2004b, Revised Soil Remedial Investigation Results Summary Report, Central Steel Drum Facility, 843-871 Delancy Street, Newark, New Jersey.

US Environmental Protection Agency, April 13, 1998, Approach for Addressing Dioxin in Soil at CERCLA and RCRA Sites, OSWER Directive 9200.4-26.

US Environmental Protection Agency, updated October 2004, Human Health Risk Assessment, Risk Based Concentration Table.

World Health Organization (WHO), European Centre for Environment and Health, International Programme on Chemical Safety, May 25-29, 1998, Executive Summary, Assessment of the Health Risk of Dioxins: Re-evaluation of the Tolerable Daily Intake (TDI).

Table 1
Former Central Steel Drum Facility
Summary of AOC Soil Sample Analyses

October-November 2001 Data							
Area	**Previous Sample Identification**	**Previous Sample Depth**	**Nominal Depth to Water**	**Proposed Delineation Sample**	**Proposed Delineation Sample Depth**	**Proposed Analyses**	**Method**
Area of Concern 2	A2-SS-9	1 ft	2 ft	A2-SS-9-B1-A A2-SS-9-B1-B A2-SS-9-B1-C A2-SS-9-B2-A A2-SS-9-B2-B A2-SS-9-B2-C A2-SS-9-B3-A A2-SS-9-B3-B A2-SS-9-B3-C A2-SS-9-B4-A A2-SS-9-B4-B A2-SS-9-B4-C	0-5 ft 1.0-1.5 ft 1.5-2.0 ft 0-5 ft 1.0-1.5 ft 1.5-2.0 ft 0-5 ft 1.0-1.5 ft 1.5-2.0 ft 0-5 ft 1.0-1.5 ft 1.5-2.0 ft	TCL VOCs + 10 TCL pesticides TCL PCBs	8260B 8081A 8082
	A2-SS-11	1 ft	2 ft	A2-SS-11-B1-A A2-SS-11-B1-B A2-SS-11-B1-C A2-SS-11-B2-A A2-SS-11-B2-B A2-SS-11-B2-C A2-SS-11-B3-A A2-SS-11-B3-B A2-SS-11-B3-C	0-5 ft 1.0-1.5 ft 1.5-2.0 ft 0-5 ft 1.0-1.5 ft 1.5-2.0 ft 0-5 ft 1.0-1.5 ft 1.5-2.0 ft	TCL VOCs + 10 TCL pesticides TCL PCBs	8260B 8081A 8082

Table 1 (concluded)
Former Central Steel Drum Facility
Summary of AOC Soil Sample Analyses

October-November 2001 Data							
Area	Previous Sample Identification	Previous Sample Depth	Nominal Depth to Water	Proposed Delineation Sample	Proposed Delineation Sample Depth	Proposed Analyses	Method
Area of Concern 3	A3-SS-6 A3-SS-7 A3-SS-10 A3-SS-11 A3-SS-15 A3-SS-18	2 ft 1 ft 1.5 ft 2 ft 2 ft 0.75 ft	2.5 ft 2.5 ft 2 ft 2.5 ft 2.5 ft 1.25 ft	A3-B1-A A3-B1-B A3-B1-C A3-B2-A A3-B2-B A3-B2-C A3-B3-A A3-B3-B A3-B3-C A3-B4-A A3-B4-B A3-B4-C A3-B5-A A3-B5-B A3-B5-C A3-B6-A A3-B6-B A3-B6-C A3-B7-A A3-B7-B A3-B7-C A3-B8-A A3-B8-B A3-B8-C	0.5-1.0 ft 1.5-2.0 ft 2.0-2.5 ft 0.5-1.0 ft 1.5-2.0 ft 2.0-2.5 ft 0.5-1.0 ft 1.5-2.0 ft 2.0-2.5 ft 0.5-1.0 ft 1.5-2.0 ft 2.0-2.5 ft 0.5-1.0 ft 1.5-2.0 ft 2.0-2.5 ft 0.5-1.0 ft 1.5-2.0 ft 2.0-2.5 ft 0.5-1.0 ft 1.5-2.0 ft 2.0-2.5 ft 0.5-1.0 ft 1.5-2.0 ft 2.0-2.5 ft	TCL VOCs + 10 TCL pesticides TCL PCBs	8260B 8081A 8082
Area of Concern 4	A4-SS-3	2 ft	2.75 ft	A4-SS-3-B1-A A4-SS-3-B1-B A4-SS-3-B1-C A4-SS-3-B2-A A4-SS-3-B2-B A4-SS-3-B2-C A4-SS-3-B3-A A4-SS-3-B3-B A4-SS-3-B3-C	0.5-1.0 ft 1.5-2.0 ft 2.0-2.5 ft 0.5-1.0 ft 1.5-2.0 ft 2.0-2.5 ft 0.5-1.0 ft 1.5-2.0 ft 2.0-2.5 ft	TCL VOCs + 10 TCL pesticides TCL PCBs	8260B 8081A 8082
	A4-SS-4	2 ft	3 ft	A4-SS-4-B1-A A4-SS-4-B1-B A4-SS-4-B1-C A4-SS-4-B2-A A4-SS-4-B2-B A4-SS-4-B2-C	0.5-1.0 ft 1.5-2.0 ft 2.0-2.5 ft 0.5-1.0 ft 1.5-2.0 ft 2.0-2.5 ft	TCL VOCs + 10 TCL pesticides TCL PCBs	8260B 8081A 8082

Proposed scope of work from URS, June 1, 2004b and NJDEP, August 4, 2003

Previous Data from URS, June 1, 2004b

AOC = Area of concern

TCL= Target compound list

PP = Priority pollutant

PCB = Polychlorinated biphenyl

PAH = polynuclear aromatic hydrocarbon

TPH = total petroleum hydrocarbon

Table 2
Former Central Steel Drum Facility
Summary of Historic Fill (Soil) and Dioxin Soil Sample Analyses

Area	Sample Identification	Nominal Sample Depth	Nominal Depth to Water	Proposed Analyses	Method
Historic fill across the site	HF-1 through HF-34	4-12 ft	2.5 ft	TPH PP metals TCL PCBs (25%) TCL PAHs (25%)	418.1 6010B/7471A 8082 8270C
Along site perimeter	D-1 through D-6	0-6 inches	2.5 ft	Dioxin	8290

Proposed scope of work from URS, June 1, 2004b; NJDEP, August 4, 2003; URS communication with NJDEP regarding dioxin analyses, January 26, 2005

TCL= Target compound list

PP = Priority pollutant

PCB = Polychlorinated biphenyl

PAH = polynuclear aromatic hydrocarbon

TPH = total petroleum hydrocarbon

PCB and PAH analyses will be performed on 25% of the samples, biased toward those showing highest TPH concentrations

Table 3
Former Central Steel Drum Facility
Summary of Dioxin Sample Analysis of Soil

LABORATORY DATA					TEQ FACTOR From WHO, 1998	RECALCULATED TOXICITY EQUIV.		
Sample ID	Units	A5-SS-6	A5-SS-8	A5-SS-12		A5-SS-6	A5-SS-8	A5-SS-12
Lab ID		AB44872	AB44873	AB44871				
Sample Collection Date		10/18/2001	10/18/2001	10/18/2001				
Depth (ft bgs)		1.5'	1'	1'				
Matrix		Soil CONC	Soil CONC	Soil CONC				
Dioxins/Furans								
2,3,7,8-Cl4-Dibenzo-p-dioxin	pg/g	60	0.77	19	1	60	0.77	19
1,2,3,7,8-Cl5-Dibenzo-p-dioxin	pg/g	13	0.94	9	1	13	0.94	9
1,2,3,4,7,8-Cl6-Dibenzo-p-dioxin	pg/g	24	1.2	17	0.1	2.4	0.12	1.7
1,2,3,6,7,8-Cl6-Dibenzo-p-dioxin	pg/g	250	5.3	170	0.1	25	0.53	17
1,2,3,7,8,9-Cl6-Dibenzo-p-dioxin	pg/g	110	3.1	53	0.1	11	0.31	5.3
1,2,3,4,6,7,8-Cl7-Dibenzo-p-dioxin	pg/g	8300	160	8700	0.01	83	1.6	87
1,2,3,4,6,7,8,9-Cl8-Dibenzo-p-dioxin	pg/g	67000	3800	85000	0.0001	6.7	0.38	8.5
2,3,7,8-Cl4-Dibenzofuran (DB5)	pg/g	48	10	75	0.1	4.8	1	7.5
1,2,3,7,8-Cl5-Dibenzofuran	pg/g	18	2.9	19	0.05	0.9	0.145	0.95
2,3,4,7,8-Cl5-Dibenzofuran	pg/g	28	6.6	42	0.5	14	3.3	21
1,2,3,4,7,8-Cl6-Dibenzofuran	pg/g	120	9.3	100	0.1	12	0.93	10
1,2,3,6,7,8-Cl6-Dibenzofuran	pg/g	28	3	27	0.1	2.8	0.3	2.7
1,2,3,7,8,9-Cl6-Dibenzofuran	pg/g	3	--	3.4	0.1	0.3		0.34
2,3,4,6,7,8-Cl6-Dibenzofuran	pg/g	38	4.3	24	0.1	3.8	0.43	2.4
1,2,3,4,6,7,8-Cl7-Dibenzofuran	pg/g	1200	30	790	0.01	12	0.3	7.9
1,2,3,4,7,8,9-Cl7-Dibenzofuran	pg/g	71	2.5	51	0.1	7.1	0.25	5.1
1,2,3,4,6,7,8,9-Cl8-Dibenzofuran	pg/g	3800	95	2400	0.0001	0.38	0.0095	0.24
					Total TEQ	**259.18**	**11.31**	**205.63**

pg/g = part per trillion
1,000 pg/g = 1 part per billion

Table 4
Former Central Steel Drum Facility
Summary of Dioxin Sample Analysis of Sediment

LABORATORY DATA					TEQ FACTOR	RECALCULATED TOXICITY EQUIV.		
Sample ID		A11-SED-9A	A11-SED-6	A11-SED-3A				
Lab ID	Units	AB46790	AB46791	AB46792				
Sample Collection Date								
Depth (ft bgs)		0-6 inches	0-6 inches	0-6 inches	From	A11-SED-9A	A11-SED-6	A11-SED-3A
Matrix		Sediment	Sediment	Sediment	WHO, 1998			
Dioxins/Furans								
2,3,7,8-Cl4-Dibenzo-p-dioxin	pg/g	84	66	130	1	84	66	130
1,2,3,7,8-Cl5-Dibenzo-p-dioxin	pg/g	47	27	35	1	47	27	35
1,2,3,4,7,8-Cl6-Dibenzo-p-dioxin	pg/g	82	37	46	0.1	8.2	3.7	4.6
1,2,3,6,7,8-Cl6-Dibenzo-p-dioxin	pg/g	280	150	170	0.1	28	15	17
1,2,3,7,8,9-Cl6-Dibenzo-p-dioxin	pg/g	210	110	140	0.1	21	11	14
1,2,3,4,6,7,8-Cl7-Dibenzo-p-dioxin	pg/g	9600	3100	4100	0.01	96	31	41
1,2,3,4,6,7,8,9-Cl8-Dibenzo-p-dioxin	pg/g	130000	28000	44000	0.0001	13	2.8	4.4
2,3,7,8-Cl4-Dibenzofuran (DB5)	pg/g	450	280	440	0.1	45	28	44
2,3,7,8-TCDF (DB225)	pg/g	220	170	180		---	---	---
1,2,3,7,8-Cl5-Dibenzofuran	pg/g	89	62	96	0.05	4.45	3.1	4.8
2,3,4,7,8-Cl5-Dibenzofuran	pg/g	280	170	240	0.5	140	85	120
1,2,3,4,7,8-Cl6-Dibenzofuran	pg/g	690	350	430	0.1	69	35	43
1,2,3,6,7,8-Cl6-Dibenzofuran	pg/g	200	110	160	0.1	20	11	16
1,2,3,7,8,9-Cl6-Dibenzofuran	pg/g	7.4	7.2	12	0.1	0.74	0.72	1.2
2,3,4,6,7,8-Cl6-Dibenzofuran	pg/g	300	150	240	0.1	30	15	24
1,2,3,4,6,7,8-Cl7-Dibenzofuran	pg/g	2900	1500	1600	0.01	29	15	16
1,2,3,4,7,8,9-Cl7-Dibenzofuran	pg/g	290	120	130	0.1	29	12	13
1,2,3,4,6,7,8,9-Cl8-Dibenzofuran	pg/g	7900	1900	2500	0.0001	0.79	0.19	0.25
					Total TEQ	**665.18**	**361.51**	**528.25**

pg/g = part per trillion

1,000 pg/g = 1 part per billion

Table 5
Former Central Steel Drum Facility
Summary of Round 1 and Round 2 Groundwater Analyses

Area	Sample Identification	Sample Location	Estimated Sample Depth	Proposed Analysis	Method
Round 1	MW-1 MW-2 MW-3 MW-4 MW-5 MW-6 MW-7 MW-8 MW-9 MW-10 MW-11 MW-12	Across the water table	About 2.5 ft below the ground surface	TCL VOCs + 10 TCL SVOCs TCL pesticides TCL PCBs Chlorophenoxy herbicides TPH PP metals	8260B 8270C 8081A 8082 8151 418.1 6010B/7470A
Area of Concern 12	MW-1D MW-2D MW-3D MW-4D MW-5D MW-6D MW-7D MW-8D MW-9D MW-10D MW-11D MW-12D	Deeper water-bearing zone	About 25 ft below the ground surface	TCL VOCs + 10 TCL SVOCs TCL pesticides TCL PCBs Chlorophenoxy herbicides TPH PP metals	8260B 8270C 8081A 8082 8151 418.1 6010B/7470A

Table 5 (concluded)
Former Central Steel Drum Facility
Summary of Round 1 and Round 2 Groundwater Analyses

Area	Sample Identification	Sample Location	Estimated Sample Depth	Proposed Analysis	Method
Round 2 **Area of Concern 12**	MW-1 MW-2 MW-3 MW-4 MW-5 MW-6 MW-7 MW-8 MW-9 MW-10 MW-11 MW-12	Across the water table	About 2.5 ft below the ground surface	TCL VOCs + 10 TCL SVOCs PP metals	8260B 8270C 6010B/7470A
	MW-1D MW-2D MW-3D MW-4D MW-5D MW-6D MW-7D MW-8D MW-9D MW-10D MW-11D MW-12D	Deeper water-bearing zone	About 25 ft below the ground surface	TCL VOCs + 10 TCL SVOCs PP metals	8260B 8270C 6010B/7470A

Proposed scope of work from URS, June 1, 2004b

Round 1 and Round 2 samples will be collected at least one month apart

TCL= Target compound list

PP = Priority pollutant

PCB = Polychlorinated biphenyl

TPH = Total petroleum hydrocarbon

SVOCs = Semivolatile organic compounds

VOCs = Volatile organic compounds

Table 6
Former Central Steel Drum Facility
Summary of Proposed Soil Sample QA/QC Analysis

SOIL

SITE LOCATION	TCL VOCs	TCL Pesticides	TCL PCBs	TPH	PP Metals	TCL PAHs	Dioxin
Areas of Concern	60	60	60	0	0	0	0
Historic Fill	0	0	9	34	34	9	0
Dioxin Delineation	0	0	0	0	0	0	6
Total	60	60	69	34	34	9	6

Quality Assurance and Quality Control Samples *

Trip Blank	5	0	0	0	0	0	0
Field Blank	5	5	5	5	5	0	0
Duplicate	3	3	3	2	2	1	0
Matrix Spike	3	3	3	2	2	1	0
Matrix Spike Duplicate	3	3	3	2	2	1	0
Total	19	14	14	11	11	3	0
Estimated Grand Total	79	74	83	45	45	12	6

* QA/QC Sample Assumptions:

One trip blank for each cooler containing VOC samples.

One field blank for each day of sampling for each matrix.

One duplicate sample for every 20 samples of each matrix.

One MS sample and one MSD sample for every 20 samples of each matrix.

TCL= Target compound list

PP = Priority pollutant

PCB = Polychlorinated biphenyl

PAH = polynuclear aromatic hydrocarbon

QA/QC = Quality Assurance and Quality Control

TPH = total petroleum hydrocarbon

Table 7
Former Central Steel Drum Facility
Summary of Proposed Groundwater Sample Analysis

GROUNDWATER

SITE LOCATION	TCL VOCs	TCL SVOCs	TCL Pesticides	TCL PCBs	Chlorophenoxy Herbicides	PP Metals	TPH
Round 1 Samples	24	24	24	24	24	24	24
Round 2 Samples	24	24	0	0	0	24	0
Total	48	48	24	24	24	48	24

Quality Assurance and Quality Control Samples *

Trip Blank	14	0	0	0	0	0	0
Field Blank	14	14	7	7	7	14	7
Duplicate	3	3	2	2	2	3	2
Matrix Spike	3	3	2	2	2	3	2
Matrix Spike Duplicate	3	3	2	2	2	3	2
Total	37	23	13	13	13	23	13

Estimated Grand Total	85	71	37	37	37	71	37

* QA/QC Sample Assumptions:

One trip blank for each cooler containing VOC samples.

One field blank for each day of sampling for each matrix.

One duplicate sample for every 20 samples of each matrix.

One MS sample and one MSD sample for every 20 samples of each matrix.

TCL= Target compound list

PP = Priority pollutant

PCB = Polychlorinated biphenyl

TPH = total petroleum hydrocarbon

Table 8
Cost Estimate for 2005 Remedial Investigation
Former Central Steel Drum Facility, Newark, New Jersey

Task Description	Expenses										Labor Costs	Other Direct Costs	Total Cost
	Unit	Qty	Unit Cost	Total Cost	Prog. Director $175.00	Proj $105.00	Asst Proj $85.00	Senior Staff $75.00	Staff/ Drafting $65.00	Tech $45.00			
LABORATORY													
lump sum (719 analyses)	ls	1	$55,000.00	$55,000.00								$55,000.00	$55,000.00
Total												$55,000.00	$55,000.00
Waste Disposal													
Field Inspector									20		$1,400.00		$1,400.00
20 drums - non hazardous	ls	1	$6,000.00	$6,000.00								$6,000.00	$6,000.00
Total											$1,400.00	$6,000.00	$7,400.00
Land Survey													
Field Inspector									20		$1,400.00		$1,400.00
Surveyors - 24 wells and assorted site features	ls	1	$4,000.00	$4,000.00								$4,000.00	$4,000.00
Total											$1,400.00	$4,000.00	$5,400.00
Ecological Assessment													
Ecologists						40		24	40		$8,800.00		$8,800.00
Supplies, maps, etc	ls	1	$500.00	$500.00								$500.00	$500.00
Data Compilation													
Prepare Ecologic Evaluation Report													
Total											$8,800.00	$500.00	$9,300.00
DELIVERABLES													
Data Validation ???													
NJDEP Hazsite Deliverables (about 160 samples)						4	24		40		$5,260.00		$5,260.00
Data Compilation and evaluation							24	40	40	16	$8,560.00		$8,560.00
Prepare Site Drawings							16		24		$3,040.00		$3,040.00
Prepare Draft Remedial Investigation Report					16	24	80	80	24		$19,800.00		$19,800.00
Prepare Final Remedial Investigation Report						16	20		16		$4,500.00		$4,500.00
Document Prep. Costs (binders, tabs, shipping)	ls	1	$450.00	$450.00								$450.00	$450.00
Reproduction (500 pgs/25 copies)	page	12500	$0.06	$750.00								$750.00	$750.00
Total											$41,160.00	$1,200.00	$42,360.00
PROJECT TOTAL					40	214	224	722	424	16	**$133,060.00**	**$133,637.00**	**$266,697.00**

URS Profession Services	$266,697.00
URS Remaining Budget for Professional Services	-$29,000.00
Subtotal	$237,697.00
NJDEP Oversight Fee 5%	$11,884.85
URS Remaining Budget for NJDEP Oversight	-$8,700.00
Subtotal	$3,184.85
NJEDA Administrative Fee	$500.00
Grand Total	**$241,381.85**

Table 8
Cost Estimate for 2005 Remedial Investigation
Former Central Steel Drum Facility, Newark, New Jersey

Task Description	Expenses										Labor Costs	Other Direct Costs	Total Cost
	Unit	Qty	Unit Cost	Total Cost	Proj. Director $175.00	Proj $105.00	Asst Proj $85.00	Senior Staff $75.00	Staff/ Drafting $70.00	Tech $45.00			
Project Management (10 months)													
Project Management, admin, meetings					24	80					$12,600.00		$12,600.00
Total											$12,600.00		$12,600.00
Mobilization													
Site Access								10			$750.00		$750.00
Contractor Coordination							24				$2,040.00		$2,040.00
Equipment Preparation/Call before you dig								8			$600.00		$600.00
Site Reconnaissance/grid layout						10	20		20		$4,150.00		$4,150.00
Prepare Health and Safety Plan						16	16				$3,040.00		$3,040.00
													$0.00
Field supplies	ls	1	$100.00	$100.00								$100.00	$100.00
Mileagecand tolls (30 miles round trip)	each	4	$12.75	$51.00								$51.00	$51.00
Total											$10,580.00	$151.00	$10,731.00
Drilling													
Borings, wells, Historic Fill Investigation	ls	1	$52,100.00	$52,100.00								$52,100.00	$52,100.00
													$0.00
Drilling Inspection						24		420	40		$36,820.00		$36,820.00
Field supplies	ls	1	$500.50	$500.50								$500.50	$500.50
Health and Safety Equipment - PID Rental	month	2	$800.00	$1,600.00								$1,600.00	$1,600.00
Health and Safety Equipment - Rad Meter Rental	month	2	$475.00	$950.00								$950.00	$950.00
Mileagecand tolls (30 miles round trip)	each	42	$12.75	$535.50								$535.50	$535.50
Sample Shipment	cooler	20	$75.00	$1,500.00								$1,500.00	$1,500.00
Total											$36,820.00	$57,186.00	$94,006.00
Groundwater Sampling (Round 1)													
Groundwater Sampling Team								70	70		$10,150.00		$10,150.00
Groundwater sampling Equipment	ls	1	$3,000.00	$3,000.00								$3,000.00	$3,000.00
Sample shipment	cooler	24	$75.00	$1,800.00								$1,800.00	$1,800.00
Total											$10,150.00	$4,800.00	$14,950.00
Groundwater Sampling (Round 2)													
Groundwater Sampling Team								70	70		$10,150.00		$10,150.00
Groundwater sampling Equipment	ls	1	$3,000.00	$3,000.00								$3,000.00	$3,000.00
Sample shipment	cooler	24	$75.00	$1,800.00								$1,800.00	$1,800.00
Total											$10,150.00	$4,800.00	$14,950.00

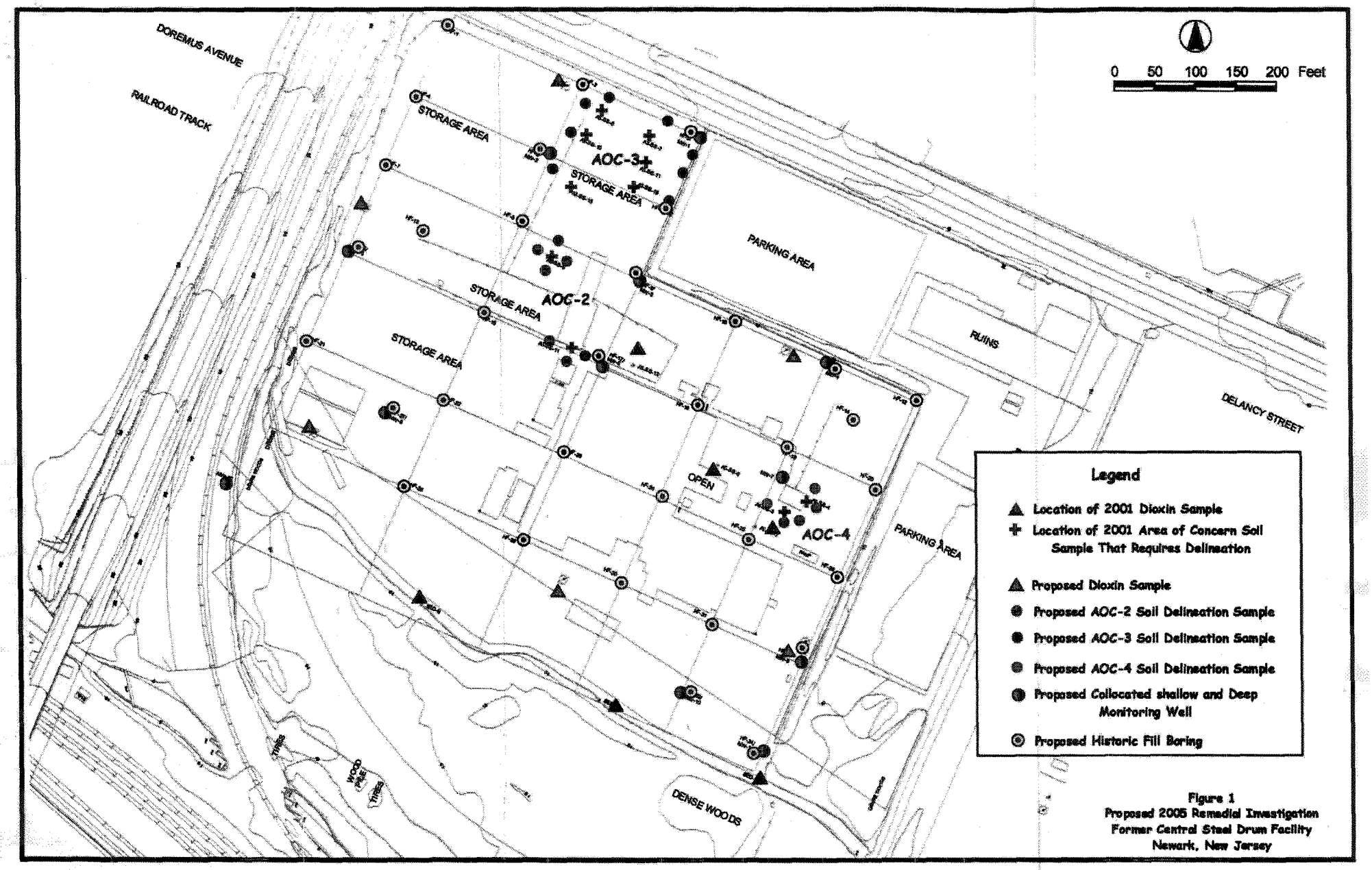
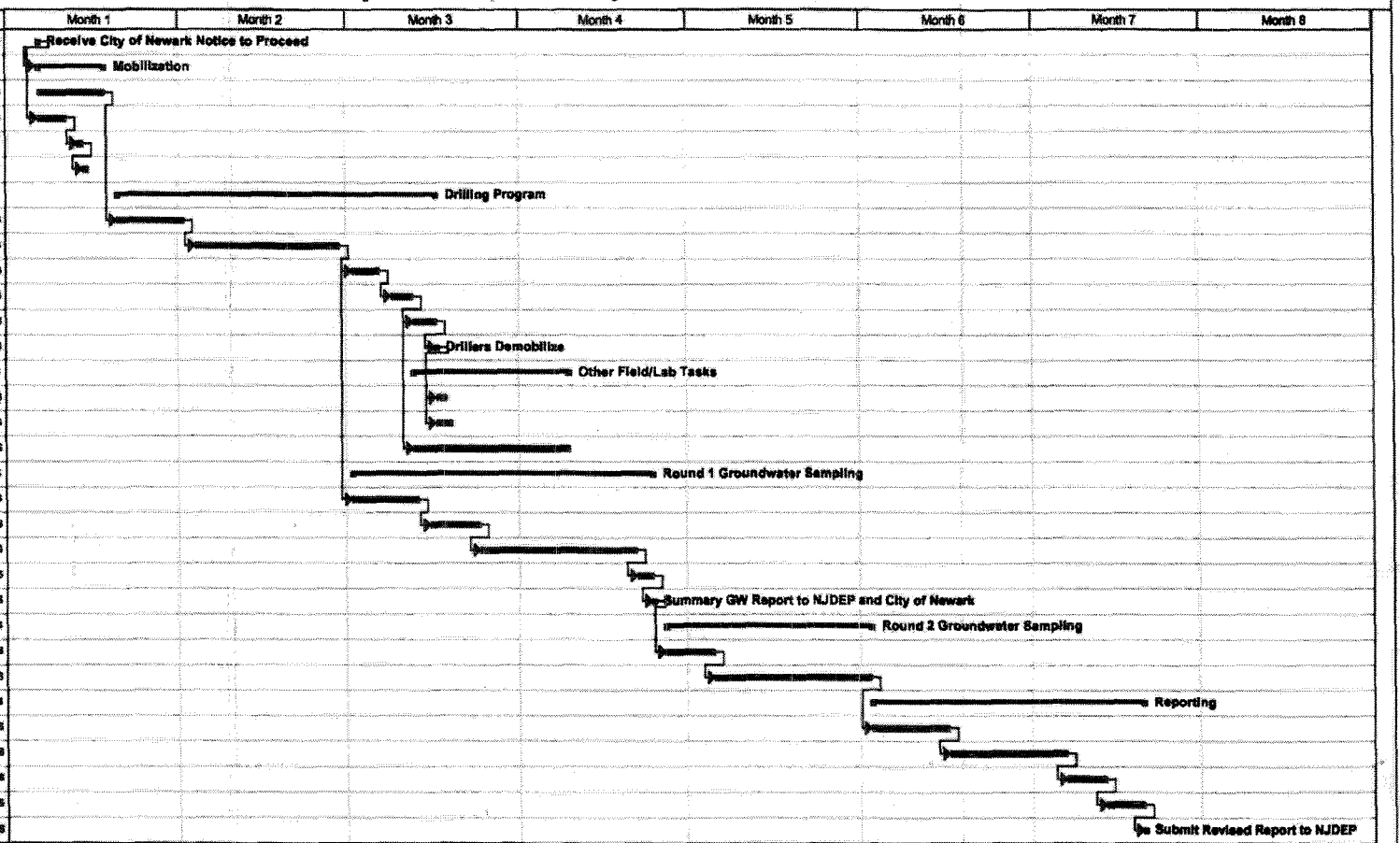


Figure 1
Proposed 2005 Remedial Investigation
Former Central Steel Drum Facility
Newark, New Jersey

Figure 2
Estimated Project Schedule for 2005
Former Central Steel Drum Facility Remedial Investigation
City Of Newark, New Jersey

ID	Task Name	Duration
1	Receive City of Newark Notice to Proceed	0 days
2	**Mobilization**	10 days
3	Mobilize - Utility Markouts and Well permits	10 days
4	Prepare Health and Safety Plan	5 days
5	Site Reconnaissance	1 day
6	Ecological Evaluation Site Walkover	1 day
7	**Drilling Program**	41 days
8	Install Casing for deep wells	10 days
9	Install 24 monitoring wells	20 days
10	Advance Historic Fill Borings	5 days
11	Advance Area of Concern Borings	4 days
12	Seal Eight Monitoring Wells	2 days
13	Drillers Demobilize	0 days
14	**Other Field/Lab Tasks**	20 days
15	Waste Characterization Soil Cuttings	2 days
16	Land Survey	3 days
17	Laboratory Analyses Soil Samples	20 days
18	**Round 1 Groundwater Sampling**	40 days
19	Two-week Aquifer Stabilization Period	10 days
20	Ground water Sampling Round 1	7 days
21	Laboratory Analyses R1 Groundwater Samples	20 days
22	Summary Review Round 1 Groundwater Data	3 days
23	Summary GW Report to NJDEP and City of Newark	0 days
24	**Round 2 Groundwater Sampling**	27 days
25	Groundwater Sampling Round 2	7 days
26	Laboratory Analyses R2 Groundwater Samples	20 days
27	**Reporting**	35 days
28	Data Compilation and Site Characterization	10 days
29	Prepare Draft Report for City Of Newark Review	15 days
30	City of Newark review Draft Report	5 days
31	Revise Draft Report	5 days
32	Submit Revised Report to NJDEP	0 days



URS Corporation
Project: Central Steel Drum RI
Date: Fri 2/4/05 CSD_RI_Ver2.mpp

Task — Critical Task — Milestone — summary

ARCADIS

City of Newark/Glopak Inc. Brownfield Redevelopment Project Briefing

Agenda
March 14, 2007
1:00 PM

Objective: Provide the NJ DEP Deputy Commissioner and other NJ DEP representatives with an overview of the proposed Brownfield Redevelopment Project at 704-738 Doremus Avenue, Block 5074, Lot 1, Newark, NJ, and ask for coordinated assistance to meet the Project's goals and schedule.

Attendees: Adam Zellner, Deputy Commissioner, *NJ DEP*
Gary Sondermeyer, Director of Operations, *NJ DEP and other NJ DEP representatives*
Pablo Fonseca, Chief of Staff, *City of Newark*
Harold Martin, Sr., President, *Glopak, Inc.*
Denise Chamberlain, Director of Risk Management, *ARCADIS U.S., Inc.*
Michael Hansen, Vice President, *ARCADIS U.S., Inc.*
Christopher Sharpe, Associate Project Manager, *ARCADIS U.S., Inc.*

Introductions
Denise Chamberlain

Current Site Status
City of Newark Representative
- Location on "Chemical Row"
- City Owner & Environmental Remedial Activities
- Need for Additional Job Creation

Glopak, Inc.
Harold Martin, Sr.
- Brief History of Operations
- Business Expansion Objectives

Brownfield Redevelopment Proposal
Glopak Team
- City Resolution - Consistent with City of Newark's East Ward Redevelopment Plan
- Major Plan Elements/Conceptual Site Plan
- Preliminary Schedule of Performance

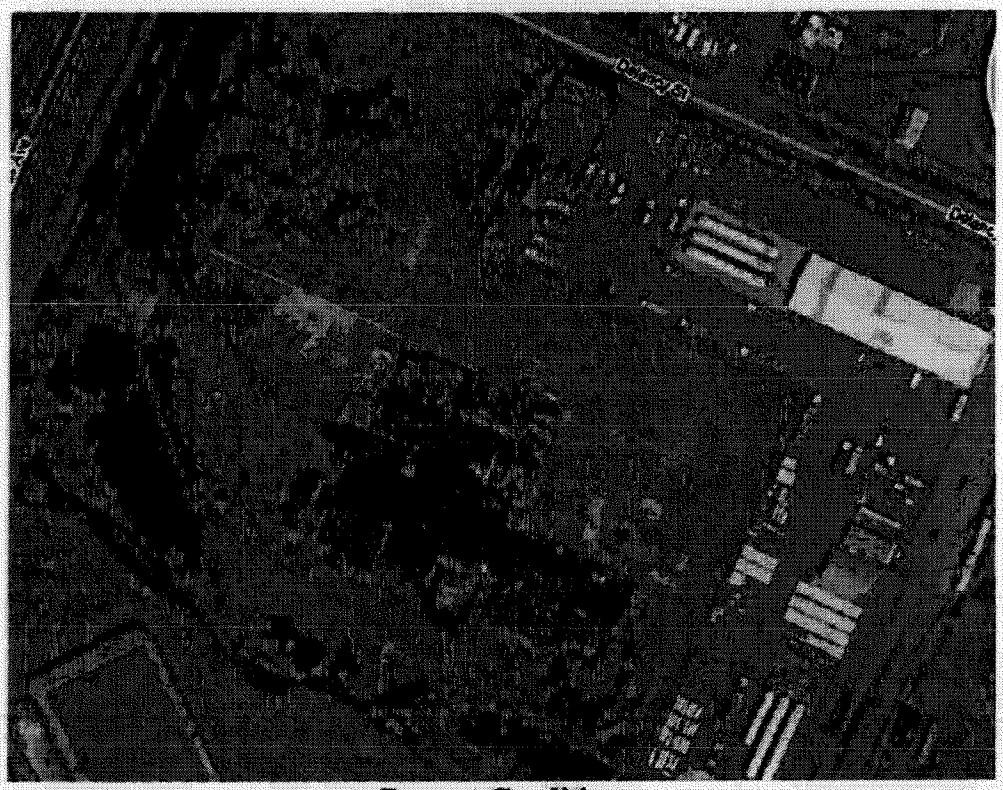
Environmental Concerns & Process Assistance
Glopak Team
- Identifying Environmental Issues and Concerns
- Developing Timely Solutions
- Requesting DEP Assistance and Path Forward

Questions & Follow-up Action Items
All

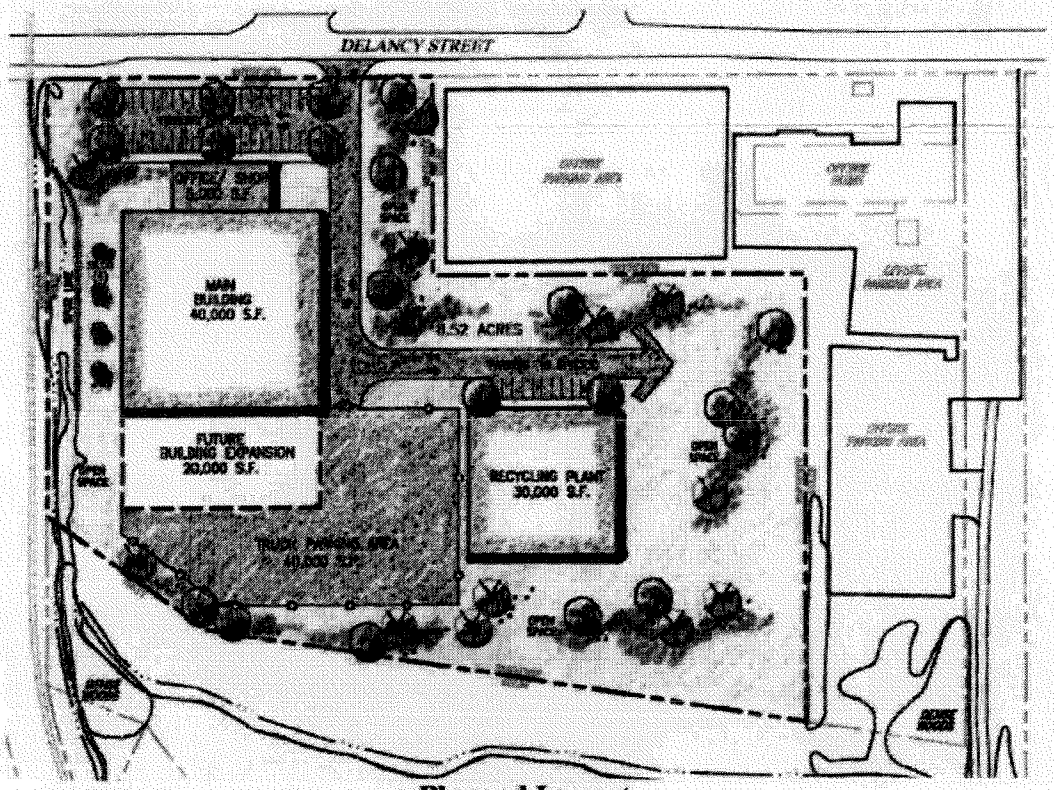
ARCADIS
Infrastructure, environment, facilities

Imagine the result

City of Newark/Glopak Inc. Brownfield Redevelopment Project Briefing
Former Central Drum Facility, Newark, NJ
March 14, 2007



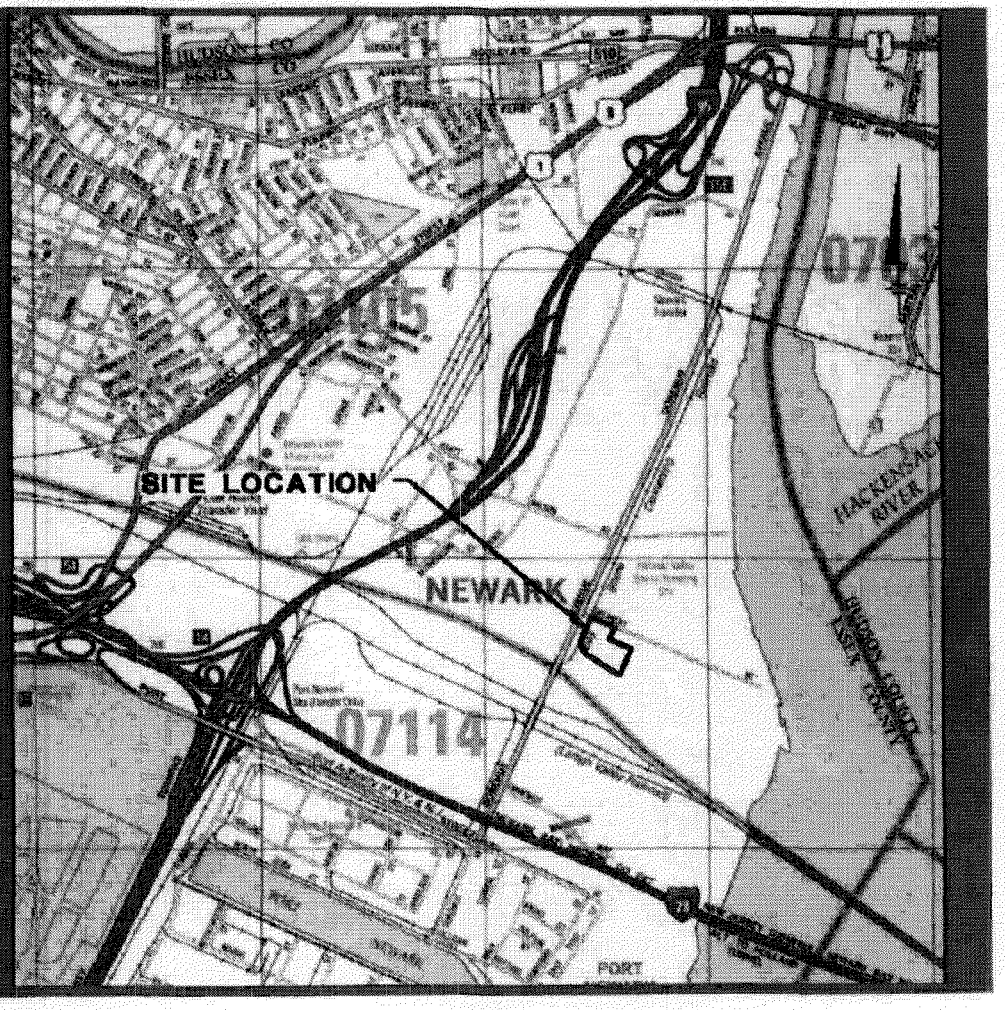
Present Condition



Planned Layout

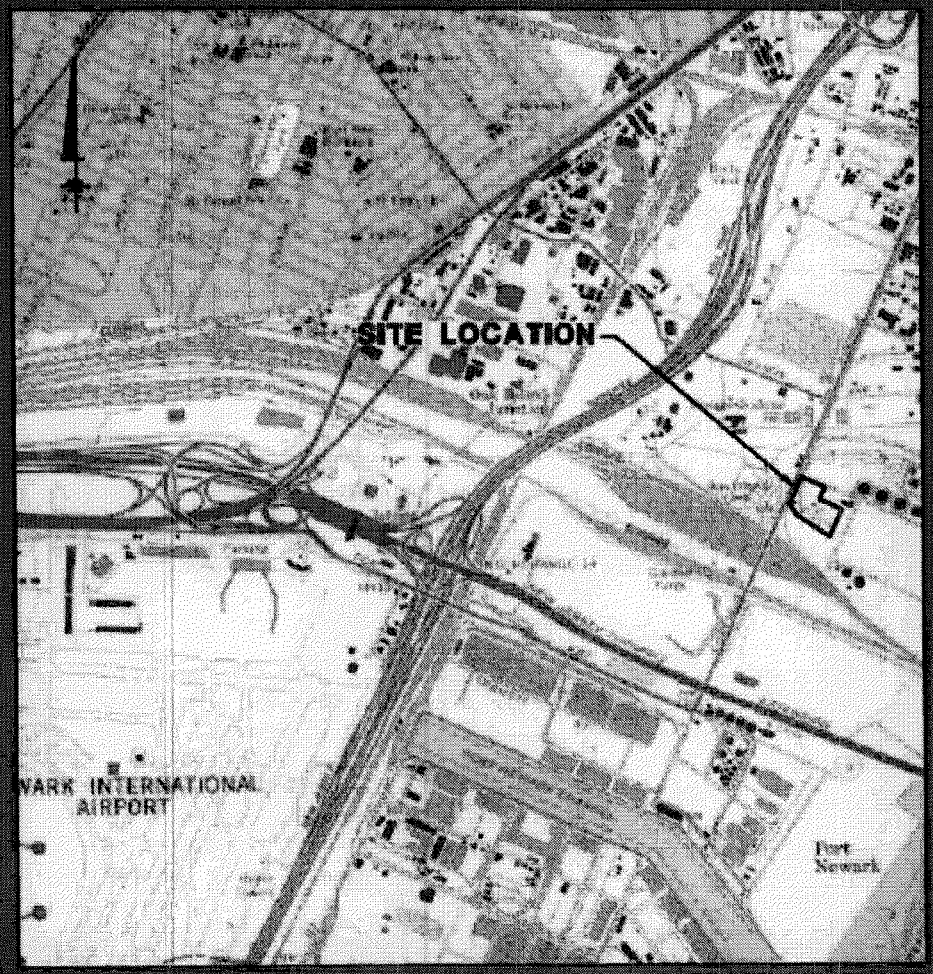
Site Location

- Intersection of Delancy Street and Doremus Avenue, Newark, New Jersey (Essex County)
- Identified as Block 5074 Lot1
- Approximately 8.5 acres of previously developed land

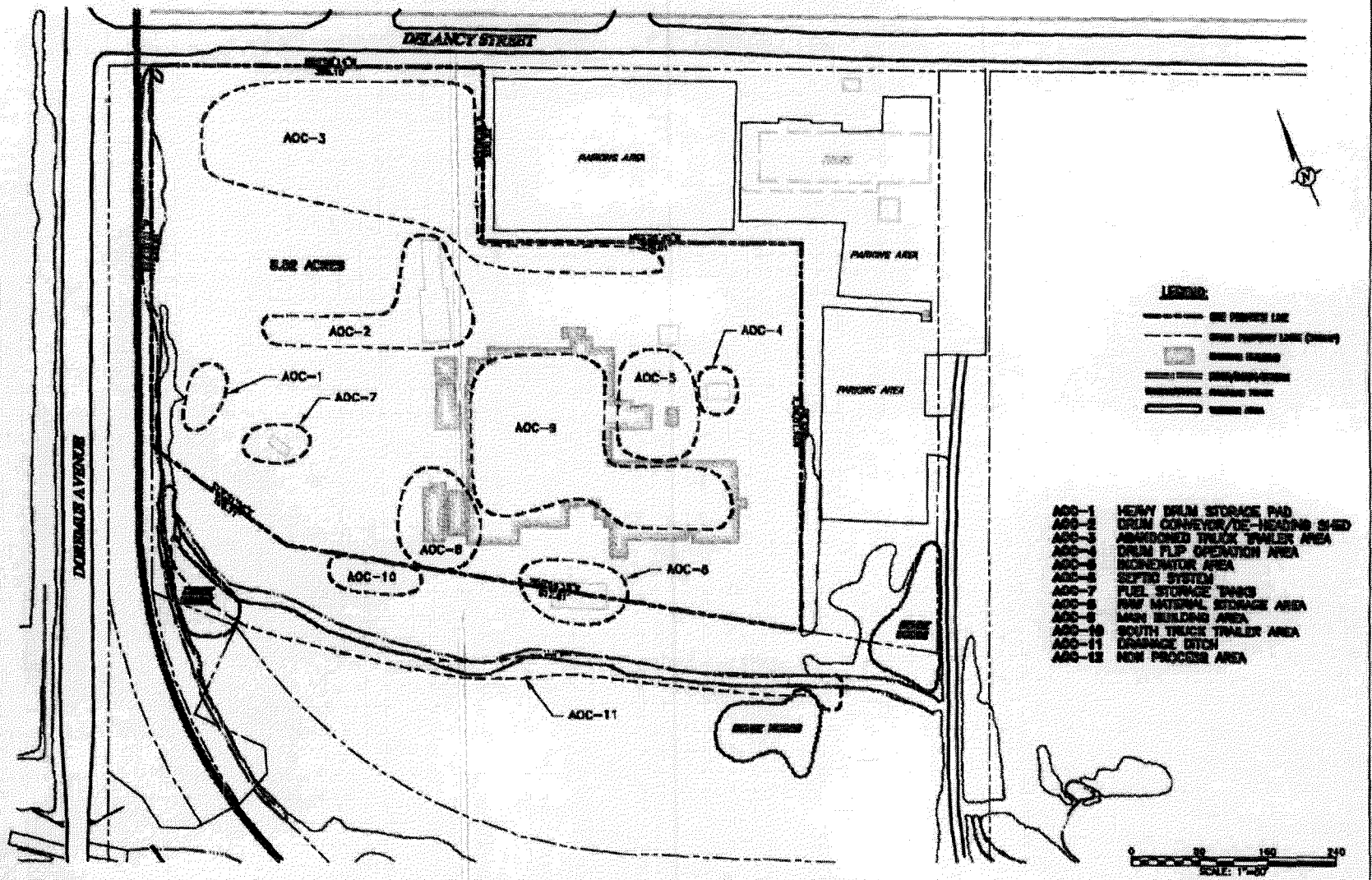


ARCADIS BBL

USGS Topographic Quad Map: Elizabeth



ARCADIS BBL



ARCADIS

GLOPAK CORPORATION
784 - 794 DORDMUS AVENUE SITE

SITE PLAN

KENILWORTH, NEW JERSEY

4 DECEMBER, 2006

1

FORM 1-4/98 2M Rev

7Rd 100406 7RN 092006

Resolution of the City of Newark, N.J.

NO. 7BD Date of Adoption OCT 04 2006

Resolution authorizing Mayor and Acting Director of Economic and Housing Development to designate Glopak Corporation, 296 South Street, Newark, New Jersey 07114, as Redeveloper of 704-738 Doremus Avenue a/k/a Block 5074, Lot 1, within the East Ward Redevelopment Area, for period of 120 days.

Approved as to Form and Legality on Basis of Facts Set Forth
Corporation Counsel

Factual contents certified by
Adam Zipin, Esq., Director
Title

Council Member: Augusto Amador

WHEREAS, Glopak Corporation ("Glopak" or "Redeveloper") has submitted a written proposal and made a formal presentation to the Department of Economic and Housing Development to construct a new manufacturing facility and headquarters on city owned real property located 704-738 Doremus Avenue aka Block 5074, Lot 1 within the East Ward Redevelopment Area; and

WHEREAS, Glopak has requested designation as Redeveloper of this property; and

WHEREAS, staff has reviewed the proposal submitted and has found same to be consistent with the requirements of the East Ward Redevelopment Plan 66APF060601; and

WHEREAS, the Redeveloper shall comply with all requirements from a design and construction standpoint as mandated within the East Ward Redevelopment Plan 66APF060601 and as may be required by the Central Planning Board of the City of Newark and Agency staff.

NOW, THEREFORE, BE IT RESOLVED BY THE MUNICIPAL COUNCIL OF THE CITY OF NEWARK THAT:

1) The recitations above are incorporated herein as if set forth at length.

2) Glopak Corporation is hereby designated as Redeveloper for the acquisition, rehabilitation and renovation of 704-738 Doremus Avenue aka Block 5074, Lot 1 and as depicted on the attached map within the East Ward Redevelopment Area, with the intention that a formal Redevelopment Agreement shall be negotiated between the Redeveloper and the Department of Economic and Housing Development, the terms and conditions of such agreement being subject to the review and approval of the Municipal Council and Corporation Counsel.

3) The designation granted herein is for a 120 day period, which period may be extended for a period not to exceed sixty (60) days if necessary at the sole discretion of the Director of Economic and Housing Development. If a formal Redevelopment Agreement has not been entered into between the City of Newark and Glopak Corporation by the end of this time period, the designation of Redeveloper given by this Resolution shall expire and become null and void.

4) Upon adoption of this resolution, Redeveloper is responsible for any and all costs incurred by the City of Newark associated with this project, including, but not limited to appraisal, title,

CITY CLERK'S OFFICE NEWARK, N.J.

FORM 4

2

TRN 092006
TRd 100406
OCT 04 2006

environmental, legal and all funds associated with necessary acquisition, relocation and/or demolition costs for the proposed project.

STATEMENT

Resolution authorizing the Mayor and Director of Economic and Housing Development to designate Glopak Corporation, 295 South Street, Newark, N.J. 07114, as Redeveloper of 704-738 Doremus Avenue aka Block 5074, Lot 1 within the East Ward Redevelopment for a period of 120 days.

CERTIFIED TO BY ME THIS
10th DAY OF OCTOBER, 2006

Do not use space below this line

RECORD OF COUNCIL VOTE ON FINAL PASSAGE

Council Member	AYE	NAY	NV	AB	Council Member	AYE	NAY	NV	AB	Council Member	AYE	NAY	NV	AB
Amador M	✓				Fauna	✓				Pino	✓			
Gonzalez	✓				Quintana, Vice Pres.	✓				Rene	✓			
James S	✓				Ramos	✓				Quintana, Pres.	✓			

✓ Indicates Vote AB - Absent NV - Not Voting

Adopted at a meeting of the Municipal Council of the City of Newark, N.J., OCT 04 2006

Mildred C. Crump
President of the Council

Robert R. Marasco
City Clerk

This Resolution when adopted must remain in the custody of the City Clerk. Certified copies are available.

MEMORANDUM OF AGREEMENT APPLICATION FOR NON-RESIDENTIAL PROPERTIES

Incident Number: 98-06-10-0020-44 Date: _____

A. Current Use: Agricultural_____ Industrial X Undeveloped_____ Commercial_____

Other_____

B. Site Name Former Central Steel Drum Facility

Street Address 704-738 Doremus Ave. & 843-871 Delancy St. Zip Code 07105

Municipality Newark County Essex

Tax Block and Lot Number(s) Block 5074 Lot 1

Latitude 40°42' 30" N Longitude 74°07' 30" W Acreage 8.5

Geographic Boundaries roads, drainage ditch and surrounding industrial

EPA ID # (if applicable) NJD011482577

C. Who will be executing this Agreement?

Name Harold Martin

Affiliation Glopak Corp.

Address 296 South Street

City Newark State NJ Zip Code_____

State of Incorporation NJ Corp. Status _____

Phone 973-344-0312 Email Address_____

D. What is the purpose for entering into this Agreement? (for example: to obtain either a "Whole Site" or "Area of Concern" NFA, demonstrate an offsite source exists, Brownfields re-development, DER or CEA amendments, etc). Attach additional sheet if needed:

Brownfields redevelopment: Developer is seeking "innocent purchaser" protection from Spill Act liability following completion of cleanup conducted in cooperation with the Department and receipt of No Further Action letter. Developer may also seek reimbursement through Brownfield Site Reimbursement Fund.

E. Provide a detailed description of the scope of the remediation for which Department oversight is being requested (areas of concern, media impacted, how it will be addressed, etc). Attach additional sheet if needed:

Site is active. MOA has been secured with current owner and investigative reporting has been filed with the Department. Impacts to soil, sediments, and groundwater have been documented for several areas of the site. Additional remedial activities including, but not limited to, excavation, soil and sediment delineation, surface water and groundwater monitoring, ecological evaluation, and institutional and engineering controls, will be described in the Remedial Action Work Plan to be submitted 30 days after property sale closure.

F. Select which phase(s) of the cleanup process are to be performed and what document(s) are to be submitted. A proposed schedule must be provided for each of the phases for which oversight is being requested.

REMEDIAL PHASE	DOCUMENTS	Projected Submittal Date
[ ] Preliminary Assessment	[ ] Preliminary Assessment Report	
[ ] Site Investigation	[ ] Site Investigation Report	
[ ] Remedial Investigation	[ ] Remedial Investigation Workplan	
[x] Remedial Action	[ ] Remedial Investigation Report	
	[ ] Remedial Action Selection Report	
	[x] Remedial Action Workplan	30 days after closure
	[x] Remedial Action Report	

G. Current Site Owner(s)

Name(s) City of Newark (Dept. of Engineering)

Firm _____ Telephone # 973-733-8520

Street Address 920 Broad Street

Municipality Newark State NJ Zip Code 07102

H. Current Business Operator(s)

Name(s) N/A

Firm _____

Telephone # _____ Street Address _____

Municipality _____ State _____ Zip Code _____

I. Current Business Owner(s) (if different than question Part G. or H.)

Name(s) N/A

Firm _____ Telephone # _____

Street Address _____

Municipality _____

State _____ Zip Code _____

J. Provide the information requested below on the previous owners of the site and the entities who operated at the site.

Name	Owner or Operator	From	To
Central Steel Drum Co.	Unknown	1951	1994

K. For those former Owner(s) and/or Operator(s)identified above (in paragraph H), give a brief discussion of all operations at the site, including but not limited to types of operations, materials used, waste generated and waste disposal techniques.

Formerly operated as drum reconditioning facility. Site is active.
Details provided to Department in previous investigative reports.

L. Are there currently or have there ever been any notices on the deed, which constitute a Declaration of Environmental Restriction (DER) pursuant to N.J.A.C. 7:26E-1 et seq.?

Yes ____ No ____ Unknown x

If yes, please state the name of the site as it was identified in the DER, the address, lot and block and EP ID number (if applicable) associated with the site.

M. Are there currently, or have there ever been, any above or below ground storage tanks at the site?

Yes x No ____ Unknown ____

N. Did the discharge impact groundwater?

Yes ____ No ____ Unknown x

O. What are the current operations at the site?

No operations are currently being conducted at the site.

P. What are the intended future uses of the site?

1. Manufacturing plastic bags
2. Recycling plastics

Q. Describe briefly the major types of contaminants found at the site and what media they affect.

PCBs, metals, VOCs, SVOCs, pesticides, and dioxins in various combinations in soil, groundwater, and sediment. Site is active. Details provided to Department in previous investigative reports.

R. Describe in detail how the contamination came to exist at the site. For example, were there past spills, landfill operations, industrial septic systems, USTs, depositions of fill material, etc.?

Impacts reportedly from past spills from drums, incinerator ash used as fill, historic fill material, and potentially leaking USTs. Site is active. Details provided in previous investigative reports.

S. List any civil/criminal actions taken against the owner/operator, managers or officials associated with the site for violations of any environmental laws or statutes.

Check here if no violations or alleged violation [ ]

Date of action Unknown

Section of law or statute violated _____

Type of enforcement action _____

Description of the violation _____

How was the violation or alleged violation resolved?

_____

T. List all permits currently held by the applicant for the site. (NJPDES, RCRA, etc.)

N/A

U. Has a Hazardous Discharge Site Remediation Fund Grant or Loan Application been filed with the Department?

Yes ____ No X

V. Has a loan/grant application pursuant to the Underground Storage Tank Finance Act been filed with the Department?

Yes ____ No X

W. Is the site located in a Neighborhood Empowerment Zone as defined in the New Jersey Urban Redevelopment Act ?

Yes ____ No X Unknown ____

X. Who will be the contact for all matters of this application?

Name Katherine Eyre Title Project Manager

Affiliation ARCADIS **Phone** 267-685-1800

Email katherine.eyre@arcadis-us.com

Address 6 Terry Drive, Suite 300 City/Town Newtown

County Bucks State PA Zip Code 18940

Y. Is the site currently, or has it ever been, under the oversight of any other program within the DEP?

Yes X No ____

If yes, explain:

Office of Brownfields Reuse, Site Remediation and Waste Management Program

Program Interest # 020061/020067

Case Manager Stephen Kehayes

Z. Do you consider this site to be a Brownfield as defined below:
Any former or current commercial or industrial site that is currently vacant or underutilized and on which there has been, or there is suspected to have been, a discharge of a contaminant.
OR is the remediation being conducted with the intent to pursue redevelopment?

Yes _X_ No ____

SIGNATORY *(Notarization of signature will be required upon completion of application)*

Date: 1/30/07 BY: Harold Martin Title: President/Owner

Signature

Harold Martin

Print Full Name Signed Above

Date: 1/30/07 BY: Susan L DeMarco

Notary Signature (application must be notarized)

COMMONWEALTH OF PENNSYLVANIA

Notarial Seal
Susan L. DeMarco, Notary Public
Falls Twp., Bucks County
My Commission Expires June 2, 2007

Member, Pennsylvania Association of Notaries

Bank of America

WILLIAM STAATS
Private Client Advisor
THE PRIVATE BANK

August 31st, 2006

Mr. Adam Zipkin, Esquire
Acting Director
Department of Economic and Housing Development
City of Newark
920 Broad Street
Newark, New Jersey 07114

RE: 704-738 Doremus Avenue aka Block 5074, lot 1

Dear Mr. Zipkin:

Our client Mr. Harold Martin, Sr. has requested I write you for the purpose of providing information regarding his financial strength and liquidity. He has shared his intentions of purchasing the above property for sale by the City of Newark.

I am Mr. Martin's accounts manager at Bank of America's Private Bank where he is a very valued client and has a very positive relationship. We manage personal banking accounts, trusts, investment management accounts and credit accounts for him and his family. His personal net worth and liquidity is well in excess of $5,000,000. He is financially very strong and capable of purchasing the real estate from the City of Newark being 704-738 Doremus Avenue, Block 5074, Lot 1. Mr. Martin informed us of a potential purchase price that is substantially less than his net worth and level of liquidity.

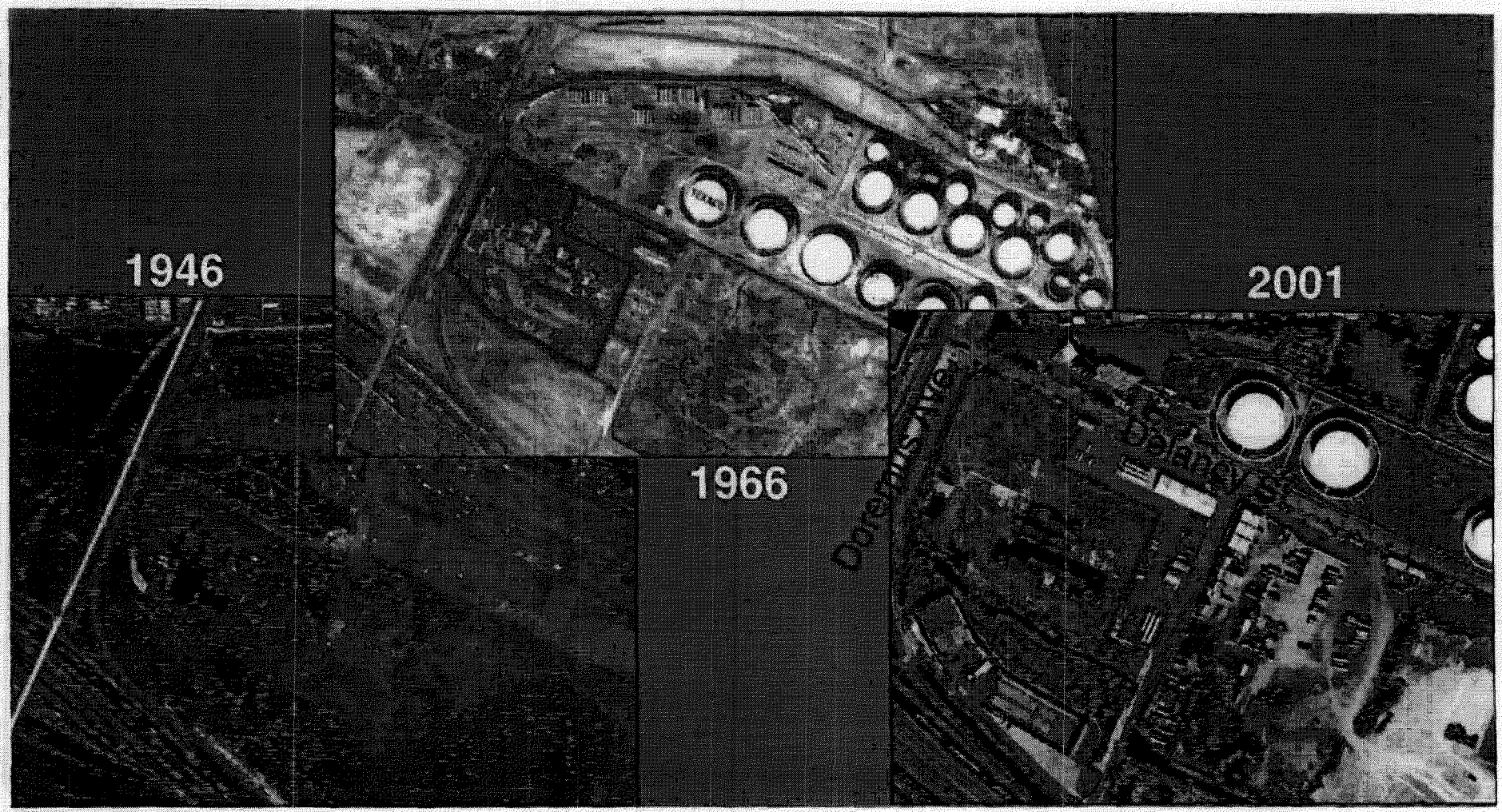
I hope you find this useful. Should you or your staff have any questions, please do not hesitate to call me.

Sincerely,

William M. Staats
Private Client Advisor

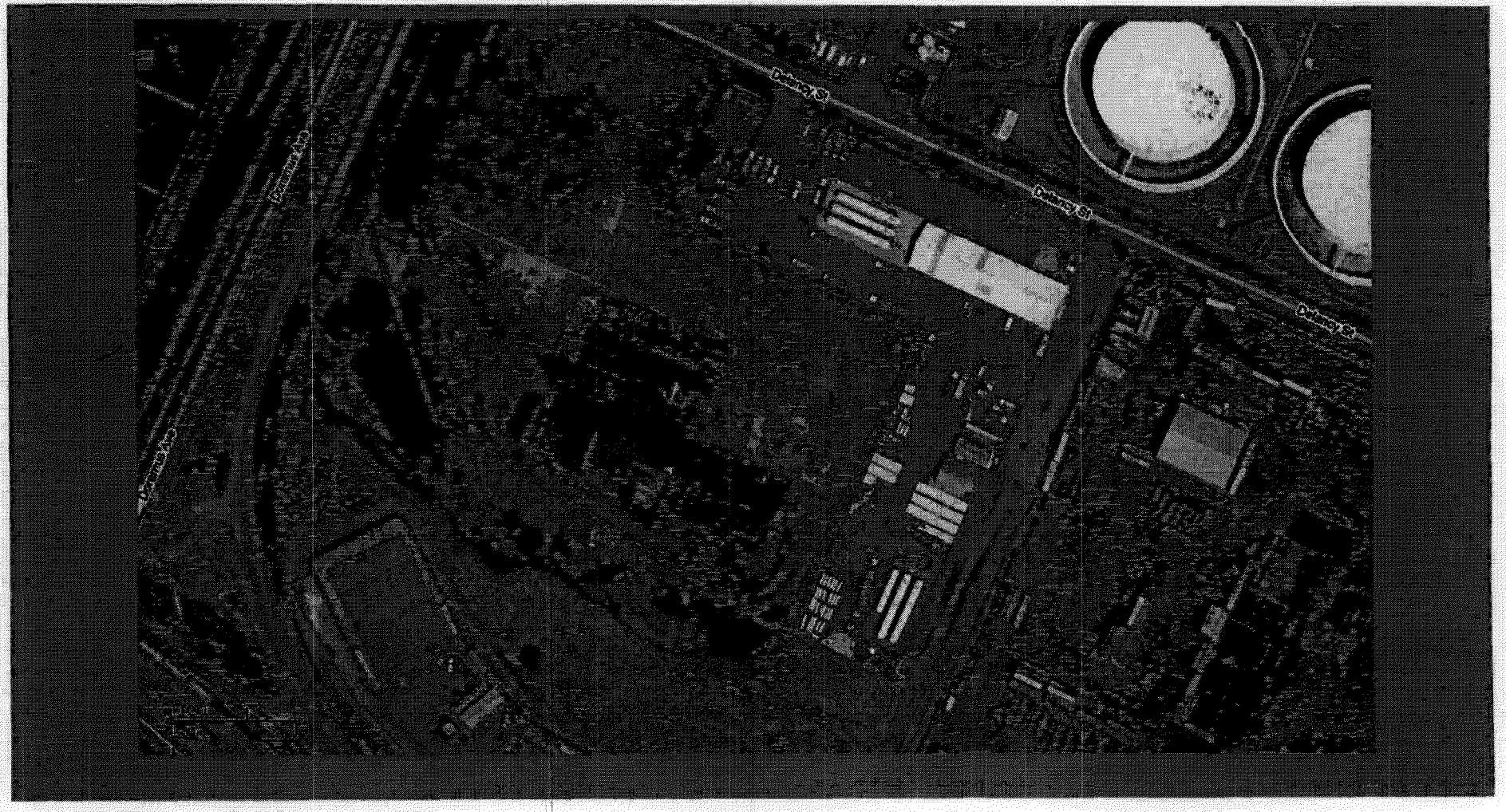
Tel: 609.987.3601 · Fax: 609.987.3593
william.m.staats@bankofamerica.com
Bank of America, NJ7-403-08-01

Figure 3.
Historic Aerial Photographs



ARCADIS BBL

Present Site Condition
Former Central Drum Facility



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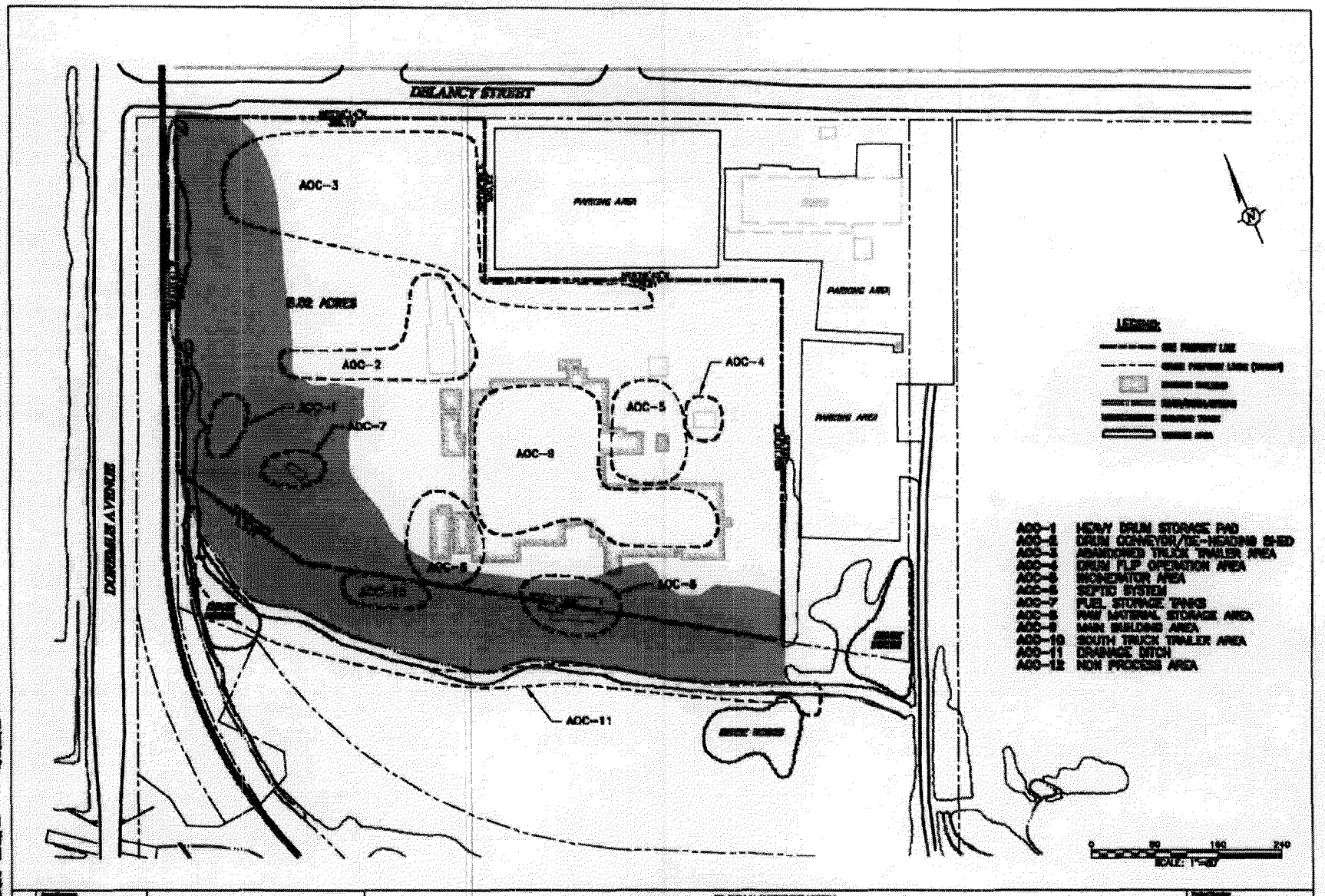


ARCADIS

GLOPAK CORPORATION
704-708 DOREMUS AVENUE SITE

SITE PLAN

NEWARK, NEW JERSEY

4 DECEMBER, 2005

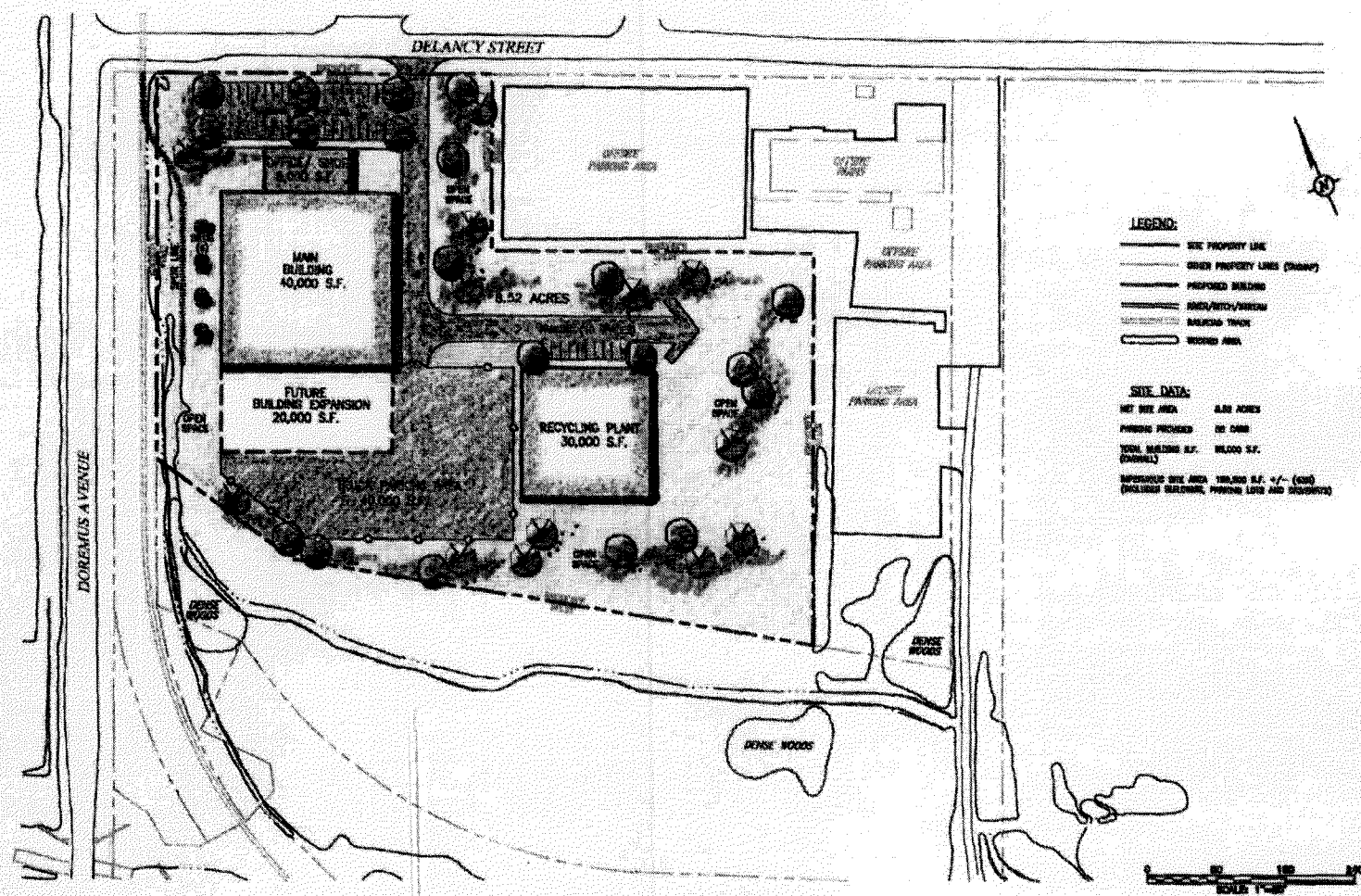
1

Glopak Inc. Business Expansion Project

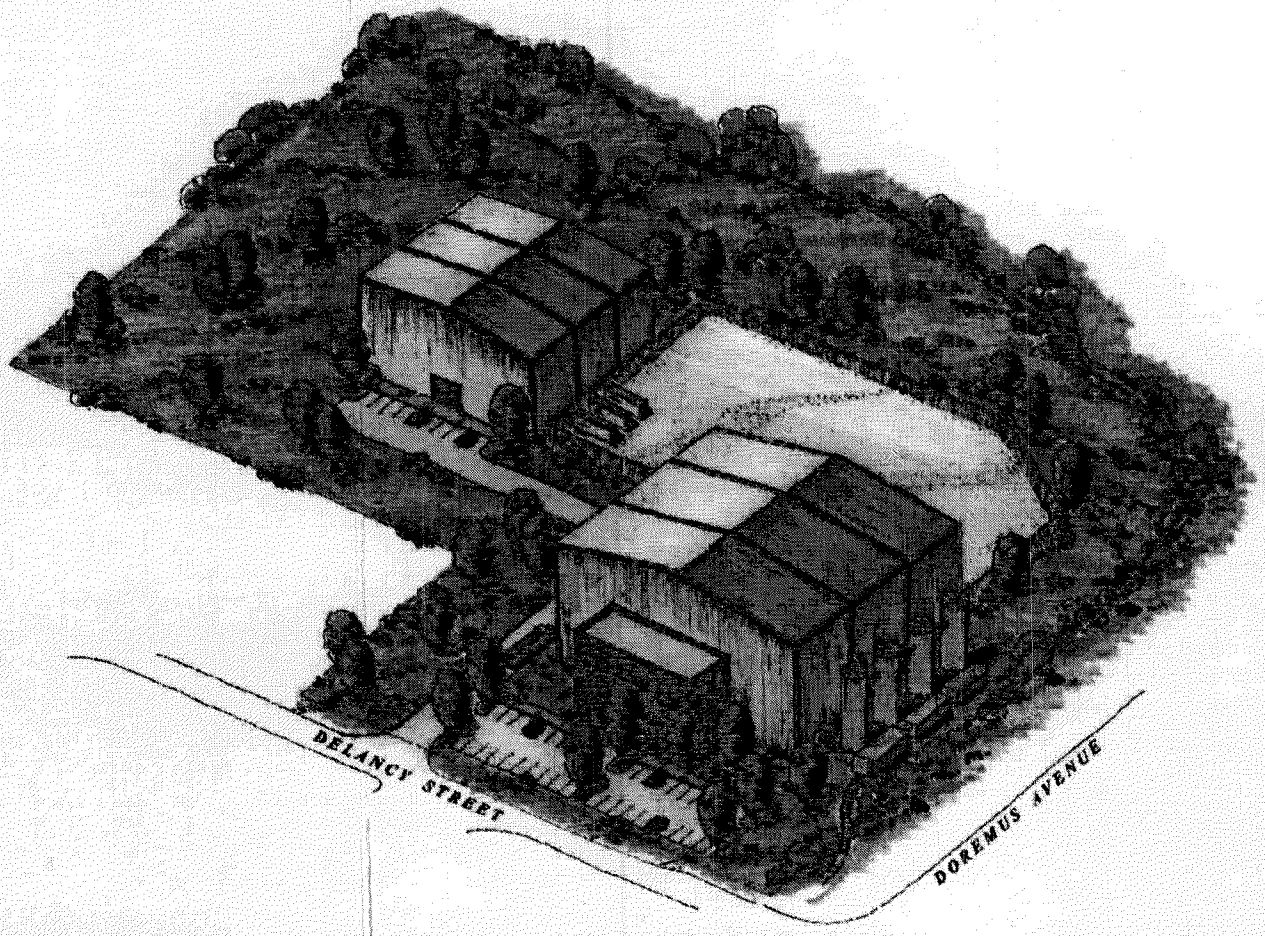
704-738 Doremus Avenue, Newark, Essex County, NJ

Preliminary Schedule of Performance

Date	Action	Responsible Party
Complete	Approval - Glopak, Inc. Named Developer	City
Complete	Prepare - Proposed Redevelopment Plan	Glopak
	Approval - Redevelopment Agreement	Glopak/City
	Submittal – NJ DEP Applications/Work Plans	Glopak
	Approval – NJ DEP Permits (Wetlands)	NJ DEP
	Submittal – Environmental Investigations	Glopak
	Approval – Environmental Actions	NJ DEP
	Submittal - City Land Use/Permits	Glopak
	Submittal - Design Plans	Glopak
	Issue - Design Approval	City
	Issue - Land Use Permits	City
	Submittal - Construction Plans	Glopak
	Approval - Building Permits	City
	Closing – Ground Lease	Glopak/City
	Commencement – Project Construction	Glopak
	Completion of Construction	Glopak



Area Manager: R. DAN Project Director: M. HANSEN Task Manager: K. EYRE Technical Fellow: J. BUTERA	ARCADIS 6 Terry Drive Suite 300 Newtown, Pa 18940 Tel: 267/685-1600 Fax: 267/685-1611 www.arcadis-us.com	GLOPAK CORPORATION 704 - 738 DOREMUS AVENUE SITE SITE PLAN NEWARK, NEW JERSEY	Project Number: NP000635.0001.00001 Date: 4 DECEMBER, 2006 Figure: 1



ARCADIS
Infrastructure, environment, buildings

GLOPAK CORPORATION
704 - 738 DOREMUS AVENUE SITE

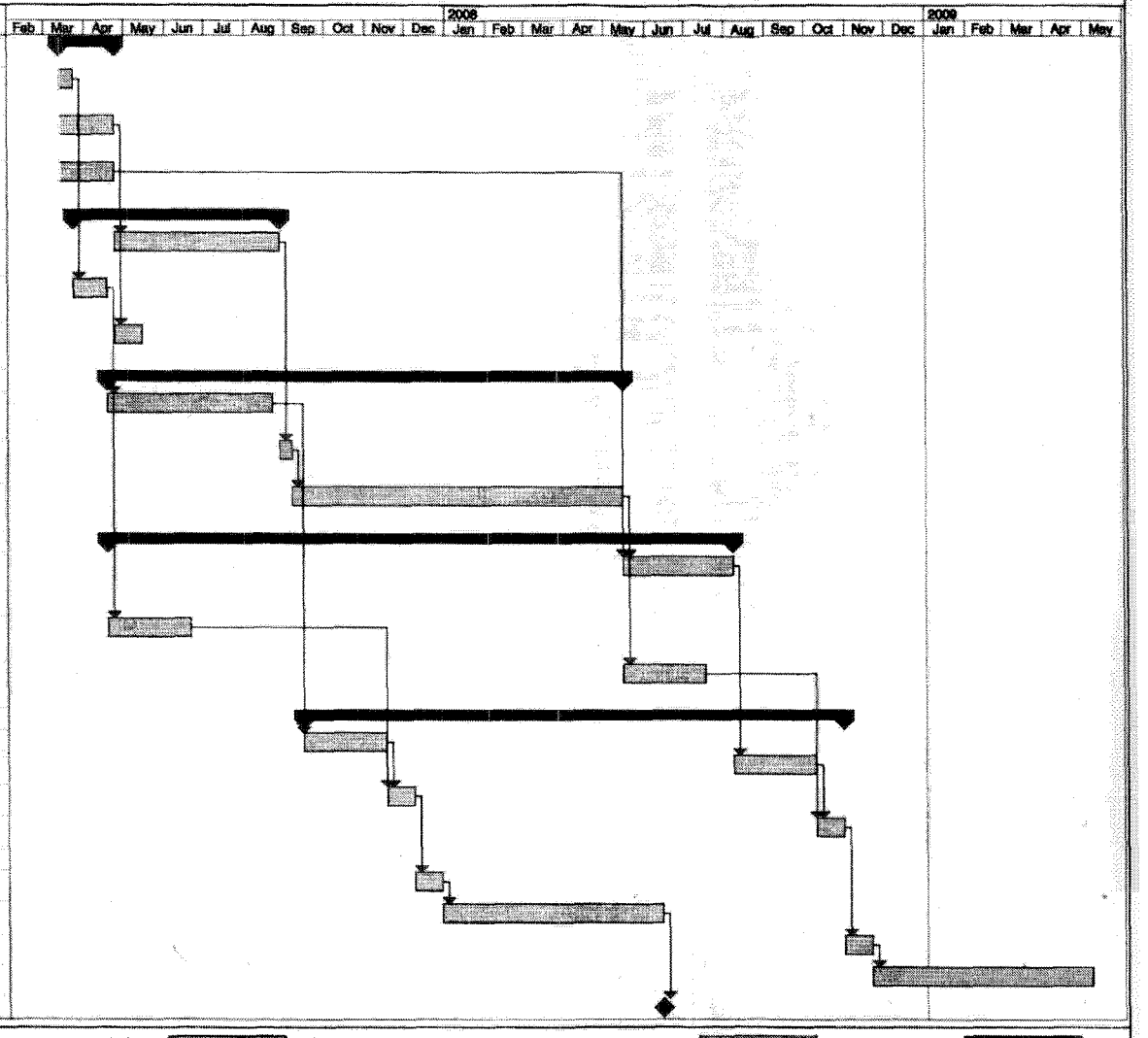
PERSPECTIVE

NEWARK, NEW JERSEY

Project Number: NP000635.0001.00001
Date: 12 DECEMBER, 2006
Figure: 1

Aggressive Tentative Schedule
Former Central Steel Drum Site Redevelopment
704-738 Doremus Avenue, Newark, NJ

ID	Task Name	Duration	Predecessors	Resource Names
1	**Site Preparation Permitting and Planning**	24 days?		ARCADIS
2	Preparation and Submission of Soil Excavation Work Plan for Area Outside (November 2006) Inundated Areas	7 days?		
3	Preparation and submission of Wetlands Delineation Report, Letter of Interpretation (LOI) Application, and Upland Waterfront Development Permit Application	24 days		ARCADIS W&WD
4	Preparation and Submission of Additional Soil Excavation Work Plan, Erosion and Sediment Control Plan, and Stormwater Management Permit Application	24 days		ARCADIS SRWM
5	**NJDEP Review and Approvals**	89 days?		NJDEP
6	Review and Approval of LOI and Upland Waterfront Development Permit	72 days?	3	NJDEP DLUR
7	Review and Approval of Remedial Excavation Workplan for Areas Outside of Inundated Areas	14 days?	2	NJDEP SRWM
8	Approval of Work Plan, Erosion and Sediment Control Plan, and Stormwater Management Permit Application	12 days?	4	NJDEP SRWM
9	**Site Work and Further Permitting**	224.5 days?		Multiple
10	Phase I Excavation of AOC Impacted Soil and Resurfacing Based on Areas Outside Inundated Areas (November 2006), and Protected Waterfront Areas	72 days	7	ARCADIS SR
11	Preparation and submission of Freshwater Wetlands GP4 Permit Application, and Mitigation Proposal	5.6 days	6	ARCADIS W&WD
12	Review and Approval of Freshwater Wetlands GP4 Permit Application, and Mitigation Proposal	144 days?	11	NJDEP DLUR
13	**Continued Remediation and Construction Preparation**	272.5 days		ARCADIS
14	Phase II excavation and resurfacing for additional areas permitted by GP4 and Mitigation Proposal approval; Preparation and submission of Remedial Action Report Describing Results of Soils Excavations	48 days	4,12	ARCADIS SR
15	Preparation and Submission of Building and Infrastructure Design, and Trades Permit Applications (Manufacturing Building)	36 days	7	ARCADIS F&J
16	Preparation and Submission of Building and Infrastructure Design, and Trades Permit Applications (Other Buildings)	36 days	12	ARCADIS F&J
17	**Soil Remediation and Site Development Approvals**	234.5 days?		Multiple
18	Approval of Remedial Action Report for Soils Outside Inundate	36 days?	10FS+14 days	NJDEP SRWM
19	Approval of Remedial Action Report for Soils	36 days?	14	NJDEP SRWM
20	Trades Permitting for Manufacturing Building (Building, Electrical, Plumbing, etc.)	12 days?	18,15	City of Newark
21	Trades Permitting for Other Buildings (Building, Electrical, Plumbing, etc.)	12 days?	16,19	City of Newark
22				
23	**Send Manufacturing Building Construction Contract Out to Bid**	12 days	20	ARCADIS F&J
24	**Construction of Manufacturing Building Facilities and Infrastructure**	96 days	23	ARCADIS F&J
25	**Send Additional Buildings Construction Contract Out to Bid**	12 days	21	ARCADIS F&J
26	**Construction of Other Buildings, Facilities and Infrastructure**	96 days	25	ARCADIS F&J
27	**Equip Building and Begin Production**	1 day?	24	



Project: Aggressive-MH-Alt
Date: Tue 3/13/07

Task | Progress | Milestone | Summary | Rolled Up Task | Rolled Up Milestone | Rolled Up Progress | Split | External Tasks | Project Summary | Group By Summary | Deadline

APPENDIX A

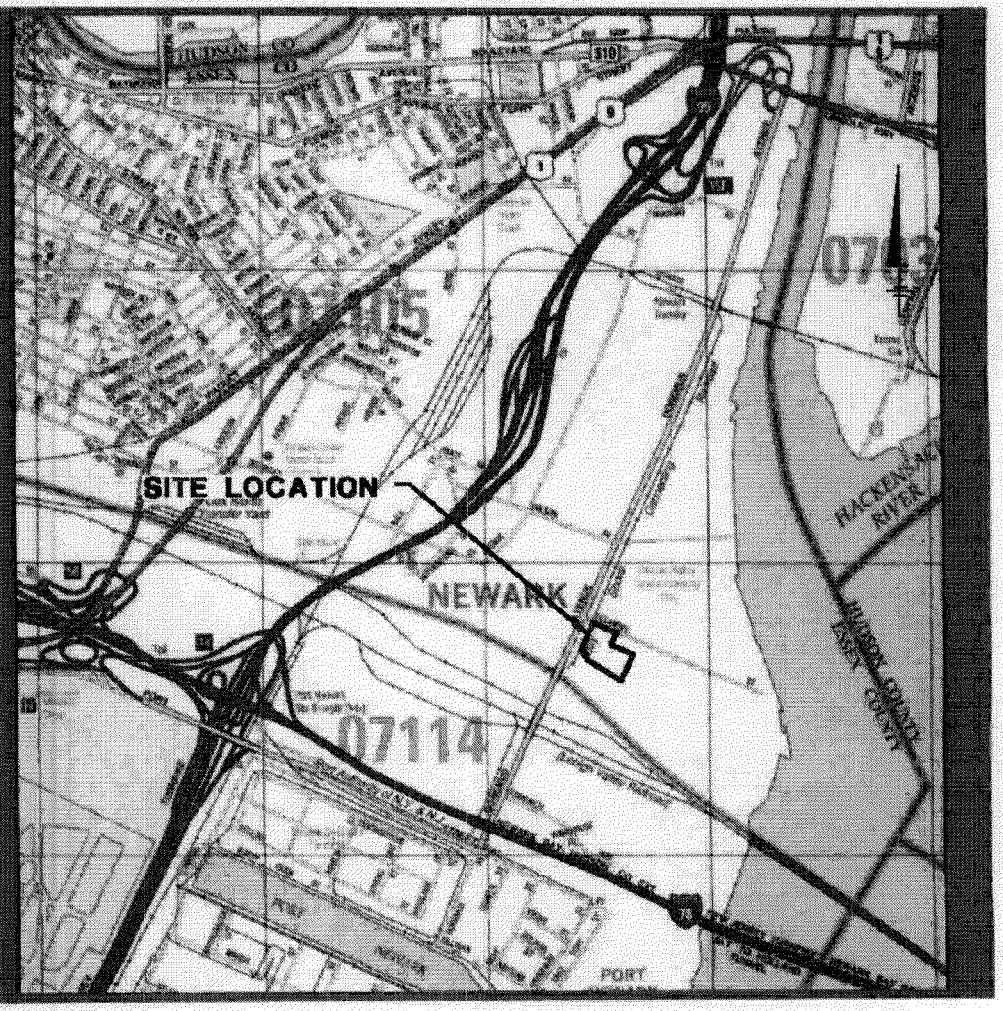
ARCADIS

Appendix A

Materials from January
NJDEP Wetlands Meeting

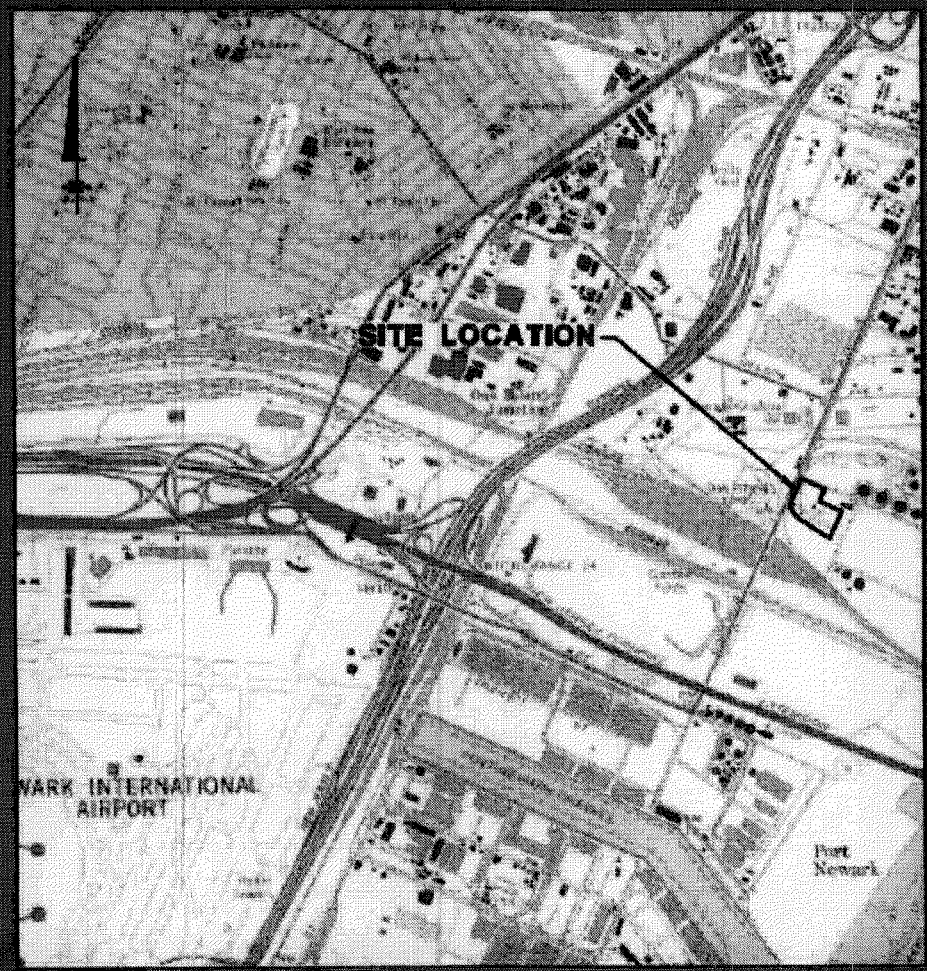
Figure 1.
Road Map

- Intersection of Delancy Street and Doremus Avenue, Newark, New Jersey (Essex County)
- Identified as Block 5074 Lot1
- Approximately 8.5 acres of previously developed land



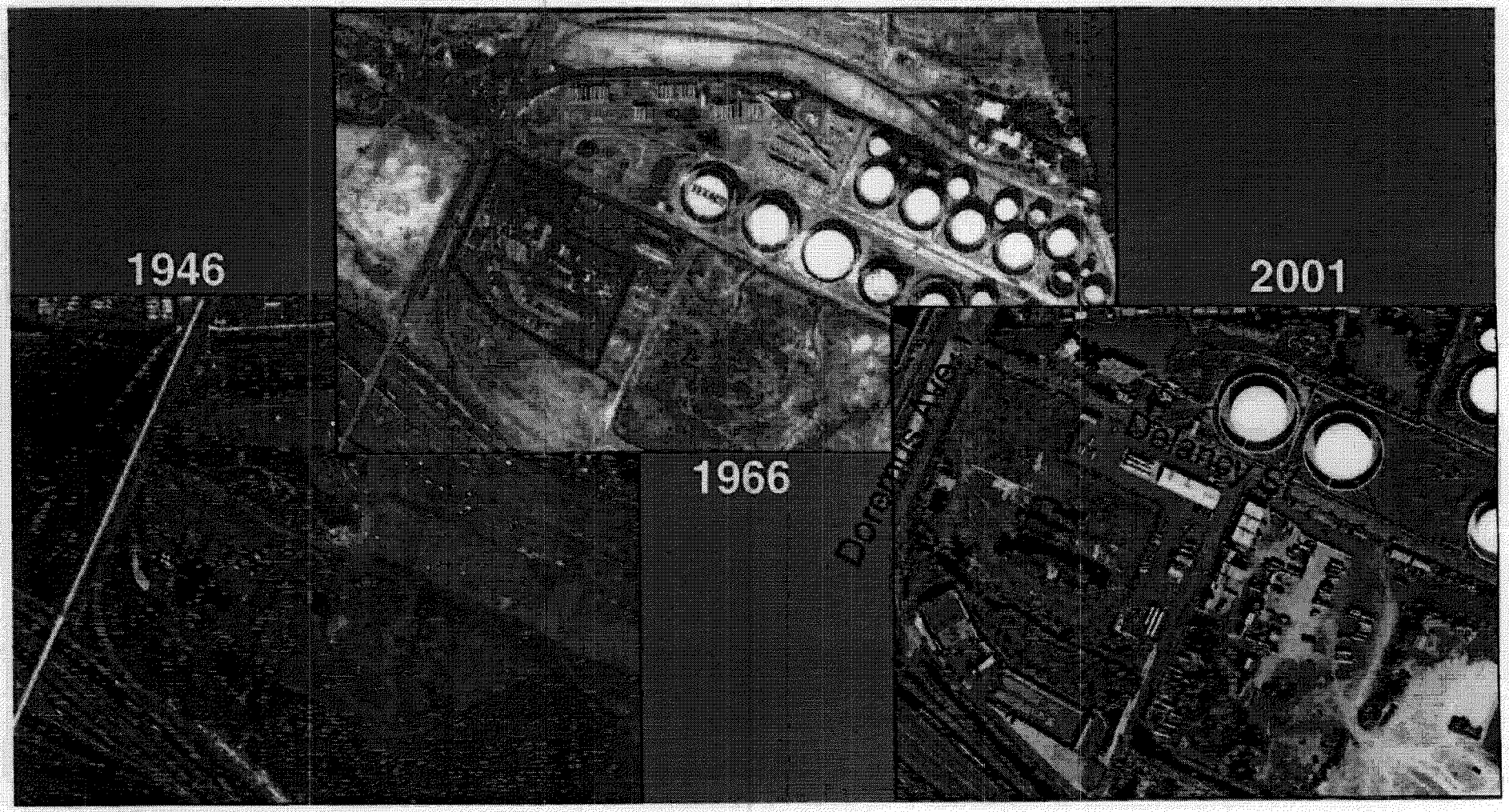
ARCADIS BBL

Figure 2.
USGS Topographic Quad Map: Elizabeth



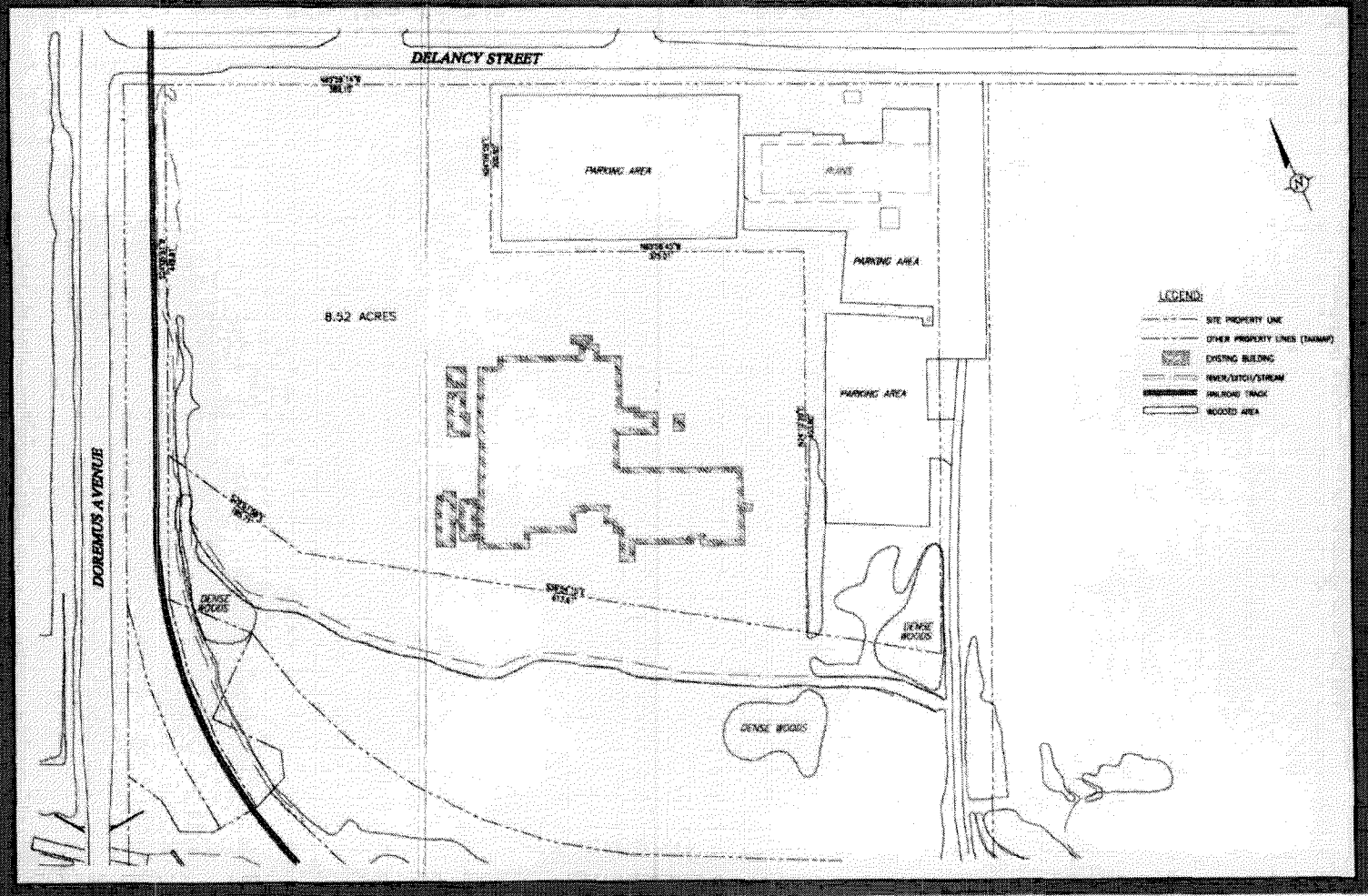
ARCADIS BBL

Figure 3.
Aerial Photographs



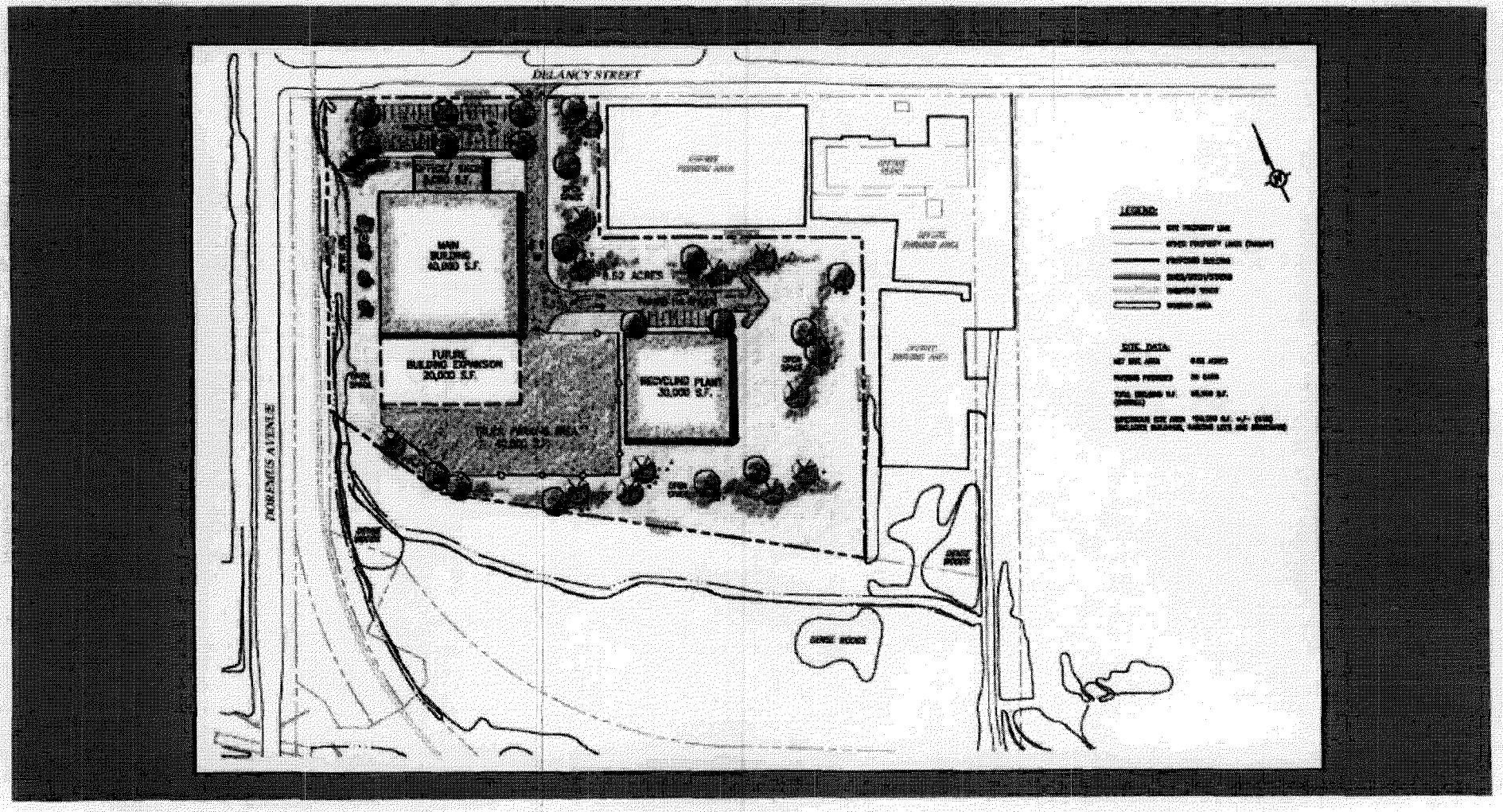
ARCADIS BBL

Figure 4.
Existing Site Layout



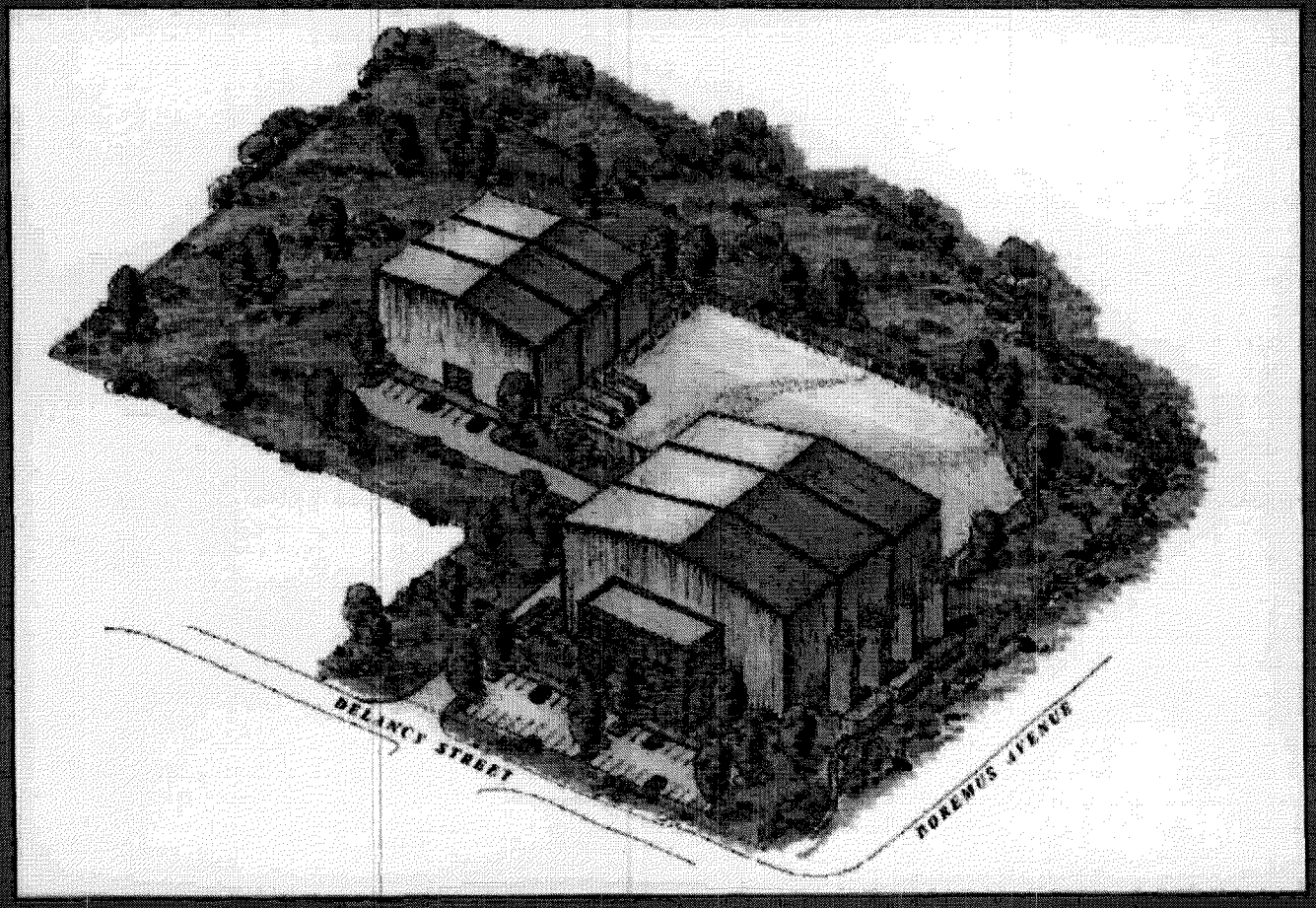
ARCADIS BBL

Figure 5.
Proposed Site Layout



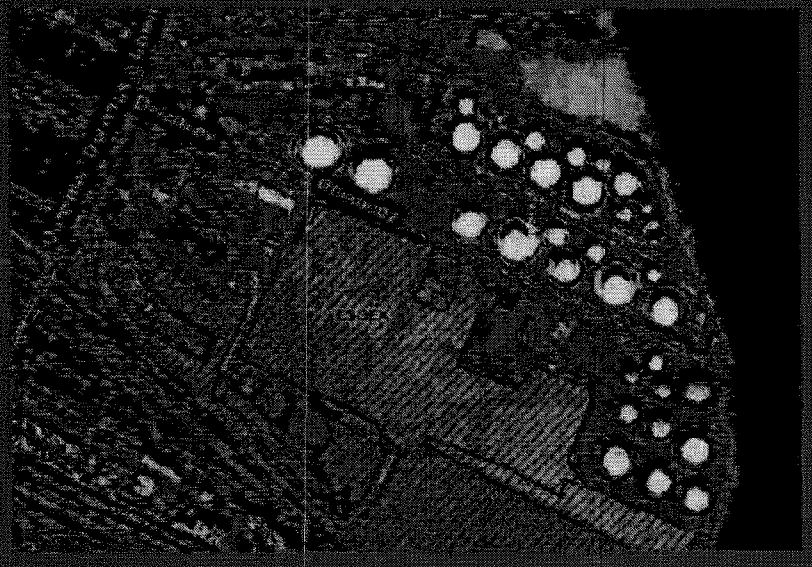
ARCADIS BBL

Figure 6.
Proposed Site Layout Perspective



ARCADIS BBL

Figure 7.
Remote Sensing - Wetlands



NJMap – 2007

Red outline indicates approximate site boundary

Blue hatching indicates freshwater wetlands

Freshwater wetlands not mapped on Site

USF&W Wetlands Map

Black outline indicates approximate site boundary

Blue shading adjacent to site indicates estuarine and marine deepwater habitats

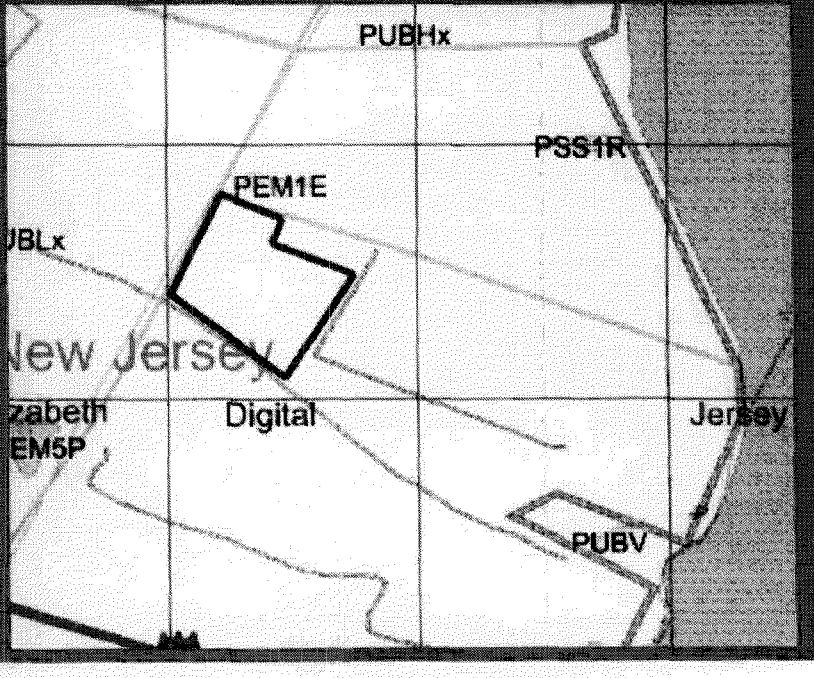


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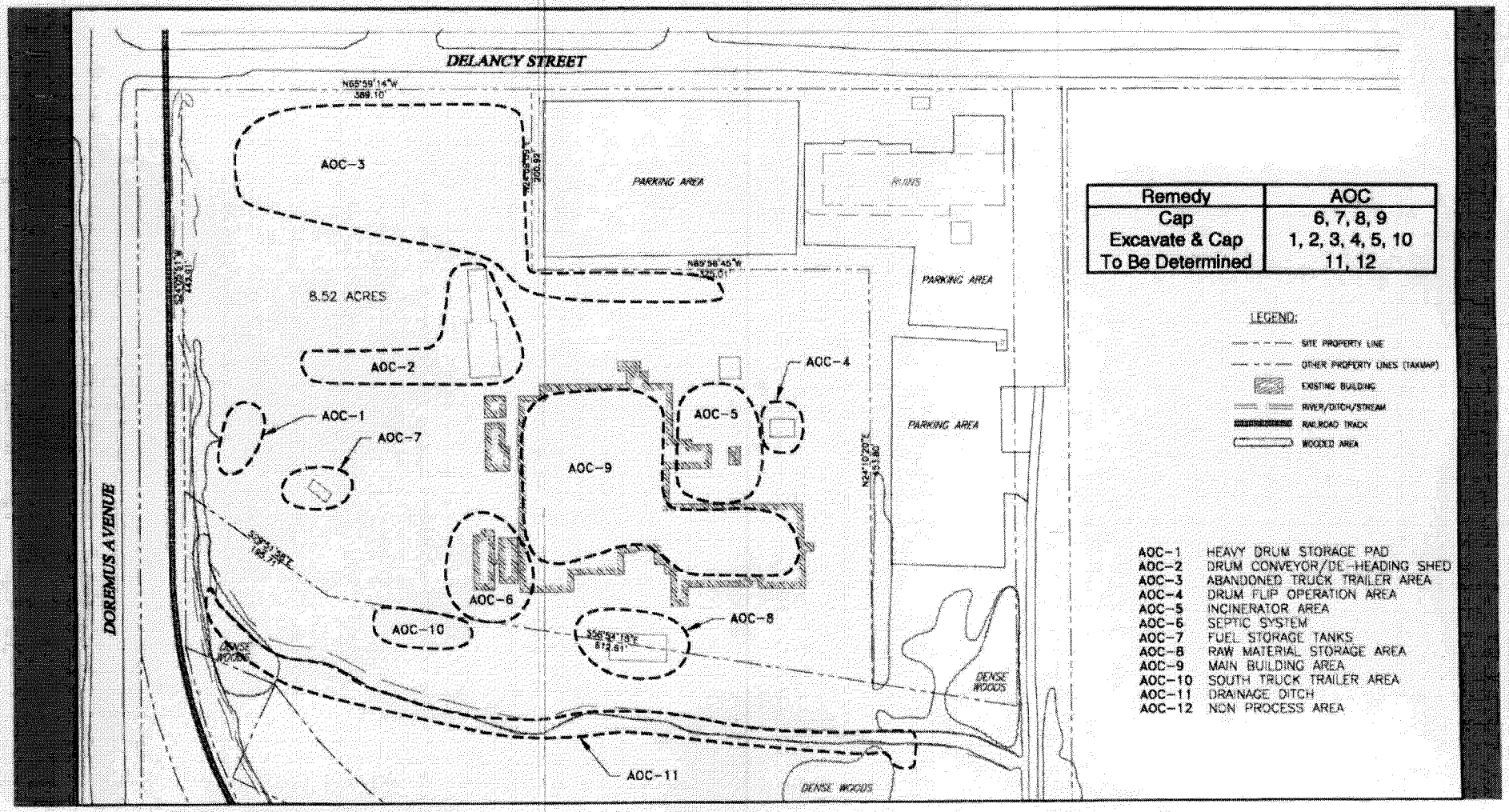
Figure 8.
Some Areas of Site Saturated at Land Surface

ARCADIS BBL

Figure 9.
Remaining Drums and Wastes

ARCADIS BBL

Figure 10.
Areas of Concern (AOCs)



ARCADIS BBL

State of New Jersey
Department of Environmental Protection
Publicly Funded Site Remediation
Hazardous Site Science Element
Bureau of Ground Water Pollution Abatement

MEMORANDUM

To: Steve Kehayes, Case Manager, Office of Brownfields Reuse

Through: Tracy Grabiak, Section Chief, BGWPA

From: Greg Bakeman, Geologist, BGWPA GB FINAL 11-7-03

Subject: Former Central Steel Drum (Now City of Newark), Newark, NJ
Remedial Investigation Report
Dated September 30, 2003
Referred October 7, 2003

Job Code: G140RU00

Background:

The Central Steel and Drum (CSD) site is a 8.5 acre site located in near the Port of Newark (less than a half mile away is Newark Bay). This site was utilized as a drum reconditioning facility between 1951 and 1994. Prior to 1951 this site was utilized a pigment manufacturing company. The city of Newark now owns this property and has entered a MOA under the Brownfield legislation. This site is located in an industrial portion of Newark and no longer has any 55 gallon drums on site. The property in relatively flat with drainage ditches located along the property boundaries and the water table located just below the ground surface. The facility processed as many as 3,000 drums per day. During the 1980-1990s thousands of drums could be found stockpiled on the site. There are no private wells in this area and local landuse includes junkyards, PVSC facilities, a firing range, mulch manufacturing company. According to interviews with former staff members, the facility experienced several fires and explosions probably from incompatible chemical interactions or poor house-keeping practices.

Previous consultants hired by CSD, noted that this site was filled to bring the site in many places to grade. The Areas of Concern previously characterized by the former consultants, EPA, and the DEP include the following:

- Heavy Drum Storate Pad
- Drum Conveyor/DeHeading Shed
- Abandoned Truck Trailer Area
- Drum Flip Operation Area
- Incinerator Area
- Septic System
- Fuel Oil Storage Tanks
- Raw Material Storage Area
- Main Building Area
- South Truck Trailer Area
- Drainage Ditches
- Historic Fill

Several revisions of various remedial action workplans were submitted to the Department in the 1990's, however none of these were approved under CSD and no additional work was completed. EPA removed the thousands of stockpiled drums during the late 1990's.

Direct push field screening of the site was discussed a good first step in characterizing the groundwater at the site, which would be followed up by installation of permanent monitoring wells. Well logs from the four nested monitoring wells installed in 1984 reveal the following Lithology:

0-3 feet Black granular gravel and sandy fill mixed with silt/clay layer, water table usually encountered near surface.

4-17 feet dark plastic gray silt/clay layers with moist/wet alternating silty sand and organic roots units. Some solvent odors were noted during drilling.

20-24 feet dark gray silt and clay with alternating bands of red-brown silts and fine sand units. Typically moist or wet around 20 feet bgs.

Remedial Investigation Report (dated 9-30-03)

The City of Newark (URS Consultants) submitted this report entitled Groundwater Screening Sample Analytical Results Summary. Originally, just the two attached figures were submitted for comment. I stated that the Department required a narrative of the work performed during the groundwater screening investigation.

URS conducted 34 shallow groundwater-screening samples (.5-3.5 feet bgs) throughout the site and depicted as Figure 1. Direct-push sampling was conducted in these locations to collect soil samples. Aqueous groundwater samples were collected from temporary monitoring points (A12-HP-1 through A12-HP-35). These samples were analyzed for VOs, BNs, PCBs, PHCs, and metals. These results revealed metals and some VO exceedances of the GWQS. URS proposes to install 15 shallow monitoring wells (MW-1 to MW-15) and 5 deep monitoring wells (MW-1D, MW-4D, MW-7D, MW-12D, and MW-14D). A second round of samples will be analyzed based upon the results of the groundwater screening and first round of sampling of the proposed monitoring wells. Refer to attached Figure 1 for proposed locations.

BGWPA Recommendations:

The results from the groundwater screening samples were surprising, since relatively low concentrations of VOs were detected at this site. Other drum reconditioning facilities typically indicate several compounds of concern at elevated concentrations, given the numerous compounds handled by these facilities. Well logs from the original monitoring wells installed in 1984 revealed oily product and strong solvent odors in some of these borings. Since this sampling is considered groundwater screening and a Department representative was not present, I suggest that these results may be biased low or may not be located strategically with the areas of concerns. Figure 2 represents BGWPA's proposed shallow and deep monitoring wells locations. These wells are biased both to the field screening data collected during October 2001 and on the areas of concern that were originally characterized. I have included Figures 3, 4, 5, and 6 that provide the 2001 groundwater screening data for Benzene, BTEX, Total Chlorinated compounds, and Pesticides, respectively.

The shallow monitoring wells should screen the top of the water table and extend no further than 5 feet below the water table. The water table at this site is probably encountered just below the ground surface within a fill layer of crush gravel/black granular sandy fill with some silt/clay encounteredat 0-3 feet bgs, however during precipitation events the water table may extend in some places to the ground surface. Potentiometric surface maps produced in the 1980's revealed at very shallow water table with little hydraulic gradient. It is likely that because this site was filled that the flow direction of the water table is directed towards the drainage ditches around the perimeter of the property.

The deeper wells should be installed just beneath the silty sand and clay semi-confining unit based upon the well logs the deeper water-bearing zone should be encountered below the gray silt and clay units. These wells should case off the first 10 feet and extend to a total depth of between 21 to 24 feet. The well screen should encounter the moist sand units which alternate within the intermediate semi-confining clay layer and the underlying sand unit. Well logs indicate that the dark silt clay units can not be considered confining units. According to previous reports there is a significant head difference between the deeper wells and the water table wells.

The City of Newark (CON) may propose to construct these wells as 2 inch nested well pairs in order to save money. A Department representative should be present during the well installations. Two sampling rounds should be proposed within two week of each other for TCL VOs, TCL BNs, Pesticides, Metals, PHCs, During drilling the boreholes should be continously split-spooned the total depth of the borehole. A geologist should log these boreholes noting such details as: lithology , water content, odor, visual staining, organic content, etc. Low flow protocol may be used on these monitoring wells, however CON must provide **all** the details regarding this sampling.

CON may be required to perform additional groundwater delineation both on and off-site based upon the collection of the two sampling rounds.

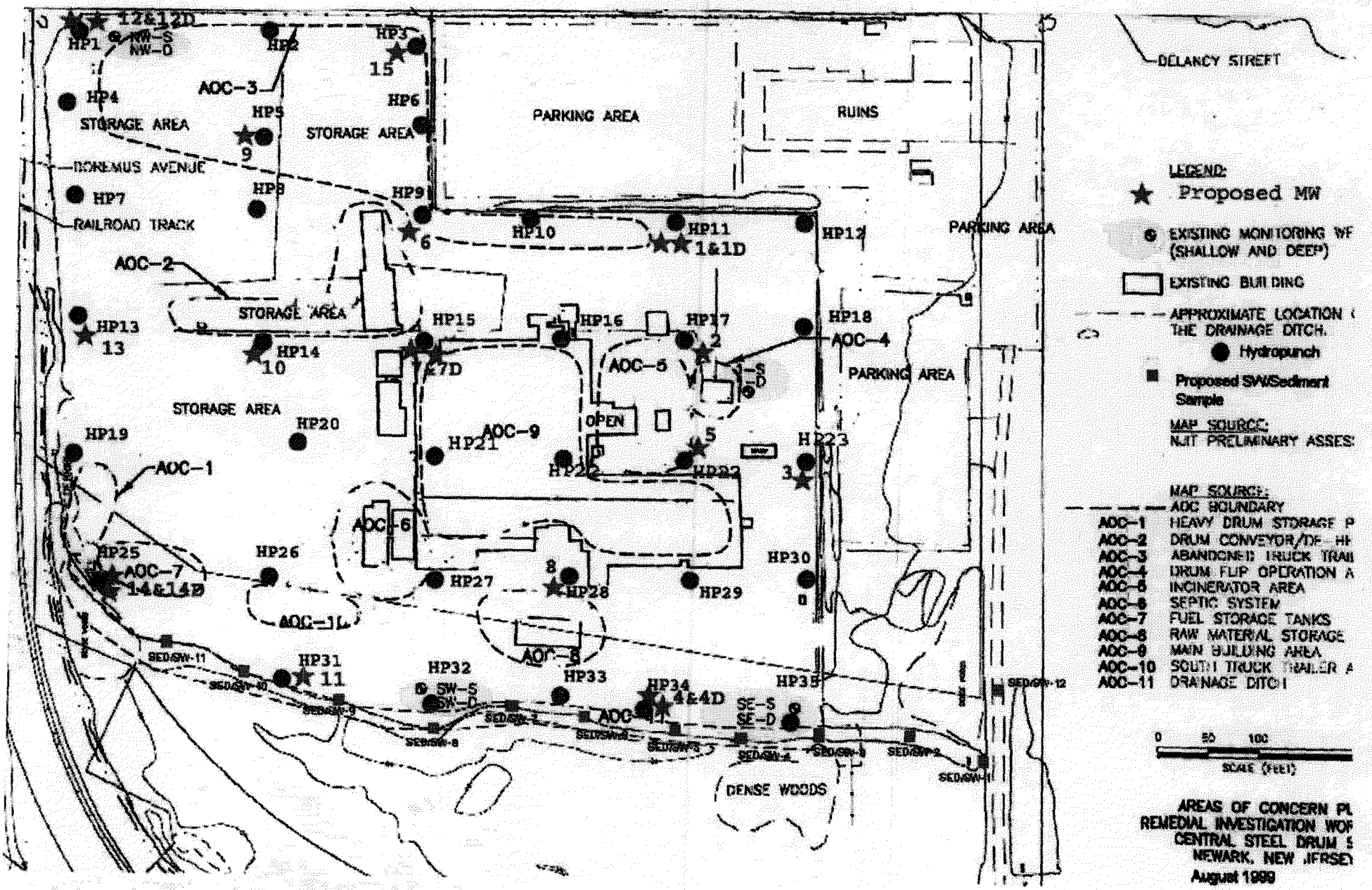
CSD originally had 4 pairs of monitoring wells, CON must determine if these wells can still be sampled, if not they must be properly located and abandoned.

An original sampling plan submitted to the Department included sediment sampling along the perimeter of the site within the drainage ditches. This issue is deferred to BEERA, however it is strongly suggested that this work be performed both on-site and off-site to assess impacts from this site to these potential receptors.

Attachments

Allan Motter, Technical Coordinator, BEERA

FIGURE 1 CSD PROPOSED MW'S



FIGURES 2 ; DEP PROPOSED MW'S

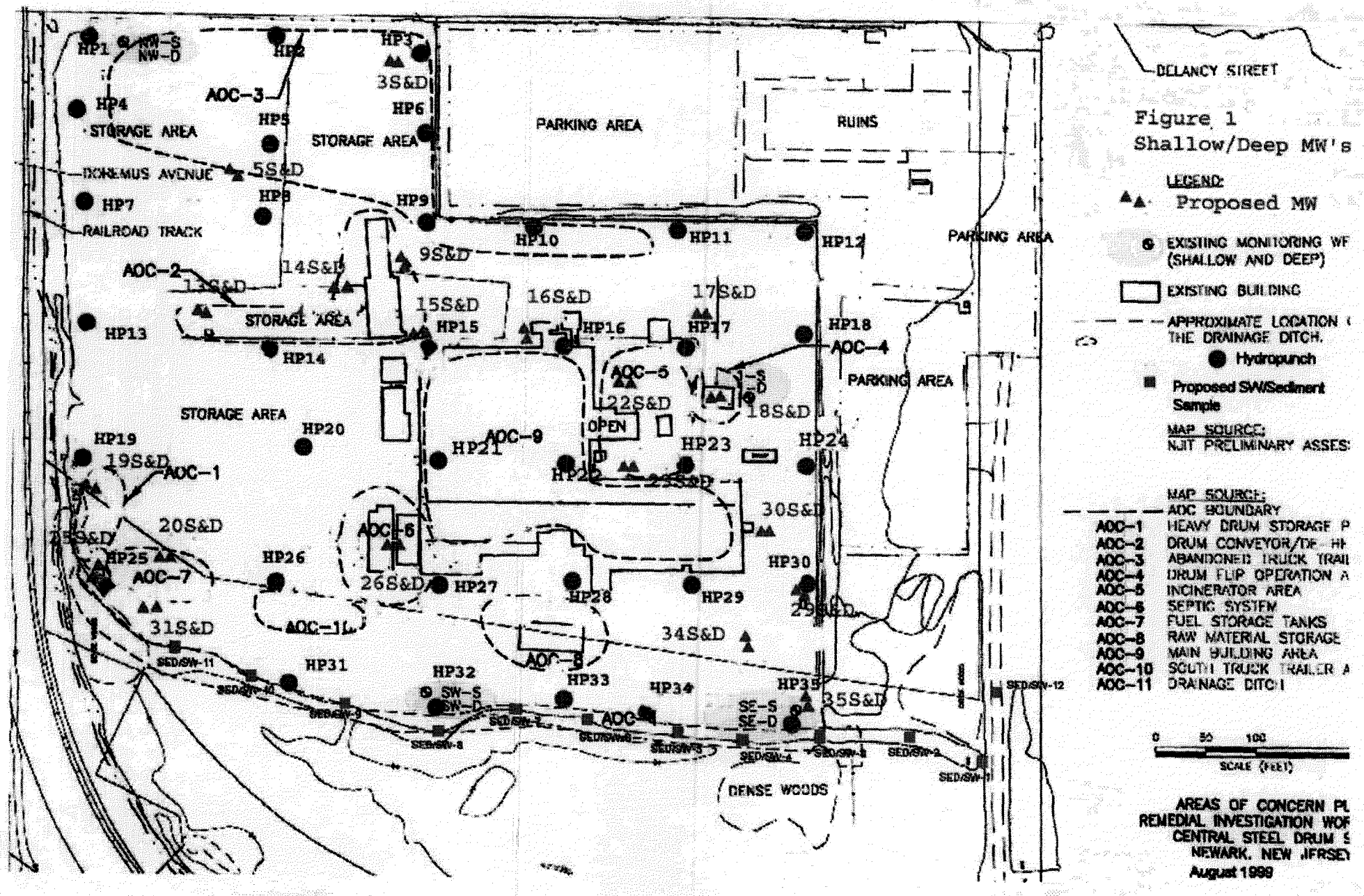
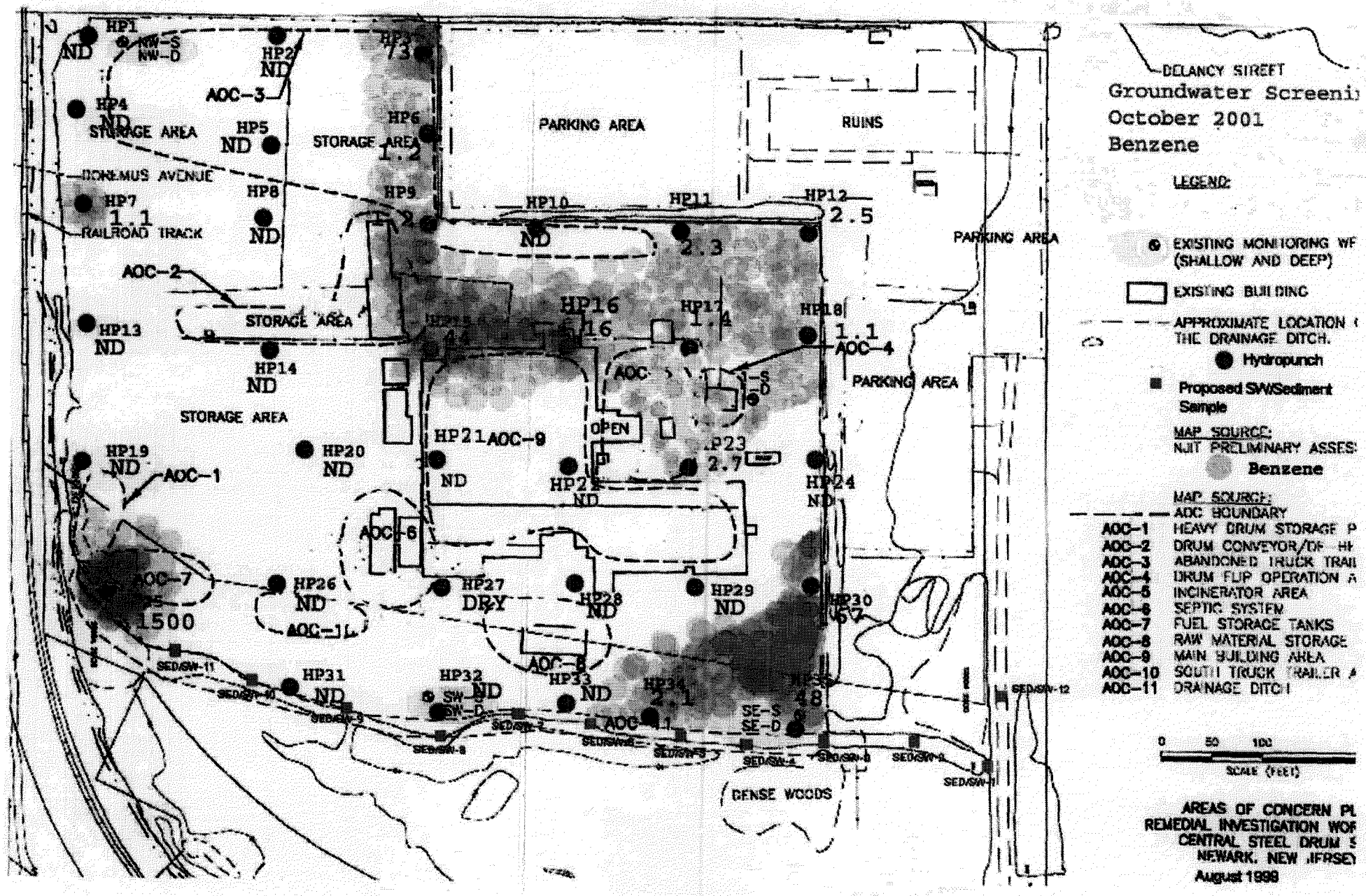
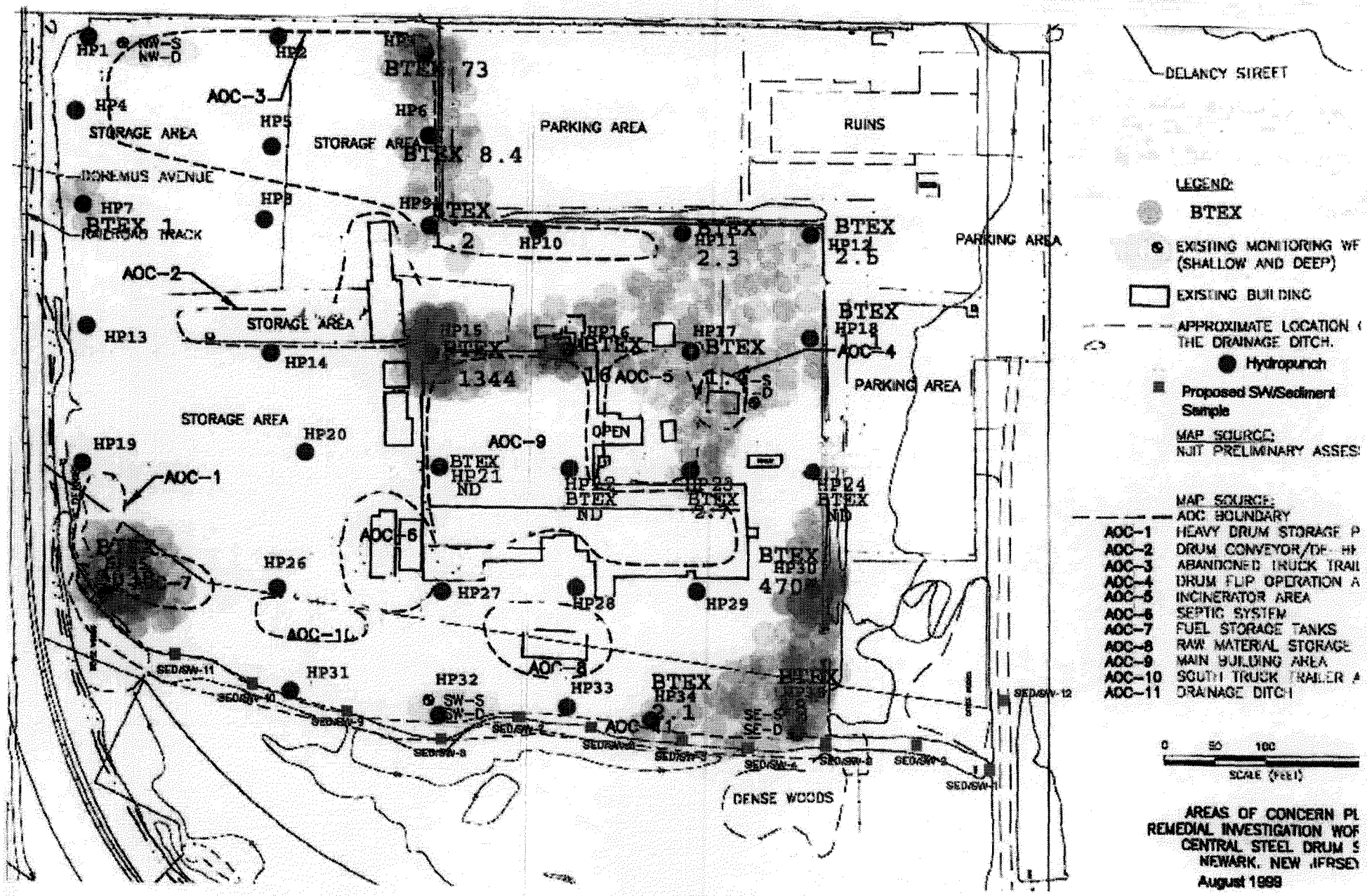


FIGURE 3



DELANCY STREET
Groundwater Screeni
October 2001
Benzene
LEGEND:
EXISTING MONITORING WE (SHALLOW AND DEEP)
EXISTING BUILDING
APPROXIMATE LOCATION THE DRAINAGE DITCH.
Hydropunch
Proposed SW/Sediment Sample
MAP SOURCE:
NJIT PRELIMINARY ASSES
Benzene
MAP SOURCE:
AOC BOUNDARY
AOC-1 HEAVY DRUM STORAGE P
AOC-2 DRUM CONVEYOR/DE HE
AOC-3 ABANDONED TRUCK TRAI
AOC-4 DRUM FLIP OPERATION A
AOC-5 INCINERATOR AREA
AOC-6 SEPTIC SYSTEM
AOC-7 FUEL STORAGE TANKS
AOC-8 RAW MATERIAL STORAGE
AOC-9 MAIN BUILDING AREA
AOC-10 SOUTH TRUCK TRAILER A
AOC-11 DRAINAGE DITCH
0 50 100
SCALE (FEET)
AREAS OF CONCERN PL
REMEDIAL INVESTIGATION WOR
CENTRAL STEEL DRUM S
NEWARK, NEW JERSEY
August 1999
PARKING AREA
RUINS
STORAGE AREA
DOREMUS AVENUE
RAILROAD TRACK
DENSE WOODS
OPEN
HP1 ND
HP2 ND
HP3 73
HP4 ND
HP5 ND
HP6 1.2
HP7 1.1
HP8 ND
HP9 2
HP10 ND
HP11 2.3
HP12 2.5
HP13 ND
HP14 ND
HP16 16
HP17 1.4
HP18 1.1
HP19 ND
HP20 ND
HP21 ND
HP22 ND
HP23 2.7
HP24 ND
HP26 ND
HP27 DRY
HP28 ND
HP29 ND
HP30 67
HP31 ND
HP32 ND
HP33 ND
HP34 2.1
HP35 48
AOC-1
AOC-2
AOC-3
AOC-4
AOC-6
AOC-7
AOC-9
AOC-10
AOC-11
1500
SED/SW-1
SED/SW-2
SED/SW-3
SED/SW-4
SED/SW-5
SED/SW-6
SED/SW-7
SED/SW-8
SED/SW-9
SED/SW-10
SED/SW-11
SED/SW-12

FIGURE 4


DELANCY STREET
DONEMUS AVENUE
RAILROAD TRACK
STORAGE AREA
PARKING AREA
RUINS
DENSE WOODS
OPEN
HP1
HP2
HP4
HP5
HP6
HP7
HP8
HP9
HP10
HP11
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AOC-1
AOC-2
AOC-3
AOC-4
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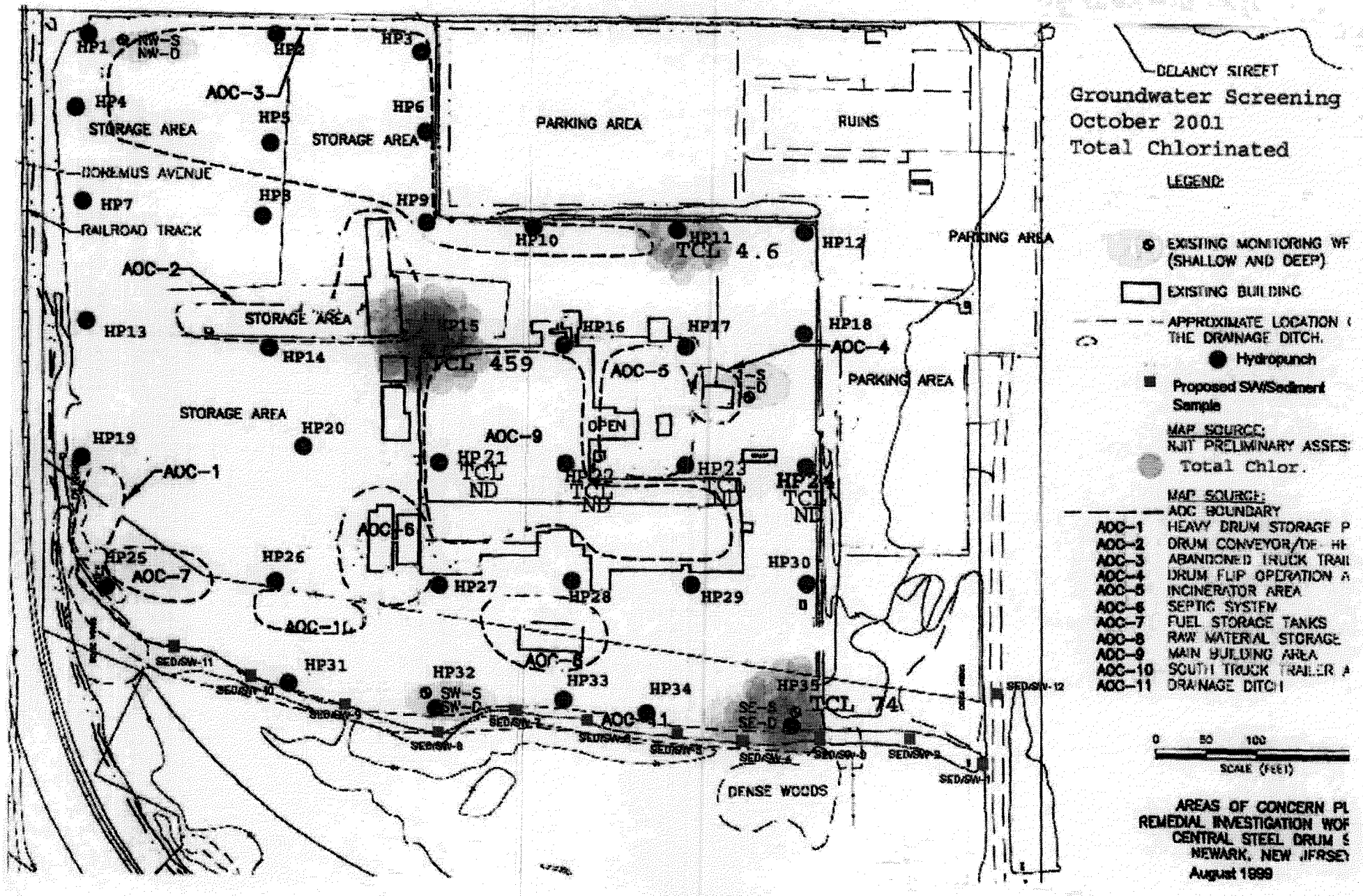
AOC-6
AOC-7
AOC-8
AOC-9
AOC-10
AOC-11
BTEX 73
BTEX 8.4
BTEX 1
BTEX 2
BTEX 2.3
BTEX 2.5
BTEX 1344
BTEX ND
BTEX 2.7
BTEX 470
BTEX 2.1
SW-S
SW-D
SE-S
SE-D
SED/SW-11
SED/SW-12
LEGEND:
BTEX
EXISTING MONITORING WE
(SHALLOW AND DEEP)
EXISTING BUILDING
APPROXIMATE LOCATION
THE DRAINAGE DITCH.
Hydropunch
Proposed SW/Sediment
Sample
MAP SOURCE:
NJIT PRELIMINARY ASSES
MAP SOURCE:
AOC BOUNDARY
AOC-1 HEAVY DRUM STORAGE P
AOC-2 DRUM CONVEYOR/DR HI
AOC-3 ABANDONED TRUCK TRAIL
AOC-4 DRUM FLIP OPERATION A
AOC-5 INCINERATOR AREA
AOC-6 SEPTIC SYSTEM
AOC-7 FUEL STORAGE TANKS
AOC-8 RAW MATERIAL STORAGE
AOC-9 MAIN BUILDING AREA
AOC-10 SOUTH TRUCK TRAILER A
AOC-11 DRAINAGE DITCH
0 50 100
SCALE (FEET)
AREAS OF CONCERN PL
REMEDIAL INVESTIGATION WOR
CENTRAL STEEL DRUM S
NEWARK, NEW JERSEY
August 1999

FIGURE 5


Groundwater Screening
October 2001
Total Chlorinated
LEGEND:
EXISTING MONITORING WE (SHALLOW AND DEEP)
EXISTING BUILDING
APPROXIMATE LOCATION OF THE DRAINAGE DITCH.
Hydropunch
Proposed SW/Sediment Sample
MAP SOURCE: NJIT PRELIMINARY ASSES
Total Chlor.
MAP SOURCE:
AOC BOUNDARY
AOC-1 HEAVY DRUM STORAGE P
AOC-2 DRUM CONVEYOR/DR HE
AOC-3 ABANDONED TRUCK TRAIL
AOC-4 DRUM FLIP OPERATION A
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AOC-6 SEPTIC SYSTEM
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AOC-8 RAW MATERIAL STORAGE
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AOC-10 SOUTH TRUCK TRAILER A
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0 50 100
SCALE (FEET)
AREAS OF CONCERN PL
REMEDIAL INVESTIGATION WOR
CENTRAL STEEL DRUM S
NEWARK, NEW JERSEY
August 1999
DELANCY STREET
DONELMUS AVENUE
RAILROAD TRACK
STORAGE AREA
PARKING AREA
RUINS
OPEN
DENSE WOODS
TCL 4.6
TCL 459
TCL ND
TCL 74
HP1
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AOC-5
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AOC-11
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SED/SW-3
SED/SW-4
SED/SW-5
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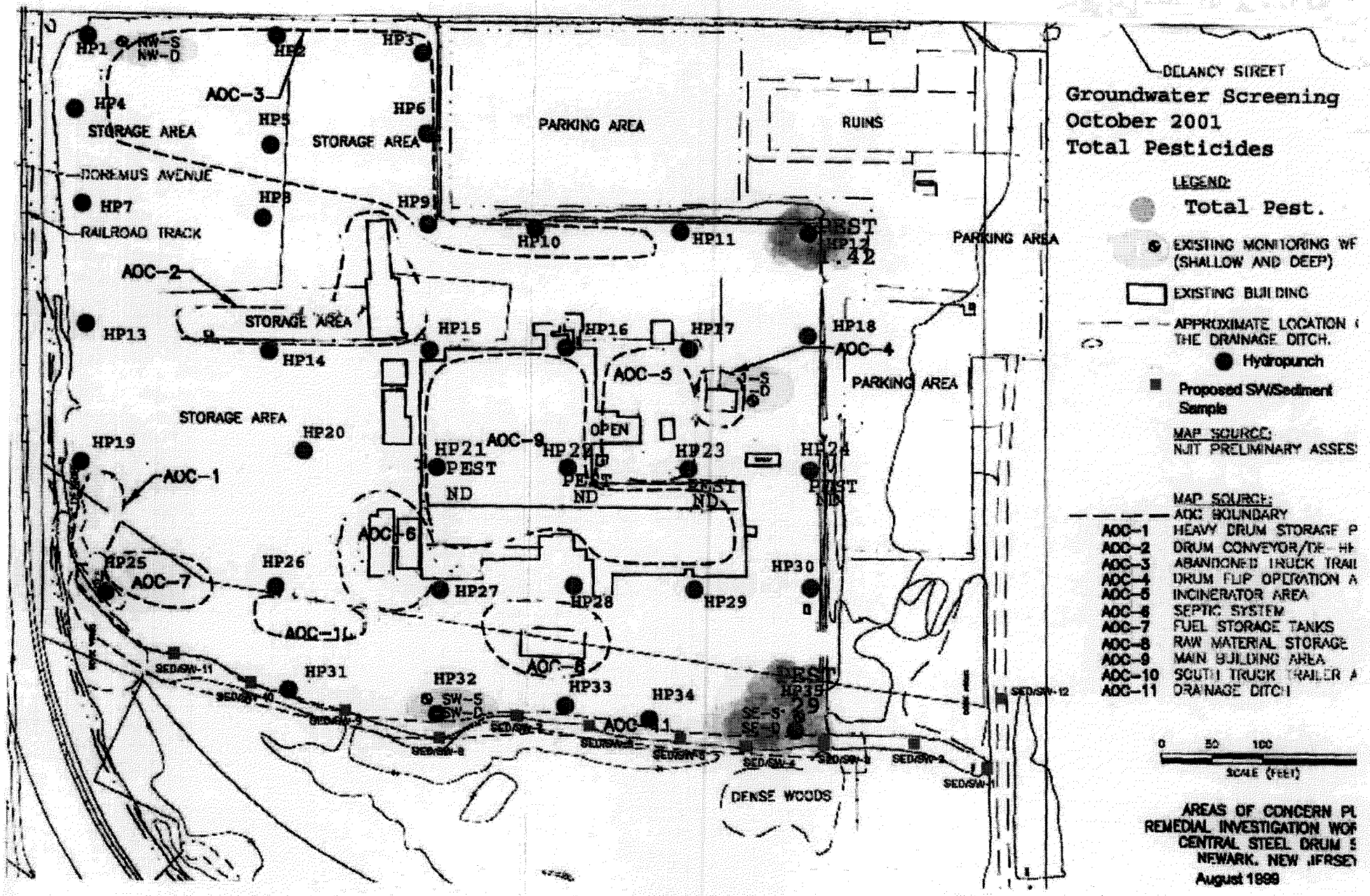
SED/SW-9
SED/SW-10
SED/SW-11
SED/SW-12

FIGURE 6



Groundwater Screening
October 2001
Total Pesticides
LEGEND:
Total Pest.
EXISTING MONITORING WE
(SHALLOW AND DEEP)
EXISTING BUILDING
APPROXIMATE LOCATION
THE DRAINAGE DITCH.
Hydropunch
Proposed SW/Sediment Sample
MAP SOURCE:
NJIT PRELIMINARY ASSES
MAP SOURCE:
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STORAGE AREA
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ND
HP1
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AOC-5
AOC-6
AOC-7
AOC-8
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AOC-10
AOC-11
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NW-D
SW-S
SW-D
SE-S
SE-D
SED/SW-1
SED/SW-2
SED/SW-3
SED/SW-4
SED/SW-5
SED/SW-6
SED/SW-7
SED/SW-8
SED/SW-9
SED/SW-10
SED/SW-11
SED/SW-12

Synopsis of CSD/Newark MOA Case

The Central Steel Drum is an 8.5-acre site consisting of a former drum reconditioning facility on the corner of Doremus Avenue and Delancy Street in Newark, Essex County. Central Steel Drum (CSD) operated the site as a drum reconditioning facility from 1951 until 1994. Prior to this time period, from 1922 to 1951,the site was occupied by a number of ink pigments manufacturing concerns, the most recent being Interchemical Corporation. Between 1902 and 1922 the site was occupied by a landfilling operation.

CSD processed approximately 3,000 thirty and fifty-five gallon drums per day. While only permitted to receive drums with one-inch residuals or less, Department inspections revealed routine acceptance of full and partially filled drums daily. CSD's operation resulted in the dumping and spilling of thousands of gallons of drum residue daily, throughout the site. In addition, some drum residues we burned in a furnace which had no air permit nor air pollution control device, and the ashes were broadcast throughout the site to fill potholes and wet areas. The site was impacted by various pesticides, polynuclear aromatic hydrocarbons, PCBs, heavy metals, total petroleum hydrocarbons, phthalates, and volatile organic compounds. The facility was shut down in 1994 as a result of Air Pollution Control Act Violations. A Judicial Consent Order between the Department and CSD was signed on January 7, 1993. However, by 1994 only a deficient RIWP was prepared. The owners of the property abandoned the site in 1994, and the City of Newark took the site over due to failure to pay taxes. USEPA conducted a surface removal action in October of 1997, and included the removal of thousands of drums, ash piles, debris, asbestos, and visibly contaminated surface soils. No subsurface soil or ground water remediation was conducted during the removal action. The removal action was completed by January of 1998. On June 12, 1998, the City of Newark signed an MOA with the Department to conduct a remedial investigation, in order to ascertain the feasibility of remediation for industrial developmental purposes.

Since that time the City has failed to provide an acceptable RIWP after five iterations, however the draft RIWP did improve during the last iterations, so that only a few hydrogeology issues remain.

In November 2001, Newark indicated they would not pay the Department oversight costs (approx. $13,000) until they received an approval. Since that time some money was paid but the Department has not received a payment from City of Newark since June 2002, and a balance of $1,732.00 remains. On December 18, 2002 the Department issued a letter to the City of Newark to make payment within 15 calendar days of the MOA would be terminated. Comments from the case geologist have been prepared and are in the red file. The last comment letter has not been written and the letter is being withheld until the payment is made.

Case Contacts:

Department

Alan Motter, Technical Coordinator, BEERA (4-4532)

Gregory Bakeman, Geologist, BGWPA (2-9963)

Job Code G140RU00

City of Newark

Primary Contact;

Paul Butler, Project manager
City of Newark
Department of Engineering
920 Broad Street, City Hall
Newark, NJ 07102
Phone (973)-733-7994

Environmental Consultant

URS Corporation
P.O.Box 290
201 Willowbrook Boulevard
Wayne, NJ 07474-0290

George Leahy
Phone (973)-785-0700
Fax (973)-785-0023
Cell (347)-392-1310

Addendum
Scope of Work for Remedial Investigation
The City of Newark, New Jersey

Drainage Ditch
at the
Central Steel Drum Site
843 Delancy Street, Newark New Jersey
Prepared by URS Corporation, March 21, 2005

1.0 BACKGROUND

URS Corporation, on behalf of the City of Newark, submitted a scope of work (dated February 4, 2005) to conduct remedial investigation of soil and groundwater at the former Central Steel Drum Facility (site) to the New Jersey Department of Environmental Protection (NJDEP) for review, comment, and approval. After initial review of the scope of work, NJDEP responded that remedial investigation of a drainage ditch adjacent to the site is also required. Accordingly, this document is a proposal to conduct remedial investigation of the drainage ditch and is an Addendum to the February 4, 2005 Scope of Work.

2.0 SITE DESCRIPTION

The site is located in Essex County, Newark, New Jersey, at the intersection of Doremus Avenue and Delancy (or Delancey) Street, and occupies Block 5074, Lot 1 on the City of Newark tax maps. The NJDEP known contaminated site list (KCSL) identification number for the former Central Steel Drum Facility is NJD011482577.

A drainage ditch extends along the south end of the site from Doremus Avenue eastward for about 2,600 feet to Newark Bay (Figure 1). The section of drainage ditch opposite the site reportedly only contains surface water intermittently and likely does not support any aquatic organisms. The matrix of the material in the ditch, therefore, is considered to be more "soil" than "sediment", for the purposes of delineation and remediation. Although the drainage ditch is outside the property boundaries (Figure 1), it reportedly contained rotting drums and received waste liquids that ran off the site (e.g., NJDEP, 1983).

In October 2001, sixteen soil/sediment samples were collected from the ditch at depths of 0 to 6 inches and 3.0 to 3.5 ft at the locations shown in Figure 2. Each sample generally had high concentrations of polychlorinated biphenyls (PCBs – up to 40 ppm) and inorganics, including antimony (up to 340 ppm), arsenic (up to 66 ppm), and lead (up to 12,000 ppm). Polynuclear aromatic hydrocarbons (PAHs) and pesticides were also detected, but at lesser concentrations (Table 1). Three sediment samples collected for dioxin analyses had toxic equivalent dioxin values (WHO, 1998) of 0.36 to 0.66 parts per billion (ppb). Surface water was not present in the ditch at the time of sampling.

3.0 PROJECT OBJECTIVES

The results of the most recent drainage ditch samples collected in 2001 (URS, June 1, 2004) indicate that none of the samples were clean and that additional, upstream, downstream, and vertical soil/sediment delineation is required. Therefore, the objective of this task is to conduct sampling of the drainage ditch to fill the remaining environmental data gaps through horizontal and vertical delineation and to develop remedial strategies for the ditch.

4.0 SCOPE OF WORK

URS proposes to conduct sampling of the drainage ditch as part of the remedial investigation described in the February 4, 2005 proposal and in accordance with NJDEP regulations (N.J.A.C. 7:26E, February 2003) and guidelines.

URS will perform the following activities for the drainage ditch investigation:

- Obtain access agreements from property holders extending along the length of the drainage ditch (from Doremus Avenue to Newark Bay).
- Conduct a site ecological reconnaissance of the entire length of the drainage ditch for assessment of accessibility, head of tide, aquatic habitat, and noting any points of inflow into the ditch.
- Collection of soil/sediment samples from the entire length of the drainage ditch.
- Laboratory analyses of drainage ditch samples.
- Data compilation and evaluation of field and laboratory data.

A summary description of these activities is provided in the sections below.

4.1 ACCESS AGREEMENT

The drainage ditch is not on property owned by the City of Newark (Figure 1). URS will locate and contact the property owners and arrange for access.

4.2 ECOLOGICAL RECONNAISSANCE OF THE DRAINAGE DITCH

URS will conduct a reconnaissance along the drainage ditch to observe access conditions, locate any bordering wetlands areas, and to establish soil/sediment sampling points. The reconnaissance will include locating the approximate head of tide, which likely separates aquatic habitat in the drainage ditch from non-aquatic habitat (i.e., determination of

sediment vs. soil matrix) and locating any other drainage features (i.e., other potential sources) that discharge into the drainage ditch.

4.3 COLLECTION OF SOIL/SEDIMENT SAMPLES ALONG THE DRAINAGE DITCH

The upstream, downstream, and vertical extent of contamination in the drainage ditch is not defined. The concentrations of PCBs and inorganics in each soil/sediment sample collected in 2001 exceeded both NJDEP non residential soil cleanup criteria and NJDEP sediment screening guidelines. Table 1 shows, as a conservative measure, chemical concentrations in soil/sediment samples compared to the most stringent category ("unrestricted use") of the NJDEP soil cleanup criteria. This provides a preliminary indication of what the potential constituents of concern are at the site. Appropriate cleanup criteria will be selected once the habitat/ecological setting of the drainage ditch and nature of the solid matrix (i.e., sediment vs. soil) is established during this investigation.

Fast Track Sampling Strategy For Horizontal Delineation:

PCBs and lead are the main site-related constituents of concern in the drainage ditch (Table 1). The concentrations of these constituents exceed both NJDEP soil and sediment criteria.

To provide a cost-effective, near "real time" assessment of the extent of contamination, URS proposes to use PCBs and lead act as surrogates for the other contaminants. URS will collect one upstream sample (HDD-1) and six downstream samples (HDD-2 to HDD-7) from the 0-6 inch depth interval along the drainage ditch at approximate 500 ft intervals (Figure 3). The locations of the samples will be biased toward any side drainage features that may discharge into the ditch. These samples will be submitted for "fast track" (i.e., expedited - 72 hour turnaround time) analyses for PCBs and lead (Table 2). The quick receipt of these initial data will allow URS to fine-tune the horizontal delineation work with the collection of additional PCB and lead fast track samples, if needed, within the same field mobilization period.

The data from this fast-track survey will quickly establish the approximate upstream and downstream extent of contamination. Once the general horizontal extent is known, one downstream confirmation sample (DNC-1) and one upstream confirmation sample (UPC-1) will be collected from the 0-6 inch interval and submitted for target compound list and target analyte list (TCL/TAL) and dioxin analyses (Table 2).

Vertical Delineation of the Drainage Ditch

Soil/sediment contamination is present in the drainage ditch to depths of at least 3.5 ft. Therefore, URS will collect 10 samples (VDD-1 through VDD-10) from depths of about 5.0 to 5.5 ft for vertical delineation of the sediments. The locations of the vertical delineation samples are shown in Figure 4. Field screening observations (e.g., visual

signs, organic vapor surveys, odors, etc.) will also be used to attempt to locate clean depths for vertical delineation. The vertical delineation samples will be submitted for target compound list and target analyte list (TCL/TAL) and dioxin analyses (Table 2).

Location of the Drainage Ditch Samples

The soil/sediment samples from the drainage ditch will be horizontally located using a tape measure and compass, NJDEP aerial photographs, and a commercial global positioning system unit (GPS - Magellen model 315 GPS receiver, or equivalent). After the field work, a land surveyor will formally survey certain sampling points at the site (e.g., monitoring well locations) and the drainage ditch sample locations in the immediate vicinity of the site will be measured from these landmarks.

4.4 LABORATORY ANALYSES OF DRAINAGE DITCH SAMPLES

The soil/sediment samples will be analyzed for TCL/TAL parameters using SW-846 methodologies (Table 2) and established chain of custody protocols. Quality assurance and quality control (QA/QC) samples (e.g., trip blanks, blind duplicates, etc.) will be collected for this investigation in accordance with NJDEP (1992; 1997) guidance (Table 3).

The laboratory deliverables will be the Reduced Laboratory Data Deliverables –Non-USEPA/CLP Methods. The laboratory will deliver the analytical results in a standard turnaround time (TAT) of 3 to 4 weeks, with the exception of the expedited (Fast track – 72 hour) PCB and lead analyses of the horizontal ditch delineation samples HDD-1 through HDD-7 (see Section 4.3).

4.5 REPORTING

URS will evaluate the field and analytical data from the drainage ditch samples and include the information in the Remedial Investigation Report, already described in the February 4, 2005 proposal. Chemical data will be compared against appropriate NJDEP standards, criteria, and guidance (i.e., NJDEP 1998; May 12, 1999). The remedial investigation report will present conclusions and recommendations for the drainage ditch.

Laboratory reports containing the raw analytical data will be submitted to the NJDEP under separate cover. The analytical data will also be submitted as an electronic deliverable (Hazsite deliverable) using the format outlined in detail in the NJDEP Electronic Data Interchange (EDI) Manual (April, 1999).

5.0 SCHEDULE

URS estimates that the remedial investigation of the drainage ditch will be accomplished within the timeframe of the eight-month project schedule submitted with the February 4, 2005 proposal. The schedule is now updated to show the estimated duration of the drainage ditch investigation (Figure 5).

6.0 COST ESTIMATE FOR DRAINAGE DITCH INVESTIGATION

The total estimated cost for the drainage ditch investigation following the scope of work described above is **$60,108.16**. A detailed cost breakdown is shown Table 4.

URS assumes that there is reasonable access around the drainage ditch and that a small, ATV-mounted direct push rig can gain access to collect the vertical delineation samples. The costs could increase if more complicated sampling methods are required. This cost estimate also does not include data validation.

7.0 TOTAL ESTIMATED COST FOR CENTRAL STEEL DRUM REMEDIAL INVESTIGATION

The new total estimated cost for the remedial investigation consists of the cost estimate provided in the URS February 4, 2005 proposal and the estimated cost for the drainage ditch investigation, as described above (Table 4). The new total estimated cost for the Central Steel Drum Remedial Investigation is **$304,495.42**, as broken down in Table 5.

References:

New Jersey Administrative Code, Amended February 2003, Chapter 7:26E, Technical Requirements for Site Remediation.

New Jersey Department of Environmental Protection, August 18, 1983, Internal Memo from Division of Water Resources to Deputy Attorney General, Subject Central Steel Drum, Newark, NJ.

New Jersey Department of Environmental Protection, May 1992, Field Sampling Procedures Manual.

New Jersey Department of Environmental Protection, February 1997, Methodology for the Field Extraction/Preservation of Soil Samples with Methanol for Volatile Organic Compounds.

New Jersey Department of Environmental Protection, November 1998, Guidance for Sediment Quality Evaluations.

New Jersey Department of Environmental Protection, April 1999, Site Remediation Program, Electronic Data Interchange Manual.

New Jersey Department of Environmental Protection, last revised May 12, 1999, Soil Cleanup Criteria: Residential Direct Contact, Non-residential Direct Contact, and Impact to Groundwater.

URS Corporation, June 1, 2005, Revised Soil Remedial Investigation Results Summary Report, Central Steel Drum Facility, 843-871 Delancy Street, Newark, New Jersey.

URS Corporation, February 4, 2004, Scope of Work for Remedial Investigation, The City of Newark, New Jersey, Central Steel Drum Site, 843 Delancy Street, Newark New Jersey.

World Health Organization (WHO), European Centre for Environment and Health, International Programme on Chemical Safety, May 25-29, 1998, Executive Summary, Assessment of the Health Risk of Dioxins: Re-evaluation of the Tolerable Daily Intake (TDI).

Table 1
Former Central Steel Drum Facility
Summary of Drainage Ditch Soil/Sediment Sample Analyses - Concentrations Exceeding NJDEP Criteria

Sample ID Lab ID Sample Collection Date Depth Matrix	NJDEP Soil Cleanup Criteria Unrestricted Use	A11-SED-11 AB46781 11/13/2001 0-6" sediment	A11-DUP AB46789 11/13/2001 0-6" sediment	A11-SED-10 AB46782 11/13/2001 0-6" sediment	A11-SED-9A AB46790 11/13/2001 0-6" sediment	A11-SED-9B AB45742 10/30/2001 [illegible] sediment	A11-SED-8 AB46783 11/13/2001 0-6" Sediment	A11-SED-7A AB46784 11/13/2001 0-6" Sediment	A11-SED-7B AB45741 10/30/2001 [illegible] sediment
VOCs (mg/kg)									
Chlorobenzene	1	--	--	--	--	--	--	--	6.7
Ethylbenzene	100	--	--	--	--	--	--	--	--
Methylene chloride	1	--	--	--	--	--	--	--	--
Styrene	23	--	--	--	--	--	--	--	--
Tetrachloroethene	1	--	--	--	--	--	--	--	--
Toluene	500	--	--	--	--	--	--	--	--
Trichloroethene	1	--	--	--	--	--	--	--	--
Xylenes (total)	67	--	--	--	---	--	--	--	--
SVOCs (mg/kg)									
Benzo(a)anthracene	0.9	---	---	0.98	1.5	---	---	---	
Benzo(a)pyrene	0.66	---	1.3	1.2	2.4	0.69	---	---	
Benzo(b)fluoranthene	0.9	0.94	2.2	2	2.2	1.4	---	---	1.1
Benzo(k)fluoranthene	0.9	---	1.5	1.3	1.6	---	---	---	
Bis(2-Ethylhexyl)phthalate	49	---	91	---	---	---	---	---	100
Indeno(1,2,3-cd)pyrene	0.9	---	1.1	---	---	---	---	---	---
Organochlorine Pesticides (mg/kg)									
Aldrin	0.04	0.14	--	--	0.21	--	--	--	0.14
Dieldrin	0.042	0.24	0.15	0.64	0.47	---	--	--	0.38
P,P'-DDE	2	---	---	--	---	---	---	--	---
P,P'-DDT	2	---	---	---	---	---	---	---	---
PCBs (mg/kg)									
Aroclor-1254	0.49	29	--	--	--	--	4.3	6.1	--
Aroclor-1260	0.49	--	3.7	14	23	0.64		--	5.7
Total Organic Carbon (mg/kg)		29000	72000	48000	75000	52,000	64000	16000	15,000
Dioxin TEQ (pg/g)	no criterion	na	na	na	665.18	na	na	na	na

pg/g = part per trillion 1,000 pg/g = 1 part per billion na = not analyzed

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Chlorinated Herbicides (mg/kg)									
2,4,5-T	no criterion	--	--	--	--	--	--	--	--
2,4-D	no criterion	--	0.026	--	0.036	--	0.18	0.6	--
Dicamba	no criterion	--	0.044	--	--	0.020	--	--	--
Silvex	no criterion	--	0.076	--	--	0.060	--	--	--
% Solids		62	27	28	37	63	19	20	76
pH		7.4	7.4	7.6	7.3	6.7	7.4	7.2	7.7

Inorganics (mg/kg)									
Antimony	14	**30**	**140**	**58**	**62**	**14**	**36**	**33**	**45**
Arsenic	20	6.6	19	13	11	**46**	--	--	11
Barium	700	340	**1000**	510	610	350	210	240	510
Cadmium	39	**180**	**59**	38	30	5.7	15	7.2	16
Chromium	*	**150**	**380**	**390**	**530**	**1,300**	**240**	**140**	**440**
Copper	600	180	580	440	440	180	340	200	330
Lead	400	**1,400**	**3,100**	**2,200**	**2,300**	**640**	**970**	**820**	**1,500**
Nickel	250	46	74	77	98	**260**	50	41	96
Thallium	2	--	--	--	--	--	--	--	--
Zinc	1,500	830	**2300**	**2100**	**1600**	670	1100	730	1,400

Notes:

NA Not analyzed
CONC Concentration
Q Qualifier

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Sample ID Lab ID Sample Collection Date Depth Matrix	NJDEP Soil Cleanup Criteria Unrestricted Use	A11-SED-6 AB46791 11/13/2001 0-6" sediment	A11-SED-5A AB46785 11/13/2001 0-6" sediment	A11-SED-5B AB45740 10/30/2001 [redacted] sediment	A11-SED-4 AB46786 11/13/2001 0-6" sediment	A11-SED-3A AB46792 11/13/2001 0-6" sediment	A11-SED-3B AB45739 10/30/2001 [redacted] sediment	A11-SED-2 AB46787 11/13/2001 0-6" sediment	A11-SED-1 AB46788 11/13/2001 0-6" sediment
VOCs (mg/kg)									
Chlorobenzene	1	--	--	--	--	--	49	--	--
Ethylbenzene	100	--	--	--	--	--	700	--	--
Methylene chloride	1	--	--	--	--	--	38	--	--
Styrene	23	--	--	--	--	--	690	--	--
Tetrachloroethene	1	--	--	--	--	--	52	--	--
Toluene	500	--	--	--	--	--	12,000	--	--
Trichloroethene	1	--	--	--	--	--	86	--	--
Xylenes (total)	67	--	--	--	--	--	9,560	--	--
SVOCs (mg/kg)									
Benzo(a)anthracene (1)	0.9	1.1	--	--	--	--	--	1.7	--
Benzo(a)pyrene (1)	0.66	1.4	0.83	--	0.92	--	--	1.9	--
Benzo(b)fluoranthene (1)	0.9	2.2	1.7	--	1.4	--	--	3.2	1.2
Benzo(k)fluoranthene (1)	0.9	1.1	--	--	--	--	--	1.2	--
Bis(2-Ethylhexyl)phthalate	49	--	--	--	--	--	69	--	--
Indeno(1,2,3-cd)pyrene (1)	0.9	--	--	--	--	--	--	--	--
Organochlorine Pesticides (mg/kg)									
Aldrin	0.04	[redacted]	0.2	--	0.07	--	--	--	--
Dieldrin	0.042	[redacted]	0.24	[redacted]	0.75	0.15	[redacted]	[redacted]	[redacted]
P,P'-DDE	2	--	--	--	--	--	[redacted]	--	--
P,P'-DDT	2	3.4	--	--	--	--	20	--	--
PCBs (mg/kg)									
Aroclor-1254	0.49	--	26	--	12	--	--	--	13
Aroclor-1260	0.49	40	--	7.9	--	2.7	9.5	16	--
Total Organic Carbon (mg/kg)		120000	71000	66,000	69000	71000	49,000	90000	120000
Dioxin TEQ (pg/g)	no criterion	361.51	na	na	na	529.26	na	na	na

pg/g = part per trillion 1,000 pg/g = 1 part per billion na = not analyzed

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Chlorinated Herbicides (mg/kg)									
2,4,5-T	no criterion	--	--	--	--	--	--	--	--
2,4-D	no criterion	0.03	0.05	--	0.28	0.052	0.10	0.026	--
Dicamba	no criterion	--	0.024	0.063	0.12	--	0.16	0.065	--
Silvex	no criterion	0.037	0.26	0.16	--	--	--	0.13	--
% Solids		31	29	68	42	28	66	33	25
pH		7.8	7.2	7.1	7.5	7.9	7.1	7.2	7.5

Inorganics (mg/kg)									
Antimony	14	160	--	340	130	70	250	200	180
Arsenic	20	24	47	66	21	14	19	29	35
Barium	700	1400	72	6,300	1300	530	1,000	1900	1500
Cadmium	39	38	--	54	38	15	77	49	48
Chromium	*	560	92	820	580	270	380	630	530
Copper	600	740	21	410	500	350	690	1100	750
Lead	400	4,200	110	12,000	3,400	1,600	4,400	5,000	3,700
Nickel	250	110	--	110	84	49	150	91	91
Thallium	2	--	--	2.9	--	--	--	--	--
Zinc	1,500	2700	79	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Notes:

NA Not analyzed
CONC Concentration
Q Qualifier

Table 2
Former Central Steel Drum Facility
Summary of Proposed Soil/Sediment Drainage Ditch Samples

Area	Sample Identification	Nominal Sample Depth	Proposed Analyses	Method	Comments
"Fast Track" Horizontal delineation samples	HDD-1 through HDD-7	0-6 inches	TCL PCBs Lead	8082 6010B	HDD-1 is upstream sample HDD-2 through HDD-7 are downstream samples Each sample submitted for 72 hour TAT
Horiontal Confirmation Samples	DNC-1 UPC-1	0-6 inches 0-6 inches	TCL VOCs TCL SVOCs TCL pesticides TCL PCBs TAL Metals Dioxin	8260B 8270C 8081A 8082 6010B/7470A 8290	DNC = downstream UPC-1 = upstream
Vertical Delineation Samples	VDD-1 through VDD-10	5.0-5.5 ft	TCL VOCs TCL SVOCs TCL pesticides TCL PCBs TAL Metals Dioxin	8082 8270C 8081A 8082 6010B/7470A 8290	

TCL= Target compound list
TAL = Target analyte list
PCB = Polychlorinated biphenyl
SVOC = Semivolatile organic compounds
VOC = Volatile organic compounds

Table 3
Former Central Steel Drum Facility
Summary of Proposed Drainage Ditch Soil/Sediment Sample QA/QC Analysis

Soil and Sediment

Drainage Ditch Samples	TCL VOCs	TCL SVOCs	TCL Pesticides	TCL PCBs	TAL Metals	Lead	Dioxin	Estimated Sampling Duration
Horizontal Fast Track Samples	0	0	0	7	0	7	0	1 day
Horizontal Confirmation Samples	2	2	2	2	2	0	2	1 day
Vertical Delineation Samples	10	10	10	10	10	0	10	3 days
Total	12	12	12	19	12	7	12	5 days

Quality Assurance and Quality Control Samples *

Trip Blank	4	0	0	0	0	0	0
Field Blank	4	4	4	5	4	1	4
Duplicate	1	1	1	1	1	1	1
Matrix Spike	1	1	1	1	1	1	1
Matrix Spike Duplicate	1	1	1	1	1	1	1
Total	11	7	7	8	7	4	7
Estimated Grand Total	23	19	19	27	19	11	19

* QA/QC Sample Assumptions:
One trip blank for each cooler containing VOC samples.
One field blank for each day of sampling for each matrix.
One duplicate sample for every 20 samples of each matrix.
One MS sample and one MSD sample for every 20 samples of each matrix.

TCL = Target compound list
TAL = Target analyte list
VOC = Volatile organic compound
PCB = Polychlorinated biphenyl
SVOC = Semivolatile organic compound
QA/QC = Quality Assurance and Quality Control

Table 4
Cost Estimate for Drainage Ditch Investigation
Former Central Steel Drum Facility, Newark, New Jersey

Task Description	Expenses											
	Unit	Qty	Unit Cost	Total Cost	Prog. Director $175.00	Proj $105.00	Asst Proj $85.00	Senior Staff $75.00	Staff/ Drafting $70.00	Labor Costs	Other Direct Costs	Total Cost
Project Management												
Project Management, admin, etc.					2	8				$1,190.00		$1,190.00
Total										$1,190.00		$1,190.00
Mobilization												
Access Agreements								24		$1,800.00		$1,800.00
Ditch Reconnaissance							10	10		$1,600.00		$1,600.00
Contractor Procurement for Vertical Samples								4		$300.00		$300.00
Field supplies (photographs, etc.)	ls	1	$25.00	$25.00							$25.00	$25.00
Mileagesand tolls (36 miles round trip)	each	1	$15.78	$15.78							$15.78	$15.78
Total										$3,700.00	$40.78	$3,740.78
Sampling												
Collect Expedited Horizontal Delineation Samples							10		10	$1,550.00		$1,550.00
Expedited Data Compilation and Analyses						2			8	$770.00		$770.00
Collect Horizontal Delineation Samples							8		8	$1,240.00		$1,240.00
Collect Vertical Delineation Samples							30		30	$4,650.00		$4,650.00
Direct Push ATV Rig for deep vertical samples	day	3	$1,500.00	$4,500.00							$4,500.00	$4,500.00
Field supplies	ls	1	$300.00	$300.00							$300.00	$300.00
Mileagesand tolls (36 miles round trip)	each	5	$15.78	$78.90							$78.90	$78.90
Health and Safety Equipment - PID Rental	week	1	$200.00	$200.00							$200.00	$200.00
Sample Shipment	each	10	$75.00	$750.00							$750.00	$750.00
Total										$8,210.00	$5,828.90	$14,038.90
LABORATORY - Soil/Sediment Samples												
TCL VOC analysis	each	23	$100.00	$2,300.00							$2,300.00	$2,300.00
TCL SVOC analysis	each	19	$180.00	$3,420.00							$3,420.00	$3,420.00
TCL Pesticides Analysis	each	19	$65.00	$1,235.00							$1,235.00	$1,235.00
TCL PCBs Analysis	each	20	$65.00	$1,300.00							$1,300.00	$1,300.00
Expedited PCBs Analysis	each	7	$100.00	$700.00							$700.00	$700.00
TAL Metals	each	19	$95.00	$1,805.00							$1,805.00	$1,805.00
Expedited Lead Analyses	each	11	$50.00	$550.00							$550.00	$550.00
Dioxin Analyses	each	19	$800.00	$15,200.00							$15,200.00	$15,200.00
Total											$26,510.00	$26,510.00
DELIVERABLES												
NJDEP Hazsite Deliverables (about 137 samples)							8		24	$2,360.00		$2,360.00
Data Compilation and evaluation					2		16	40	40	$7,510.00		$7,510.00
Prepare Site Drawings								4	16	$1,420.00		$1,420.00
Total										$11,290.00		$11,290.00
PROJECT TOTAL					4	10	82	82	136	**$24,390.00**	**$32,379.68**	**$56,769.68**

URS Profession Services	**$56,769.68**
NJDEP Oversight Fee 5%	**$2,838.48**
NJEDA Administrative Fee	**$500.00**
Grand Total	**$60,108.16**

Version 1:01 PM 3/25/2005

Table 5
Total Estimated Costs for Remedial Investigation
Former Central Steel Drum Facility, Newark, New Jersey

Cost Estimate for URS Profession Services in February 4, 2005 Proposed Scope of Work	$266,697.00
Cost Estimate for URS Profession Services for Proposed Drainage Ditch Scope of Work	$60,108.16
Total Estimated Cost for Remedial Investigation	**$326,805.16**
URS Remaining Budget for Professtional Services	**-$29,000.00**
Adjusted RI cost	**$297,805.16**
NJDEP Oversight Fee 5%	$14,890.26
URS Remaining Budget for NJDEP Oversight	**-$8,700.00**
Adjusted NJDEP Ocersight Cost	**$6,190.26**
NJEDA Administrative Fee	**$500.00**
Grand Total	**$304,495.42**

N

400 0 400 Feet

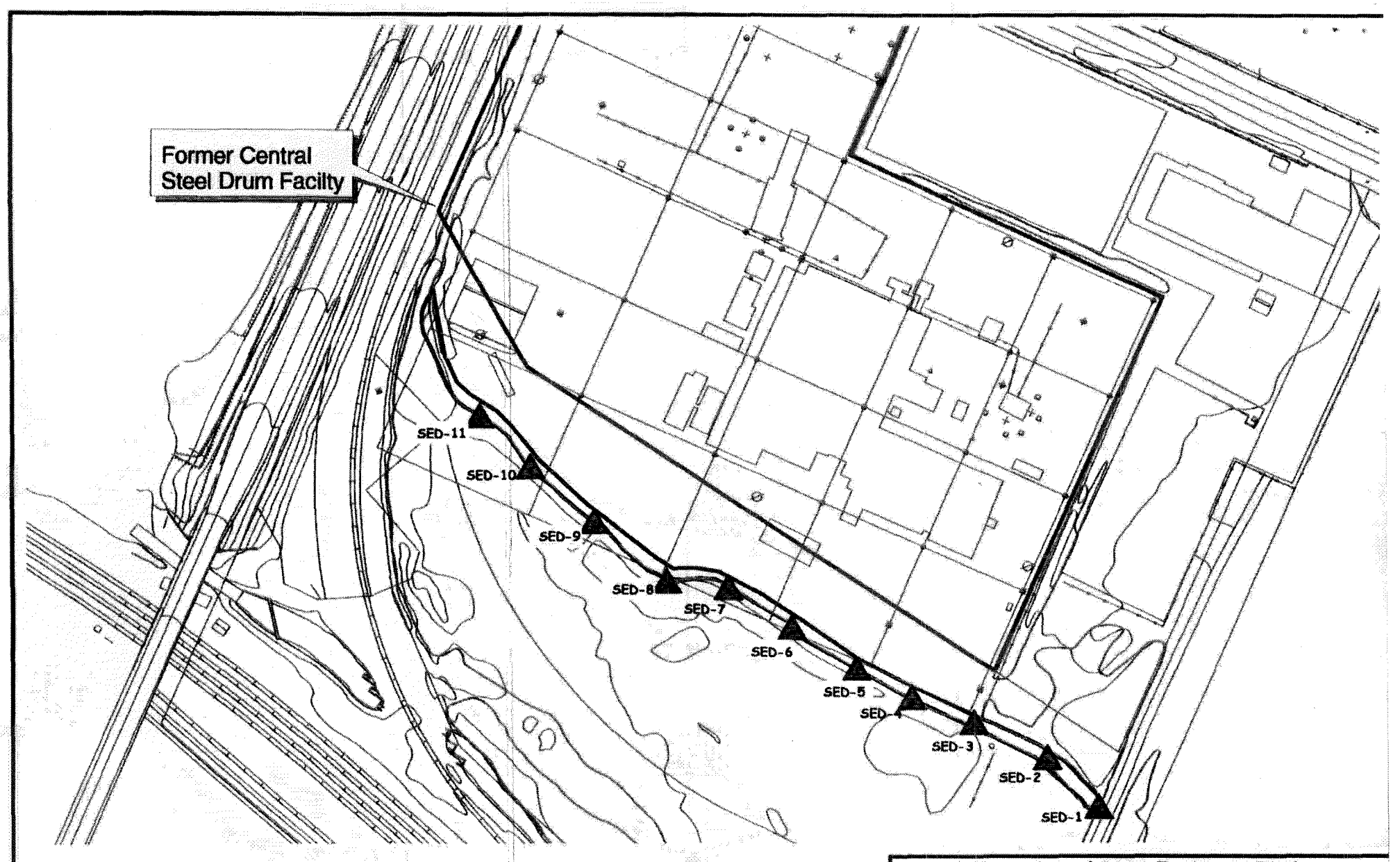
Property Boundary shown for Block 5074 Lot 1 - from the City of Newark Tax Map

Location of Drainage Ditch from NJDEP 2000 Orthophotographs - on line

Approximate Location of Drainage Ditch
Former Central Steel Drum Facility
Newark, New Jersey

URS
Wayne, New Jersey

Scale 1:4800	Proj. No. 19684075	
Date 03/18/05		Figure 1



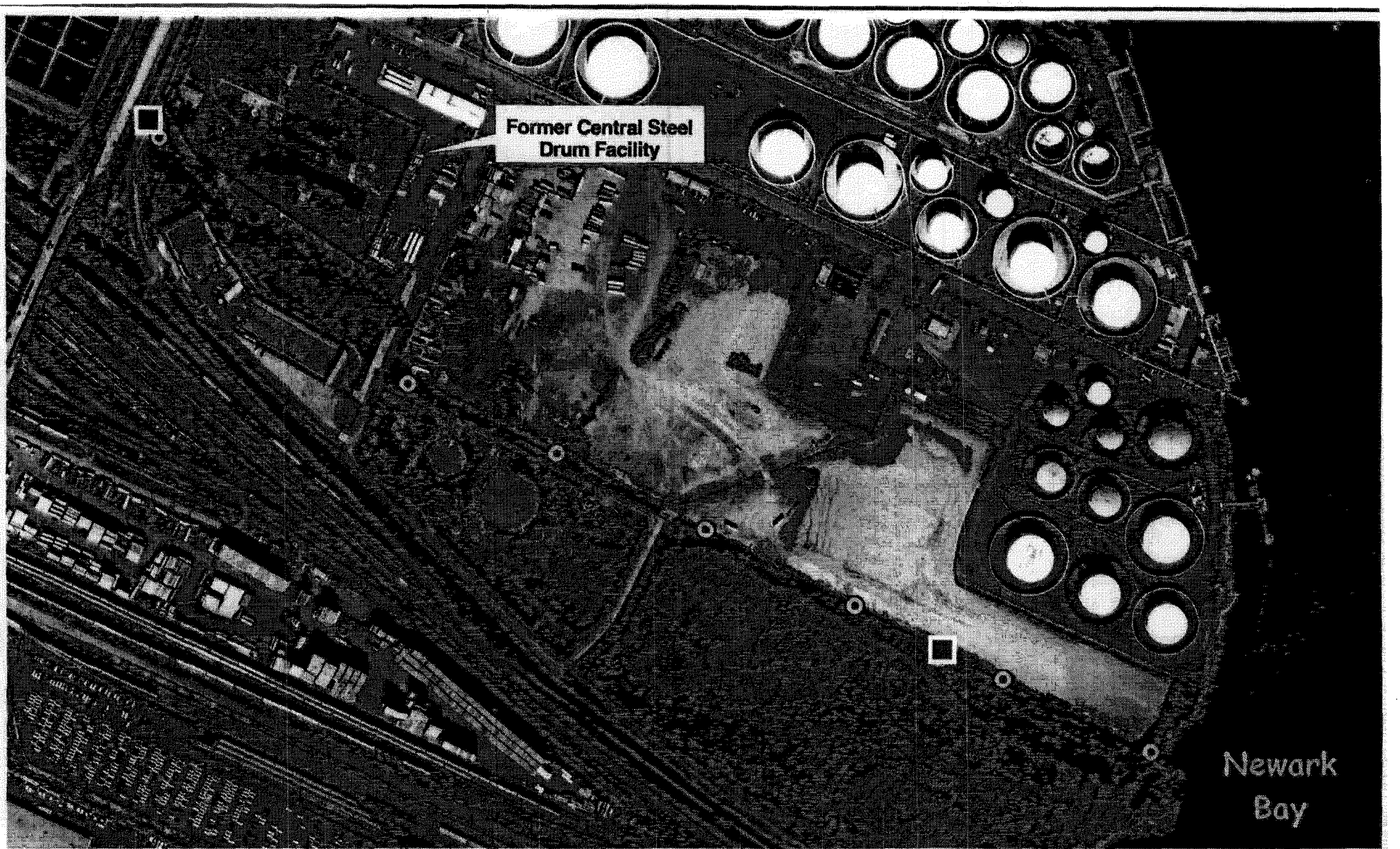
Map Source: NJIT Preliminary Assessment, 1998

Property Boundary shown for Block 5074 Lot 1 - from the City of Newark Tax Map

Location of 2001 Drainage Ditch
Soil/Sediment Samples
Former Central Steel Drum Facility
Newark, New Jersey

URS
Wayne, New Jersey

Scale 1:1200	Proj. No. 19684075	
Date 03/18/05		Figure 2



400 0 400 Feet

N

▲ Location of 2001 soil/sediment samples

⊙ Location of proposed PCB/lead soil/sediment fast-track samples - upsteam and downstream

■ Estimated location of proposed upstream and downstream soil/sediment confirmation samples

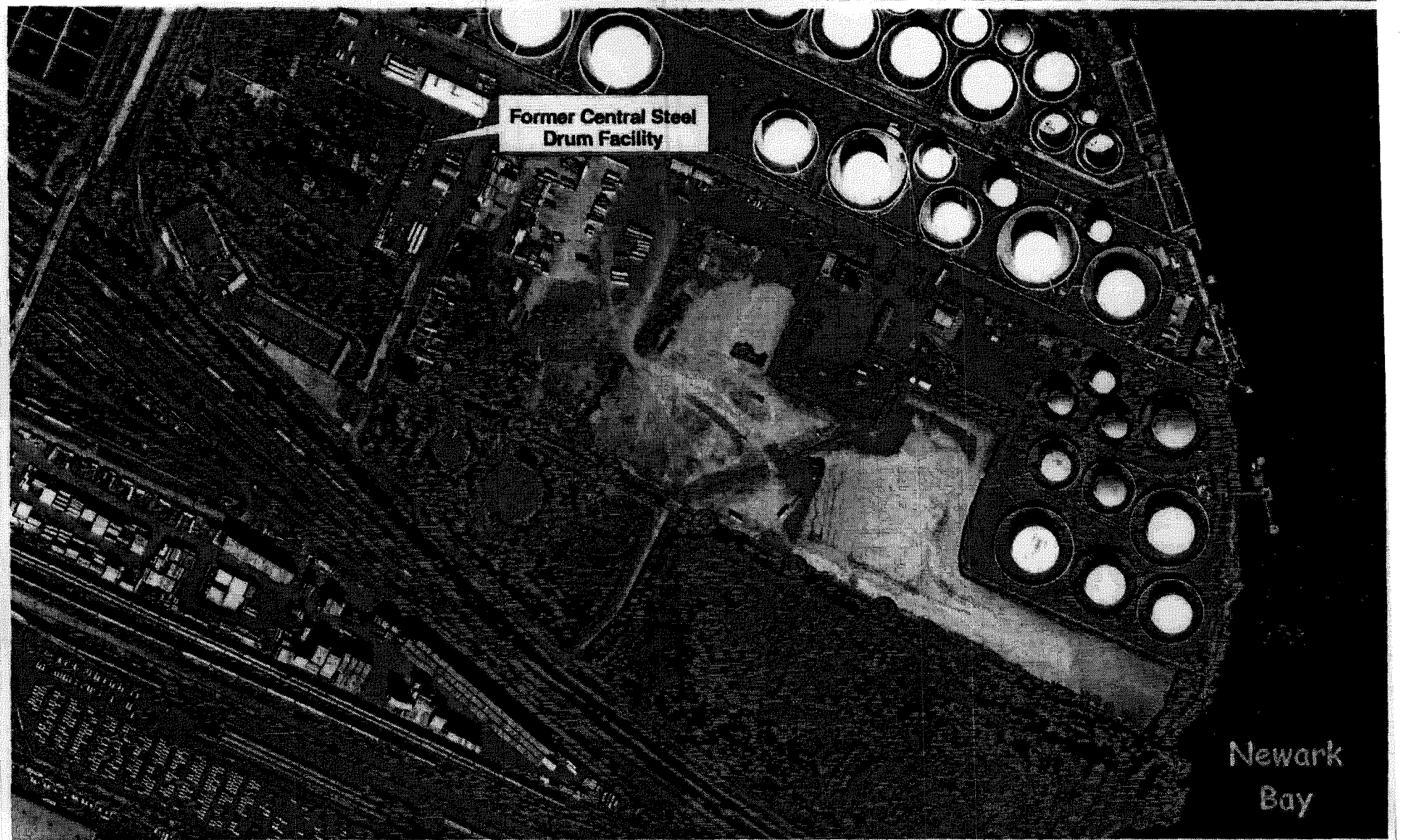
Property Boundary shown for Block 5074 Lot 1 - from the City of Newark Tax Map

Location of Drainage Ditch from NJDEP 2000 Orthophotographs - on line

Location of Proposed Horizontal Delineation
Soil/sediment Samples
Former Central Steel Drum Facility
Newark, New Jersey

URS
Wayne, New Jersey

Scale 1:4800	Proj. No. 19684075	
Date 03/18/05		Figure 3



400 0 400 Feet

N

● Estimated Location of proposed vertical delineation soil/sediment

Property Boundary shown for Block 5074 Lot 1 - from the City of Newark Tax Map

Location of Drainage Ditch from NJDEP 2000 Orthophotographs - on line

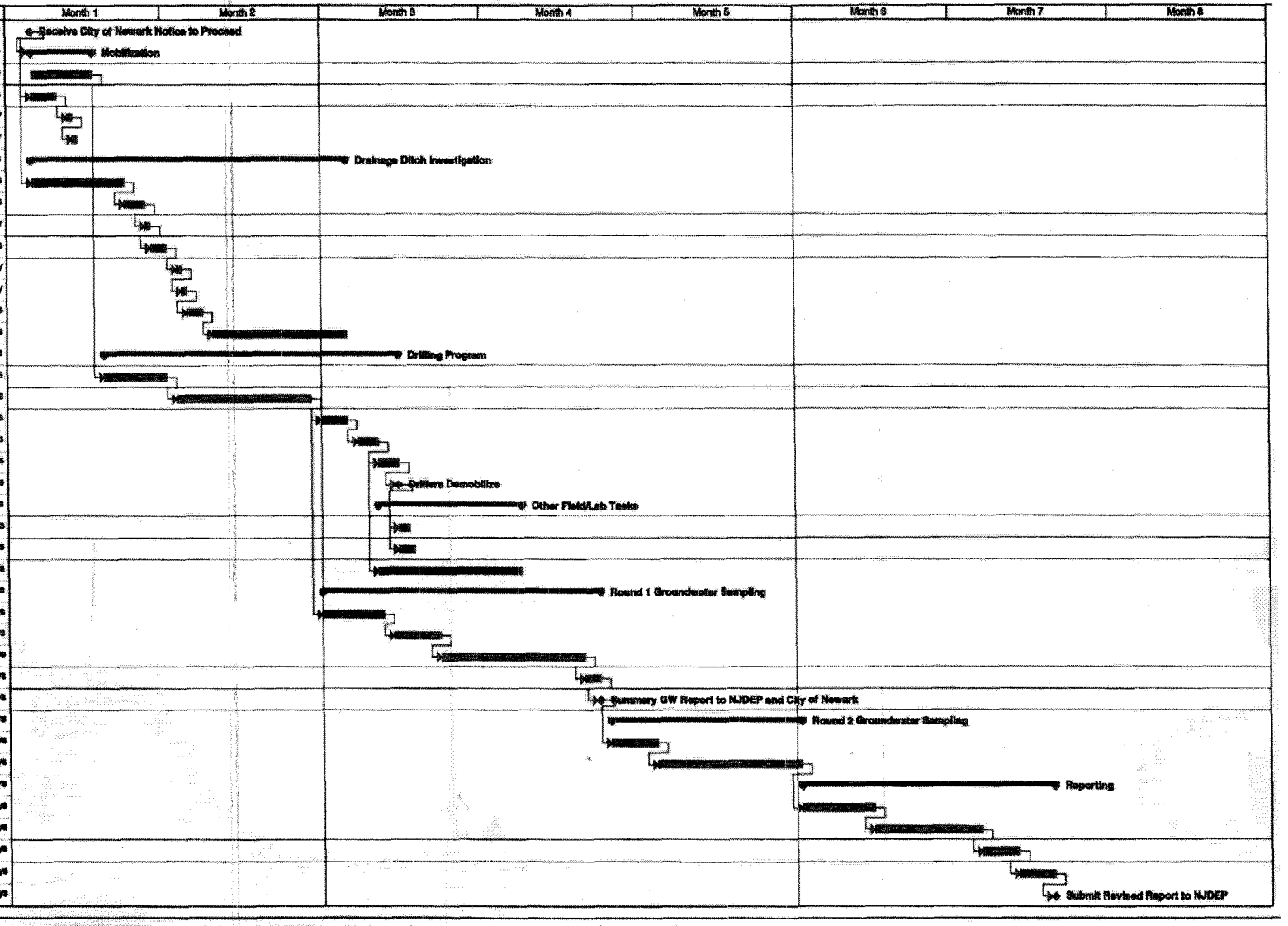
Location of Proposed Vertical Delineation
Soil/sediment Samples
Former Central Steel Drum Facility
Newark, New Jersey

URS
Wayne, New Jersey

Scale 1:4800	Proj. No. 19684075	
Date 03/18/05		Figure 4

Figure 5
Estimated Project Schedule for 2005
Former Central Steel Drum Facility Remedial Investigation

ID	Task Name	Duration
1	Receive City of Newark Notice to Proceed	0 days
2	Mobilization	10 days
3	Mobilize - Utility Markouts and Well permits	10 days
4	Prepare Health and Safety Plan	5 days
5	Site Reconnaissance	1 day
6	General Ecological Evaluation Site Walkover	1 day
7	Drainage Ditch Investigation	45 days
8	Obtain Access Agreements	14 days
9	Ecological Reconnaissance of Ditch to Newark Bay	2 days
10	Collect Fast Track horizontal Delineation Samples	1 day
11	Laboratory Analysis of Expedited Samples (72 hr)	3 days
12	Expedited Data Evaluation	1 day
13	Collect horizontal Confirmation Samples	1 day
14	Collect Vertical Delineation Samples	3 days
15	Laboratory Analysis of Drainage Ditch Samples	20 days
16	Drilling Program	41 days
17	Install Casing for deep wells	10 days
18	Install 24 monitoring wells	20 days
19	Advance Historic Fill Borings	5 days
20	Advance Area of Concern Borings	4 days
21	Seal Eight Monitoring Wells	2 days
22	Drillers Demobilize	0 days
23	Other Field/Lab Tasks	20 days
24	Waste Characterization Soil Cuttings	2 days
25	Land Survey	3 days
26	Laboratory Analyses Soil Samples	20 days
27	Round 1 Groundwater Sampling	40 days
28	Two-week Aquifer Stabilization Period	10 days
29	Ground water Sampling Round 1	7 days
30	Laboratory Analyses R1 Groundwater Samples	20 days
31	Summary Review Round 1 Groundwater Data	3 days
32	Summary GW Report to NJDEP and City of Newark	0 days
33	Round 2 Groundwater Sampling	27 days
34	Groundwater Sampling Round 2	7 days
35	Laboratory Analyses R2 Groundwater Samples	20 days
36	Reporting	35 days
37	Data Compilation and Site Characterization	10 days
38	Prepare Draft Report for City Of Newark Review	15 days
39	City of Newark review Draft Report	5 days
40	Revise Draft Report	5 days
41	Submit Revised Report to NJDEP	0 days



URS Corporation
Project: Central Steel Drum RI
Date: Fri 8/26/05 CSD_RI_update_1.mpp

Task | Critical Task | Milestone | summary

Diamond Alkali Co.
Newark Bay Study Area

NJD980528996

THIS DOCUMENT **"Memorandum from Dennis Hart to Nancy Stiles, Lance Miller, Steven Madonna regarding Illegal Operations at the Central Steel Drum Site, 07/16/1990"** IS CURRENTLY CLASSIFIED AS **NON-CONFIDENTIAL** BY EPA.

Amelia Wagner

Amelia Wagner
Office of Regional Counsel

4/22/09
Date

Let's protect our earth

State of New Jersey
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF HAZARDOUS WASTE MANAGEMENT
CN 028
Trenton, N.J. 08625-0028
(609) 633-1406
Fax # (609) 633-1454

CONFIDENTIAL
MEMORANDUM

TO: Steven Madonna, Assistant Attorney General
Department of Law and Public Safety

THROUGH: Nancy Stiles, Director
Division of Regulatory Affairs 11/16/90

THROUGH: Lance R. Miller, Acting Director
Division of Hazardous Waste Management

FROM: Dennis Hart, Acting Assistant Director
Responsible Party Cleanup Element

SUBJECT: Central Steel Drum
Newark, Essex County, N.J.

This memo serves as a request for action by your office with regard to the current illegal operations at the referenced site. A synopsis of the general history and current status of the Central Steel Drum site is provided below.

Central Steel Drum Company (hereinafter "CSD") is an active drum reconditioning facility located at 704 Doremus Avenue, Newark, N.J. (hereinafter the "Site"). The Site consists of approximately 8.5 acres and is located in a heavily industrialized section of Newark, surrounded on all sides by refineries, chemical plants and other industrial facilities. CSD is violating the Water Pollution Control Act, the Spill Compensation and Control Act and the Solid Waste Management Act by employing its current operating practices.

Process Description: CSD's operations at the Site involve the reconditioning of drums used in the food, paint, adhesive and ink industries. The drums which CSD accepts on site should be "empty", meaning that they contain one (1) inch or less of the former contents, although Departmental inspections have shown otherwise. Drums containing one-inch or less of waste are exempt from RCRA regulations.

Upon entry to the Site the drums are placed in a drum storage area, the open-top drums standing up-right and the close-top drums lying on their sides. The drums are removed from this area as the incoming orders dictate and transported to an incinerator on a chain conveyor. At the head of this incinerator the drums are flipped over, depositing the former contents onto the conveyor and ultimately onto the ground. The chain conveyor transports the drums through the incinerator, burning whatever residue remains. After the incinerator, the drums are blasted with steel shot to remove any remaining paint or residues, pressure tested, reformed, painted and sold to industry. The facility processes 3,000 drums a day, with approximately 60,000 drums stored at the Site. We have videotaped this operation during a recent site inspection.

Owners and Operators: CSD is a privately held company, with the principals listed as follows:

President - Allen Fischer
Vice-President(s) - Gerry Greenberg
- Edward Fischer
Secretary - Neil Fischer
Treasurer - Jeffrey Skuraton

These principals have been operating at the Site since 1966, at which time they purchased CSD from the original operators, who are unclear because of the lack of file information.

CSD operates at the Site as leasee to a corporation named Dore Realty, Inc., which is listed as dissolved by the State Department on July 25, 1966. There are indications that Dore Realty was the former operator at the Site. The individual listed owners of the Site are as follows:

Dorothy Greenberg
Bessie Baron
Jane Ratner-Mattson
Marian Ratner-Abrams

Records indicate that Gerry Greenberg (V.P) is related to Dorothy Greenberg as her son.

Financial Status: A recent Dun and Bradstreet search listed CSD as a company which has annual sales of $5,000,000 and, according to this information, the sales have remained constant since 1982, with no percentage increase. A search of the tax assessor records lists the property value of the principal's residences as follows:

Alan Fischer
39 Harvey Drive
Short Hills, N.J.
Assessed: 1984 Value: $298,100

Neil Fischer
47 Spencer Drive
Short Hills, N.J.
Assessed: 1984 Value: $182,700

Jeffrey Skuraton
89 Hartshorn Drive
Short Hills, N.J.
Assessed: 1985 Value: $388,800

Gerald Greenberg and Edward Fischer have no listed property values.

A search of the tax assessor records for the property value of the Site is as follows:

Property: Block 5074, Lot 1
Assessed: 1986
Value: Land - $169,900
Buildings - $ 81,900

Total Value: $251,800

Departmental Involvement: The Department of Environmental Protection (hereinafter "Department") has been involved in this site since November 27, 1979 when the Department received an anonymous complaint of illegal waste disposal practices at the Site, namely the burying of incinerator ash. To date, four (4) separate Divisions have been involved in different capacities with this case; Division of Environmental Quality, Division of Water Resources, Division of Waste Management (now Hazardous Waste Management) and the Division of Regulatory Affairs. A description of their involvement is as follows.

Division of Environmental Quality (DEQ) Most of DEQ's involvement with the Site deals with the monitoring of the drum incinerator permit, which was issued in 1983. Compliance inspections of the Site, beginning in 1986, have shown that the incinerator was operating illegally and releasing massive fugitive emissions into the air. DEQ has issued many Administrative Orders and Penalty Assessments for these violations, but to date none of the penalties have been paid. (See attached DEQ referral).

On August 30, 1988, CSD entered into an Administrative Consent Order with DEQ to replace the existing incinerator. A permit application was submitted, but determined to be incomplete by DEQ, so CSD was required to submit a complete application. The updated application was received by DEQ, but not approved because of review difficulties. During this time period CSD's incinerator permit had lapsed and DEQ determined that CSD was operating the incinerator illegally. There is a $200,000+ penalty outstanding against CSD for violations of the drum incinerator permit or lack thereof.

Currently the State is involved in an Administrative Law matter regarding the operation of the incinerator out of compliance with the Administrative Consent Order. The hearing is set for September 6, 1990, and the DAG involved is Rachel Lehr (3-8119).

Division of Water Resources (DWR) On March 6, 1987, DWR required CSD to submit an application for a NJPDES-DGW permit. This letter was issued in response to a DWR enforcement site inspection where CSD was observed dumping drum contents onto the ground. DWR determined that this was a

discharge to ground water and through the permit CSD is required to remediate soil contamination at the Site. DWR received a completed NJPDES application from CSD on July 8, 1987, but its processing was stopped because DHWM was requiring CSD to remediate on-site contamination, therefore DHWM's actions would address DWR's concerns as well.

DWR was also involved in the reviews of monitor well locations (reference Attachment A) and sampling requirements in 1985, but no additional actions were necessary and none were taken.

Division of Waste Management (DWM) DWM first became involved with this case in 1979 when the aforementioned complaint of illegal dumping was received. A Notice of Prosecution was issued to CSD on March 28, 1980, ordering CSD to halt all illegal waste disposal practices and remediate any on site contamination. CSD did not comply.

In 1980, DWM began to conduct site inspections at the Site to monitor CSD's compliance with environmental regulations. The Division's inspections continually disclosed full drums on Site, numerous spills on the ground, poor operating practices and general sloppy housekeeping. From 1980 onward DWM issued numerous Notices of Violations to CSD for violations observed during site inspections, but at that time the majority of the enforcement actions were undertaken by EPA.

In 1983, DWM referred the case to Criminal Justice for a criminal investigation and to the Attorney General for an injunction against CSD for numerous violations of the Solid Waste Management Act. There is no indication in the file as to the result of these referrals, but further investigation is necessary.

During 1985 DWM was involved in the review and approval of monitor wells at the Site in response to a EPA Consent Agreement with CSD. After this review DWM apparently became inactive in this case until September 21, 1988, when the case was transferred to the Responsible Party Cleanup Element. We are currently negotiating an Administrative Consent Order with CSD to address this site, absent DEQ issues. The negotiation deadline is July 16, 1990 but we do not anticipate CSD entering into the Administrative Consent Order.

Division of Regulatory Affairs (DRA) DRA was active in the case from 1982 to 1985, giving regulatory support to the other divisions involved. The role of DRA is not clearly defined in the file, but the Regulatory Officer was Scott Dubin.

EPA Involvement: The first indication of involvement by EPA was through a Site inspection on September, 1981, where EPA noted full drums, spillage and general sloppy housekeeping. At this time the interrelation between the Department and EPA is not clear.

On March 19, 1982, EPA issued a Complaint and Compliance Order stating that CSD violated RCRA and the regulations thereunder. The Order also required CSD to comply with applicable regulations and stop illegal treatment of the ash and sludge (incineration). On April 28, 1982, CSD replied to EPA

denying all the charges set forth in the order. A $38,000 penalty was assessed which was never collected.

On November 25, 1983, EPA entered into a consent agreement with CSD which required CSD to remediate the site, among other things. There was no response from CSD until May, 1984, when CSD installed monitor wells at the Site (as was referenced above). The delay was attributed to difficulty in review of the monitor well requirements.

On April 9, 1985, EPA received the results of a hydrogeologic assessment which was completed to examine the conditions of the shallow and deep aquifers, but did not determine the extent of contamination at the Site. The results were of no use in terms of the effect of contamination on the site. In February 1986, EPA conducted soil, surface water and ground water sampling at the Site to determine the amount of on site contamination. The analysis revealed that the Site was heavily contaminated in all media. According to the file, EPA did not request any further sampling to delineate the extent of contamination.

The last recorded involvement EPA had with this case was a request for information letter dated September 23, 1987. Further investigation is warranted into past involvement of EPA in the event of litigation.

Possibility of Criminal Activities: Past conversations with Tom Brady, field inspector for DHWM, have incorporated the possibility of criminal activities in terms of illegal waste disposal or the illegal disposal of drum contents. This information is unsubstantiated, but demands further criminal investigation.

Other Related Activities: The principals of Central Steel Drum operated a similar facility in Burlington County called South Jersey Container Corp. (hereinafter "SJC"). Apparently one (1) day before ECRA became effective, SJC sold the property on which they operated to a party for the sum of one (1) dollar. This was viewed as an attempt to avoid ECRA by the Department. When SJC stopped operating at the Site they triggered ECRA and were required to comply with all the regulatory obligations. During that time period SJC also received a substantial penalty for their activities at the Site. The decision was made within the Department to allow SJC to "go ECRA" instead of paying the penalty. SJC made a minimal attempt at Site remediation, but eventually gave up and abandoned the Site. The State used Spill Fund money to secure the Site with a fence and within that timeframe a $100,000+ penalty was assessed against SJC. To this date there are hundreds of full drums of unknown material at this Site and the penalty matter has been transferred to BPA for reassignment. According to the Department's records the principals of South Jersey Container are the same as Central Steel Drum and any actions that are taken against CSD should be correlated with the SJC case.

Conclusion/Recommendations: The Central Steel Drum site and operations is a complex case with an abundance of related issues. This case involves the Department, USEPA, DAG and Administrative Law offices and it lends itself to a variety of conclusions, I believe the foremost being the total remediation of the Site.

The information (i.e. Site inspection reports, sampling data, etc.) on this site is abundant, the process is ongoing and sadly enough the company still entertains a blatant disregard for environmental regulations. Through this case the Department should shut down the facility, collect substantial penalties and send a clear message to other drum reconditioning companies as well as assure the total site remediation in the event of unsuccessful negotiations. All these issues need to be addressed.

In order to construct the best possible case against CSD, DHWM suggests the following course of action:

1. Surveillance should be initiated to detect any illegal discharges through the drum flipping process. This surveillance will prove, beyond any doubt, that CSD is committing illegal acts at the Site. We can discuss surveillance points with you;

2. The drums on Site will have to be examined and analyzed to determine if the residue in the drums is a hazardous waste, hazardous substance or pollutant. The major violations we would expect to encounter here would be the illegal treatment, storage, disposal or discharge of a hazardous waste or substance. This is a necessary foundation for the case;

3. Operations at the site indicate blatant violations of the Solid Waste Management Act. A criminal investigation into these activities should be conducted; and

4. If CSD is determined to be violating the Spill Act, Water Pollution Control Act or Solid Waste Management Act and/or participating in illegal activities a court order could be issued to CSD for the purpose of halting all aspects of their existing operations. This, action and all the aforementioned actions, will result in the most expedient conclusion of the continuing neglect for environmental regulations by the Central Steel Drum Company. In conjunction with this action we would be ready to discuss with USEPA the possibility of removing the drums from the site and we may also be able to have the generators remove the identifiable drums.

Due to the complex legal and environmental problems associated with this site it is imperative that a consolidated enforcement action be taken to address this site. A meeting between your office and all Departmental offices involved in this case should be held as soon as possible.

kj

Attachment A
Central Steel Drum

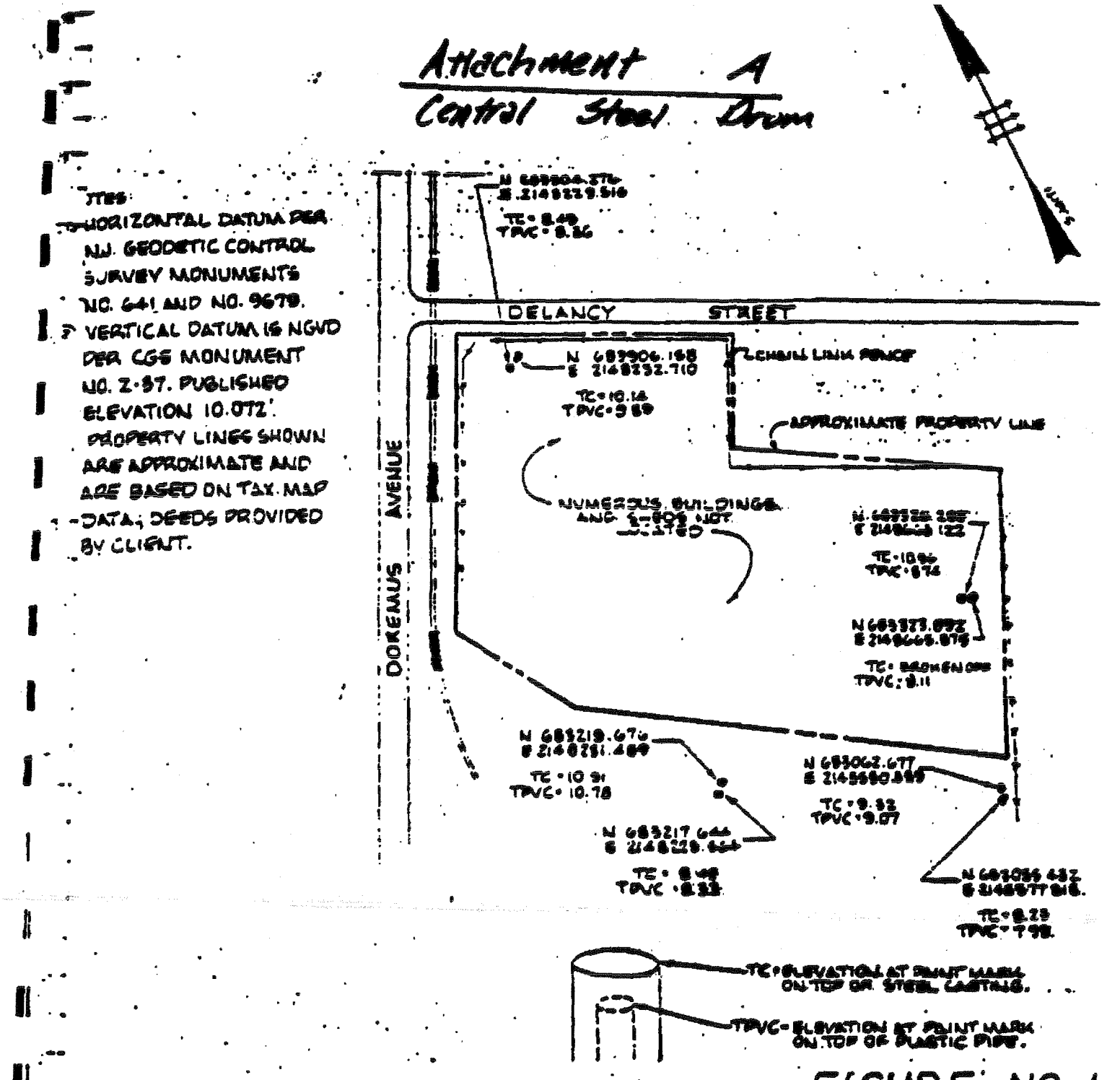


FIGURE NO. 1

SKETCH SHOWING LOCATION OF WELLS

LOT 1, BLK 5074

CITY OF NEWARK
COUNTY OF ESSEX
NEW JERSEY

[redacted]

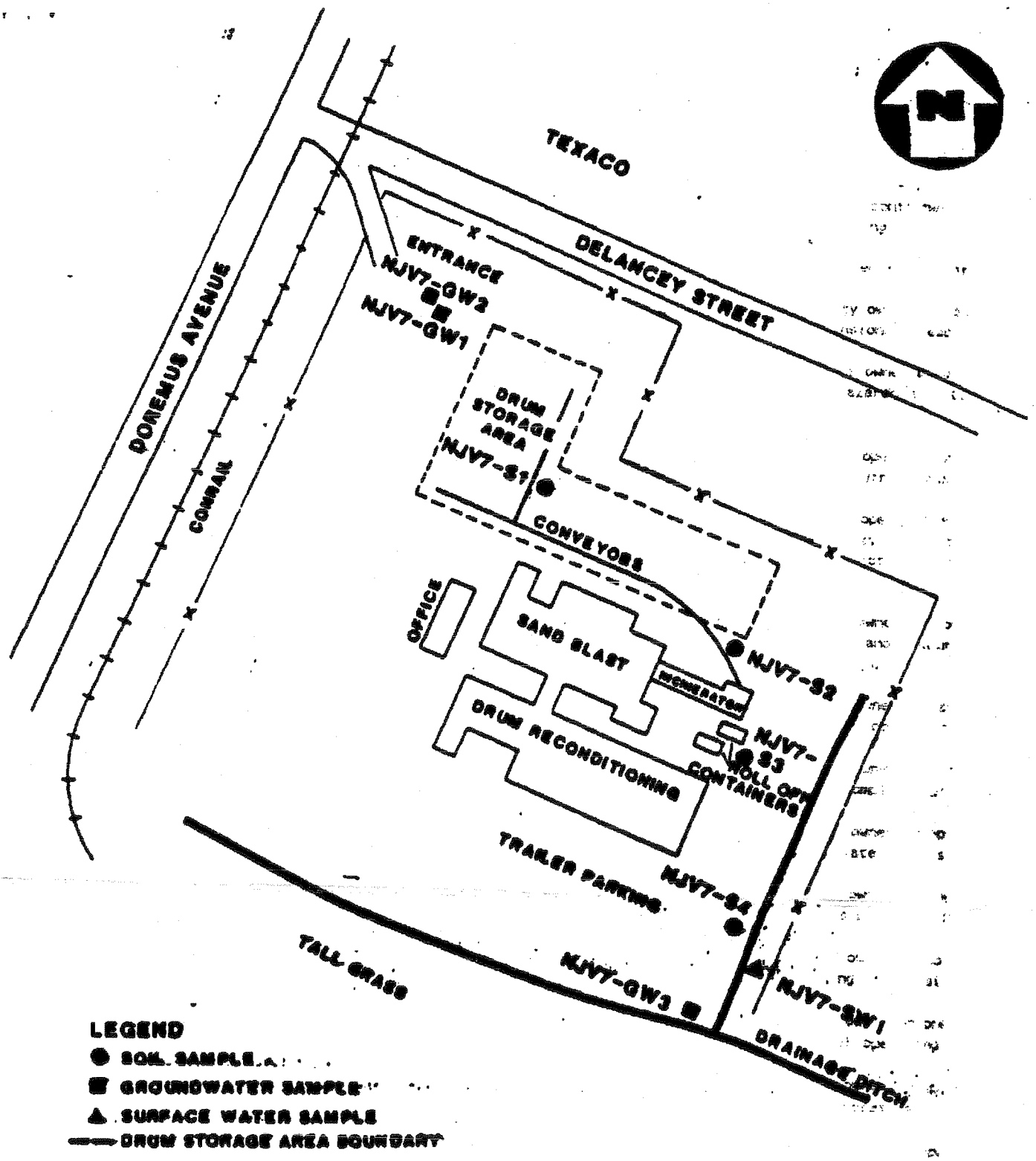


FIGURE A-2

SAMPLE LOCATION MAP

CENTRAL STEEL DRUM, NEWARK, N.J.

(NOT TO SCALE)

[redacted]

ROBERT J. DEL TUFO
Attorney General of New Jersey
Through: Steven J. Madonna,
Environmental Prosecutor
Attorney for Plaintiff, State of New Jersey
Department of Environmental Protection
R.J. Hughes Justice Complex
CN 112
Trenton, New Jersey 08625

By: STEVEN J. MADONNA
Assistant Attorney General
(609) 292-3924

By: R. BRIAN McLAUGHLIN
MARTIN McHUGH
Deputy Attorneys General
Assistant State Environmental Prosecutors
(609) 292-1508

SUPERIOR COURT OF NEW JERSEY
CHANCERY DIVISION - ESSEX COUNTY
DOCKET NO.

STATE OF NEW JERSEY, DEPARTMENT OF ENVIRONMENTAL PROTECTION,	)	Civil Action
Plaintiff,	)	VERIFIED COMPLAINT
v.	)	
CENTRAL STEEL DRUM COMPANY, DOROTHY GREENBURG, BESSIE BARON, JANE RATNER-MATTSON and MARIAN RATNER-ABRAMS,	)	
Defendants.	)	

The plaintiff, State of New Jersey, Department of Environmental Protection ("Department" or "DEP") having principal offices at 401 East State Street, City of Trenton, County of Mercer, by way of Verified Complaint against Defendant says:

NATURE OF ACTION

1. This is a civil action seeking temporary restraint, preliminary and permanent injunctive relief and penalties for discharges of hazardous substances, pollutants and wastes, and illegal treatment, storage and disposal of hazardous and other solid waste, all in violation of various environmental statutes, at and about property known as 704 Doremus Avenue (Block 5074, Lot 1), Newark, Essex County, New Jersey ("the site").

A. The Plaintiff

2. Plaintiff, New Jersey Department of Environmental Protection ("Department" or "NJDEP"), is a body corporate and politic of the State of New Jersey and is authorized to supervise, monitor, permit, regulate and prohibit the discharge of hazardous substances and pollutants pursuant to the Water Pollution Control Act, N.J.S.A. 58:10A-1 et seq., the Spill Compensation and Control Act, N.J.S.A. 58:10-23.11 et seq. and the Air Pollution Control Act, N.J.S.A. 26:2C-1 et seq. Furthermore, pursuant to the Solid Waste Management Act, N.J.S.A. 13:1E-1 et seq., the Department is given the responsibility to supervise and regulate solid and hazardous waste facilities and to adopt codes, rules and regulations concerning such activities. In order to enforce these statutes and regulations, the Department is authorized by N.J.S.A. 13:1E-9 to institute a summary action or proceeding pursuant to R. 4:67-1 et seq. in the Superior Court for injunctive relief and statutory penalties against any solid or hazardous waste disposal facility which is operated in violation of the Solid Waste Manage-

ment Act, or in violation of a code or regulation promulgated thereto, N.J.A.C. 7:26-1 et seq. The court in such an action is authorized to proceed in a summary manner. N.J.S.A. 13:1E-9(d).

B. Defendants

3. Upon information and belief, defendants Dorothy Greenburg, Bessie Baron, Jane Ratner-Mattson and Marian Ratner-Abrams ("defendant owners") are the current owners of the site. Dorothy Greenburg and Bessie Baron each have a 1/3 share in the ownership of the site, while Jane Ratner-Mattson and Marian Ratner-Abrams share a 1/3 share, which was willed to them by their late mother, Mollie Ratner.

4. Bessie Baron, Mollie Ratner, Dorothy Greenburg and Gertrude Greenburg purchased the site from Interchemical Corporation in 1952. On April 30, 1965, the aforementioned parties incorporated Dore Realty and transferred the ownership of the Subject Property to that company, with themselves as the principals. On July 26, 1966, Bessie Baron, Dorothy Greenburg, Mollie Ratner, Gertrude Greenburg and Abbie Greenburg purchased the Subject Property from Dore Realty. Dore Realty dissolved on the same date, with the aforementioned parties signing the certificate of dissolution. On September 3, 1968, Bessie Baron, Mollie Ratner and Dorothy Greenburg bought Abbie and Gertrude Greenburg's shares of the site for $100,000, retaining full ownership of the site.

5. Defendant Central Steel Drum ("CSD") is a New Jersey corporation with its principal place of business located at 704 Doremus Avenue, Newark, New Jersey.

6. Defendant CSD operates a drum reconditioning facility on the site. Since June 1966, CSD has leased the site first from Dore Realty Company, Inc. and then from defendant owners, Dore Realty's successor in interest.

FIRST COUNT

7. Pursuant to the Air Pollution Control Act, N.J.S.A. 26:2C-1 et seq. ("APCA") NJDEP supervises and regulates the emission into the outdoor atmosphere of air pollutants which are or tend to be injurious to human health or welfare or would unreasonably interfere with the enjoyment of life or property. N.J.S.A. 26:2C-2.

8. The Department is authorized, pursuant to N.J.S.A. 26:2C-19a., to commence a civil action in the Superior Court for injunctive relief against any person who violates the provisions of the APCA, the regulations promulgated thereunder or an administrative order issued pursuant thereto. Pursuant to N.J.S.A. 26:2C-19a., this court may proceed in the action in a summary manner.

9. The APCA also empowers the Department to institute a civil action for the recovery of civil penalties for the violation of the APCA, regulations promulgated thereunder or administrative orders issued pursuant thereto. N.J.S.A. 26:2C-19d. Such civil penalties shall not exceed $10,000 for a first offense, $25,000 for a second offense and $50,000 for third and subsequent offenses. Id. "If the violation is of a continuing nature, each day during which the violation continues ... constitutes an additional, separate and distinct offense." Id. The above penalties may be

recovered, with costs, in a summary manner pursuant to the Penalty Enforcement Law, N.J.S.A. 2A:58-1 et seq.

10. The APCA prohibits the construction, installation or alteration of any air pollution creating equipment or apparatus for controlling such air pollution without first filing an application for and receiving NJDEP approval of a permit. N.J.S.A. 26:2C-9.2a. Likewise, no new or altered equipment or control apparatus may be operated prior to NJDEP approval of an operating certificate. N.J.S.A. 26:2C-9.2b.

11. The APCA regulations explicitly prohibit the operation of any equipment or control apparatus unless "[a]ll conditions and provisions of the permit and certificate are fulfilled; and [a]ll components connected or attached to, or serving the equipment and/or control apparatus are functioning properly and are in use in accordance with the permit and certificate." N.J.A.C. 7:27-8.3(e) 1 and 2.

12. Defendant CSD reconditions 55 gallon steel drums using a process of thermal oxidation in its Main Drum Tunnel to remove the residual contents and old decorative coatings from used drums. After preparing the steel, the drums are then coated with interior and exterior surface coatings.

13. Defendant CSD's Main Drum Tunnel and two associated afterburners are permitted to operate in accordance with all provisions, conditions and emissions limitations of a Permit to Construct and Certificate to Operate ("P/CT") No. 67438 issued by plaintiff DEP to defendant CSD.

14. During 1987 and 1988, plaintiff DEP issued several Administrative Orders and Notices of Civil Administrative Penalty Assessments ("AO/NOCAPAS") to defendant CSD for violations of the Air Pollution Control Act and various regulations promulgated thereunder occurring between 1986 and 1988.

15. Defendant CSD entered into an Administrative Consent Order ("ACO") with plaintiff DEP effective on or about September 7, 1988 which settled all of the outstanding air pollution penalties, required CSD to cease its violations of air pollution regulations, to comply with its permit, and to take actions necessary to control or eliminate the emissions from its Main Drum Tunnel and two after-burners. As part of the ACO, CSD agreed to undertake these necessary actions pursuant to the compliance schedule set forth therein. The actions to be performed by CSD included designing a new exit afterburner, quench chamber, and deluge system; to obtain an approved P/CT for an entire upgraded air pollution control system ("the system") covering all processes at the site; and to install and commence operating the system.

16. On or about December 30, 1988, in accordance with the ACO, CSD submitted a Permit to Construct, Install or Alter Control Apparatus or Equipment and Certificate to Operate Control Apparatus on Equipment ("P/Ct") application to NJDEP.

17. On or about February 6, 1989, NJDEP notified CSD that its P/Ct application did not meet the basic requirements of an application and provided a list of questions that needed to be

resolved before a decision to grant or deny the application could be made.

18. On or about March 10, 1989, plaintiff DEP granted defendant CSD a 60 day extension of the March 1, 1989 deadline set forth in the compliance schedule of the ACO by which CSD had to obtain a permit to upgrade or replace its main drum tunnel.

19. On or about March 15, 1989, a meeting was held between CSD and NJDEP at which CSD presented additional information concerning its P/Ct application to NJDEP.

20. On or about May 9, 1989, plaintiff DEP denied defendant CSD's permit application because CSD submitted insufficient information to allow DEP a complete review of the application.

21. On or about May 19, 1989, CSD submitted a request for an administrative hearing to contest the May 9, 1989 denial of its P/Ct application.

22. On or about October 17, 1989, CSD submitted a revised P/Ct application covering only the main drum tunnel to NJDEP in a belated attempt to comply with the requirements of the ACO.

23. On or about January 13, 1990, CSD submitted a request that the ACO compliance schedule dates be extended pursuant to the Force Majeure provisions of the ACO.

24. On or about March 2, 1990, NJDEP notified CSD that it failed to comply with the notice requirements of the ACO's Force Majeure provision, and that it also failed to comply with the ACO's compliance schedule for obtaining the approved P/Ct and with the

ACO's requirements for installing, debugging and commencing operation of the required new Main Drum Tunnel and associated equipment without the approved P/Ct. NJDEP further notified CSD that the ACO was thus terminated based upon CSD's failure to comply with the terms set forth therein, and that the effective date of termination of the ACO was July 2, 1989, one day following the ACO's final compliance date.

25. On or about March 29, 1990, NJDEP issued an Administrative Order of Revocation and Notice of Civil Administrative Penalty Assessment to CSD revoking its Certificate to Operate #67438 effective April 28, 1990, and advising that any operation of CSD's main drum tunnel incinerator after April 28, 1990, would constitute a violation of N.J.A.C. 7:27-8.1 et seq.

26. On or about April 17, 1990, CSD submitted a request for an administrative hearing to NJDEP to challenge the revocation order and other alleged violations.

27. On or about April 27, 1990, CSD submitted a request to NJDEP for a stay of the Administrative Order revoking the P/Ct for the main drum tunnel.

28. On or about May 30, 1990, NJDEP advised CSD that its request for a stay of the revocation order was denied.

29. On or about June 12, 1990, NJDEP advised CSD that its second P/Ct application for the main drum tunnel incinerator was denied on the basis that CSD had not demonstrated that the proposed equipment incorporated state-of-the-art air pollution control. NJDEP further advised CSD that air quality monitoring and

risk assessment would be required for any subsequent applications to demonstrate that the air quality effects would be acceptable after application of state-of-the-art air pollution control.

30. On or about July 19, 1990 CSD proposed to submit an application to NJDEP for an emergency permit and certificate to install and operate a scrubber on its existing main drum tunnel incinerator as a means of controlling its fugitive emissions problem on an interim basis until it receives NJDEP approval to build a new state-of-the-art incinerator.

31. On or about August 3, 1990 NJDEP advised CSD that it could not approve the installation of the proposed scrubber inasmuch as the existing system was in such poor physical condition that the interim scrubber would have little or no benefit in protecting the environment.

32. Following the execution of the September 7, 1988 ACO, defendant CSD has been cited by plaintiff DEP for numerous additional air pollution violations, including the following:

a. The Department issued seventeen (17) Administrative Orders and Notices of Civil Administrative Penalty Assessments and one (1) Administrative Order of Revocation and Notice of Civil Administrative Penalty Assessment to CSD for eighty-three (83) separate violations of N.J.A.C. 7:27-8.3(e)2, which provides that "no person shall use or cause to be used any equipment or control apparatus unless all components connected or attached to, or serving the equipment

and/or control apparatus are functioning properly and are in use in accordance with the permit and certificate."

b. The Department issued six (6) Administrative Orders and Notices of Civil Administrative Penalty Assessments to CSD Administrative Penalty Assessments to CSD for seven (7) separate violations of N.J.A.C. 7:27-11.3(d), which provides that "no person shall construct, install, use or cause to be used any common incinerator or any special incinerator which will result in odors being detectable by sense of smell in any area of human use or occupancy."

c. The Department issued four (4) Administrative Orders and Notices of Civil Administrative Penalty Assessments to CSD for six (6) separate violations of N.J.A.C. 7:27-11.3(c) which provides that "no person shall cause, suffer, allow, or permit the emission of particles of unburned waste or ash from any common incinerator or from any special incinerator which are individually large enough to be visible while suspended in the atmosphere."

d. The Department issued three (3) Administrative Orders and Notices of Civil Administrative Penalty Assessments to CSD for three (3) violations of N.J.A.C. 7:27-2.3(a) which provides that "no person shall cause, suffer, allow or permit the disposal of

rubbish, garbage, or trade waste, or buildings or structures by open burning."

e. The Department issued three (3) Administrative Orders and Notices of Civil Administrative Penalty Assessments to CSD for three (3) violations of N.J.A.C. 7:27-5.2(a) which provides that "... no person shall cause, suffer, allow or permit to be emitted into the outdoor atmosphere substances in quantities which shall result in air pollution..."

f. The Department issued two (2) Administrative Orders and Notices of Civil Administrative Penalty Assessments to CSD for two (2) violations of N.J.A.C. 7:27-11.3(b) which provides that "... no person shall cause, suffer, allow or permit smoke from any incinerator the shade or appearance of which is darker than Number 1 of the Ringelmann Smoke Chart ... to be emitted into the open air; or ... exclusive of water vapor, of such opacity leaving a stack or chimney to a degree greater than the emission designated at Number 1 of the Ringelmann Smoke Chart."

g. The Department issued an Administrative Order and Notice of Civil Administrative Penalty Assessment to CSD for the violations of N.J.A.C. 7:27-8.3(b), which provides that "no person shall use or cause to be used any new or altered equipment or control

apparatus without first having obtained a certificate..."

h. The Department issued an Administrative Order and Notice of Civil Administrative Penalty Assessment to CSD for the violation of N.J.A.C. 7:27-11.2(a) which provides that "no person shall construct, install, use or cause to be used any existing or new incinerator unless such incinerator is of the multiple chamber type or of a type approved by the Department ..."

i. The Department issued an Administrative Order and Notice of Civil Administrative Penalty Assessment to CSD for the violation of N.J.A.C. 7:27-8.3(e)1, which provides that "no person shall use or cause to be used any equipment or control apparatus unless ... all conditions and provisions of the permit and certificate are fulfilled ..." and

j. The Department issued an Administrative Order and Notice of Civil Administrative Penalty Assessment to CSD for the violation of N.J.A.C. 7:27-8.3(a) and (b) which provide that "no person shall construct, install or alter any equipment or control apparatus without first having obtained a permit ..." and that "no person shall use or cause to be used any new or altered equipment or control apparatus without first having obtained a certificate..."

k. As a result of numerous investigations conducted by DEP during the period of December 1990 to the present, DEP issued Administrative Orders and Notices of Civil Administrative Penalty Assessments for violations of N.J.A.C. 7:27-8.3(e)2 on the following dates:

1. January 15 and April 11, 1991 for fugitive particulates released from holes in the Main Drum Tunnel Incinerator.
2. January 22, March 4 and 21, and May 8, 1991 for fugitive particulates released from the exit section of the Main Drum Tunnel Incinerator.

l. As a result of numerous investigations conducted by DEP during the period of December 1990 to the present, DEP issued Administrative Orders and Notices of Civil Administrative Penalty Assessments for violations of N.J.A.C. 7:27-11.3 on the following dates:

1. February 11, 1991 for permitting smoke from the Main Drum Tunnel incinerator the shade or appearance of which was darker than Number 1 of the Ringelmann Smoke Chart.
2. March 4 and April 11, 1991 for permitting particles of unburned waste or ash to be released from the Main Drum Incinerator of a

size large enough to be visible while suspended in the atmosphere.

33. Following the March 29, 1990 renovation, CSD continued to operate without a valid Permit to Construct and Certificate to Operate.

34. The Department has conducted a dispersion modeling analysis of CSD's stack emissions and of the fugitive emissions from its drum tunnel which indicates that the continued operation of the CSD facility, even if operating in full compliance with all the conditions of its 1982 permit, (which the above noted numerous violations indicate it is not) constitutes a clear risk of adverse health effects for those persons exposed to its emissions.

WHEREFORE, plaintiff Department of Environmental Protection demands judgment against CSD:

a. Temporary restraining order and a preliminary and permanent injunction, enjoining CSD from operating its facility without a valid permit to Construct and Certificate to Operate ("P/Ct");

b. Ordering CSD to pay maximum statutory penalties as provided by N.J.S.A. 26:2C-19; and

c. Ordering any and all other such relief as the Court may deem just and equitable.

SECOND COUNT

35. CSD's operations at the site involve the reconditioning of drums used in the food, paint, adhesive and ink industries. It is estimated that there are approximately 60,000 drums

at the site at any one time. It is also estimated that approximately 50,000 of the drums accepted at the site contain residues which are listed as hazardous substances pursuant to the Spill Compensation and Control Act, N.J.S.A. 58:10-23.11 et seq., specifically, N.J.A.C. 7:1E-1 et seq. CSD reports that it accepts used drums which contain up to one (1) inch of residue of the former contents; however, inspections performed by the Department have revealed the presence of drums at the site containing more than one inch of residue, including partially and completely full drums. CSD's current reconditioning process includes emptying out as much of the residue in each drum as possible by flipping them upside down and then transporting the upended drums by chain conveyer through a main incinerator to burn out the residues which were left clinging to the inside of the upended drums as well as the paint that coated the surface of the drums. Following incineration the drums are blasted by steel shot, painted and sold to numerous industries. CSD processes approximately 3,000 drums a day.

36. CSD's drum emptying operation occurs in a roofed, partially enclosed area. CSD "deheads" each of the drums by removing one of the ends of the drum to facilitate the emptying operation. The drums are then transported to the incinerator by the claim conveyor. At the head of the incinerator each of the deheaded drums is flipped upside down for the purpose of dumping out as much of the remaining contents as possible. The deheaded drums are then sent into the incinerator as described in paragraph

35. The drum residues from the flipped drums are dumped into a collection pit, forming a sludge, which is ultimately carried and dumped by a secondary conveyer onto a flat and unbermed concrete pad. The sludge piles up on the unbermed concrete pad and flows to the surrounding bare ground in an uncontrolled manner. The sludge dumped onto the unbermed concrete pad is uncovered, exposed to the element's and is stored there by CSD for an undetermined amount of time. CSD eventually transfers the sludge from the unbermed concrete pad to roll-off containers for ultimate off-site disposal by various waste disposal companies. Prior to August 1990, CSD disposed of the sludge by shoveling it into a secondary incinerator (afterburner). This operation generated an ash. CSD ceased the secondary incinerator operation because CSD had allowed the secondary incinerator to deteriorate to such a condition that CSD could no longer operate this equipment effectively. CSD processes approximately 3,000 drums per day, and it is CSD's alleged business practice to accept drums containing up to one inch of residue. However, the Department's inspections have revealed CSD's acceptance of partially and completely full drums. As such, CSD's drum emptying and transfer operation results in the dumping, spilling and discharging of hundreds, if not thousands, of gallons of drum residues each day.

37. On March 29, 1978, Department representatives inspected the site and requested that a waste survey report be submitted to the Department by CSD to determine what types of wastes were being produced. Alan Fischer, President of CSD,

indicated that the wastes being generated were paper, wood, ash and scrap metal. Mr. Fischer agreed to mail in a complete waste survey report for all the wastes generated at the site, but the Department has no record of CSD ever submitting the waste survey report.

38. On November 27, 1979, the Department conducted an inspection of the site in response to an anonymous complaint which was received indicating that CSD was burying waste at the back of the site. The inspector noted an area at the site where recent grading had been done. The Department performed a follow-up inspection on January 29, 1980, and Alan Fischer admitted that CSD used incinerator ash as fill in low areas of the site to prevent flooding. At that time CSD was dumping approximately one 55 gallon drum of ash per day onto the ground as fill. The incinerator ash contained fifteen hazardous substances and the placement of the ash on the ground, as fill or otherwise, resulted in the discharge of hazardous substances onto the lands and into the waters of the State of New Jersey.

39. On March 28, 1980, the Department issued a Notice of Prosecution to CSD for illegal waste disposal practices and assessed CSD a $2,000 penalty for the referenced violations. A prior NJDEP investigation on January 29, 1980, disclosed that CSD was dumping incinerator ash at the site, in violation of the Solid Waste Management Rules, specifically, N.J.A.C. 7:26-2.2(b) and N.J.A.C. 7:26-2.2(c). Since the incinerator ash contained hazardous substances, this method of disposal was a discharge of hazardous substances to the land, and caused the spread of the

hazardous substances through the run-off of rainwater from the exposed ash piles, thereby resulting in the transport of hazardous substances from the ash piles to other parts of the site and the waters of the State. CSD was given the opportunity to settle this fine and comply with the requirements of the Notice of Prosecution, which included an order that CSD excavate and properly dispose of the incinerator ash at an authorized facility within thirty (30) days of receipt of said Notice. CSD never achieved settlement of, nor did they comply with, the Notice of Prosecution. To this date the unlawfully disposed incinerator ash remains at the site, which continually results in discharges from the run-off of contaminants onto the ground and waters of the State.

40. On December 7, 1981, the U.S. Environmental Protection Agency (hereinafter "EPA") performed an inspection of the site to determine whether CSD was violating the regulations of the Resource Conservation and Recovery Act ("RCRA"), Comprehensive Environmental Response, Compensation and Liability Act ("CERCLA") or National Pollutant Discharge Elimination System ("NPDES"). EPA noted that there were a large number of drum spillages and chemicals and oily liquids were pooling on the ground. EPA concluded that there was strong visual evidence to suggest violations of RCRA, CERCLA and NPDES regulations and recommended that enforcement action be taken against CSD.

41. On February 2, 1982, the Department conducted an investigation of the site. The inspectors noted contamination of the soil and surface water from the spillage of drums. Twenty (20)

to thirty (30) full drums were also noted on site categorizing CSD as a Treatment, Storage and Disposal (TSD) facility placing CSD in violation of RCRA for failure to obtain a RCRA TSD Permit required to store hazardous wastes.

42. On March 19, 1982, EPA issued a Complaint and Compliance Order to CSD. The Order stated that CSD had violated Sections 3002 and 3004 of the Resource Conservation and Recovery Act (RCRA), 42 U.S.C. 6924, and the regulations promulgated thereunder. The Order also gave CSD the opportunity to request a formal hearing to contest the charges. The principal violations cited included the following:

a) CSD was treating a hazardous waste, namely the sludge, without having obtained a hazardous waste permit.

b) CSD was disposing of hazardous wastes, namely the sludge and incinerator ash, on the ground without having obtained a hazardous waste permit.

c) CSD was storing a hazardous waste, namely the incinerator ash, in a pile on the ground without having obtained a hazardous waste permit.

d) CSD failed to comply with four regulatory standards established for hazardous waste generators.

e) CSD failed to comply with eight regulatory standards established for facilities that treat, store or dispose of hazardous wastes.

43. On April 28, 1982, CSD replied to the March 19, 1982 Complaint and Compliance Order denying all charges set forth in the aforementioned complaint.

44. On February 2, 1983, the Department conducted an investigation at the site. The inspector observed approximately 50 full unmarked drums on the ground in the drum storage area. A

sample was taken from one of these drums and sent to a laboratory for analysis. The sample was found to contain concentrations of toluene (6,700 parts per million (ppm)) and 1,1,1 trichloromethane (208 ppm). The sample analysis also revealed that the drum contents were ignitable and therefore defined as ignitable wastes pursuant to the Solid Waste Management Rules, N.J.A.C. 7:26-8.9(a)1. These same compounds were also found to be present as contaminants in the soil and surface water sampling subsequently performed at the site, thereby indicating a correlation between CSD's drum operations and the contamination present in the soil, groundwater and surface water at the site. These compounds are defined as hazardous substances pursuant to the Spill Compensation and Control Act, N.J.S.A. 58:10-23.11 et seq. and the regulations promulgated pursuant thereto, N.J.A.C. 7:1E-1 et seq.

45. On February 15, 1983, the Department collected four (4) soil samples from different locations at the site. The sampling results revealed the following compounds in the soil: ethylbenzene (45,600 ppb), toluene (40,800 ppb), 1,1,1-trichloromethane (6,720 ppb), methylene chloride (2,680 ppb) and trichloroethylene (2,200 ppb). Several of these compounds were found in samples of incinerator ash generated at the site. Some of these compounds are included on a "List of Contaminants" submitted to the Department by CSD as part of a renewal application for its drum incinerator air permit. This "List of Contaminants" disclosed what materials CSD was processing through the drum incinerator. There is therefore a clear nexus between the compounds that CSD processed

through the drum incinerator, the compounds found in the incinerator ash and the presence of these same compounds as contaminants in the soil, ground water and surface water samples taken at the site.

46. On May 24, 1983, the Department collected soil and surface water samples at the site. One water and two soil samples were collected at the site. The sampling results revealed concentrations of the following compounds in the soil; toluene (20,870 ppb), 1,1-dichloroethane (9,310 ppb), benzene (3,395 ppb), methylene chloride (3,240 ppb) and ethylbenzene (3,050 ppb). The sampling results revealed concentrations of the following compounds in the water; ethylbenzene (150 ppb) and xylene (560 ppb). Several of these compounds were found in samples of incinerator ash generated at the site, and on the "List of Contaminants" referenced in paragraph 45, thereby indicating a correlation between CSD's drum operations and the contamination present at the site.

47. On August 23, 1983, the Department issued a Notice of Violation to CSD for failure to submit its annual generator report pursuant to the Solid Waste Management Act, N.J.S.A. 13:1E-1 et seq. The Department directed CSD to submit the required generator report within 30 days of receipt of the Notice, but CSD never complied with the Notice of Violation.

48. On November 25, 1983, EPA entered into a Consent Agreement and Final Compliance Order with CSD for violations of Sections 3002 and 3004 of the Resource Conservation and Recovery Act, 42 U.S.C. 6022 and 6924, and the regulations promulgated

thereunder. This Consent Agreement was in settlement of the Compliance Order issued by EPA, as referenced in paragraphs 42 and 43. This Final Compliance Order charged that CSD used this Site to treat, store and dispose of hazardous wastes. This order also charged that the sludge burned in the incinerator by CSD was hazardous waste and that CSD was illegally disposing of the hazardous waste because CSD did not have a hazardous waste disposal permit. These charges were based on the EPA December 7, 1981 inspection referenced in paragraph 40.

49. EPA's November 25, 1983 Consent Agreement and Final Compliance Order required CSD to adhere to nine (9) stipulations. Those stipulations were:

i. CSD shall not accept drums containing acute hazardous waste, as listed in 40 C.F.R. 261.33(e), or any container with more than one (1) inch of any other hazardous waste.

ii. CSD shall ensure that all incoming manifests are complete.

iii. CSD shall file an Exception Report for any hazardous waste shipments for which no completed manifest is returned from the Treatment Storage or Disposal (TSD) facility.

iv. CSD shall submit a RCRA Part A application within ten (10) days of this Consent Agreement.

v. CSD shall comply with all interim standards, as defined by 40 C.F.R. part 265, within forty-five (45) days.

vi. CSD shall post the financial requirements, as defined in 40 C.F.R. 265.240 to 265.151, within sixty (60) days.

vii. Within sixty (60) days, CSD shall only generate hazardous waste, and shall not treat, store or dispose of any hazardous waste.

viii. CSD shall develop and implement a plan to identify the contaminated portions of the property and conduct sampling and analysis as necessary. CSD shall implement a program to decontaminate, control, contain, neutralize and/or remove any contaminants identified through the sampling and testing.

ix. CSD shall pay a Civil Penalty of $29,000.00.

50. In November, 1983, CSD submitted a Phase I proposal to the Department for a soil and ground water investigation study at the site as directed by the EPA Consent Agreement and Final Compliance Order referenced in paragraph 49. The proposal evaluated the possibility of drilling wells at four (4) separate locations at the site where samples would be taken continuously to identify soil type during the drilling. This proposal was developed to assess the conditions of the soil and ground water at the site. The proposal was slightly modified and approved by the Department in January, 1984.

51. In 1983, the Department received the results of incinerator ash samples from the site, collected by S&W Waste Inc., G.R.O.W.S. Landfill and Ages Corporation during the period of February 9, 1980, to May 4, 1983. These companies were contracted by CSD to dispose of CSD's incinerator ash. Annual samples of the generated waste were taken by the above named companies, pursuant to the Solid Waste Management Rules, N.J.A.C. 7:26-9.4(b), and indicate that fifteen (15) hazardous substances were present in the incinerator ash.

52. Between January and May of 1984, test borings were performed and monitoring wells were installed at the site by CSD in accordance with the November 1983 Consent Agreement. In total,

eight (8) wells were drilled on-site, formed in clusters of two with one deep well and one shallow well per cluster. The four well clusters are located in the northern corner of the site (wells 102 & 202), next to the incinerator on the south-eastern border of the site (wells 103 & 203), in the corner of the extreme southern border of the site (wells 104 & 204) and also to the inside of the south-west border of the site (wells 101 & 201).

53. On March 5, 1985, the Department performed a Preliminary Assessment of the site to examine the potential hazards posed by the site. The Department executed off-site reconnaissance on the aforementioned date and noted that sludge was stored on a concrete slab in the vicinity of the drum incinerator in a manner which caused an uncontrolled discharge onto the lands and waters of the State. In addition, numerous drums were observed leaking, and the resulting spills were observed collecting in a runoff with an oily sheen that was flowing from the site directly into a drainage ditch which discharges directly into Newark Bay. The Department confirmed that there was a very high potential for contamination of the ground water, surface water and soil at the site.

54. On April 9, 1985, CSD submitted to the Department a hydrogeologic assessment of the site which analyzed the results of that were obtained from CSD's sampling of the monitoring wells. The report prepared by CSD merely examined the conditions of the shallow and deep aquifers on the site, and failed to examine the extent of contamination of the ground water.

55. On November 20, 1985, the Department collected its own ground water samples from the shallow and deep monitoring wells on the site. Samples were split between CSD and the Department. Analyses of both sets of samples were completed by CSD and the Department, respectively. The following is a summary of the sample results:

a. Metals -- Monitor Well Nos. 101, 102, 201 and 202 were found to have high concentrations of arsenic (maximum concentration = 204 ppb), cadmium (max. = 100 ppb), chromium (max. = 1,800 ppb), copper (max. = 35,400 ppb), lead (max. = 82,900 ppb), mercury (max. = 42.5 ppb) and zinc (max. = 39,900 ppb). These compounds are hazardous substances pursuant to the Spill Compensation and Control Act, N.J.S.A. 58:10-23.11 et seq., and are pollutants under the Water Pollution Control Act, N.J.S.A. 58:10A-1 et seq.

b. Volatile Organics -- CSD's results indicated no contamination of Volatile Organics (VO) in all monitor wells. Samples analyzed by the Department indicated 30 ppb of Total Volatile Organics (TVO) in Monitor Well No. 202 and 150 ppb of TVO in Monitor Well No. 104.

c. Base-Neutral Extractables -- CSD's results indicate no contamination of Base-Neutral Extractable Compounds (hereinafter "Base-Neutral"). Samples analyzed by the Department indicated Base-Neutral contamination in Monitor Well Nos. 101 (max. = 92 ppb) and 102 (max. = 93 ppb).

d. Pesticide/PCB's -- CSD utilized an insufficiently sensitive analytical method and concluded that the PCB contamination in the ground water in all monitoring wells was below the minimum detection limit of 10 ppb associated with its methodology. The Department utilized a more sensitive analytical method and determined that a PCB (Aroclor 1254) concentration of 6.5 ppb was present in Monitor Well No. 101.

56. On February 6, 1986, EPA conducted an inspection of the site to further categorize what contaminants were present. EPA

took four soil, three ground water and one surface water samples at different locations at the site. The results were submitted in a site inspection report dated July 25, 1986, and the results indicated the presence of 27 contaminants, including 16 hazardous substances. The presence of certain contaminants, including hazardous substances, in the ash indicates that such contaminants had been present in the residues in the drums which were incinerated to produce the ash. Those same contaminants in the drum residues are connected to the disposal of the contents in CSD's drum "flipping"/emptying operations: a clear nexus exists between the compounds present in the ash and the compounds detected as contaminants in the soil, ground water and surface water samples taken at the site. The results also showed that the main areas of contamination are related to the areas of high industrial activity at the site.

57. In a letter dated February 24, 1986, the Department required CSD to complete a NJPDES Discharge to Ground Water (DGW) Permit application for the discharges to ground water generated by the drum flipping (emptying) process upon entry to CSD's main incinerator and the transfer of the sludge to the then existing afterburner.

58. In a letter dated April 11, 1986, Alan Fischer of CSD denied that his operations resulted in discharges of pollutants to ground water for the following reasons:

a. Only empty drums are accepted for reconditioning.

b. The drums are stored in a way in which rain water could not enter the drums.

c. Any residue that is spilled is caught on a pad and pumped back into the incinerator.

The Department's inspections, including, but not limited to, an inspection on March 22, 1983, disclosed full, or partially full, drums at the site and drums that were standing on end, "mired in liquid." In addition, CSD did not employ any mechanism which would successfully contain residues spilled from the drums during the emptying and transfer operations. Furthermore, such spills are considered discharges which require a valid NJPDES permit. Accordingly, CSD's drum flipping/emptying operations resulted in the continuous discharge of contaminants, including hazardous substances, to the lands and waters of the State.

59. In a letter dated March 6, 1987, CSD was directed by the Department to complete a NJPDES-DGW Permit Application within 30 days of receipt of said correspondence.

60. On July 8, 1987, the Department received a completed NJPDES-DGW Permit application from CSD.

61. On April 24, 1987, inspectors from the Department responded to a complaint of acrid odors permeating a nearby rail yard. The rail yard master stated that many of his workers had been complaining of "watery" eyes and "runny" noses, sore throats, tightness of their chests and that some workers had to go to the hospital because they inhaled vapors emanating from a stack at the CSD site. Upon entry to the CSD site, the DEP inspector noticed that heavy odors were rising from piles of smoldering ash located directly on the ground, although no fumes were coming from the

incinerator. The inspector noted partially full drums, drums bearing hazardous waste labels and drums marked with the word "POISON" at the site. Upon testing the air for volatile organics the inspectors detected levels of 400 ppm for toluene. After a lengthy inspection, the inspectors issued the production manager, Edward Fischer, two Notices of Violation for violations of the Spill Compensation and Control Act, N.J.A.C. 58:10-23.11 et seq., specifically for the discharge of hazardous substances in violation of N.J.S.A. 58:10-23.11(c) and for failure to notify the Department of said discharge in violation of N.J.S.A. 58:10-23.11(e).

62. On September 17, 1987, inspectors from the Department conducted an investigation of the operation of the site after reports of illegal air releases. The inspectors noted, apart from fugitive emissions, that there were pools of multi-colored liquids ponding near the incinerator and sludge burner.

63. In the air permit application for its drum reclamation furnace, which CSD submitted to the Department's Division of Environmental Quality on or about October 16, 1989, CSD estimated that it processed 2,800 drums per day, and that the drums contained a total of 10,500 pounds of residues. The residues and their mixture into a sludge are the subject of the aforementioned drum emptying operations of CSD. Further, CSD disclosed the names of over one hundred chemical contaminants involved in its operations, and CSD identified the chemical composition of some of the types of drum residues that it handled. The total amount of the drum

residues and the chemical composition of such residues CSD identified were as follows:

a. Water Base Adhesive and Solvent Base Adhesive Residues: An estimated 300 drums of these two types were processed each day with the drums containing a total of 900 pounds of residues. CSD disclosed information regarding the chemical composition of only four of the Water Base Adhesive type residues. These four residues contained the following hazardous substances:

1. Vinyl Acetate (Monomer)
2. Ammonium Bifluoride
3. Ammonium Hydroxide

CSD disclosed information regarding the chemical composition of only three of the Solvent Base Adhesive type residues. These three residues contained the following hazardous substances:

1. Phenol
2. Toluene
3. Benzene

b. Paint Residues: An estimated 1,000 drums from the paint industry were processed each day with the drums containing a total of 6,000 pounds of residues. CSD disclosed information regarding the chemical composition of only two of the Paint type residues. These two residues contained the following hazardous substances:

1. V.M. & P Naphthalene
2. Toluene
3. Xylene

64. On February 27, 1990, the Department conducted a RCRA inspection at the site. The inspection revealed many spills of multi-colored liquids on the ground in the drum storage area and in the vicinity of the drum incinerator, along with the storage of sludge and incinerator ash on an unbermed concrete pad where contaminants flow onto the ground in an uncontrolled manner. During this inspection the locations of an underground storage tank and

two (2) underground diesel fuel storage tanks were discovered. Since no information was available regarding these tanks, the inspector suggested that these tanks be included in any future site inspections. The Department inspector also noted instances of poor worker health and safety practices, such as a man standing in a collection pit filled with sludge wearing no protective gear except for rubber boots.

65. On April 30, 1990, the Department issued a Notice of Violation (hereinafter "NOV") to CSD for violations observed during an April 25, 1990 site inspection. The NOV addressed violations of the Solid Waste Management Rules, N.J.A.C. 7:26-1 et seq., specifically, for failure to determine if a solid waste is hazardous, in violation of N.J.A.C. 7:26-8.5(a), for failure to mark stored containers with accumulation dates, in violation of N.J.A.C. 7:26-9.3(a)3 and for the acceptance and storage of hazardous waste, in violation of N.J.A.C. 7:26-9.2(a). A second NOV was issued during the aforementioned site inspection which addressed a violation of the Spill Compensation and Control Act, N.J.S.A. 58:10-23.11, specifically for the discharge of a hazardous substance onto the ground in an uncontrolled manner, in violation of N.J.S.A. 58:10-23.11c. No penalty was assessed for these violations.

66. Many of the substances referred to above are defined as hazardous substances pursuant to the Spill Compensation and Control Act, N.J.S.A. 58:10-23.11 et. seq.

67. These hazardous substances were discharged, and continue to be discharged, into the waters and onto the lands of the State of New Jersey in violation of the Spill Compensation and Control Act, specifically N.J.S.A. 58:10-23.11c.

68. On May 3, 1990 the Department conducted an additional inspection of the site. During this inspection, DEP inspectors observed a drum in very poor condition (rusted and deteriorated) which was discharging diesel fuel directly onto the ground from a hole in the bottom. This drum was located on a storage trailer in the drum storage area. During this inspection, DEP inspectors also observed workers in the drum cutting shed removing the tops off drums marked with paint labels. These workers did not wear any protective gear, including respirators, while removing these drum tops and were constantly exposed to the concentrated vapors emanating from the drums. Additionally, it was observed that CSD was storing sludge on the unbermed concrete pad and drum residues were being spilled by CSD from drums onto the conveyor line; both of these practices caused an uncontrolled release of contaminants to the surrounding area.

69. On May 25, 1990, DEP conducted an additional inspection of the site. DEP inspectors observed numerous areas of the site where there were pools of multi-colored liquids on the ground, visible oil spills behind the drum cutting shed and areas of contaminated soil throughout the drum storage area. During this inspection, DEP representatives observed workers loading drums onto the chain conveyor while such workers were standing in the middle

of these pools of multi-colored liquids. These workers were not wearing any protective gear. Again, during this inspection, DEP representatives observed CSD storing sludge on the unbermed concrete pad and at a separate location, CSD employees were observed spilling drum residues onto the secondary conveyor line which leads to the unbermed concrete pad. Both of these practices resulted in uncontrolled releases of contaminants to the surrounding area.

70. On June 20, 1990, the Department conducted another follow-up inspection at the site, wherein it was observed that there were numerous instances in the drum storage area of liquid spilling onto the ground from drums. Areas of discolored surface water were observed throughout the site, as well as large amounts of visibly contaminated soil on the ground. The inspection also revealed that residue from drums had coated all of the equipment in the vicinity of the drum incinerator, and that piles of sludge were deposited on an unbermed concrete pad directly adjacent to the drum incinerator. A volatile organic ("VO") compound detector was also utilized during the June 20th inspection. A VO level 50 ppm was obtained from an area of exposed soil, a VO level of 70 ppm was obtained from a drum on the process line which greater than one inch of residue contained and levels as high as 40 ppm were obtained inside a building on the site; each of these levels are recognized to be well above safe operational levels. To compound the problem, workers on the site were wearing no protective gear with the exception of some employees with paper face respirators,

even though they were subject to full exposure to hazardous substances at any time.

71. On August 14, 1990, DEP conducted another inspection of the site. The DEP inspector observed sludge, which was improperly deposited on the drum conveyor line, spontaneously burst into flames, posing a severe fire hazard to the surrounding area, where numerous drums were stacked, the contents of many of which were highly flammable. The DEP inspector also noted contaminated soil, pools of green liquid on the ground and drum spillage throughout the site.

72. On August 29, 1990, DEP returned to the site and took samples of groundwater surface water, soil, sediments, drums, sludge and incinerator ash. The following is a partial summary of the sampling results:

a. Groundwater -- found to contain high concentrations of lead (maximum concentration = 307 parts per billion ("ppb"), zinc (max. = 1,070 ppb), chromium (max. = 76 ppb) and cadmium (max. = 127 ppb). These substances are all hazardous substances within the meaning of the Spill Act and are pollutants pursuant to the Water Pollution Control Act.

b. Surface Water -- found to contain high concentrations of chromium (max. = 3,420 ppb), lead (max. = 31,200 ppb) and zinc (max. = 13,000 ppb). These substances are all hazardous substances within the meaning of the Spill Act and are pollutants pursuant to the Water Pollution Control Act.

c. Soil -- found to contain high concentrations of chromium (max = 2,940 parts per million ("ppm"), lead (max. = 13,100 ppm), zinc (max. = 3,030 ppm), toluene (max. = 570 ppm) and mercury (max. = 7.4 ppm). These substances are all hazardous substances within the meaning of the Spill Act and are pollutants pursuant to the Water Pollution Control Act.

d. Sediments -- found to contain high concentrations of barium (max. = 3,170 ppm), chromium (max. = 1,170 ppm), lead (max. = 9,080 ppm), zinc (max. = 4,760 ppm) and mercury (max. = 13 ppm). These substances are all hazardous substances within the meaning of the Spill Act and are pollutants pursuant to the Water Pollution Control Act.

e. Drums -- one sample taken from a drum containing greater then one (1) inch of residue, exhibited a flash point of 70°F, making it an ignitable waste pursuant to N.J.A.C. 7:26-8.9. Also found to contain high concentration of toluene (max. = 400 ppm), a hazardous substance within the meaning of the Spill Act and are pollutants pursuant to the Water Pollution Control Act.

f. Sludge -- found to have high concentrations of toluene (max. = 870 ppm), ethylbenzene (max. = 100 ppm) and xylene (max. = 520 ppm), all hazardous substances within the meaning of the Spill Act and are pollutants pursuant to the Water Pollution Control Act.

g. Incinerator Ash -- no RCRA characteristics detected.

73. On September 21, 1990 the Department issued an NOV to CSD for violations observed during a August 14, 1990 Site inspection. The NOV addressed violations of the Spill Compensation and Control Act, N.J.S.A. 58:10-23.11 et seq., specifically for the discharge of a hazardous substance to the lands and waters of the State in violation of N.J.S.A. 58:10-23.11c and for failure to notify the Department of such discharge in violation of N.J.A.C. 7:1E-2.1(b). The NOV also addressed violations of the Solid Waste Management Act, N.J.S.A. 13:1E-1 et seq., specifically for the failure to mark drums with accumulation dates and contents in violation of N.J.A.C. 7:26-9.3(a)3 and for the transfer and storage of a hazardous waste in a manner which causes an unauthorized

discharge of pollutants to the lands and waters of the State in violation of N.J.A.C. 7:26-9.2(a)2.

74. On November 7, 1990, the Department issued an NOV to CSD for violations observed during an August 29, 1990 site inspection. The NOV addressed violations of the Solid Waste Management Act, N.J.S.A. 13:1E-1 et seq., specifically for the processing of a drum containing greater than one (1) inch of residue. The residue from this drum, which was en route to the incinerator, was sampled by DEP. The analysis revealed that the residue was a RCRA ignitable waste with a flash point of 70°F as described in paragraph 72 herein. The NOV cited CSD for its failure to obtain a detailed chemical analysis of a hazardous waste prior to treatment in violation of N.J.A.C. 7:26-9.4(b), with such treatment resulting in an uncontrolled discharge of pollutants onto the lands or into the waters of the State in violation of N.J.A.C. 7:26-9.2(a)2.

75. On February 21, 1991 the Department withdrew a Directive issued to defendants on May 9, 1990. The May 9, 1990 Directive issued pursuant to the Spill Compensation and Control Act, N.J.S.A. 58:10-23.11 et seq. directed defendants to arrange for the cessation of a continuing threat to human health and the environment by conducting a remedial investigation and feasibility study at the site.

76. On June 6, 1991, the Department issued a Directive and Notice to Insureds to defendants, pursuant to the Spill Compensation and Control Act, N.J.S.A. 58:10-23.11 et seq. directing defendants to arrange for the cessation of a continuing

threat to human health and the environment by paying the Department a sum of $2,250,000 to conduct a remedial investigation and feasibility study of the Site.

77. Pursuant to N.J.S.A. 58:10-23.11c of the Spill Compensation and Control Act, the discharge of hazardous substances is prohibited unless a party is in compliance with a state or federal discharge permit. Pursuant to N.J.S.A. 58:10-23.11b, a discharge includes any intentional or unintentional action or omission resulting in the release, spill, leak, pumping, pouring, emitting, emptying or dumping of hazardous substances into the water or onto the lands of this State.

78. As more fully set forth above and below, each defendant in this suit has discharged hazardous substances or, pursuant to N.J.S.A. 58:10-23.11(g)(c), "is in any way responsible" for the discharge of hazardous substances at the site. These discharges have occurred in violation of the requirement of compliance with a State or federal permit.

79. Each day during which the aforesaid violations continue constitutes an additional, separate and distinct offense. Pursuant to N.J.S.A. 58:10- 23.11u(d).

80. Pursuant to N.J.S.A. 58:10-23.11u(b), plaintiff may seek injunctive relief in the Superior Court to prohibit and prevent the continuation of the violation or violations of the Spill Act by all of the defendants in this suit and the Court may proceed in a summary manner.

WHEREFORE, plaintiff Department of Environmental Protection demands judgment against each defendant, jointly and severally:

a) Temporary restraining order and preliminary and permanent injunction enjoining the defendants, jointly and severally, from further violation of N.J.S.A. 58:10-23.11 et seq. on the site;

b) Ordering the defendants to pay maximum statutory penalties as provided by N.J.S.A. 58:10-23.11u(a);

c) Ordering the defendants, jointly and severally, to pay any costs incurred by the State of New Jersey to conduct an investigation and remediation of contamination at the site including the costs incurred by the State for the investigation and remediation of properties which have been adversely effected by CSD's operations pursuant to N.J.S.A. 58:10-23.11g;

d) Ordering any and all such other relief as the Court may deem just and equitable.

THIRD COUNT

81. Plaintiff repeats each and every allegation of the previous counts as if more fully set forth herein.

82. Defendants have knowingly permitted the discharge of hazardous substances in quantities or concentrations which will or may result in damage to land, waters or natural resources of the State and pollutants onto the ground and into or potentially into the waters of the State.

83. Pursuant to N.J.S.A. 58:10-23.11e any person who may be subject to liability for a discharge under the Spill Act shall immediately notify the Department of such discharge.

84. Failure to notify the Department of a reportable discharge subjects the violator to daily statutory penalties of up to $50,000. A reportable discharge is a discharge of hazardous substances in quantities or concentrations which will or may result in damage to land, waters or natural resources of the State. N.J.A.C. 7:1E-1.2.

85. Despite the fact that each aforementioned discharge was reportable, defendants did not notify the Department of the discharge. The failure to notify the Department on each occasion that a discharge occurs constitutes a violation of the Spill Compensation and Control Act which, pursuant to N.J.S.A. 58:10-23.11e, makes the violator jointly and severally liable for a daily penalty not to exceed $50,000 for each separate occurrence where notification should have occurred but did not.

WHEREFORE, plaintiff Department of Environmental Protection demands judgment against defendants:

a) Temporary restraining order and preliminary and permanent injunction enjoining defendants from further violation of N.J.S.A. 58:10-23.11 et seq. on the site;

b) Ordering defendants to pay maximum statutory penalties as provided by N.J.S.A. 58:10-23.11u(a);

c) Ordering the defendants, jointly and severally, to pay any costs incurred by the State of New Jersey to conduct an

investigation and remediation of contamination at the site including the costs incurred by the State for the investigation and remediation of properties which have been adversely effected by CSD's operations pursuant to N.J.S.A. 58:10-23.11g;

d) Ordering any and all such other relief as the Court may deem just and equitable.

FOURTH COUNT

86. Plaintiff DEP repeats each and every allegation of the prior counts as if more fully set forth herein.

87. The owner or operator of a facility from which a discharge has occurred, or any person responsible for causing the discharge, must attempt to stop or contain the discharge. N.J.A.C. 7:1E-2.3

88. At the time of all of the discharges described above defendant CSD was the operator of the site and defendant owners were the owners of the Site.

89. During each instance constituting an illicit discharge, as more fully described above, defendants could have stopped or taken affirmative action to stop or contain a discharge following every incident that resulted in a discharge, but instead chose not to do so.

90. Each day during which a discharge occurred that could have been stopped or abated by defendants but was not, constitutes a separate and distinct violation of N.J.A.C. 7:1E-2.3 for

which the Spill Act prescribes a separate daily penalty. N.J.A.C. 58:10-23.11u.

WHEREFORE, plaintiff Department of Environmental Protection demands judgment against defendants:

a) Temporary restraining order and preliminary and permanent injunction enjoining defendants from further violation of N.J.S.A. 58:10-23.11 et seq. on the site;

b) Ordering defendants to pay maximum statutory penalties as provided by N.J.S.A. 58:10-23.11u(a);

c) Ordering the defendants, jointly and severally, to pay any costs incurred by the State of New Jersey to conduct an investigation and remediation of contamination at the site including the costs incurred by the State for the investigation and remediation of properties which have been adversely effected by CSD's operations pursuant to N.J.S.A. 58:10-23.11g;

d) Ordering any and all such other relief as the Court may deem just and equitable.

FIFTH COUNT

91. Plaintiff DEP repeats each and every allegation in the prior counts as if more fully set forth herein.

92. Pursuant to the Water Pollution Control Act, N.J.S.A. 58:10A-1 et seq., and the regulations promulgated thereunder, N.J.A.C. 7:14A-1 et seq., the Department is charged with supervising and regulating all activities within the State which result in the discharge of pollutants into the ground water and/or surface water.

93. Pursuant to N.J.S.A. 58:10A-6(a), it is unlawful for any person to discharge pollutants except in conformance with a New Jersey Pollutant Discharge Elimination System ("NJPDES") Permit issued by the Department.

94. The Water Pollution Control Act defines "person" as including both the owner and operator of the discharge source, as set forth in N.J.S.A. 58:10A-3(l).

WHEREFORE, plaintiff Department of Environmental Protection demands judgment against defendants:

a) Temporary restraining order and preliminary and permanent injunction enjoining the defendants, jointly and severally, from further violation of N.J.S.A. 58:10A-23.11 et seq. on the site;

b) Ordering defendants to pay maximum statutory penalties as provided by N.J.S.A. 58:10A-10(e);

c) Ordering defendants to pay the cost of investigation and suit pursuant to N.J.S.A. 58:10A-10(c)(2);

d) Ordering defendants to pay compensatory damages to all persons or entities aggrieved by said violations pursuant to N.J.S.A. 58:10A-10(c)(4);

e) Ordering any and all such other relief as the Court may deem just and equitable.

SIXTH COUNT

95. Plaintiff DEP repeats each and every allegation of the above counts as if more fully set forth herein.

96. By the actions described more fully above, the defendants have carried and continue to carry on an abnormally dangerous activity at the site for which they are strictly liable in tort.

WHEREFORE, plaintiff New Jersey Department of Environmental Protection demands judgment against the defendants and an Order:

a) Temporary restraining order and preliminary and permanent injunction enjoining the defendants, jointly and severally, from continuing to carry on the abnormally dangerous activity at the site;

b) Ordering defendants to pay compensatory damages to all persons or entities aggrieved by the conduct of such abnormally dangerous activity;

c) For all other relief requested in the above counts; and

d) For such other relief as may be deemed just and equitable by the Court.

SEVENTH COUNT

97. Plaintiff DEP repeats each and every allegation of the above counts as if more fully set forth herein.

98. By the actions described more fully above, the defendants have allowed to develop and have permitted to continue the discharge of hazardous substances, pollutants and contaminants into the air, soils and waters of the State of New Jersey and/or

have placed such substances in such a manner as to permit them to be discharged into the air, waters and soils.

99. By these actions these defendants have created and maintained a public nuisance at the site and the defendants are liable for all harm and damages incurred as a result of this public nuisance.

100. As a result of the conditions created by the defendants, persons situated or residing and working near the site, as well as citizens of New Jersey in general, have been and continue to be deprived of the full use and enjoyment of neighboring property and water. These affected individuals will continue to suffer harm and damage until the public nuisance is abated.

WHEREFORE, plaintiff New Jersey Department of Environmental Protection demands judgment against the defendants and an Order:

a) Temporary restraining order and preliminary and permanent injunction enjoining defendants, jointly and severally, from maintaining a public nuisance at the site;

b) For all other relief requested in the above counts; and

c) For such other relief as may be deemed just and equitable by the Court.

EIGHTH COUNT

101. Plaintiff NJDEP repeats the allegations of the previous counts as if more fully set forth herein.

102. During the August 29, 1990 site inspection conducted by the Department, defendant CSD was found to have committed violations of the Solid Waste Management Act, N.J.S.A. 13:1E-1 et seq., and the regulations promulgated thereunder.

103. As a result of the August 29, 1990 inspection, the Department issued CSD an NOV on or about November 5, 1990, citing the CSD for the following violations;

> a. Allowing or permitting the acceptance, transfer, storage, processing or treatment of a hazardous waste in such a manner as to violate the provisions of State hazardous waste regulations or any other applicable federal or State statute, code, rule or regulation, contrary to N.J.A.C. 7:26-9.4(b)1;
>
> b. Failing to obtain a detailed chemical analysis of a hazardous waste prior to treatment in violation of N.J.A.C. 7:26-9.4(b)1;
>
> c. Failing to securely close a container to ensure that there was no release of a hazardous waste or its vapors in violation of N.J.A.C. 9.4(d)4i;
>
> d. Treatment or storage of a hazardous waste in such a manner that the hazardous waste threatens human health or the environment in violation of N.J.A.C. 7:26-9.4(e)2v; and
>
> e. Storage of a hazardous waste (incinerator ash) in such a manner that could cause an uncontrolled discharge of pollutants onto the land or into the surface waters of the State in violation of N.J.A.C. 7:26-9.2(a)2.

WHEREFORE, plaintiff DEP demands judgment against defendant CSD:

a) Temporary restraining order and preliminary and permanent injunction enjoining defendant CSD from further viola-

tions of N.J.S.A. 13:1E-1 et seq. and N.J.A.C. 7:26-1 et seq. on the site.

b) Ordering defendant CSD to pay maximum statutory penalties as provided by N.J.S.A. 13:1E-9.

c) Ordering any and all such other relief as the Court may deem just and equitable.

NINTH COUNT

104. Plaintiff repeats the allegations of the previous counts as if more fully set forth herein.

105. During the August 29, 1990 DEP inspection of the CSD site, DEP obtained a sample of residue from a drum on the site which was on the conveyor en route to the drum incinerator and which contained greater than one inch of residue.

106. Laboratory analysis performed on the above-referenced sample of drum residue revealed that the residue was considered to be a RCRA D001 hazardous waste due to its low flash point.

107. CSD's acceptance, or permitting the acceptance, transfer, storage, processing or treatment of a drum at the site containing greater than one inch of residue of hazardous waste violates the Solid Waste Management Act, N.J.S.A. 13:1E-1 et seq. and the regulations promulgated thereunder, including N.J.A.C. 7:26-9.4(b)1.

WHEREFORE, plaintiff DEP demands judgment against defendant CSD:

a) Temporary restraining order and preliminary and permanent injunction enjoining defendant CSD from further violations of N.J.S.A. 13:1E-1 et seq. and N.J.A.C. 7:26-1 et seq. on the site.

b) Ordering defendant CSD to pay maximum statutory penalties as provided by N.J.S.A. 13:1E-9.

c) Ordering any and all such other relief as the Court may deem just and equitable.

ROBERT J. DEL TUFO
ATTORNEY GENERAL OF NEW JERSEY
Through: Steven J. Madonna
Environmental Prosecutor
Attorney for State of New Jersey,
Department of Environmental
Protection

By: R. Brian McLaughlin
R. Brian McLaughlin
Deputy Attorney General
Assistant State Environmental
Prosecutor

By: Martin J. McHugh
Martin J. McHugh
Deputy Attorney General
Assistant State Environmental
Prosecutor

Dated: June 6, 1991

VERIFICATION OF PLEADING

HAROLD E. CHRISTIFF, of full age, makes the following certification:

1. I am employed as the Chief, Bureau of Enforcement Services, of the New Jersey Department of Environmental Protection ("DEP" or "Department"), Division of Environmental Quality ("DEQ").

2. I have read the foregoing Complaint and based on my own personal knowledge I know that the facts set forth in the First Count are true.

3. Said facts are incorporated in this Certification by reference thereto.

4. I certify that the foregoing statements made by me are true. I am aware that if any of the foregoing statements made by me are willfully false, I am subject to punishment.

Dated: 6/6/91

Harold E. Christiff
HAROLD E. CHRISTIFF

VERIFICATION OF PLEADING

DENNIS HART, of full age, makes the following certification:

1. I am employed as the Acting Assistant Director of the Responsible Party Cleanup Element in the Division of Hazardous Waste Management of the New Jersey Department of Environmental Protection ("DEP").

2. I have read the foregoing Complaint and based on my own personal knowledge I know that the facts set forth in the Second through Ninth Counts are true.

3. Said facts are incorporated in this Certification by reference thereto.

4. I certify that the foregoing statements made by me are true. I am aware that if any of the foregoing statements made by me are willfully false, I am subject to punishment.

DENNIS HART

Dated: June 6, 1991

CERTIFICATION REGARDING OTHER
PROCEEDINGS AND PARTIES

I certify in accordance with R. 4:5-1 that there are no other proceedings either pending or contemplated with respect to the matter in controversy (with the exception of the pending administrative matter entitled Central Steel Drum v. Division of Environmental Quality bearing OAL Docket No. EEQ 04358-91N), and there are no other parties who should be joined in this action.

R. Brian McLaughlin
R. BRIAN McLAUGHLIN

Dated: June 6, 1991

Form DWR-082
3/81

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES

REPORT OF PHONE CALL OR VISIT

50-0790
Newark

Bureau or Office: MBRE

In: ____ Out: ✓

Date: 7/18/96 Time: ____

File: Central Barrel & Drum

Routing: Richard White
Gloria Grant

Person Contacted: Rich Portuese

Phone No.: ____

Affiliation: Water Watch & Director of Suburban Regional Health

Subject of (Call / Visit): Central Barrel & Drum

Summary of (Call / Visit): Mr. Portuese informed me that he has been with representatives of Emergency Response and Air Quality to Central Barrel & Drum 704 Doremus Avenue in Newark. He believes there are many water pollution violations. The wash curtain that washes out hazardous waste, oil, and paint sludges goes out to the surface water. He also believes that they spill the waste onto the ground and has built up a layer of pollution that is leaching into the bay.

Action Recommended: ____

Kathleen Beyer
Signature

BBG000218

MARK S. GESCHWER, P.C.
185 Bridge Plaza North
Fort Lee, NJ 07024
(201) 461-7445
Attorney for Plaintiff

Plaintiff DORE REALTY COMPANY, INC., a corporation of the State of New Jersey -vs- Defendant CENTRAL STEEL DRUM, INC., a corporation of the State of New Jersey, ABBEY GREENBERG, JACK ROSS, EDWARD DENBY, NATE PLOFSKY, EDWARD FISHER, ALAN FISHER, JERRY GREENBERG, and JOHN DOE (fictitious name-name being unknown) and STATE OF NEW JERSEY, DEPARTMENT OF ENVIRONMENTAL PROTECTION, DIVISION OF HAZARDOUS WASTER MANAGEMENT, jointly, severally or in the alternative	SUPERIOR COURT OF NEW JERSEY ESSEX COUNTY: CHANCERY DIVISION DOCKET NO. CIVIL ACTION BRIEF

Brief of Plaintiff, Dore Realty Company, Inc.
in support of application for temporary relief and other relief

Mark S. Geschwer, P.C.
185 Bridge Plaza North
Fort Lee, NJ 07024

ON THE BRIEF: MARK S. GESCHWER, ESQ.

STATEMENT OF FACTS

Dore Realty Company, Inc. is the owner of land and improvements that are hereinafter referred to.

There was an approximate 12 1/2 acres that constitute a property which was owned by Dore Realty Company.

Dore Realty Company conducted an enterprise located thereon under the name Central Steel Drum Company. The property consisted of three principal buildings and two much smaller buildings, a couple of sheds and a large commercial garage. This property was purchased from Interchemical Corp. International Printing, Inc., located at 704 Doramus Avenue, Newark, New Jersey. The original owners were Lee Baron and Bess Baron, Jack Greenberg and Dorothy Greenberg, Abby Greenberg and Ruth Greenberg and Murray Ratner and Mollie Ratner.

In the mid 1950's the Central Steel Drum Company conveyed approximately four acres to its neighbor Paragon Oil Company which is now Texaco (that portion of the property was to the southeastern end of the property in principal). This left approximately 8 1/2 acres remaining.

Annexed hereto find a survey for the Le High Valley Railroad dated May 24, 1945, revised June 3, 1947, which is marked **Exhibit A**. It shows the railroad tracks running around and then into the property right between the three buildings which on the remaining property would have held approximately 30 freight cars. A very valuable commodity and asset in this area.

In June 1966 the Central Steel Drum Company was sold by Mr. Baron, et al. to the principals of a group (one of the key figures of the group being Abby Greenberg) owned by Abbey Greenberg, Jack Ross, Edward Denby and Nate Plofsky, to whom the premises was leased from Dore Realty. At the same time, the group headed by Abbey Greenberg also purchased the use of the name Central Steel Drum Company. At that same time, Dore Realty Company, Inc., a real estate corporation owned by Mr. Baron and partners, leased the property upon which the business was being conducted to Abby Greenberg, et als.

A copy of the lease of June 6, 1966 is annexed hereto and made a part hereof and is referred to as **Exhibit B**.

Subsequent to 1966, the group headed by Abby Greenberg then conveyed the enterprise known as Central Steel Drum Company to a different second group which is still located in the premises and who became committed to the terms and conditions as set forth in the lease of June 6, 1966.

Paragraph 19 of the aforementioned lease deals with what shall take place in the event of the destruction of the whole or substantial part of the demised property. Under the terms of that clause, the landlord, namely Dore Realty Company, Inc., shall have the first option to reconstruct and repair the said premises and the insurance money shall be paid to the landlord and tenant, deposited in a joint account in the name of both to be available for the reconstruction or repair. In the event that the landlord does not wish to exercise that option, then the tenant has the option to reconstruct or repair to be

exercised within ten days. In this paragraph 19 of the aforesaid lease, the tenant agreed to rebuild and repair the same in such manner that the building and improvements so rebuilt and repaired shall be the same value as prior to the damage or destruction and that the landlord has the right of approval of all plans and specifications which must be submitted prior to any work being performed.

Approximately three years later, the lessees sold their rights under the lease to Edward Fisher, Allen Fisher, Abby Greenberg and a fourth person whom I do not recall the name of. Subsequent and during the term of the lease, tenants made various additions to various improvements located on the premises (meaning additions to the three separate buildings). These additions were consented to by the landlord and were made by the tenant properly and in accordance with the terms of the lease.

The premises with the additions to the buildings then appeared as per a second diagram annexed hereto being **Exhibit C** stating on the lower right "Central Steel Drum, Inc., et al, Newark, New Jersey."

Please note the current dispute has to do with what has been referred to in Exhibit C as the truck repair shop, which on Exhibit B is referred to as garages.

In January of 1983 an explosion took place on the adjacent property owned by Texaco in which two large reservoirs of fuel exploded, decimating and destroying all the physical improvements located on the subject premises.

Pursuant to the above lease, subsequent to that destruction, the landlord, Dore Realty Company, Inc., did not exercise the option referred to, however, the tenant did, and a joint account was in fact set up into which the insurance proceeds were paid.

However, the landlord, pursuant to its rights under the lease, never received any drawings or other requisites with respect to what the tenants proposed and how they would be proceeding in terms of the reconstruction except a drawing of the "garages/truck repair shop" which was rejected by the landlord.

The landlord's principal, Lee Baron, had by this time relocated to Florida.

When Mr. Baron came to New Jersey to inspect the site, prior to what he thought to what was any work being done on the premises, he found that the tenant had poured concrete over the entire length of a railroad siding through and into the property (substantially diminishing the value of the property by the loss of this valuable asset), for the entire length of the rail spur that would ultimately be located within the confines of a building they were constructing into which there would be supports. Most of the other portions of the rail were covered with dirt.

Thereafter, an extensive amount of effort was required in order to demolish the destroyed remnants of what the previous buildings had been on the property site and new steel and materials had been delivered to the premises.

Actually, the tenants had commenced reconstruction without having submitted plans. When Mr. Baron came to the site and saw the appearance of the framework of what was started to be built, he immediately objected and advised tenants to terminate.

The tenants, however, had started construction and the construction site had reached a status where it had become obvious that there was a large building being built that would form a triangle with an outside that would follow the exterior lines of the three buildings and extend through what would be an imaginary fourth building so that all three of the buildings on **Exhibit D**, a copy of which is annexed hereto, being also a diagram, would be contained within the walls of this new structure.

Mr. Baron, on behalf of Dore Realty Company, upon seeing what was being done and without ever having received any prior drawings, specifically denied permission for the project the tenants were proposing and already constructing.

A litigation was initiated in the Superior Court of Essex County by plaintiff Dore Realty Company, Inc. v. Central Steel Drum Company and its principals, being an action of dispossess, and which was in the Superior Court of New Jersey, Law Division, Essex County, bearing Docket No. L-44454-84E.

As a result of that litigation, a settlement was reached between the parties, a copy of which is annexed hereto and marked as **Exhibit E**.

Pursuant to the terms of that settlement (and in part,) the landlord Dore Realty Company, Inc. gave permission to the tenant under certain specific conditions for the tenant to complete the reconstruction of the single large building.

There was no separate resolution as to the reconstruction of the "garages/truck repair shop" premises which would still require the same satisfaction as per the original lease in 1966.

The landlord rejected drawings of the tenant both before and after the settlement with respect to the "garages/truck repair shop" premises building.

In the meantime insurance proceeds of $887,085.00 were received, which were put into a joint account.

Annexed hereto find copy marked **Exhibit F** of multiple pages of Mejor Consulting Corp. evaluations and evaluation sheets. On Pages 8 and 9 there is an indication that the truck repair shop, which is referred to as the shop and/or "garages/truck repair shop" referred to in the previous documents was a 100 percent loss with a value of $105,000.00.

During the repair stage, papers and checks were forwarded to Dore Realty Company, Inc. which were endorsed for utilization on the reconstruction of the premises which would include a reconstruction of the "garages/truck repair shop" at the point in time when Dore Realty Company, Inc. approved drawings that would be submitted. There never has been approval of any drawings. In fact plaintiff Dore Realty Company, Inc., through me, has rejected any diagrams submitted.

The joint account however had been totally utilized by the tenants and there are no proceeds left whatsoever in the account, as the account had been closed.

The account had been at the Howard Savings Bank in Newark, New Jersey.

Over the past three and one-half years, the plaintiff-landlord Dore Realty Company, Inc., individually or through its agents, servants and/or employees, has on a regular basis been requesting that the tenant submit proper plans duplicating the specifications as in the multiple page Mejor Consulting Corp., description of the repair shop, so that the premises repair shop could be rebuilt.

The plaintiff, to this date, has not received any diagrams nor any other submissions with respect to the rebuilding of same and was always told "Don't worry, I'll talk to our attorney, we'll submit plans and we'll get it built," which has never taken place. The above was again repeated in a conversation as recently as Monday, September 18, 1989, at which time Mr. Fisher of Central Steel Drum, when reminded about the very expansive and sophisticated heating/blowing system in that garage/truck repair shop building, indicated that he could just put something in there for $3,500.00. The heating/blowing system in that building was an expansive one that would be valued far in excess of $3,500.00. The unit itself is referred to in the Mejor Consulting Corp. estimate to repair the damage previously referred to as including an oil-fired suspended warm air unit.

In the meantime, over the past three and one-half years, the tenants have converted to their own use and been enjoying the $105,000.00 portion of the insurance proceeds plus all investment proceeds they could make thereon.

In the meantime, the cost of rebuilding the garage/truck repair shop in the identical fashion has grown dramatically.

The funds and property are being utilized for the business enterprise of the tenants for the past three and one-half years without the consent of the plaintiff.

Mr. Baron received a letter in November from the State of New Jersey, Department of Environmental Protection, dated October 30, 1989, a copy of which is annexed hereto as Exhibit F (1). He had never received any information regarding this matter before that time and the tenants have failed to remediate the site.

To date plaintiff has not received any documentation indicating what the environmental problem is.

PLEASE BE ADVISED THAT ALL EXHIBITS REFERRED TO IN THIS BRIEF ARE ATTACHED TO THE COMPLAINT BEING FORWARDED SIMULTANEOUSLY HEREWITH.

POINT ONE

Plaintiff is entitled to receive the applied for relief.

Rule 4:52-1, et seq. entitled **Temporary Restraint and Interlocutory Injunction** of the Rules governing the courts of the State of New Jersey control the application for and granting of this relief when

> "immediate and irreparable damage will probably result to the plaintiff..."

Rule 4:52-3 entitled **Security** provides

> "The court, on granting a temporary restraining order or interlocutory injunction or at any time thereafter, may require security or impose such other equitable terms as it deems appropriate."

The defendant-tenants have totally failed to rebuild the truck repair shop/garage, have totally failed to provide the $105,000.00 nor interest thereon, nor the amount of increased cost to rebuild, nor have they provided for the loss of value to the premises by there not being said truck repair shop/garage.

There is also no information provided nor security provided nor even verification of the ability of the defendant-tenants to fulfill and meet these obligations.

In addition, there is confirmation from the Department of Environmental Protection, Division of Hazardous Waste Management that for 10 years there have been numerous enforcement actions taken against defendant-tenants, who have a history of noncompliance with the regulations of the State of New Jersey, according to said New Jersey department. This has reached a level where the State has drafted an administrative consent order to ensure that the site is remediated.

During this entire 10-year history right through to date, the defendant-tenants have never provided any information or documentation that this was going on.

As to the environmental problem, plaintiff's property could be being damaged each and every moment that defendant-tenants are conducting business, creating increasingly greater obligations and costs to remediate as time passes. This action without admission nor constituting any waiver of rights or position of plaintiff, could very well be progressively creating increasing potential obligations of plaintiff-landlord for damages flowing from the operations of the defendant-tenants.

In addition, these defendant-tenants have been enjoying the benefits of the $105,000.00 for over three and one-half years including the interest thereon and have diminished the value of the property by failing to have had the truck repair shop/garage reconstructed and by their delay have caused a situation where the costs of replacement have grown dramatically.

With respect to the truck repair shop/garage, landlord-plaintiffs conservatively estimate over $260,000.00 of obligation by defendant-tenants to landlord-plaintiffs. In addition to that regarding the alleged waste contamination, this could possibly extend into the millions of dollars.

There is no provision or information to confirm that defendant-tenants are capable of meeting these financial and potential financial obligations.

For this reason immediate action is required. In addition, without immediate action, there very well may be irreparable damage that will probably result to the plaintiffs as the financial obligations are or could be so vast as to totally decimate plaintiff's assets and potentially violate the environment.

POINT TWO

> The restraints requested and the posting of bonds and/or other security as well as the providing of all environmental studies with requisites that defendant-tenants perform each and every act necessary to completely resolve all of same are necessary immediately to prevent irreparable damage and are an appropriate use of the Court's power under Rule 4:52-3.

Under the Rules of the Courts of New Jersey, Rule 4:52-3 entitled **Security**, the court is empowered as follows:

> "The court, on granting a temporary restraining order or interlocutory injunction or at any time thereafter, may require security or impose such other equitable terms as it deems appropriate."

In this matter, considering the tremendous financial obligations of defendant-tenants created by the above referred to nonfeasance as well as the above referred to continuing misfeasance, requires the granting of the requisites and restraints requested and forming a part of the Order to Show Cause, including but not limited to

(a) The defendants, jointly, severally or in the alternative shall either (1) place the sum of $260,000.00 in either the court account through the Surrogate's office of the Superior Court, Essex County, and/or post a bond in the sum of $260,000.00 for the faithful performance of any obligations it should be required to make under the terms of this litigation; and

(b) pending the further order of this Court, the defendants, jointly, severally or in the alternative, shall not be permitted to spend any money or do any construction in any fashion with respect to a garage/truck repair shop at the premises referred to in the complaint at 704 Duramus Avenue, Newark, New Jersey; and

(c) be restrained from any transfer sale, mortgage, sublease of assignment with respect to the lease of the premises and/or the premises and from doing any act which in any way diminishes the opportunity of plaintiff from making a full and proper recovery under this litigation; and

(d) be restrained from the performance of any act or the execution of any agreement or document which in any way shall bear upon the construction of the garage/truck repair shop and/or the funds referred to in terms of the insurance proceeds in the complaint and/or with respect to sufficient funds to guarantee the ability to fully pay for all said sums plus the loss in value of the property plus the increased costs of the construction of the garage/truck repair shop and/or any other damages that the plaintiff may be deemed entitled to; and

(e) that a bond be posted sufficient to meet all requisites of the Environmental Protection Agency of the State of New Jersey; and

(f) that an order be entered compelling defendants to perform each and every act necessary to completely resolve all environmental issues; and

(g) that the defendant, State of New Jersey, Department of Environmental Protection, Division of Hazardous Waste Management, shall within _____ days of the date of this Order furnish to plaintiffs at the office of plaintiffs' attorney, Mark S. Geschwer, P.C., copies of any and all documents, violations, reports, enforcement actions, documents confirming noncompliance of Central Steel Drum Company with regulations of the State of New Jersey, inspections, letters, test reports, etc. which in any way bears upon or relates to the subject premises and/or tenants and/or owners of same.

Considering the extensive periods of time that have elapsed without defendant-tenants complying with the New Jersey Department of Environmental Protection as well as utilizing the funds for the truck repair shop/garage and ignoring the obligations to rebuild and further in defendant-tenants absolute failure to advise landlord-plaintiff with regard to these matters, it seems absolutely necessary to provide the temporary relief requested and in fact to make permanent all of same.

CONCLUSION

The relief sought is appropriate, the damage to plaintiffs is probably immediate and probably irreparable. The Court has the power and authority to enter an order for the requested temporary relief as well as making same "permanent" and the need for same is clear. Thus it is respectfully submitted that the Court should enter the Order to Show Cause.

Diamond Alkali Co.
Newark Bay Study Area

NJD980528996

THIS DOCUMENT "**Memorandum from David Paddock to Brian McLaughlin regarding analytical results for samples collected at the Central Steel Drum Site, 07/16/1990**" IS CURRENTLY CLASSIFIED AS **NON-CONFIDENTIAL** BY EPA.

Amelia Wagner

Amelia Wagner
Office of Regional Counsel

4/22/09
Date

State of New Jersey
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF HAZARDOUS WASTE MANAGEMENT
CN 028
Trenton, N.J. 08625-0028
(609) 633-1406
Fax # (609) 633-1454

CONFIDENTIAL
MEMORANDUM

OCT 31 1990

TO: Brian McLaughlin, DAG
Division of Law

FROM: David Paddock, Case Manager
Bureau of State Case Management

SUBJECT: Central Steel Drum
Newark, Essex County, New Jersey
August 29, 1990 Sampling Results

This memo should serve to inform you of the analytical results for samples collected at the Central Steel Drum Site on August 29, 1990 by Departmental personnel.

The following sample results are summaries of the complete data packages, including only the compounds that were found at unsafe concentrations through the individual analysis. The adjoining summary is structured by media and marked to indicate the recognized standard (i.e., Action Level, ARAR, etc.) over which concentrations these compounds are known to be harmful to human health and the environment. Please note that all the compounds recorded herein are listed by the United States Environmental Protection Agency as priority pollutants and, therefore, are compounds of concern.

Analytical Results

Groundwater

Sample # - MW101

Compound	Concentration (ppb)	Applied Standard
Carbon disulfide (H.S.)*	6	No Std.
Copper (H.S.)	89	No Std.
Lead (H.S.)	148	50 ppb
Zinc (H.S.)	220	No Std.

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Sample # - MW201

Compound	Concentration (ppb)	Applied Standard
Carbon disulfide (H.S.)	6	No Std.
Chromium (H.S.)	76	50 ppb
Copper (H.S.)	90	No Std.
Lead (H.S.)	101	50 ppb
Nickel (H.S.)	80	No Std.
Zinc (H.S.)	463	No Std.

Sample # - MW203

Compound	Concentration (ppb)	Applied Standard
Lead (H.S.)	307	50 ppb

Sample # - MW104

Compound	Concentration (ppb)	Applied Standard
Zinc (H.S.)	71	No Std.

Sample # - MW204

Compound	Concentration (ppb)	Applied Standard
2,4,6 Trichlorophenol (H.S.)	10	No Std.
Cadmium (H.S.)	127	10 ppb
Zinc (H.S.)	1,070	No Std.

Surface Water

Sample # - SW1

Compound	Concentration (ppb)	Applied Standard
~~Acetone~~	42	~~No Std.~~ (found in Trip Blank)
1,1-dichloroethane	65	No Std.
2-butanone	13	No Std.
1,1,1-trichloroethane	270	26 ppb
4-Methyl, 2-Pentanone	26	No Std.
Toluene (H.S.)	170	No Std.
Ethylbenzene (H.S.)	91	No Std.
Xylene(s) (H.S.)	510	44 ppb
Naphthalene (H.S.)	55	No Std.
Phenol	130	No Std.
Phenanthrene	6.7	No Std.
di-n-butylphthalate	18	No Std.
4-Methylphenol	34	No Std.
Antimony (H.S.)	222	No Std.
Cadmium (H.S.)	339	10 ppb
Chromium (H.S.)	3,420	50 ppb
bis(2-Ethylhexyl) phthalate	[illegible]	[illegible]

Copper (H.S.)	2,990	No Std.
Lead (H.S.)	31,200	50 ppb
Mercury (H.S.)	18	2 ppb
Nickel (H.S.)	275	No Std.
Zinc (H.S.)	13,000	No Std.
TPHC	93,000	No Std.

Sample # - SW2

Compound	Concentration (ppb)	Applied Standard
Add. Ethylbenzene (H.S.)	106	No Std.
1,1,1-trichloroethane	54	26 ppb
2-butanone	440	No Std.
4-Methyl, 2-Pentanone	190	No Std.
Toluene (H.S.)	1,400	No Std.
Xylene(s) (H.S.)	500	44 ppb
Anthracene	6.2	No Std.
Chrysene	8.2	No Std.
Fluorene	6.0	No Std.
~~Naphthalene (H.S.)~~	~~37~~	~~No Std.~~ Is out of control
Phenanthrene	60	No Std.
Phenol (H.S.)	350	No Std.
bis(2-ethylhexyl)phthalate	530	No Std.
Butylbenzyl phthalate	210	No Std.
di-n-butyl phthalate	260	No Std.
Antimony (H.S.)	415	No Std.
Cadmium (H.S.)	163	10 ppb
Chromium (H.S.)	245	50 ppb
Copper (H.S.)	676	No Std.
Lead (H.S.)	3,690	50 ppb
Nickel (H.S.)	195	No Std.
Zinc (H.S.)	5,040	No Std.
TPHC	5,000	No Std.

Sample # - SW3

Compound	Concentration (ppb)	Applied Standard
~~Acetone~~	~~1,200~~	~~No Std.~~ Found in Trip Blank
1,2-dichloroethene	14	2 ppb
2-butanone	41	No Std.
4-Methyl, 2-Pentanone	12	No Std.
Toluene (H.S.)	41	No Std.
Ethylbenzene (H.S.)	15	No Std.
Phenol (H.S.)	130	No Std.
2-Methylphenol	18	No Std.
4-Methylphenol	20	No Std.
Isophorone	21	No Std.
bis(2-ethylhexyl)phthalate	37	No Std.
Antimony (H.S.)	103	No Std.
Cadmium (H.S.)	230	10 ppb
Chromium (H.S.)	1,150	50 ppb
Copper (H.S.)	4,830	No Std.
Lead (H.S.)	19,000	50 ppb
Nickel (H.S.)	355	No Std.
Zinc (H.S.)	11,800	No Std.
Cyanide	60	No Std.
TPHC	18,000	" "

Sample # - SW4

Compound	Concentration (ppb)	Applied Standard
~~Acetone~~	~~1,200~~	~~No Std.~~ found in trip blank
Carbon disulfide (H.S.)	9	No Std.
1,2-dichloroethene	6	No Std.
4-Methyl, 2-Pentanone	70	No Std.
2-butanone	490	No Std.
Toluene (H.S.)	460	No Std.
Ethylbenzene (H.S.)	40	No Std.
Styrene (H.S.)	30	No Std.
Xylene(s) (H.S.)	180	44 ppb
4-Methylphenol	63	No Std.
Isophorone	89	No Std.
bis(2-ethylhexyl)phthalate	260	No Std.
di-n-octylphthalate	19	No Std.
Antimony (H.S.)	90	No Std.
Cadmium (H.S.)	44	10 ppb
Chromium (H.S.)	157	50 ppb
Copper (H.S.)	354	No Std.
Lead (H.S.)	2,330	50 ppb
Nickel (H.S.)	151	No Std.
Zinc (H.S.)	1,420	No Std.
Cyanide	18	"
Trial	3,300	" "

Sample # - SW5

Compound	Concentration (ppb)	Applied Standard
2-butanone	15	No Std.
Toluene (H.S.)	7	No Std.
Ethylbenzene (H.S.)	13	No Std.
Xylene(s) (H.S.)	130	44 ppb
bis(2-ethylhexyl)phthalate	~~20~~ 3,000	No Std.
Cadmium (H.S.)	56	10 ppb
Chromium (H.S.)	463	50 ppb
Copper (H.S.)	1,020	No Std.
Lead (H.S.)	7,630	50 ppb
Nickel (H.S.)	124	No Std.
Zinc (H.S.)	4,000	No Std.
Cyanide	97	" "
Trial	14,000	" "

Sample # - SW6

Compound	Concentration (ppb)	Applied Standard
2-butanone	210	No Std.
Carbon disulfide (H.S.)	15	No Std.
4-Methyl, 2-Pentanone	19	No Std.
Toluene (H.S.)	130	No Std.
Ethylbenzene (H.S.)	17	No Std.
Styrene (H.S.)	6	No Std.
Xylene(s) (H.S.)	88	44 ppb
Phenol (H.S.)	130	No Std.
4-Methylphenol	73	No Std.
Isophorone	27	No Std.

bis(2-ethylhexyl)phthalate	41	No Std.
Cadmium (H.S.)	11	10 ppb
Chromium (H.S.)	73	50 ppb
Copper (H.S.)	74	No Std.
Lead (H.S.)	383	50 ppb
TPHC	5,100	" "

Soil

Sample # - S1

Compound	Concentration (ppm)	Applied Standard
Beryllium (H.S.)	1.9	1 ppm
Chromium (H.S.)	201	100 ppm
Copper (H.S.)	324	170 ppm
Lead (H.S.)	1,720	250 ppm
Zinc (H.S.)	638	350 ppm
Mercury (H.S.)	2.3	1 ppm
TPHC	2,117	100 ppm

Sample # - S2

Compound	Concentration (ppm)	Applied Standard
Toluene (H.S.)	20	1 ppm TVO*
Ethylbenzene (H.S.)	1	1 ppm TVO
Xylene(s) (H.S.)	9	1 ppm TVO
Trichlorobenzene	98	10 ppm TBN*
Phenanthrene	8.9	10 ppm TBN
di-n-butylphthalate	66	10 ppm TBN
Pyrene	4.7	10 ppm TBN
Butylbenzylphthalate	200	10 ppm TBN
bis(2-ethylhexyl)phthalate	620	10 ppm TBN
di-n-octylphthalate	74	10 ppm TBN
Barium (H.S.)	1,750	400 ppm
Chromium (H.S.)	2,470	100 ppm
Copper (H.S.)	673	170 ppm
Lead (H.S.)	8,330	250 ppm
Mercury (H.S.)	6.4	1 ppm
Zinc (H.S.)	5,210	350 ppm
TPHC	58,987	100 ppm

Sample # - S3

Compound	Concentration (ppm)	Applied Standard
Isophorone	9.3	10 ppm TBN
di-n-butylphthalate	320	10 ppm TBN
Naphthalene (H.S.)	.8	10 ppm TBN
Butylbenzylphthalate	50	10 ppm TBN
bis(2-ethylhexyl)phthalate	260	10 ppm TBN
Benzo(b)fluoranthene	4	10 ppm TBN
Barium (H.S.)	1,540	400 ppm
Chromium (H.S.)	2,940	100 ppm
Copper (H.S.)	614	170 ppm
Lead (H.S.)	13,100	250 ppm
TPHC	6,173	100 ppm

Zinc (H.S.)	2,640	350 ppm
Mercury (H.S.)	5.6	1 ppm

Sample # - S4

Compound	Concentration (ppm)	Applied Standard
Toluene (H.S.)	43	1 ppm TVO
Ethylbenzene (H.S.)	.7	1 ppm TVO
Xylene(s) (H.S.)	4.1	1 ppm TVO
di-n-butylphthalate	16	10 ppm TBN
Pyrene	5	10 ppm TBN
Butylbenzylphthalate	23	10 ppm TBN
bis(2-ethylhexyl)phthalate	~~180~~ 200	10 ppm TBN
di-n-octylphthalate	15	10 ppm TBN
Barium (H.S.)	1,710	400 ppm
Chromium (H.S.)	875	100 ppm
Copper (H.S.)	1,710	170 ppm
Lead (H.S.)	6,650	250 ppm
Zinc (H.S.)	3,030	350 ppm
Mercury (H.S.)	7.4	1 ppm
TPHC	9,827	100 ppm

Cadmium 47 (3)

Sample # - S5

Compound	Concentration (ppm)	Applied Standard
1,1-dichloroethane	27	1 ppm TVO
1,2-dichloroethene	340	1 ppm TVO
1,1,1-trichloroethane	120	1 ppm TVO
Trichloroethene	93	1 ppm TVO
Tetrachloroethene	220	1 ppm TVO
Toluene (H.S.)	570	1 ppm TVO
Ethylbenzene (H.S.)	166	1 ppm TVO
Xylene(s) (H.S.)	440	1 ppm TVO
di-n-butylphthalate	71	10 ppm TBN
Pyrene	4.1	10 ppm TBN
bis(2-ethylhexyl)phthalate	210	10 ppm TBN
di-n-octylphthalate	24	10 ppm TBN
Barium (H.S.)	636	400 ppm
Chromium (H.S.)	248	100 ppm
Copper (H.S.)	350	170 ppm
Lead (H.S.)	2,040	250 ppm
Zinc (H.S.)	947	350 ppm
TPHC	5,868	100 ppm

2-methyl, 1-pentene 49

Sample # - S6

Compound	Concentration (ppm)	Applied Standard
Acetone	22	1 ppm TVO
Toluene (H.S.)	310	1 ppm TVO
Ethylbenzene (H.S.)	18	1 ppm TVO
Xylene(s) (H.S.)	140	1 ppm TVO
Naphthalene (H.S.)	88	10 ppm TBN
2-Methylnaphthalene	78	10 ppm TBN

1,1,3-trimethyl cyclohexane 4.2

phenol 46

Fluorene	37	10 ppm TBN
Phenanthrene	150	10 ppm TBN
di-n-butylphthalate	170	10 ppm TBN
Pyrene	24	10 ppm TBN
Butylbenzylphthalate	160	10 ppm TBN
bis(2-ethylhexyl)phthalate	1,600	10 ppm TBN
di-n-octylphthalate	50	10 ppm TBN
Barium (H.S.)	944	400 ppm
Chromium (H.S.)	752	100 ppm
Copper (H.S.)	706	170 ppm
Lead (H.S.)	4,190	250 ppm
Zinc (H.S.)	2,250	350 ppm
~~130,~~ TPHC	150,157	100 ppm

methylbenzene 30
dimethyl naphthalene 54
dimethylbenzene 49

Sediment

Sample # - SED1

Compound	Concentration (ppm)	Applied Standard
Acetone	3.5	1 ppm TVO
Toluene (H.S.)	9.2	1 ppm TVO
Ethylbenzene (H.S.)	3.4	1 ppm TVO
Xylene(s) (H.S.)	23[illegible]	1 ppm TVO
Naphthalene (H.S.)	8.9	10 ppm TBN
Phenanthrene	18	10 ppm TBN
di-n-butylphthalate	8.2	10 ppm TBN
Fluoranthene	12	10 ppm TBN
Pyrene	11	10 ppm TBN
bis(2-ethylhexyl)phthalate	260	10 ppm TBN
di-n-octylphthalate	33	10 ppm TBN
PCB-Aroclor 1254 (H.S.)	12	1 ppm
Barium (H.S.)	3,170	400 ppm
Chromium (H.S.)	1,170	100 ppm
Copper (H.S.)	1,540	170 ppm
Lead (H.S.)	9,080	250 ppm
Zinc (H.S.)	4,760	350 ppm
Mercury (H.S.)	6.5	1 ppm
TPHC	21,785	100 ppm

2methylnaph - 5.6
fluorene 3.6
benzo(a)anth 6.0
chrysene 4.8
benzo(b)fluor. 5.9
4-(2,2,3,3 tetra methyl) phenol - 209
dimethylbenzene 35

Sample # - SED2

Compound	Concentration (ppm)	Applied Standard
Toluene (H.S.)	1.7	1 ppm TVO
Ethylbenzene (H.S.)	3.6	1 ppm TVO
Xylene(s) (H.S.)	27	1 ppm TVO
bis(2-ethylhexyl)phthalate	67	1 ppm TBN
PCB - Aroclor 1254 (H.S.)	12	1 ppm
Barium (H.S.)	2,160	400 ppm
Chromium (H.S.)	863	100 ppm
Copper (H.S.)	743	170 ppm
Lead (H.S.)	7,630	250 ppm
Mercury (H.S.)	4	1 ppm
TPHC	8,007	100 ppm

isophorone - 4.1
naphthalene - 1.1
phenanthrene - 3.1
dimethylbenzene - 21
~~ethylbenzene~~ - 4.3
fluoranthene - 4.4
Pyrene - 4.4

Sample # - SED3

Compound	Concentration (ppm)	Applied Standard
Acetone	1.6	1 ppm TVO
Carbon disulfide (H.S.)	.93	1 ppm TVO
Benzene (H.S.)	.3	1 ppm TVO
Toluene (H.S.)	1	1 ppm TVO
Xylene(s) (H.S.)	4.9	1 ppm TVO
bis(2-ethylhexyl)phthalate	120	10 ppm TBN
PCB - Aroclor 1254 (H.S.)	20	1 ppm
Arsenic (H.S.)	40.5	20 ppm
Barium (H.S.)	1,360	400 ppm
Chromium (H.S.)	747	100 ppm
Copper (H.S.)	773	170 ppm
Lead (H.S.)	2,100	250 ppm
Zinc (H.S.)	1,750	350 ppm
Mercury (H.S.)	13	1 ppm
TPHC	6,973	100 ppm

dinoctylphthalate 6.4
benzo(b)fluor 3.2
benzo(a)pyrene 3.5
pyrene 3.4
phenanthrene 3.9
4-(2,2,3,3,-Tetramethyl)phenol 12

Drum Samples

Sample # - W1

Compound	Concentration (ppm)	Applied Standard
Carbon dioxide	280	NO Std.
Benzyl alcohol	8,400	No Std.

- Due to high levels of benzyl alcohol in the diluted sample, the analytical equipment malfunctioned and did not record the full range of contaminants.

Sample # - W2

Compound	Concentration (ppm)	Applied Standard
Diethylphthalate	2,600	No Std.
Benzyl alcohol	2,000	No Std.
Toluene (H.S.)	~~7,900~~ 7.9	NO Std.
ethanol	470	NO Std.

1-methylene-1-(cyclohexane)-200
3,7 dimethyl-1 3 4 octatriene 83
refer to QA/QC

- Sample analysis was ineffective due to a high level of non-target volatile compounds.

- Sample exhibited flash point of 70°F. Therefore, the contents of this drum are defined as an acute hazardous waste pursuant to N.J.A.C. 7:26-8.9.

Sample # - W3

Compound	Concentration (ppm)	Applied Standard
Toluene (H.S.)	400	No Std.
ethanol	470	NO Std.

refer to QA/QC

- Very few compounds detected due to a high concentration of contaminants which caused an equipment overload.

Sludge

Sample # - WSP

Compound	Concentration (ppm)	Applied Standard
trichloroethene 12 1,1,1-trichloroethane	200	No Std.
Toluene (H.S.)	870	No Std.
Ethylbenzene (H.S.)	100	No Std.
Styrene (H.S.)	15	No Std.
Xylene(s) (H.S.)	520	No Std.
TPHC	12,297	~~100 ppm~~ No Std.

- Samples not analyzed for semivolatiles or metals.

Ash

Sample # - A1

- Sample analyzed for RCRA characteristics (i.e., Reactivity, Ignitability, Corrositivity and Extraction Procedure Toxicity).

No RCRA characteristics detected but sample most probably will exhibit hazardous waste constituent compounds if reanalyzed. This correlation is observed by the concentration of contaminants in the drum samples and process line sludge samples and the ultimate transition of these materials into ash form.

Sample # - A2

- Same as A1

All of the samples referenced in this memo are graphically depicted in the maps enclosed herein.

If you have any questions regarding this sampling episode or the adjoining analytical results, I can be contacted at (609) 633-0719.

sw
Enclosures

* - (H.S.) denotes the contaminant as being a hazardous substance pursuant to N.J.A.C. 7:1E - Appendix A.

* - TVO represents the standard for Total Volatile Organics, which is the sum total of all volatile compounds in that specific sample set. If all the separate volatile compound concentrations in one sample are added and the total represents greater than 1 ppm this sample location demands further investigation.

* - TBN represents the standard for Total Base Neutral compounds, which is the sum total of all base neutral compounds in that specific sample set. If all the separate base neutral compound concentrations in one

sample are added and the total represents greater than 10 ppm this sample location demands further investigation.

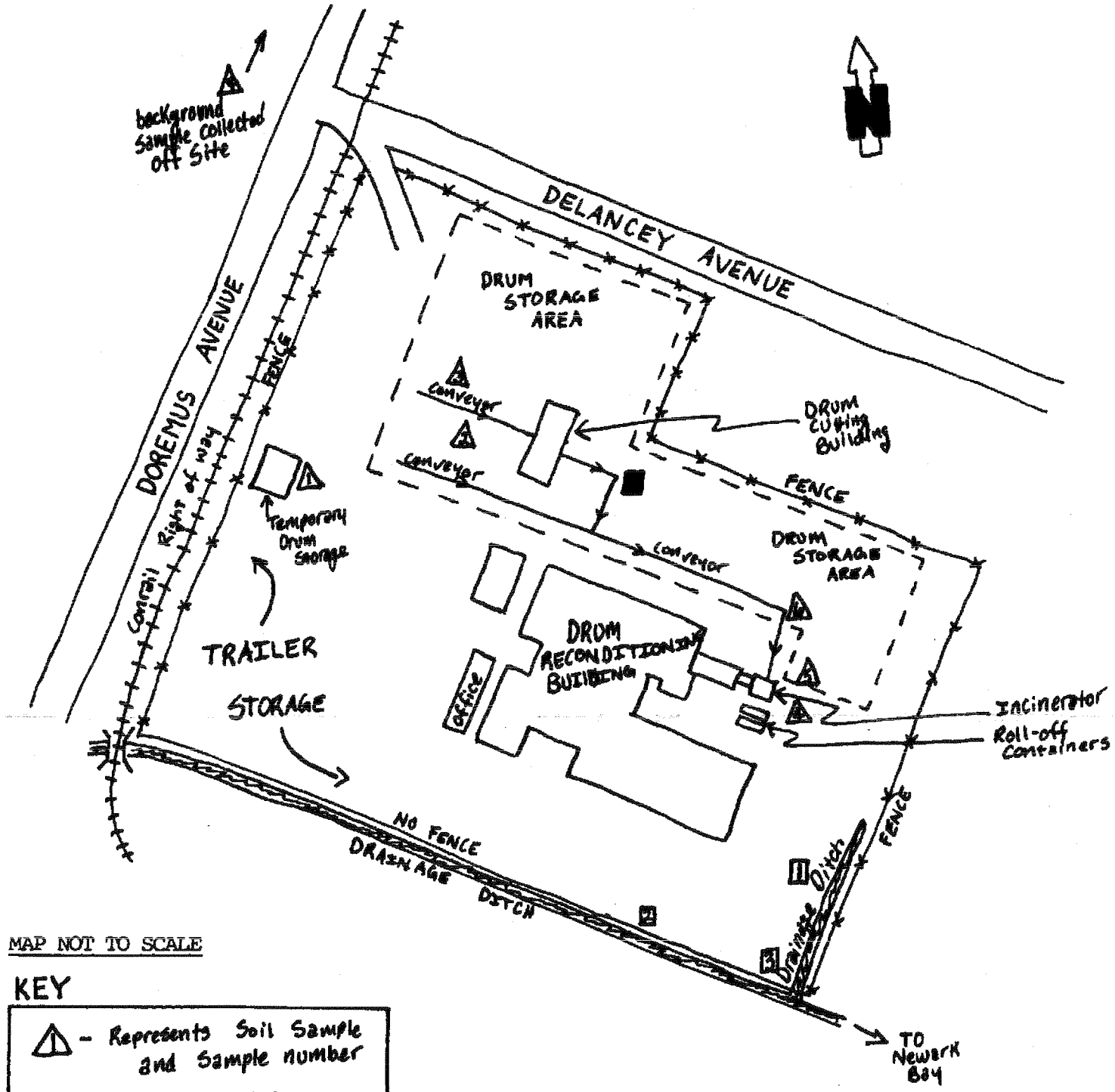
c. Dennis Hart, Acting Assistant Director, RPCE
Donald Patterson, Assistant Director, DEQ-Enforcement
Charles Licata, DAG, Office of the Environmental Prosecutor
Mark Ferencevych, Investigator, Division of Criminal Justice
James J. Groome, Acting Chief, BSCM
Colleen Kokas, Acting Section Chief, BSCM
Michael Klein, Section Chief, DEQ - Metro Enforcement
Dale Adkisson, BCTS
Michael Hruse, BCTS

SITE LOCATION MAP

CENTRAL STEEL DRUM CO., BLOCK 5074 LOT 1

NEWARK, ESSEX COUNTY

SAMPLE TYPE(S)- Soil, Sediment & Drum



MAP NOT TO SCALE

KEY

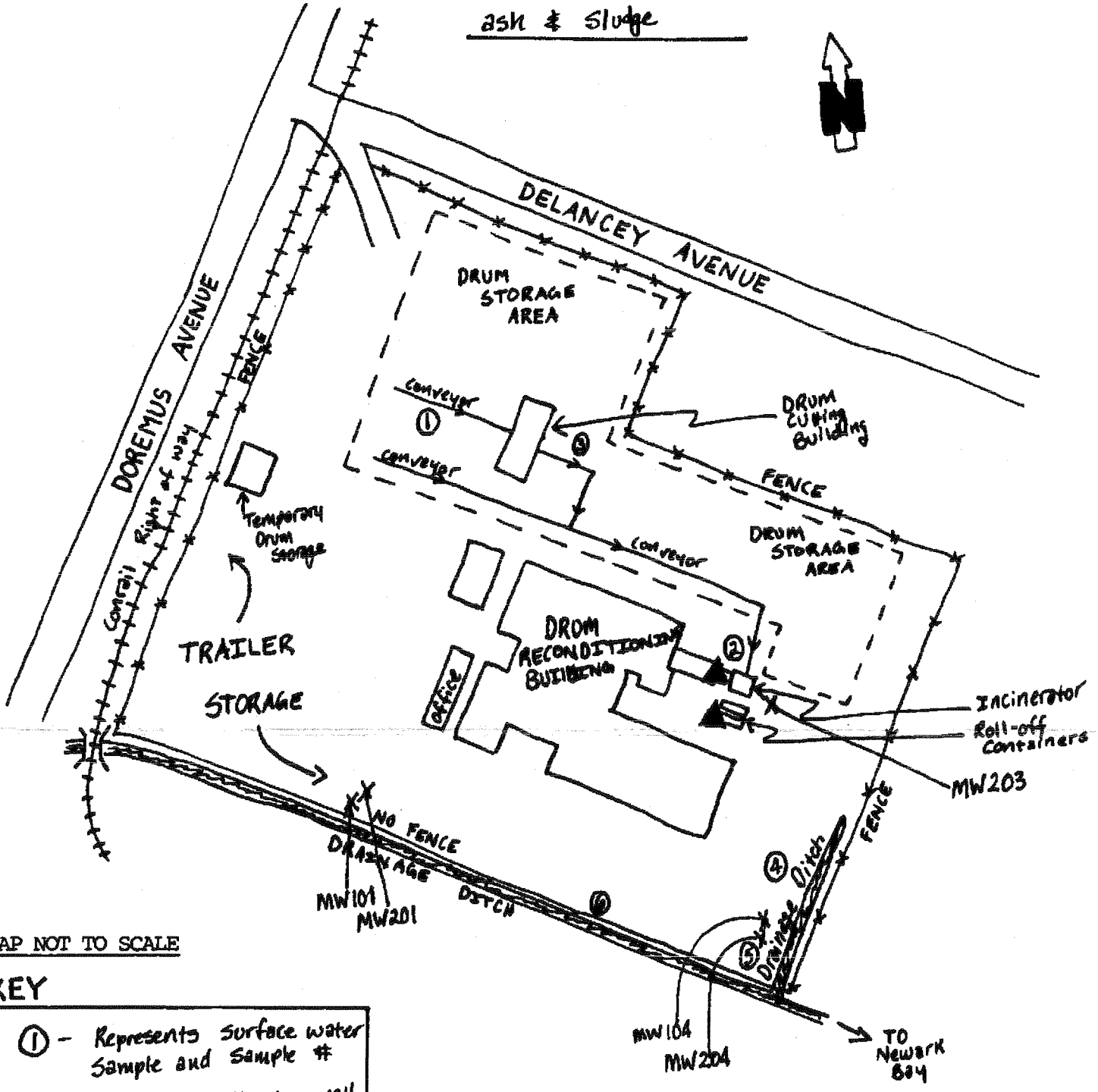
- △ - Represents Soil Sample and Sample number
- [I] - Represents Sediment Sample and Sample number
- ■ - Represents Drum sample Location

SITE LOCATION MAP

CENTRAL STEEL DRUM CO., BLOCK 5074 LOT 1

NEWARK, ESSEX COUNTY

SAMPLE TYPE(S) - Surface water, ground water, ash & sludge



MAP NOT TO SCALE

KEY

① - Represents surface water sample and sample #

X - Represents Monitor well location - marked with sample number

▲ - Represents ash and sludge sample locations

RECEIVED
FEB 10 1994
Murray G. Simon, J.S.C.
(retired and temporarily
assigned on recall)

FILED
FEB 14 1994
Murray G. Simon, J.S.C.
(retired and temporarily
assigned on recall)

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SUPERIOR COURT OF NEW JERSEY
CHANCERY DIVISION - ESSEX COUNTY
DOCKET NO. C-152-91

STATE OF NEW JERSEY, DEPARTMENT OF ENVIRONMENTAL PROTECTION AND ENERGY,	)
Plaintiff,	)
v.	)
CENTRAL STEEL DRUM COMPANY, et al.,	)
Defendants.	)

Civil Action

AMENDMENT TO JANUARY 8, 1993 JUDICIAL CONSENT ORDER BETWEEN DEPE AND CENTRAL STEEL DRUM

On January 8, 1993, this Court entered a Judicial Consent Order ("the JCO") in this matter between plaintiff State of New Jersey, Department of Environmental Protection and Energy ("DEPE") and defendant Central Steel Drum ("CSD"), wherein CSD agreed, inter alia,

to conduct Interim Remedial Measures, ("IRM") to conduct a Remedial Investigation/Feasibility Study ("RI/FS") and to design and implement a remedial action alternative to remedy all pollution at, or emanating from, or previously emanating from, CSD's drum reconditioning facility located at 704 Doremus Avenue in Newark, New Jersey ("the site"). In addition, CSD was obligated under Paragraph 102(a) of the JCO to obtain and comply with a permit and certificate to operate a new state-of-the-art hazardous waste incinerator and to cease operating and dismantle the existing incinerator at the site, referred to as the Main Drum Tunnel incinerator with afterburners, within twelve months of the execution of the JCO. The twelve month period has since expired, and CSD has neither installed a new incinerator at the site, nor ceased operating its existing incinerator. Accordingly, CSD has agreed to completely cease its drum incinerating operations at the site. In order to effectuate a prompt and complete cessation of CSD's drum reconditioning operations at the site, CSD and DEPE have agreed, pursuant to Paragraph 145 of the JCO, to amend the JCO to accomplish this end. This Court having considered the parties' application, and having been satisfied that good cause exists for such an amendment to the JCO,

IT IS on this 14th day of February, 1994

ORDERED that the January 8, 1993 JCO in this matter is hereby amended solely to the following extent:

1. Effective immediately, CSD shall be permanently enjoined from accepting any drums which require incineration for reconditioning, storage or disposal at the site.

2. Also effective immediately, CSD shall be permanently enjoined from accepting any drums containing any amount (regardless of whether the drum is "empty" as defined by N.J.A.C. 7:26-8.4) of hazardous substances (as that term is defined by the New Jersey Spill Compensation and Control Act ("Spill Act"), N.J.S.A. 58:10-23.11a et seq.) for reconditioning, storage or disposal at the site.

3. Effective Wednesday, February 16, 1994 at 5:00 p.m., CSD shall be permanently enjoined from operating the Main Drum Tunnel incinerator and afterburners. CSD shall render the latter permanently inoperable immediately upon cessation of operation.

4. Prior to 5:00 p.m. on Wednesday, February 16, 1994, CSD may process the remaining drums on site subject to the following terms and conditions:

a. All environmental control equipment at the CSD facility, including, but not limited to, all portions of the sludge/ash conveyor, all afterburners, and the water sprayer shall be fully functioning properly and in working order at all times during the drum reconditioning process. Should any of the environmental control equipment fail to function properly, CSD must immediately cease its drum reconditioning operations, and may not resume operations until the problem is corrected.

b. CSD shall provide, by telecopy, to the DEPE contact persons designated in Paragraph 114 of the JCO,

daily progress reports setting forth the number of drums processed, and the number of drums remaining on site, for each of these limited drum reconditioning operations.

5. Any drums which require incineration to be reprocessed and which remain at the site upon the expiration of the 5:00 p.m. deadline on February 16, 1994, must be lawfully removed or disposed of by CSD within 30 days.

6. CSD's failure to comply with any of the following terms and conditions of the JCO as amended shall constitute contempt of court, and CSD may be subject to a proceeding brought pursuant to R. 1:10-2 and/or R. 1:10-5:

a. CSD's failure to immediately cease operating the Main Drum Tunnel incinerator and afterburners by the 5:00 p.m. deadline on February 16, 1994;

b. CSD's acceptance of any drums containing any amount (regardless of whether the drum is "empty" as defined by N.J.A.C. 7:26-8.4) of hazardous substances (as that term is defined in the Spill Act) subsequent to the entry of this Amendment to the JCO; or

c. CSD's failure to lawfully remove, or dispose of, any drums containing hazardous substances (as that term is defined in the Spill Act) which had been accepted by CSD for processing prior to the entry

of this Amendment to the JCO, and which remain unprocessed at the site by March 18, 1994.

7. Except as otherwise provided by this Amendment to the JCO, all other terms and conditions of the January 8, 1993 JCO, including, but not limited to, CSD's obligations to remediate all pollution at the site, emanating from the site, or which has previously emanated from CSD's drum reconditioning facility at the site, shall remain in full force and effect.

Murray G. Simon, J.S.C.
(retired and temporarily assigned on recall)

We hereby consent to the form and entry of the within Amendment to the January 8, 1993 Judicial Consent Order.

NEW JERSEY DEPARTMENT OF
ENVIRONMENTAL PROTECTION
AND ENERGY

Date: 2-9-94 By:

Ronald T. Corcory
Assistant Director
Responsible Party Cleanup
Element
Division of Responsible Party
Site Remediation

Date: 2-9-94 By:

Donald Paterson DP 2-9-94
Assistant Director
Air and Environmental Quality
Enforcement
Division of Environmental
Field Operations

CENTRAL STEEL DRUM COMPANY

Date: 2/10/74 By: _____

GERALD GREENBERG
Vice-President

REMEDIAL INVESTIGATION
PHASE I

CENTRAL STEEL DRUM
704 Doremus Avenue
Newark, NJ

Prepared by

J M Sorge, Inc.
50 County Line Road
Somerville, NJ 08876

July 1990

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1	Plant Inventory/Control Information CSD Right-to-Know Inventory Newark Hazardous Facility Permit CSD Contingency Plan
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3	Soil Boring Log Chain of Custody Control Form Standard Field Procedures
4	Hydrogeologic Data Request Aerial Photographs

CENTRAL STEEL DRUM
REMEDIAL INVESTIGATION PLAN

1.0 INTRODUCTION AND REQUIREMENTS

J M Sorge, Inc. (JMS) was retained by Central Steel Drum (CSD) to respond to the State directive issued on May 10, 1990, which required the submittal of the Remedial Investigation Plan for their facility in Newark. CSD responded to the directive by providing an interim remedial measures plan at a meeting held between the Company and the Department on June 14, 1990. During the referenced meeting, CSD indicated their desire to conduct a multi-phased remedial investigation at the site. The Department indicated that a multi-phased program would be acceptable. The following represents Phase I of the Remedial Investigation as required by the directive issued by the State on May 10, 1990.

CSD also requested an extension in the preparation of the Phase I Remedial Investigation (RI) Plan during the referenced meeting. The extension was requested to allow time to compile a complete history of the site prior to CSD's operations. The State rejected the request and indicated that a preliminary remedial investigation plan would be required no later than July 16, 1990. Therefore, the historical information provided at this time is incomplete. The following document represents the Phase I Remedial Investigation Plan for the CSD site. The plan and following zdocumentation was prepared to be totally responsive to the Department's directive dated May 10, 1990.

1.1 REMEDIAL INVESTIGATION REQUIREMENTS AND OBJECTIVES

The following section provides the general requirements of a remedial investigation as required by the RI Scope of Work attached to the State directive. Subsequent sections provide detailed description of the Phase I - RI Plan developed for this site. Following the review of the completed results of the Phase I investigation, a subsequent Phase II Work Plan will be developed for the site. The Phase II plan will be developed to address potential off-site impacts associated with CSD operations and address the feasibility of various remedial alternatives for the site.

1.1.1 Waste Characterization

A complete Waste Characterization Program for raw materials generated during the remediation of this site cannot be developed at this time. The current plan calls for preliminary characterization of waste materials in soils in the vicinity of critical plant operations. The operations consist of: the drum flipping operations; the drum storage operations; the incinerator area;

the rejected drum storage pad; and the facility septic tank. Additional areas may be defined during the course of the Phase I - RI Program based on the results of the soil and groundwater investigations conducted at the site. Any such additional areas will be fully characterized during the course of the Phase II - RI Program. The RI program will serve to identify all potential wastes which may contribute to the contamination present at the site.

1.1.2 Present Site Conditions

The Phase I Program will include investigation of soil, groundwater, surface water and sediment conditions on the site. A detailed site assessment program will be conducted to determine the nature of any contamination present and its approximate horizontal and vertical extent. The Phase I Plan also includes an investigation of soil and groundwater conditions at the approximate property boundaries. The objective of the boundary investigation will be to determine if CSD operations have potentially impacted the surrounding environment.

1.1.3 Potential Migration Pathways

The Phase I drilling program will be conducted for the purpose of establishing the lithology of the site as well as groundwater conditions and flow regime beneath the site. We anticipate the groundwater flow beneath the site is influenced by tidal fluctuations. Therefore, diurnal flow direction reversals are expected. Based on regional data, we anticipate a net flow to the south and east. The available site data indicates that the facility is constructed on fill which overlies a dense clay layer 7 to 13 feet thick. The clay layer overlies a sand zone of undetermined depth. The objective of the Phase I Program is to determine the effectiveness of the clay layer in preventing migration from the surface to the sand aquifer beneath the site. This determination is critical for the evaluation of potential CSD impacts on the surrounding areas, as well as the selection of remediation alternatives.

1.1.4 Potential Health and Environmental Impacts

The investigation plan will incorporate the review of the potential health and environmental impacts associated with any discharge from the CSD operation. A review of the surrounding area, including sensitive receptors, will be conducted as part of the Phase II investigation program. The Phase I program will include an evaluation of groundwater use in the vicinity, as well as the use of surface water downgradient from the facility. The plan also calls for the investigation of any sensitive ecological areas downgradient from the site which could be affected either by surface or groundwater discharges emanating from the CSD facility.

1.1.5 Remedial Alternatives and Feasibility

Based on our review of the data developed during the RI investigation program, a series of remedial alternatives will be developed for the CSD facility. A complete description of each remedial alternative, along with a cost/benefit analysis, will be presented in the final report. The identified remedial alternatives will be ranked in accordance with the selection criteria developed in cooperation with the Department. The final RI report will include a minimum of three (3) remedial alternatives which will be investigated under the feasibility assessment portion of the program.

1.1.6 Plant Modification Requirements

As discussed previously with the Department, the plant is currently anticipating the installation of a state of the art incinerator system. In addition, several operational improvements were proposed in the IRM Plan submitted to the Department on June 14, 1990. Based on the results of the complete RI investigation program, a series of additional modifications may be required at the facility. Available data suggests that all areas where drums are handled, stored or transferred, should be paved to prevent migration of any spillage to the soils beneath. It is also expected that the facility septic system will be abandoned and the facility connected to the municipal sewage system, if feasible. These improvements, along with others developed during the course of the RI study, will be subject to review as part of the feasibility study for this site. The improvements identified here may or may not be included based on the results of the remedial feasibility investigation.

1.2 PHASE I - RI PLAN

The following presents a detailed description of the proposed Phase I - RI Plan. The Phase I Plan is designed to assess current site conditions at the CSD facility. The plan incorporates a detailed investigation of soils, fill, groundwater, surface water, sediment, and area quality on, and in the vicinity of, the CSD facility. The objective of the program is two-fold; first, to determine what operations conducted by CSD may have resulted in an impact on the local environment. Second, to determine if CSD impacts have affected the area surrounding the CSD site, and therefore present a risk to human health or the environment.

1.2.1 Waste Characterization

CSD currently disposes of incinerator ash as a RCRA-regulated waste. The material has been periodically sampled to support classification and acceptance by a RCRA-regulated waste facility. CSD currently utilizes City Disposal Corp. for this service. There are no other waste streams currently generated by CSD.

Preliminary inspections by NJDEP and NUS indicate that stained soil is present on the site. A thorough investigation of the site will be required to determine the nature of the contaminants present and the approximate volume of affected soil. The RI - Phase I program is designed to provide this information. The Phase I results will be used to determine if off-site disposal of the affected soils is required. If off-site disposal is warranted, a waste characterization plan will be included in the RI - Phase II Plan.

If warranted, the RI - Phase II Plan for waste characterization sampling will conform to State and Federal requirements regarding the sampling frequency and procedures used to characterize waste soils for disposal.

1.2.2 Site Evaluation

The Phase I Site Evaluation will include a preliminary investigation of air quality, soil, groundwater and surface water conditions, and sediment quality on the CSD facility. The soil program will determine the soil quality within the fill layer since the primary potential source of site contamination is surface spillage. Deeper sampling will be conducted in the incinerator pit area and the septic tank area, since these units represent

the only potential subsurface sources at the site. A groundwater monitoring program is proposed in order to determine the tidal effect within each native soil layer beneath the site, as well as the potential impact of the CSD facility on the two (2) water bearing zones beneath the facility; the fill layer and the silty sand aquifer beneath the native clay soil layer.

The investigation of surface water and sediments on the site will be designed to determine if the various CSD operations have impacted the surface water drainage system at the site, and determine if these impacts have affected off-site surface water systems. A complete evaluation of water quality, as well as sediments within the drainage system surrounding the site, will be conducted. We are proposing a preliminary air quality survey of the site as part of the Phase I program. The results of the survey will be used to determine the need for a more detailed air quality investigation. We anticipate that any potentially significant air quality impacts associated with this site are related to plant operations rather than soil conditions present at the facility.

2.0 SITE HISTORY

Due to schedule constraints, the historical investigation of the CSD has not been fully completed. Historic aerial photographs have been ordered but have not been received to date. Similarly, the inventory of groundwater wells in the CSD area has not been received although the information has been requested through appropriate channels at NJDEP (see Attachment 4).

The completed historical review of the site and surrounding areas will be submitted as a supplemental report as soon as the requested information is received. The following provides a summary of currently available historical information regarding the CSD site.

2.1 FACILITY SETTING

CSD, which currently occupies the site, reconditions open steel drums received from various industries ranging from food to paint manufacturing. The initial phase of reconditioning involves incineration; this is followed by sand blasting and repainting. CSD has been in operation since 1951. Prior to this, the site was occupied by an ink manufacturer which is now part of what is known as Inmont Chemical Corporation. The site occupies eight (8) acres.

The site is located in the industrial area of Newark Bay east of the NJ Turnpike and north of Newark International Airport. The site is situated on filled marsh land. The residential area begins 1.5 miles from the site (Ironbound section of Newark). On site drainage ditches feed into Newark Bay and groundwater recharges the industrially used Brunswick aquifer west/northwest of the site.

Limited site information is available regarding the soils and groundwater beneath the CSD site. Previous investigations (1983) indicate that the facility is constructed on fill ranging in depth from 4 to 12 feet. A clay layer extends from the base of the fill to a depth of 17 to 20 feet. A reddish-brown, fine silty sand is encountered beneath the clay layer. Groundwater was reported in the fill layer at shallow depths (1 - 2 feet) and with the sand layer at a depth of 5 - 6 feet below the surface.

As indicated in the previous investigation, this results in a perched water condition within the more permeable fill material above the clay layer. Thus, the facility is prone to frequent flooding following periods of precipitation. Storm water on the site is routed to a ditch system which extends along the southern and eastern sides of the property. Storm flow is directed via the ditch to the west, beneath Doremus Avenue (Figure 1).

2.2 OWNERSHIP HISTORY

The following section was prepared by Wilentz, Goldman & Spitzer on behalf of CSD and has been included in it's entirety.

IN THE MATTER OF CENTRAL
STEEL DRUM CO., ET AL.

OWNER/OPERATOR HISTORY
704 DOREMUS AVENUE
NEWARK, NEW JERSEY

The following history of the owners and/or operators of the Central Steel Drum Company site located at 704 Doremus Avenue in Newark, New Jersey is prepared and submitted in accordance with Paragraph II.B.1. of Appendix B of Attachment A to the May 9, 1190 Directive issued by the New Jersey Department of Environmental Protection to Central Steel Drum Company. Listed below in chronological order are the past owners and/or operators of the site, the period of such ownership and/or operation, the type of operation conducted on the site by each owner and/or operator, and the current or last known address of each owner and/or operator, if known.

OWNER/OPERATOR: The Land Filling & Improvement Company
PERIOD: June 14, 1902 to November 2, 1922[1]
OPERATION: Landfill
CURRENT ADDRESS: Unknown
LAST KNOWN ADDRESS: Bayone, New Jersey

OWNER: Maynard F. Holt
PERIOD: November 2, 1922 to November 2, 1922[2]

---

[1]Without an extensive and extremely detailed title search, the exact date upon which The Land Filling and Improvement Company acquired title to the real property comprising the Central Steel Drum Company site cannot be determined. It is known that The Land Filling & Improvement Company first began acquiring properties in the City of Newark on June 14, 1902, last acquired a property in Newark on December 26, 1918 and sold its properties on November 2, 1922. It is possible that the Central Steel Drum Company site is a compilation of various parcels of property which were acquired by The Land Filling & Improvement Company on various dates.

[2]Note that immediately upon acquiring title to the site from The Land Filling & Improvement Company, Maynard F. Holt transferred the property to International Inks, Inc.

OPERATOR: None (see footnote 2)
OPERATION: None (see footnote 2)
CURRENT ADDRESS: Unknown
LAST KNOWN ADDRESS: Larchmont, New York

OWNER/OPERATOR: International Inks, Inc.
PERIOD: November 2, 1922 to June 12, 1928
OPERATION: Ink Manufacturing
CURRENT ADDRESS: Unknown
LAST KNOWN ADDRESS: 580 Fifth Avenue, New York, New York

OWNER/OPERATOR: The International Printing Ink Corporation
PERIOD: June 12, 1928 to December 21, 1928
OPERATION: Ink Manufacturing
CURRENT ADDRESS: Unknown
LAST KNOWN ADDRESS: 432 New Street, Cincinnati, Ohio

OWNER/OPERATOR: International Inks, Inc.
PERIOD: December 21, 1928 to December 17, 1929
OPERATION: Ink Manufacturing
CURRENT ADDRESS: Unknown
LAST KNOWN ADDRESS: 580 Fifth Avenue, New York, New York

OWNER/OPERATOR: The International Printing Ink Corporation
PERIOD: December 17, 1929 to December 28, 1934
OPERATION: Ink Manufacturing
CURRENT ADDRESS: Unknown
LAST KNOWN ADDRESS: 432 New Street, Cincinnati, Ohio

OWNER/OEPRATOR: Philip Ruxton, Inc.
PERIOD: December 28, 1934 to December 20, 1948
OPERATION: Unknown (poosibly ink and/or chemical manufacturing)
CURRENT ADDRESS: Unknown
LAST KNOWN ADDRESS: 350 Fifth Avenue, New York, New York

OWNER/OPERATOR: Interchemical Corporation
PERIOD: December 20, 1948 to December 28, 1951
OPERATION: Unknown (poossibly ink and/or chemical manufacturing)
CURRENT ADDRESS: Unknown
LAST KNOWN ADDRESS: 44 East Broad Street, Columbus, Ohio

OWNER: Bessie Baron, Ruth Greenberg, Mollie Ratner and Dorothy Greenberg
PERIOD: December 28, 1951 to March 31, 1965
CURRENT ADDRESS: Bessie Baron, 1299 Wellington Avenue, West Englewood, New Jersey; Dorothy Greenberg, 6131 La Groce Drive, Miami Beach Florida

LAST KNOWN ADDRESS: Ruth Greenberg, deceased, 5 Archbridge Lane, Springfield, New Jersey; Molly Ratner, deceased, 135 Ocean Parkway, Brooklyn, New York[3]
OPERATOR: Central Steel Drum Company
OPERATION: Recycling of steel drums
CURRENT ADDRESS: 704 Dovemus Avenue, Newark, New Jersey

OWNER: Dore Realty Co., Inc.
PERIOD: March 31, 1965 to July 22, 1966
CURRENT ADDRESS: 30 Journal Square, Jersey City, New Jersey
OPERATOR: Denctral Steel Drum Company
OPERATION: Recycling of steel drums
CURRENT ADDRESS: 704 Doremus Avenue, Newark, New Jersey

OWNER: Bessie Baron, Abbie Greenberg,[4] Mollie Ratner and Dorothy Greenberg
PERIOD: July 22, 1966 to August 30, 1968
CURRENT ADDRESS: Bessie Baron, 1299 Wellington Avenue, West Englewood, New Jersey; Abbie Greenberg, 5 Archbridge Lane, Springfield, New Jersey; Dorothy Greenberg, 6131 La Groce Drive, Miami Beach, Florida
LAST KNOWN ADDRESS: Mollie Ratner, deceased, 135 Ocean Parkway, Brooklyn, New York (see footnote 3)
OPERATOR: Central Steel Drum Company
OPERATION: Recycling of steel drums
CURRENT ADDRESS: 704 Doremus Avenue, Newark, New Jersey

OWNER: Bessie Baron, Mollie Ratner and Dorothy Greenberg
PERIOD: August 30, 1968 to October 26, 1988
CURRENT ADDRESS: Bessie Baron, 1299 Wellington Avenue, West Englewood, New Jersey; Dorothy Greenberg, 6131 La Groce Drive, Miami Beach, Florida
LAST KNOWN ADDRESS: Mollie Ratner, deceased, 135 Ocean Parkway, Brooklyn, New York (see footnote 3)
OPERATOR: Central Steel Drum Company
OPERATION: Recycling of steel drums
CURRENT ADDRESS: 704 Doremus Avenue, Newark, New Jersey

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[3]The Estate of Mollie Ratner was administrated by Jane Ratner Mattson and Marion Ratner Abrams as co-executrices whose current addresses are 25 Hardscrabble Hill, Chappaqua, New York and 10810 Missouri Avenue, Los Angeles, California, respectively.

[4]Abbie Greenberg was married to Ruth Greenberg and succeeded to Ruth's interests in the site upon her death.

OWNER: Bessie Baron, Dorothy Greenberg, Jane Ratner Mattson and Marion Ratner Abrams[5]
PERIOD: October 26, 1988 to present
CURRENT ADDRESS: Bessie Baron, 1299 Wellington Avenue, West Englewood, New Jersey; Dorothy Greenberg, 6131 La Groce Drive, Miami Beach, Florida; Jane Ratner Mattson, 25 Hardscrabble Hill, Chappaqua, New York; Marion Ratner Abrams, 10810 Missouri Avenue, Los Angeles, California
OPERATOR: Central Steel Drum Company
OPERATION: Recycling of steel drums
CURRENT: 704 Doremus Avenue, Newark, New Jersey

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[5]Jane Ratner Mattson and Marian Ratner Abrams succeeded to the interests of Mollie Ratner upon her death.

2.3 RAW MATERIALS AND PRODUCT DESCRIPTION

CSD is engaged in the re-manufacture of 55-gallon steel drums. Drums are incinerated, sand blasted, and repainted as part of the process. CSD maintains a large inventory of used drums at the site. The drums are stored in large stacks on open soil in the plant yard area.

The on-site inventory of hazardous materials includes primarily paint and adhesives. A copy of the facility's current Community Right to Know Survey, which lists all hazardous substances on the facility, is provided in Attachment 1. We have also included a copy of the facility's permit application.

2.4 HISTORICAL SITE PLANS

The CSD office was destroyed in a fire in January 1983, as a result of the explosion of the adjacent Texaco terminal. The fire destroyed all CSD records, plant drawings, etc. Therefore, there are no as-built engineering plans for the facility.

2.5 AERIAL PHOTOGRAPHS

The facility does not currently have any aerial photographs of the plant, since all records were destroyed in 1983. We have contacted various aerial photo service companies and a series of historical photos have been ordered. Aerial photos have been ordered for the following periods: 1940, 1951, 1962, 1969 and 1974. The aerials will be reviewed upon receipt and the results will be provided in a supplemental report for NJDEP evaluation.

2.6 SITE WATER BUDGET

The facility does not use water in the drum re-conditioning process. Drinking water is supplied to the plant from the municipal water system available on Doremus Avenue. Drinking water is distributed to the plant offices, employee showers, and to the incinerator area through an underground distribution system.

In general, water is primarily used for personnel sanitation only. The facility employees up to 110 people when the plant is fully operational. Therefore the facility uses an estimated 15 to 15 thousand gallons of water per day. All used water is discharged to the on-site septic system which is shown on Figure 1. Water is also used for fire control in the incinerator area on an "as-needed" basis. In addition, small quantities of water are used in the plant maintenance area for cleaning, etc.

2.7 SURROUNDING WELL DATA

As indicated, we have requested well inventory data for the surrounding area; however, the data has not been received to date. A supplemental report will be issued to the Department as soon as the data is available.

The site was investigated by NUS in February 1986 under contract to the USEPA. The results of their investigation are as follows:

> Wells are commercially owned and are west and northwest of the site. Wells vary from 200 - 900 feet in depth and average about 350 ft. No drinking wells are present. nearest downgradient well is on Delancey Street, Newark and is owned by Rutherford and Delancey Holding Corp. The nearest well is 1-mile from the site. All the wells to the west of the site tap the Brunswick Aquifer which is charged by Newark Bay. Groundwater flow is away from Newark Bay because of heavy pumping conditions in Newark.

The facility records regarding foundation borings, etc., were destroyed in a fire in 1983. However, a series of eight (8) wells were installed by CSD in 1983 by Environics. The borings logs for these site wells are provided in the Environics report included as Attachment 2.

The drum flipping operation is conducted manually within a small building located at the starting point of the incinerator chain feed system. The drums are opened and flipped onto the chain conveyor system which feeds the drums into the incinerator and subsequently the refinishing plant. Any liquid or solids present in the drums fall to the conveyor beneath the drum chain. However, some spillage occurs, particularly if the drum residue is a liquid, due to the flipping process employed.

Spilled residue, which is not caught in the conveyor system, is contained by a concrete pad sloped to direct the liquid to a drain located to the south of the flipping station. The drain discharges to a concrete containment basin as indicated in Figure 2. The containment basin is a concrete-floored unit approximately 2-feet deep. The unit is surrounded by a block, or concrete wall, approximately 8 - 12 inches above the surrounding grade. The block/concrete wall was originally installed to prevent stormwater runoff from entering the containment unit. However, the block wall has been damaged in several areas, therefore stormwater can enter the containment unit.

The containment unit is equipped with a concrete lined trench set 2-feet below the containment system floor. The integrity of this trench could not be determined during our inspection since the trench was completely filled with sediment. CSD informed us that the trench is cleaned out on the average frequency of once a week.

The concrete trench drains through a concrete channel beneath the block wall at the surface, and enters a concrete walled pit to the east (Figure 2). The exact dimension of the pit were not determined, but it appears to be approximately 4 by 6 feet. The depth of the pit could not be determined due to the presence of water and sediment at the time of our inspection. CSD indicated that the pit is concrete floored.

During our inspection, a pump was present in the pit but was not operating. CSD indicated that the liquid and sediment from the pit is pumped back onto the incinerator feed chain as necessary. However, CSD also indicated that during periods of heavy rainfall, stormwater enters the containment system since the incinerator area is the lowest area of the site. When flooding occurs, stormwater is pumped out of the pit and discharged toward the ditch to the east.

2.8 PREVIOUS ECRA DATA

The facility was never involved in the ECRA program.

2.9 ENFORCEMENT HISTORY

The following section was prepared by Wilentz, Goldman and Spitzer on behalf of CSD and included in its entirety.

A880296 SBA, CDS April 7, 1988; A880297 SBA, CDS dated April 7, 1988; A880298 SBA CDS dated April 7, 1988; A880299 SBA, CDS dated April 7, 1988; A881021 MRA, CDS dated August 9, 1988.

In the Matter Central Steel Drum Co., etc., Log No. A881677 MRA, CDS Administrative Order and Notice of Civil Administrative Penalty Assessment dated October 20, 1988

This Administrative Order alleges that CSD emitted odors from its facility in violation of N.J.A.C. 7:27-11.3(d). CSD has denied these allegations and has filed a request for Administrative Hearing which is currently pending with NJDEP. Without admitting any violations, CSD has performed certain minor repairs and has applied to NJDEP for approval to improve the facility with control equipment and apparatus which will prevent odors.

In the Matter of Central Steel Drum Co., etc., Log No. A881678 MRA, CDS Administrative Order and Notice of Civil Administrative Penalty Assessment dated October 20, 1988

This Administrative Order alleges that CSD permitted illegal smoke emissions to escape from its facility. CSD has denied these allegations and has filed a request for administrative hearing which is currently pending with NJDEP. Without admitting any violations, CSD has performed certain minor repairs and has applied to NJDEP for approval to improve the facility with control equipment and apparatus which will prevent smoke emissions.

In the Matter of Central Steel Drum Co., etc., Log No. A881679 MRA, CDS Administrative Order and Notice of Civil Administrative Penalty Assessment dated October 20, 1988

This Administrative Order alleges that CSD operated its facility without all of its component parts in place and in operation in violation of N.J.A.C. 7:27-8.3(e)2. CSD has denied these allegations and has filed a request for administrative hearing which is currently pending with NJDEP. Without admitting any violations, CSD has performed certain minor repairs and has applied to NJDEP for approval to improve the facility with control equipment and apparatus which will prevent equipment breakdown.

In the Matter of Central Steel Drum Co., etc., Log No. A890490 MRA, CDS Administrative Order and Notice of Civil Administrative Penalty Assessment

This Administrative Order alleges that CSD operated its facility without all of its component parts in place and in operation in violation of N.J.A.C. 7:27-8.3(e)2. CSD has denied these allegations and has filed a request for administrative hearing which is currently pending with NJDEP. Without admitting any violations, CSD has performed certain minor repairs and has applied to NJDEP for approval to improve the facility with control equipment and apparatus which will prevent equipment breakdown.

In the Matter of Central Steel Drum Co., etc., Log No. A890491 MRA, CDS Administrative Order and Notice of Civil Administrative Penalty Assessment

This Administrative Order alleges that CSD permitted illegal smoke emissions to escape from its facility in violation of N.J.A.C. 7:27-11.3(b). CSD has denied these allegations and has filed a request for administrative hearing which is currently pending with NJDEP. Without admitting any violations, CSD has performed certain minor repairs and has applied to NJDEP for approval to improve the facility with control equipment and apparatus which will prevent smoke emissions.

In the Matter of Central Steel Drum Co., etc., Log No. A890656 MRA, CDS Administrative Order and Notice of Civil Administrative Penalty Assessment dated March 2, 1989

This Administrative Order alleges that CSD operated its facility without all of its component parts in place and in operation in violation of N.J.A.C. 7:27-8.3(e)2. CSD has denied these allegations and has filed a request for administrative hearing which is currently pending with NJDEP. Without admitting any violations, CSD has performed certain minor repairs and has applied to NJDEP for approval to improve the facility with control equipment and apparatus which will prevent equipment breakdown.

In the Matter of Central Steel Drum Co., etc., Log No. A890657 MRA, CDS Administrative Order and Notice of Civil Administrative Penalty Assessment dated March 2, 1989

This Administrative Order alleges that CSD emitted odors from its facility in violation of N.J.A.C. 7:27-11.3(d). CSD has denied these allegations and has filed a request for administrative hearing which is currently pending with NJDEP. Without admitting any violations, CSD has performed certain minor repairs and has applied to NJDEP for approval to improve the facility with control equipment and apparatus which will prevent odors.

In the Matter of Central Steel Drum Co., etc., Log No. A890803 MRA, CDS Administrative Order and Notice of Civil Administrative Penalty Assessment dated March 22, 1989

This Administrative Order alleges that CSD operated its facility without all of its component parts in place and in operation in violation of N.J.A.C. 7:27-8.3(e)2. CSD has denied these allegations and has filed a request for administrative hearing which is currently pending with NJDEP. Without admitting any violations, CSD has performed certain minor repairs and has applied to NJDEP for approval to improve the facility with control equipment and apparatus which will prevent equipment breakdown.

In the Matter of Central Steel Drum Co., etc., Log No. A891088 MRA, CDS Administrative Order and Notice of Civil Administrative Penalty Assessment

This Administrative Order alleges that CSD emitted odors from its facility in violation of N.J.A.C. 7:27-11.3(d). CSD has denied these allegations and has filed a request for administrative hearing which is currently pending with NJDEP. Without admitting any violations, CSD has performed certain minor repairs and has applied to NJDEP for approval to improve the facility with control equipment and apparatus which will prevent odors.

In the Matter of Central Steel Drum Co., etc., Log No. A892155 MRA, CDS Administrative Order and Notice of Civil Administrative Penalty Assessment dated September 15, 1989

This Administrative Order alleges that CSD operated its facility without all of its component parts in place and in operation in violation of N.J.A.C. 7:27-8.3(e)2. CSD has denied these allegations and has filed a request for administrative hearing which is currently pending with NJDEP. Without admitting any violations, CSD has performed certain minor repairs and has applied to NJDEP for approval to improve the facility with control equipment and apparatus which will prevent equipment breakdown.

In the Matter of Central Steel Drum Co., etc., Log No. A893011 MRA, CDS Administrative Order and Notice of Civil Administrative Penalty Assessment

This Administrative Order alleges that CSD permitted open burning at its site in violation of N.J.A.C. 7:27-2.3(a). CSD has denied these allegations and has filed a request for administrative hearing which is currently pending with NJDEP. Without admitting any violations, CSD has adopted a policy and has instructed its employees against open burning. CSD does not permit the open burning of any material at its facility.

In the Matter of Central Steel Drum Co., etc., Log No. A893089 SBA, CDS Administrative Order and Notice of Civil Administrative Penalty Assessment

This Administrative Order alleges that CSD operated its facility without all of its component parts in place and in operation in violation of N.J.A.C. 7:27-8.3(e)2. CSD has denied these allegations and has filed a request for administrative hearing which is currently pending with NJDEP. Without admitting any violations, CSD has performed certain minor repairs and has applied to NJDEP for approval to improve the facility with control equipment and apparatus which will prevent equipment breakdown.

In the Matter of Central Steel Drum Co., etc., Log No. A900029 MRA, CDS Administrative Order and Notice of Civil Administrative Penalty Assessment

This Administrative Order alleges that CSD operated its facility without all of its component parts in place and in

operation in violation of N.J.A.C. 7:27-8.3(e)2. CSD has denied these allegations and has filed a request for administrative hearing which is currently pending with NJDEP. Without admitting any violations, CSD has performed certain minor repairs and has applied to NJDEP for approval to improve the facility with control equipment and apparatus which will prevent equipment breakdown.

In the Matter of Central Steel Drum Co., etc., Log No. A900030 MRA, CDS Administrative Order and Notice of Civil Administrative Penalty Assessment

This Administrative Order alleges that CSD permitted illegal smoke emissions to escape from its facility in violation of N.J.A.C. 7:27-11.3(b). CSD has denied these allegations and has filed a request for administrative hearing which is currently pending with NJDEP. Without admitting any violations, CSD has performed certain minor repairs and has applied to NJDEP for approval to improve the facility with control equipment and apparatus which will prevent smoke emissions.

In the Matter of Central Steel Drum Co., etc., Log No. A900312 MRA, CDS Administrative Order and Notice of Civil Administrative Penalty Assessment

This Administrative Order alleges that CSD operated its facility without all of its component parts in place and in operation in violation of N.J.A.C. 7:27-8.3(e)2. CSD has denied these allegations and has filed a request for administrative hearing which is currently pending with NJDEP. Without admitting

any violations, CSD has performed certain minor repairs and has applied to NJDEP for approval to improve the facility with control equipment and apparatus which will prevent equipment breakdown.

In the Matter of Central Steel Drum Co., etc., Log No. A900313 MRA, CDS Administrative Order and Notice of Civil Administrative Penalty Assessment

This Administrative Order alleges that CSD permitted open burning at its site in violation of N.J.A.C. 7:27-2.3(a). CSD has denied these allegations and has filed a request for administrative hearing which is currently pending with NJDEP. Without admitting any violations, CSD has adopted a policy and has instructed its employees against open burning. CSD does not permit the open burning of any material at its facility.

In the Matter of Central Steel Drum Co., etc., Log No. A900314 SBA, CDS Administrative Order and Notice of Civil Administrative Penalty Assessment

This Administrative Order alleges that CSD emitted odors from its facility in violation of N.J.A.C. 7:27-11.3(d). CSD has denied these allegations and has filed a request for administrative hearing which is currently pending with NJDEP. Without admitting any violations, CSD has performed certain minor repairs and has applied to NJDEP for approval to improve the facility with control equipment and apparatus which will prevent odors.

In the Matter of Central Steel Drum Co., etc., Log No. A900518 MRA, CDS Administrative Order and Notice of Civil Administrative Penalty Assessment dated March 29, 1990

This Administrative Order alleges that CSD permitted excessive emissions of volatile organic substances from its facility in violation of N.J.A.C. 7:27-16.5. CSD has denied these allegations and has filed a request for administrative hearing which is currently pending with NJDEP. Without admitting any violations, CSD has performed certain minor repairs and has applied to NJDEP for approval to improve the facility with control equipment and apparatus which will prevent excess emissions of volatile organic substances.

In the Matter of Central Steel Drum Co., etc., Log No. A900519 MRA, CDS Administrative Order and Notice of Civil Administrative Penalty Assessment dated March 29, 1990

This Administrative Order alleges that CSD operated its facility without all of its component parts in place and in operation in violation of N.J.A.C. 7:27-8.3(e)2. CSD has denied these allegations and has filed a request for administrative hearing which is currently pending with NJDEP. Without admitting any violations, CSD has performed certain minor repairs and has applied to NJDEP for approval to improve the facility with control equipment and apparatus which will prevent equipment breakdown.

In the Matter of Central Steel Drum Co., etc., Log No. A900566 MRA, SBA, CDS Administrative Order and Notice of Civil Administrative Penalty Assessment dated March 29, 1990

This Administrative Order alleges that CSD permitted fugitive emissions to escape from its facility in violation of N.J.A.C. 7:27-8.3(e)2. CSD has denied these allegations and has filed a request for administrative hearing which is currently pending with NJDEP. Without admitting any violations, CSD has performed certain minor repairs and has applied to NJDEP for approval to improve the facility with control equipment and apparatus which will prevent equipment breakdown.

In the Matter of Central Steel Drum Co., etc., Log No. A900567 MRA, CDS Administrative Order and Notice of Civil Administrative Penalty Assessment dated March 29, 1990

This Administrative Order alleges that CSD emitted odors from its facility in violation of N.J.A.C. 7:27-11.3(d). CSD has denied these allegations and has filed a request for administrative hearing which is currently pending with NJDEP. Without admitting any violations, CSD has performed certain minor repairs and has applied to NJDEP for approval to improve the facility with control equipment and apparatus which will prevent odors.

In the Matter of Central Steel Drum Co., etc., Log No. A900568 MRA, CDS Administrative Order and Notice of Civil Administrative Penalty Assessment dated March 29, 1990

This Administrative Order alleges that CSD constructed, installed or altered certain incinerator equipment not approved by NJDEP in violation of N.J.A.C. 7:27-11.2(a). CSD has denied these allegations and has filed a request for administrative hearing which is currently pending with NJDEP. Without admitting any violations, CSD has shut down and does not operate the incinerator equipment and has applied to NJDEP for approval of the incinerator equipment.

In the Matter of Central Steel Drum Co., etc., Log No. A900569 MRA, CDS Administrative Order and Notice of Civil Administrative Penalty Assessment dated March 29, 1990

This Administrative Order alleges that CSD permitted open burning at its facility in violation of N.J.A.C. 7:27-2.3(a). CSD has denied these allegations and has filed a request for administrative hearing which is currently pending with NJDEP. Without admitting any violations, CSD has adopted a policy and has instructed its employees against the open burning of materials at its facility. CSD does not permit the open burning of any material at its facility.

In the Matter of Central Steel Drum Co., etc., Log No. A900570 MRA, CDS Administrative Order and Notice of Civil Administrative Penalty Assessment dated March 29, 1990

This Administrative Order alleges that CSD permitted visible emissions to escape from its facility contrary to the provisions of its Permit No. 81990 in violation of N.J.A.C. 7:27-8.3(e)1. CSD has denied these allegations and has filed a request for administrative hearing which is currently pending with NJDEP. Without admitting any violations, CSD has performed certain minor repairs and has applied to NJDEP for approval to improve the facility with control equipment and apparatus which will prevent visible emissions.

In the Matter of Central Steel Drum Co., etc., Log No. A900571 MRA, CDS Administrative Order and Notice of Civil Administrative Penalty Assessment dated March 29, 1990

This Administrative Order alleges that CSD constructed, installed or altered certain control apparatus or equipment without a permit in violation of N.J.A.C. 7:27-8.3(a) and (b). CSD has denied these allegations and has filed a request for administrative hearing which is currently pending with NJDEP. Without admitting any violations, CSD has applied to NJDEP for approval of the control apparatus and equipment.

In the Matter of Central Steel Drum Co., etc., Log No. A900934 SBA, CDS Administrative Order and Notice of Civil Administrative Penalty Assessment dated May 31, 1990

This Administrative Order alleges that CSD emitted odors from its facility in violation of N.J.A.C. 7:27-5.2(a). CSD intends to file a request for administrative hearing with NJDEP with respect to this Administrative Order. Without admitting any violations, CSD has performed certain minor repairs and has applied to NJDEP for approval to improve the facility with control equipment and apparatus which will prevent odors.

2.10 HAZARDOUS SUBSTANCE STORAGE UNITS

The facility discharges sanitary waste to an on-site septic tank system. There are no construction drawings or details available regarding the design of the septic system and any associated leach field. Based on inspection, the tank appears to have a capacity of 1500 to 2000 gallons. However, due to the presence of sludge, etc., a complete inspection of the tank could not be conducted. A drilling program is proposed in the area of the septic tank to provide additional information regarding this system. The septic system was installed prior to CSD's purchase of the site in 1951. The exact age of the system is unknown. There has been no analysis of the material present in the septic tank.

A liquid waste stream is generated from the drum-flip operation. The sludge is composed of residuals present within the used drums and incinerator ash. The sludge collection system described below was constructed at the time the facility was developed in 1951. A sample of the sludge was collected in June 1990; the laboratory analysis results have not been received to date.

CSD operates a drum storage pad which is used to store rejected drums until they can be returned to the customer. Rejected drums include drums with excess material present and/or drums which cannot be recycled. The storage pad is constructed of concrete. The pad dimensions are approximately 15 x 10 feet. There is no containment curbs, etc. present surrounding the pad. Therefore, spillage or leakage may drain off the pad into the surrounding soils. The age of the pad is unknown, however, it was constructed sometime after 1951.

The rejected drums stored on the concrete pad is highly variable. Actual storage depends on the types of drums handled on a daily basis. Drums may contain any one of the various compounds produced by CSD's client base. Typically, the drum pad is used to store paints, pesticides, and other organic materials.

CSD also stores raw materials in the plant. CSD purchases paint, adhesives, etc., in 55-gallon drums. The raw material drums are stored inside the main plant on a concrete floor. A typical material inventory includes paint, adhesives, etc.

CSD also operates an underground fuel oil and a gasoline tank for fueling trucks and other vehicles. The tanks are approximately 15 years old. The capacity of the gasoline tank is 3000 gallons, the capacity of the diesel tank is 4000 gallons. Neither tank has ever been leak tested.

The facility also generates incinerator ash which is considered a hazardous waste under RCRA regulations. Incinerator ash is stored in two (2) roll-off contains for off-site disposal. The containers are stored on a concrete pad in the incinerator area of the plant. The roll-off containers are supplied by the waste transporter. Roll-offs have been used to containerize the waste since 1985. Prior to 1985, the ash was stored directly on the concrete pad for loading into open top bulk trailers for off-site transport.

There is evidence of historic spillage of ash in the pad area. Also in the past, ash was utilized on-site as fill to level potholes, etc. According to plant personnel, only small quantities of non-hazardous ash were used to fill potholes. Inspection reveals evidence of staining throughout the incinerator drum/flip area (Figure 1).

2.11 HAZARDOUS SUBSTANCE DISCHARGE HISTORY

A summary of all known discharges which occurred at the facility is provided in Section 2.9, along with a description of any remediation conducted. Inspection of the site reveals evidence of staining in the drum storage area, the soils adjacent to the rejected drum pad, the drum unloading area, and throughout the drum/flip incinerator area. The quality of affected soils has not been determined. Sampling is proposed to delineate this area.

CSD removed approximately 40 yards of soil from the incinerator area in 1988. The soil was temporarily stockpiled for disposal characterization. The waste characterization results (Attachment 2) indicated PCB levels of approximately 330 parts per million (ppm). The soil was removed and properly disposed of as a hazardous waste. The source of this contamination is unknown, but is believed to be related to disposal operations at the site prior to CSD (see Section 2.13).

2.12 PREVIOUS SAMPLING DATA

CSD contracted Environics in 1983 to install a series of eight (8) monitoring wells on the site. The wells were installed by CSD in response to a request by NJDEP. The wells were sampled by Environics in 1983. The Environics' report is included as Attachment 2.

NUS conducted an investigation of the CSD site in February 1986. During their investigation, NUS collected a series of four (4) soil samples, three (3) groundwater samples and one (1) surface water sample. The results are provided along with the NUS inspection report as Attachment 2.

JMS collected two (2) background soil samples and a composite waste characterization sample from the CSD site in August 1988. The sampling was conducted to support the removal of stockpiled soils generated during the regrading of the incinerator area. The results are provided in Attachment 2. The results indicated elevated levels of PCBs were present in the stockpiled soils and the background soils on the site. The source of this contamination is believed to be related to operations conducted at the site prior to CSD's operation.

2.13 DATA REVIEW SUMMARY

Limited site information is available regarding the soils and groundwater beneath the CSD site. Previous investigations (1983) indicate that the facility is constructed on fill ranging in depth from 4 to 12 feet. A clay layer extends from the base of the fill to a depth of 17 to 20 feet. A reddish-brown, fine silty sand is encountered beneath the clay layer. Groundwater was reported in the fill layer at shallow depths (1 - 2 feet) and with the sand layer at a depth of 5 - 6 feet below the surface.

As indicated in the previous investigation, this results in a perched water condition within the more permeable fill water above the clay layer. Thus, the facility is prone to frequent flooding following periods of precipitation. Stormwater on the site is routed to a ditch system which extends along the southern and western sides of the property. Storm flow is directed via the ditch to the west, beneath Doremus Avenue (Figure 1).

There is very limited data available for this site. Available results are provided in the reports by Environics 1983, NUS 1986, and JMS 1988 included as Attachment 2. The groundwater results for 1986 indicate that the perched water in the fill soils has been affected by CSD operations. Elevated concentrations of various metals and volatile organics are present within the perched water in the fill layer.

NUS also collected two (2) additional groundwater samples from the groundwater wells screened within the lower sand aquifer (20 feet below the surface). The results obtained for the deeper aquifer indicated trace levels of volatile organics (<10 parts per billion). However, the analysis also showed a concentration level for methylene chloride of 100 parts per billion (ppb). The results appear to indicate that the intervening clay layer between the fill soils and the deeper sand aquifer has prevented significant vertical migration of the surface contaminants. However, the data available is insufficient to support any final conclusion.

Limited sampling of surface soils has been completed by NUS and JMS. The results confirm elevated levels of metals, volatiles, base neutrals and pesticides are present in the surface soils at

the site. The horizontal and vertical extent of the contamination present has not been determined. One surface water sample was collected by NUS in 1986, the results confirm elevated levels of metals, base neutrals and volatile organics are present in the surface water drainage system. The contamination present is probably due to stormwater runoff from the affected areas of the site. Additional surface water data is required to adequately assess the present condition within the stormwater drainage system.

2.14 ENVIRONMENTAL EVENTS

The CSD facility was partially destroyed in a fire which spread from the adjacent Texaco terminal. According to plant personnel, a gasoline storage tank at Texaco ruptured and caught fire in January 1983. Leaking gasoline rapidly spread the fire to the CSD site. During the incident, the production facility was heavily damaged and the CSD office was destroyed. There was no subsequent testing conducted to determine if residual gasoline and/or other contaminants had been spread by the fire.

CSD apparently utilized non-hazardous incinerator ash to fill potholes on the site prior to 1980. Based on accounts by plant personnel, the use of incinerator ash for this purpose was very limited. NJDEP inspected the facility on January 29, 1980, in response to a complaint and directed CSD to store incinerator ash in roll-offs and properly dispose of the material offsite.

CSD regraded the area of the site adjacent to the incinerator in 1988 to provide a level surface for drum storage. The excavated soils were stockpiled for disposal. JMS sampled the stockpiled soils and determined that elevated levels of PCBs were present in the soil. Since CSD does not recycle PCB drums or use PCBs in their operation, it appears that the PCBs present were related to operations conducted at the site prior to CSD's operation. There has been no further investigation of the PCB problem.

2.15 ENVIRONMENTAL PERMITS

The following list of Environmental Permits was prepared by CSD and has been included in its entirety.

CENTRAL STEEL DRUM CO.

ID #	001	002	003	004	005
AGENCY	NJDEP AIR QUALITY DIVISION	NJDEP AIR QUALITY DIVISION	NJDEP AIR QUALITY DIVISION	NJDEP AIR QUALITY DIVISION	NJDEP AIR QUALITY DIVISION
PERMIT #				LOG 1-86-2793	LOG 1-86-2795
CERT. #	081990	013006	067438		
DATE SUBMITTED	10/10/86 & 2/9/87	STACK HAS BEEN ELIMINATED	STACK HAS BEEN ELIMINATED	5/2/86 & 10/21/86	5/2/86 & 10/21/86
DATE OF APPROVED/DENIED	3/1/88 - 1/5/87	2/7/79 APPR.	8/11/82 APPR.		
REASON FOR DENIAL	NA			STACK HAS BEEN ELIMINATED	STACK HAS BEEN ELIMINATED
EXPIRATION DATE	8/17/90	2/7/89	10/18/91		
NOTES		REPLACED BY CERT. # 094966 SEE STACK REF. N.J. #015	REPLACED BY CERT. #094966	REPLACED BY CERT. #094967 SEE STACK REF. N.J. #016	REPLACED BY CERT. #094702 SEE STACK REF. N.J. #011

ID #	006	007	008	009	010
AGENCY	NJDEP AIR QUALITY DIVISION	NJDEP AIR QUALITY DIVISION	NJDEP AIR QUALITY DIVISION	NJDEP AIR QUALITY DIVISION	NJDEP AIR QUALITY DIVISION
PERMIT #	LOG 1-86-2794	LOG 1-86-3750	LOG 1-87-0501	LOG 1-87-0502	
CERT. #					069955
DATE SUBMITTED	5/2/86 & 10/21/86	10/21/86	2/12/87	2/12/87	
DATE OF APPROVED/DENIED					10/16/84 APPR.
REASON FOR DENIAL					
EXPIRATION DATE	STACK HAS BEEN ELIMINATED	STACK HAS BEEN ELIMINATED	STACK HAS BEEN ELIMINATED	STACK HAS BEEN ELIMINATED	10/16/94
NOTES	REPLACED BY CERT. #094968 SEE STACK REF. N.J. #017	REPLACED BY CERT. #094705 SEE STACK REF. N.J. #014	REPLACED BY CERT. #094704 SEE STACK REF. N.J. #013	REPLACED BY CERT. #094703 SEE STACK REF. N.J. #012	

3.0 PHASE I SCHEDULE

The Phase I Program schedule is provided in Figure 4. As shown, the schedule includes significant milestones, project reports, etc. The anticipated schedule for completion of the Phase I Program is 8.5 months unless well replacement is required. If well replacement is required, program completion will require 10 months. A supplmental report documenting well use data in the site area and the results of our review of purchased aerial photos will be provided in approximately 45 days following plan approval.

4.0 PROJECT PERSONNEL RESUMES

The project will be managed and directed by JMS. The resumes of supervisory and management personnel are provided. Field personnel will be assigned to the project on an as-needed basis from our staff. All individuals assigned to the field program will be required to have completed their medical monitoring physicals in accordance with JMS procedures, and must have completed at least 40 hours of health and safety training.

JOSEPH M. SORGE

PRESIDENT

EXPERIENCE

Joseph Sorge as President is ultimately responsible for the technical quality and direction of the firm. For the past seven years Mr. Sorge has worked in New Jersey on the solution of industrial hazardous waste problems ranging from Superfund to ECRA problems. As the former president of a national consulting firm, Mr. Sorge directed a team of over 40 professionals in various aspects of the hazardous waste field. Mr. Sorge has over 15 years of professional consulting experience covering an extremely broad range of the environmental field.

Mr. Sorge has concentrated his expertise on solving ECRA-related problems for the New Jersey based industry. Mr. Sorge stresses the development of total ECRA solutions through the development of a comprehensive program designed to clear the site in a practical manner. He has successfully applied this technique to numerous facilities ranging from large industrial complexes to small commercial properties. He has directed or managed the clearance of over 100 facilities in the past two (2) years.

Mr. Sorge directed a multi-million-dollar EPA support contract which included the development of technical training programs, permit applications guidance manuals, and the evaluation of advanced technical solutions to hazardous waste problems. He also managed an extensive investigation of landfill design and performance standards for the EPA which required the coordination of six (6) consulting organizations and two (2) EPA research units. The results of the investigation were used as the technical basis for modifying portions of the Federal RCRA regulations.

EXPERIENCE

Joseph Sorge's experience in project management for industrial clients includes: air monitoring projects, PSD air studies, facility siting and feasibility studies. Mr. Sorge's practical knowledge of environmental regulatory programs resulted in assistance to industrial clients in Michigan, Wisconsin, Illinois and Indiana on three (3) nuclear power facilities, chemical plants, waste water treatment facilities and other industrial complexes. The scope of projects handled included air pollution, waste disposal, monitoring system design and quality assurance.

EDUCATION

MS Atmospheric Physics (1974) - State University of New York, Albany

BS Physics/Math (1973) - University of Wisconsin

REGISTRATIONS

Certified Consulting Meterologist (#225)

PROFESSIONAL ORGANIZATIONS

Sigma Pi Sigma - Physics Honor Society
Air Pollution Control Association
National Council of Industrial Meterologists (#97)
American Meterological Society
Certified Energy Consultant (NJ)

JOHN J. GRELIS IV

VICE PRESIDENT

EXPERIENCE

John Grelis' experience encompasses a 10-year period and includes a variety of aspects in the fields of geology, hydrogeology, and engineering. Mr. Grelis' role as Vice President incorporates technical project management, personnel management and administrative responsibilities. The firm's Quality Assurance/Quality Control group, responsible for the technical consistency and completeness of field programs and reports, is directed by Mr. Grelis. For the last 7 years Mr. Grelis has been involved in the environmental consulting field in New Jersey. Prior to that time, he was a Project Engineer with a major coal producer in southern West Virginia.

Mr. Grelis' consulting experience has focused on the development and implementation of regulatory compliance programs in accordance with the requirements of ECRA, CERCLA, RCRA and NJPDES. In addition, he is engaged in the conduct of due-diligence site investigations and site cleanup programs. Mr. Grelis has also designed and completed more than 10 remediation programs under the New Jersey Bureau of Underground Storage Tanks (BUST) regulations.

Under contract to the U.S. EPA, in support of enforcement activities, John Grelis served as Project Manager on numerous hydrogeologic investigations at major hazardous waste sites throughout New Jersey and New York. He has also served as Project Manager for remedial investigation/feasibility studies (RI/FS) for a wide array of hazardous sites in New Jersey, New York, and Pennsylvania. He has directed all phases of monitoring well installations, hazardous waste repository borings, geophysical investigations, multi-media sampling, aquifer pump testing, and the conduct of rising/falling head tests. Mr. Grelis incorporates his extensive field experience into his current hands-on style of management.

As Project Engineer for a southern West Virginia coal producer, Mr. Grelis was responsible for the management of the core drilling program, design, development and permitting of new mines, calculations of available coal reserves, preparation of division economic feasibility reports, conduct of time studies relevant to the mining industry, and conduct of laboratory analyses of water and wastewater to monitor compliance with State and Federal permit requirements.

EDUCATION

BS - Environmental Science, Resource Management & Geology (1980)
Lehigh University, Bethlehem, Pennsylvania

PROFESSIONAL ORGANIZATIONS

Association of Groundwater Scientists and Engineers
National Water Well Association

ANDREW J. BER

PROJECT GEOLOGIST

EXPERIENCE

Andrew Ber is primarily responsible for conducting hydrologic and geologic investigations at commercial and industrial facilities. This includes implementing air, water and soil sampling procedures, determining the extent of soil and groundwater contamination, and developing remedial action alternatives. Mr. Ber also works in conjunction with these facilities to assist them in complying with Federal RCRA and CERCLA regulations, as well as the State of New Jersey Environmental Cleanup Responsibility Act.

Prior to joining the J M Sorge, Inc. environmental group, Mr. Ber participated in the geological interpretation of the aerial photographs for the Detailed Map of the State of New Jersey with the Bureau of Geology and Topography New Jersey Geological Survey, Department of Environmental Protection, Division of Water Resources.

EDUCATION

MS Geology (1960) - Warsaw University, Poland

Postgraduate fellowship - Geology (1971)
Geologinen Tutkimuslaitos, Espoo, Finland

Ph. D. Geology (1972)
Institute of Geology, Poland

REGISTRATIONS

Licensed Professional Geologist, Central Board of Geology, Poland

MEMBERSHIPS

Corresponding Member of the Commission on Formation and Properties of Glacial Deposits, INQUA

Specialist of the Association of Engineering and Technician of Mining, Poland

ISAAC ASEMOTA

Staff Geologist

EXPERIENCE:

Isaac Asemota is responsible for conducting environmental assessments of industrial and commercial facilities undergoing New Jersey Environmental Cleanup Responsibility Act (ECRA) clearance. This includes site evaluations, the development and implementation of sampling plans, soil, surface water and groundwater sampling, preparation of ECRA applications and the planning and coordination of the related cleanup programs.

Prior to joining J M Sorge, Inc., Mr. Asemota served as a Research Assistant and Co-Investigator in the Acid Rain Research Project funded by the US Department of the Interior, through, Rutgers University. This study provided information regarding the sensitivity of New Jersey surface and groundwaters to acidification and the benefits of the buffering effect of the naturally-occuring carbonates and glacial materials. Mr. Asemota served as a teaching assistant during his graduate work at Rutgers University, geology department, Newark. He taught Geology courses and coordinated several field trips.

As an undergraduate student, Mr. Asemota participated in a two-year co-op program in which he served as an assistant to the geologist. His responsibilities included: sampling, identifying, mapping and analyzing test results of the Indiana shales; input of required pedologic, geologic and geographic data into the Soil Test Data Bank; and writing of detailed geologic reports on project areas.

EDUCATION:

MS Geology - Rutgers University (1987)
Newark, New Jersey

BS Geology - Indiana State University (1980)
Terre Haute, Indiana

PROFESSIONAL ORGANIZATION

Sigma Gamma Epsilon (National Honorary)

Geological Society of America

Association of Groundwater Scientists and Engineers

PUBLICATIONS:

"Sulfide Mineral Distribution of Northern New Jersey Rock Formation and their Surface Water Induced Acid Generating Capacity", Published Masters Thesis, Rutgers University, Newark, 1987

"Structural and Stratigraphic Study of Blackhawk Oilfield", Vigo County, Indiana, Geoletters, I.S.U. Geology Department Newsletter, December 1980, 30p.

PETER J. KAMINSKI

STAFF SCIENTIST

EXPERIENCE

Peter Kaminski is responsible for conducting field investigations of industrial waste sites including those regulated by the Environmental Clean-up Responsibility Act (ECRA). Under the direction of the Project Manager, he conducts site inspections, groundwater and soil and surface water sampling. Mr. Kaminski's responsibilities include the preparation of Sampling Plans which comply with the Bureau of Industrial Site Evaluation's latest policies and guidelines. He works in conjunction with J M Sorge, Inc. geologists and hydrogeologists to develop and install groundwater monitoring systems.

Additional responsibilities include conducting waste inventories, facility histories, and ECRA General Information Submissions and Site Evaluation Submissions.

EDUCATION

BS Biology (1988) - St. Joseph's University, Philadelphia, PA

CONTINUING EDUCATION

40 Hour Health and Safety Course for Hazardous Waste Operations (Oct. 1989) - Madison, NJ

ANDREW L. CONFORTINI

STAFF FIELD INVESTIGATOR

EXPERIENCE

Andrew Confortini is responsible for conducting field investigations of industrial waste sites including those regulated by the Environmental Clean-Up Responsibility Act (ECRA). Under the direction of the Project Manager, he conducts site inspections, groundwater and soil and surface water sampling. Mr. Confortini's responsibilities include preparing Sampling Plans which comply with the Bureau of Industrial Site Evaluation's latest policies and guidelines. He works closely with J M Sorge, Inc. geologists and hydrogeologists to develop and install groundwater monitoring systems.

Responsibilities also include conducting waste inventories, facility history, and ECRA General Information Submissions and Site Evaluation Submissions.

EDUCATION

B.S. Environmental Science (1986) - Stockton State College

KURT M. ROCK

STAFF SCIENTIST

EXPERIENCE

Kurt Rock is responsible for conducting field investigations of commercial and industrial waste sites including those regulated by the Environmental Clean-up Responsibility Act (ECRA). He conducts site inspections, groundwater and soil and surface water sampling under the direction of a J M Sorge, Inc. Project Manager. He works closely with J M Sorge, Inc. geologists and hydrogeologists to develop and install groundwater monitoring systems.

Responsibilities also include conducting waste inventories, facility histories, and ECRA General Information Submissions and Site Evaluation Submissions.

EDUCATION

BA Geography (1987) - East Stroudsburg University, East Stroudsburg, PA

CONTINUING EDUCATION

40 Hour Health and Safety Course for Hazardous Waste Operations (June 1990) - Madison, NJ

5.0 SOIL INVESTIGATION PLAN

5.1 BACKGROUND INFORMATION

5.1.1 Environmental Setting

A series of eight (8) well borings were installed on the site in 1984, at the locations indicated in Figure 1. The boring logs indicate the presence of a fill layer which varies in depth from 4 feet on the western portion of the site, to 12 feet on the eastern portion. The fill appears to be oil-stained in several areas and consists of soil, ash, cobbles and debris. The general quality of the fill soil present has not been investigated; however, similar fill is believed to extend well beyond the CSD site boundaries. The fill is underlain by a layer of stiff native clay soils.

The native clay soils contained roots and other decayed vegetation indicating that the clay surface represents the original meadow-mat surface in this area of Newark. Below the clay, the borings encountered a silty sand layer which extends to an undetermined depth. The boring logs indicate that water is present within the fill layer and within the sand layer. However, there was no water encountered in the clay zone.

The surrounding area is heavily industrialized. The site was investigated by the NUS Corp., under the Region II FIT contract, on February 6, 1986. According to the NUS report, there was no potential impact to the population associated with groundwater, surface water, or air emissions from the site, and there was no potential for direct population contact. NUS also concluded that there was no potential risk due to fire or explosion; no drinking water affects, and no population risk of exposure or injury. NUS also concluded that there was a low risk of damage to flora, fauna, and the food chain associated with surface runoff from the site.

NUS indicated that the labor force present (110 people) could be exposed due to spills and contaminated soil. NUS did confirm that leakage from on-site drums had resulted in various stains present on the site soils.

5.1.2 CSD Operations

CSD uses the property to store and re-manufacture 55-gallon steel drums. The principal CSD operations which may have affected the site are as follows:

- Drum Inventory - Drums are delivered to the CSD site by various clients, or by CSD personnel. Excess drums are stored in open stacks in the yard area of the site. Due to the volume of drums stored, virtually the entire northern half of the site is, or has been, used for this purpose. Due to the large number of drums stored, some surface spillage has occurred resulting in the staining noted during previous regulatory inspections.

- Drum Handling - Arriving drums are unloaded onto the conveyor (Figure 1). This area may be affected due to drum handling mishaps, etc. Similarly, the conveyor transfer area may also have been affected by drum handling operations.

- Incinerator/Drum Flip Area - The drums are conveyed to the head of the incinerator system. At that point, drums are overturned and any residual material enters a pit collection area. Incinerator ash is also removed from the same area and loaded into dumpsters for off-site disposal. The potential exists for leakage from the collection pit, as well as spillage of incinerator ash, throughout this area (Figures 1 and 2). The collection pit integrity has not been verified, and therefore may represent a potential subsurface discharge point.

- Rejected Drum Storage Pad - Drums which enter the site are checked to determine if they contain excess residuals, or, are otherwise unacceptable for recycling. Rejected drums are stored on a concrete pad awaiting pickup by the generator. Runoff from the drum pad may have affected surface soils in this area (Figure 1).

- Septic System - The facility discharges sanitary waste, roof runoff, and compressor condensate to an on-site septic tank (Figure 1). There are no as-built construction drawings available regarding this septic system. The tank is periodically pumped out by a septic cleaning service on an as-needed basis. The septic may represent a potential subsurface discharge point.

In summary, there are several potential sources of surface contamination present on the CSD site. The facility is unpaved, therefore, surface contamination may have migrated vertically, as well as horizontally, across the site. Surface runoff is directed toward a ditch which runs along the eastern and southern sides of the property. Therefore, surface contamination may have affected the water and sediment within this ditch system.

There are only two (2) potential subsurface discharge points currently identified on the site. Available information regarding these systems (drum flip collection pit and septic system) is not sufficient to determine if these units were constructed in the native clay soils or site fill.

5.2 SOILS INVESTIGATION

5.2.1 Soil Boring Program

There are six (6) areas of potential concern associated with CSD's site operations. The areas include the following: drum inventory, rejected drum storage pad, conveyor transfer area, drum unloading area, plant septic tank, the incinerator/drum flip area, and underground fuel storage area. The first four (4) areas are surficial in nature, therefore, potential impacts should decrease with depth. The three (3) latter areas represent the only potential subsurface contaminant sources on the site.

The soil sampling program will include the drilling of a series of soil borings within, and around, each area of concern. All borings will be installed by a licensed driller after valid State permits are obtained. Borings will be sealed in accordance with State requirements by a licensed driller following sampling.

The anticipated boring locations are provided on Figure 3 for review. As indicated, a series of six (6) background borings will be installed in areas which are not affected by CSD's operations. In general, the drilling procedure will be as follows:

- Each boring will be continuously sampled using standard split-spoon sampling techniques (Section 9.0);
- The sampler will be advanced using standard penetration methods, ahead of, and through a hollow stem auger;
- The boring will be advanced to a total depth of 16 feet, which represents a minimum depth within the clay layer of 3-feet;

- Each split-spoon sample will be logged and scanned using an Hnu photoionization detector; and,

- JMS will complete a boring log for each boring installed; soils will be classified according to the Unified System.

Soil samples will be selected for analysis based on the area of concern, the physical appearance of the samples, Hnu readings, and the objective of characterizing the type of contamination and its approximate extent within each area of concern. In general, a minimum of two (2) shallow samples (2 1 - 3 feet) will be collected from within each area of concern to characterize the contamination present. A minimum of one (1) deep sample, collected from the depth corresponding to the top of the clay layer, will also be selected for analysis. The remaining samples will be selected based on elevated Hnu readings or unusual physical characteristics.

All unused soil samples and drill cuttings will be drummed for analysis of waste characteristics. Separate drums will be used to segregate the cuttings and rejected samples obtained from each area of concern. It is anticipated that a minimum of one (1) sample per boring will be selected for analysis.

5.2.2 Laboratory Analysis

The samples selected for laboratory analysis will be submitted to Accutest Laboratories of Dayton, New Jersey. All primary samples collected will be analyzed for the complete list of USEPA priority pollutants+40 compounds (PP+40); CLP-Tier I QA/QC will be provided. Secondary samples selected to better define the nature and extent of the contamination present will be analyzed for priority pollutants (Tier II) and/or petroleum hydrocarbons to supplement the Tier I results. All reported data will be accompanied by complete Tier I or II laboratory documentation, as appropriate. A summary of the estimated number of soil samples which will be selected for analysis is provided on Table 1. Field and trip blanks will be analyzed at a minimum frequency of one per day or per 20 samples.

5.2.2 Sampling Procedures and Chain-of-Custody Control

Standard split-spoon sampling procedures will be utilized to collect all soil samples. Detailed sampling procedures are provided in Attachment 3. Soil samples will be placed in laboratory cleaned sampling jars. Chain-of-Custody Control forms will be submitted for each sample and associated sampling jar. The chain-of-custody will document receipt of laboratory sample bottles and each transfer of the sample. To the extent possible,

sample transfers will be limited to field pickup by laboratory personnel, or temporary transfer to JMS offices in Somerville for daily pickup by the selected laboratory. Sample chain-of-custody control forms are provided in Attachment 3. Selected samples submitted for laboratory analysis will be analyzed by the laboratory for particle size. The results will be compared to the boring logs to confirm field identification. Each split-spoon sample will be field screened using an Hnu photoionzation detector.

All sampling equipment will be field cleaned between sample locations. Standard field cleaning procedures are provided in Attachment 3. All borings will be installed by a licensed driller following receipt of required NJDEP boring permits. Borings will be sealed by a licensed driller, using bentonite pellets or slurry, immediately following sampling. A ~~complete soil~~ boring log (sample provided in Attachment 3) will be completed for each boring. Boring logs will include soil classification according to the Unified System. All drill cuttings and discarded samples will be drummed for proper off-site disposal.

6.0 GROUNDWATER INVESTIGATION

6.1 WELL INSPECTION PROCEDURE

There are currently eight (8) groundwater monitoring wells located on the CSD site (Figure 1). The wells were installed in 1983 by Environics (Attachment 2) under contract to CSD. The wells were required by NJDEP-DWR in 1983. Three (3) wells were sampled by NUS on February 5, 1986. A copy of the Environics Well Installation Report is provided as Attachment 2.

Each of the wells will be inspected to determine if they are presently usable or if damage has occurred. The wells will be sounded to determine if the open well depths correspond nominally to the installed depths as reported in the Environics report. If the well depths correspond to the approximate initial installation depth, and there is no apparent surface damage to the well, the current wells will be used for sampling.

Any wells determined to be unusable will be properly abandoned in accordance with NJDEP's well abandonment guidelines. A supplemental well installation and location work plan will be submitted to the Department prior to the replacement of any site wells. If needed, the supplemental plan will include a detailed specification of the well installation procedure as well as appropriate well specifications. All wells proposed will conform to NJDEP's specifications for the installation of monitoring wells in unconsolidated formations (Attachment E to the NJDEP directive).

6.2 GROUNDWATER SAMPLING

Following well replacement (if needed), a complete round of groundwater samples will be collected, including all four (4) shallow wells and all four (4) deep wells. Sampling will be conducted using stainless steel, laboratory-cleaned bailers. A separate bailer will be dedicated for use in sampling each well. Specific well sampling procedures are provided in Attachment 3.

Static water levels will be measured using an electronic water level detector prior to purging. Following water level measurement, three (3) volumes of well water will be removed by bailing using the dedicated bailer. The bailed water will be stored in drums for subsequent off-site disposal, if required.

Following purging, the water level will be allowed to return to the approximate pre-purge level prior to sampling. Sampling will be conducted using field-cleaned dedicated bailers. Field cleaning procedures are specified in Attachment 3. The water samples will be placed in laboratory certified clean sampling jars and placed in a field cooler at 4°C (wet ice). Chain-of-custody control forms will be completed and each sample jar

will be labeled for identification. The sampling team leader will document sampling time, date and other pertinent information in the field notebook and on the sample labels.

6.3 QUALITY ASSURANCE/QUALITY CONTROL (QA/QC)

All samples will be accompanied by properly completed chain-of-custody documents at all times. A sample chain-of-custody control form is provided in Attachment I. Samples will be stored in field coolers for transport directly to the laboratory (if possible) or to JMS offices in Somerville, New Jersey. Chain-of-custody control will include documentation of each transfer of control of the sample from the time of initial sampling through laboratory analysis.

All samples will be analyzed by Accutest Laboratories of Dayton, New Jersey. Accutest is a NJ-certified laboratory (#12129) capable of conducting the required analysis. Each groundwater sample collected will be analyzed for the complete list of USEPA PP+40 compounds; CLP-Tier I QA/QC documentation will be provided as outlined in Attachment 3.

The proposed sampling does not require any regulatory permits. However, if replacement wells are required, well permits will be obtained from NJDEP prior to installation. The hydrogeologic investigation will be conducted under the supervision of the senior hydrogeologist designated in Section 4.0 of this report. All sampling equipment and water level recorder equipment will be decontaminated in accordance with procedures specified in Attachment 3. Water levels will be measured from the top of the well casing, since this elevation was included in the well survey completed in 1983. In the event that replacement wells are required, a survey mark will be permanently etched into the top of each well casing.

6.4 GROUNDWATER FLOW MONITORING

As indicated previously, groundwater flow may be tidally influenced in the site area due to CSD's proximity to Newark Bay. In order to determine the actual tidal influence beneath the site, continuous water level monitoring will be required. Four (4) pressure activated transducers will be mounted in the shallow wells for a period of 2-weeks. The recording system will be set to record water levels at 1-minute intervals over the period. This operation will be repeated a second time for the four (4) deep wells in order to determine if there is any significant difference in flow within the deeper sand aquifer.

Following completion of the deep well water level monitoring cycle, two (2) of the recorders will be removed from the deep wells and placed into the two (2) shallow wells adjacent to the remaining deep well recorders. Again, water levels will be recorded at 1-minute intervals over a 2-week period. The results will be used along the tidal influence curve within each water bearing zone to correlate these curves in time. The tidal curves will also be correlated to tidal periods within Newark Bay.

A series of groundwater surface contour maps will be prepared to reflect flow conditions at critical points in the tidal response curve. The critical points selected will include high and low tidal conditions, but more importantly at periods within minimal tidal influence. The periods of minimal influence will provide a clear indication of the net flow direction beneath the site.

In order to verify recorder linearity, water levels will be measured manually at various times during the water level measurement program. In addition, water levels will be manually measured prior to removal of the transducers from the respective wells. Manual measurements will be used to supplement and verify the recorded water levels.

7.0 SURFACE WATER AND SEDIMENT INVESTIGATION

7.1 BACKGROUND INFORMATION

There is virtually no previous data regarding the quality of the surface water and sediment within the site drainage system. NUS collected one (1) water sample during their investigation of the site in February 1986, which indicated elevated levels of volatiles and base neutrals in the stagnant water within the facility drainage ditch.

Based on topographic maps of the area, surface runoff appears to be directed toward the west from the site into a drainage channel system which eventually discharges to Newark Bay to the east. However, NUS reported that surface flow is directed eastward toward Newark Bay. A complete review of the surface water discharge system will be required to determine the course of the discharge channel.

The onsite drainage system consists of a ditch located along the eastern and southern sides of the property (Figure 3). The ditch on the eastern portion of the site is virtually silted-in and presently appears as a swale with a very gentle slope toward the south. Based on a review of the data available, there does not appear to have been any testing of the sediment in the ditch system to date.

7.2 SAMPLING PROGRAM

A series of surface water and sediment samples will be collected along the course of the on-site ditch system. The objective will be to determine water and sediment quality upgradient and downgradient of the facility in general, and also with respect to the major operational areas of the site.

A series of five (5) sampling locations (Figure 3) have been selected along the ditch area. If possible, both surface water and sediment will be sampled at each location, however, there is generally no water present in the ditch along the eastern side of the site. Therefore, water sampling along the eastern ditch may not be feasible.

Surface water sampling will be completed using a stainless steel pond sampler in accordance with the procedures specified in Attachment 3. During sampling, precaution will be taken to prevent unnecessary disturbance of the underlying sediments. Water sampling will proceed from the furthest downgradient pocket to prevent any disturbance of the sampling location prior to sediment sampling.

Sediment samples will be collected using stainless steel hand augers. One auger will be dedicated to each sampling location to minimize potential cross contamination. Sediment samples will be collected from a depth of 1.0 to 1.5 feet below the uppermost sediment surface. However, if non-sediment soils are encountered, the sample depth will be modified to correspond to the deepest 6-inch layer of sediment encountered. Sediment sampling will be conducted in accordance with the procedures specified in Attachment 3.

7.3 QUALITY ASSURANCE/QUALITY CONTROL

All samples will be accompanied by properly completed chain-of-custody documents at all times. A sample chain-of-custody control form is provided in Attachment I. Samples will be stored in field coolers for transport directly to the laboratory (if possible) or to JMS offices in Somerville, New Jersey. Chain-of-custody control will include documentation of each transfer of control of the sample from the time of sample collection through laboratory analysis.

All samples will be analyzed by Accutest Laboratories of Dayton, New Jersey. Accutest is a NJ-certified laboratory (#12129) capable of conducting the required analysis. Each sample collected will be analyzed for the complete list of USEPA PP+40 compounds; CLP-Tier I QA/QC documentation will be provided as outlined in Attachment 3.

8.0 AIR QUALITY INVESTIGATION

As previously indicated, air quality monitoring during the RI - Phase I program will be limited to recording ambient organic vapor levels using an Hnu photoionization detector and a GCA Mini-Ram Model PDM-3. Hnu readings will be recorded at each soil boring location, groundwater well, and surface water sampling point (Figure 3). The objective of the Phase I Plan is to establish principal areas of concern on the site. Based on the results of the NUS investigation of the site, there is no population or environmental risk associated with air quality emissions at the site. Therefore, a comprehensive air quality monitoring program is not warranted at this site.

The Hnu will be calibrated daily in accordance with procedures specified by the manufacturer (Attachment 3). Organic vapor levels will be recorded in the field notebook during all field activities. A level will be recorded prior to boring installation, for each split-spoon sample, and at the completion of the boring. Organic levels will be recorded within each groundwater monitoring well upon opening the well, following bailing, and after sampling. The results will be tabulated and reported in the Phase I investigation report.

9.0 HEALTH AND SAFETY PLAN

9.1 BACKGROUND

The CSD facility is located on Doremus Avenue in a heavily industrialized section of Newark, New Jersey. The facility is engaged in the business of drum recycling. Used drums are incinerated, cleaned and repainted for reuse. Residues present within the drums are also incinerated.

The objective of the RI - Phase I program is to characterize the nature and approximate extent of on-site contamination associated with past and present site operations. The program will include the drilling of approximately 33 soil borings to a depth of approximately 15 feet. Continuous split-spoon sampling will be conducted in each boring. Soil samples will be selected from the split-spoons for laboratory analysis based on the specifications set forth in the RI - Phase I Plan. Boring logs will be prepared for each soil boring installed. Soil borings will be installed and sealed by a licensed driller in accordance with applicable guidelines.

The program also includes the sampling of eight (8) on-site groundwater monitoring wells following a thorough evaluation of the structural integrity of each well. Sampling will require pre-sample purging, etc., as specified in the JMS groundwater sampling procedure. Following sampling, continuous water level recorders will be installed in the site wells to record any tidal effects present.

Surface water and sediment sampling (five sample points) will also be completed during this phase of the project. Surface water and sediment sampling will take place outside the site fenceline. Sampling will be conducted using pond samplers and hand augers.

9.2 POTENTIAL EXPOSURE RISKS

The available test results are indicated on the following table. The results confirm that soils in the incinerator area and other site areas, will be considered hazardous. Therefore, site personnel should avoid any direct contact with the soils, pooled liquids or sludge. Vapor monitoring will be required on a continuous basis in all work areas.

The available data indicate that health risk is primarily associated with direct contact with affected soils, ash or sludge. This material exhibits significantly elevated levels of heavy metals, volatile organic compounds, and pesticides. Potential exposure pathways also include dust inhalation and vapor inhalation, in addition to direct contact.

The unconsolidated and saturated nature of the site soils indicates that dust generation during drilling will not be significant. However, the uppermost 1 - 2 feet of soil is generally unsaturated. If weather conditions dictate, the soil surface in the area of boring installation should be moistened prior to drilling.

Continuous ambient air monitoring, using an Hnu PT-101 photoionization detector and a GCA Mini-Ram Model PDM-3 particulates monitor, will be required; monitoring of drilling operations will also be required.

9.3 SCOPE OF WORK

JMS personnel will be onsite to supervise drilling operations and conduct all sampling required. Specifically, JMS will complete the following items:

- Insure that utility markouts have been completed prior to the start of any field work;
- Supervise drilling operations, prepare boring logs, verify drilling, sealing, and abandonment permits as appropriate; and,
- Conduct all soil, groundwater, surface water, sediment and air quality sampling as required by the approved work plan.

CSD personnel will be required to remove stored drums or other material to provide access to all proposed sampling areas.

9.4 PERSONNEL PROTECTIVE EQUIPMENT

All site workers involved with drilling and groundwater investigations will be required to wear Level C protection equipment and standard safety gear. The work zone will be continuously monitored using an Hnu PT-101 photoionization detector, GCA Mini-Ram, and explosimeter. If a sustained reading of 50 ppm above background is detected on the Hnu, site work will be halted immediately. Work will not resume until the safety coordinator has determined it is safe to proceed, or the level of personal protection has been upgraded to Level B.

Dermal protection, consisting of gloves and disposal boots, will be required at all times.

EQUIPMENT REQUIRED ON SITE

- Full-face (Level C) respirator (MSA)
- Hnu PT-101 photoionization detector
- Explosimeter (MSA)
- GCA Mini-Ram PDM-3 Particulate Monitor
- Tyvek coveralls
- Disposal boots (overboots)
- Steel toe safety boots
- Disposable gloves (Nitrile or Neoprene overgloves, latex undergloves)
- Hardhats
- Safety glasses (drilling operations)
- Emergency spill containment supplies (3M packs, pigs, shovels, speedy-dri)

9.5 DECONTAMINATION PROCEDURES

Personnel and equipment leaving the Exclusion Zone (work area) shall be thoroughly decontaminated. The Standard Level C decontamination protocol shall be used with the following decontamination stations:

1. Equipment drop
2. Outer garment wash
3. Boot/Glove wash
4. Disposable clothing drop
5. Respirator removal
6. Site exit

Clothing known to be contaminated should be contained and left onsite for proper disposal.

The following decontamination equipment is required:

tubs, buckets, brushes, liquinox, sprayer and trash bags.

Sampling equipment must be decontaminated in accordance with the procedures specified in Section 10.0.

9.6 GENERAL WORK REQUIREMENTS

All personnel must comply with the following requirements:

1. Have satisfied the medical surveillance requirements of the Superfund Amendment Reauthorization Act (SARA) of 1986 as listed in 29 CFR Part 1910.120;

2. Have completed an appropriate safety training course (OSHA 1910.120);

3. Have 3 days of prior fieldwork experience under a qualified supervisor;

4. Have reviewed the HASP and are fully aware of the requirements in the Plan;

5. Dressed out in accordance with the task-specific plans;

6. No eating, drinking, smoking, or gum/tobacco chewing is allowed in the work zone;

7. Individuals will shower, as soon as possible, after leaving the job site at the end of the day; and,

8. Contact with contaminated surfaces or surfaces suspected of being contaminated should be avoided while the worker is unprotected. In the event that protective clothing is ripped or torn, work is to stop and the protective clothing removed and replaced as soon as possible. In the event of direct skin contact, the affected area is to be washed immediately with soap and water.

All personnel entering areas requiring Level B or C protection shall:

1. Be respirator fit-tested (within previous 6 months). Documentation must be provided to show respirator size, model and manufacturer;

2. Be cleanly shaven;

3. Have been trained in the level of respiratory protection being used at the site; and,

4. Work in a minimum of a two-person team with a line of sight to a third person (Level C).

9.7 SITE ENTRY AND EXIT PROCEDURES

STARTUP

1. Team briefing to review intended daily operations and safety procedure update;

2. Daily check of all monitoring and safety equipment; and,

3. Personnel dress out and team proceeds to the work area.

SHUTDOWN

1. All personnel exit from the work zone and decontaminate; and,

2. Insure that the work area and all equipment are secured.

9.8 VISITOR PROTOCOL

All visitors who proceed downrange in the Exclusion Zone must comply with the following requirements.

1. Visitors must have reviewed the site-specific HASP and must agree to comply with the guidelines set forth in this plan;

2. Visitors will be limited to Level D work areas; and,

3. Visitors must be escorted by onsite personnel.

9.9 CONTINGENCY PLAN

In the event of an unanticipated emergency, such as explosimeter warning, fire, explosion, etc., the following procedures will be followed:

1) All on-site workers will be notified of the emergency by the team leader sounding an alarm signal using a portable emergency horn;

2) All personnel will proceed to the escape location indicated by the team leader, or to the decontamination area if no alternative escape route is indicated. In the event of poor visibility, the leader will signal which escape route to utilize using short blasts on the emergency horn. One long blast indicates escape route 1 - the decontamination area; two indicates the alternate.

3) The team leader will ascertain if all personnel have left the work area by taking a head count at the designated escape area. The team leader will designate an individual to notify emergency medical assistance, fire department, and NJDEP. The team leader will then determine if it is safe to attempt rescue of any missing personnel. No one, including the team leader, will attempt a rescue if it is unsafe to do so.

4) Upon arrival of municipal emergency personnel, the team leader will be responsible for informing emergency personnel of the situation and events leading to the emergency.

In the event of a spill of contaminated material, etc., all field activity should cease and the team leader be notified of the incident. The leader will follow emergency procedures 1 and 2 above. Following assembly of the entire crew, the leader will proceed as follows:

1) Determine if any personnel have been exposed to a significant health risk, notify medical emergency personnel as appropriate;

2) Designate a spill containment leader to contain the spill using emergency containment supplies stored in the decontamination area; and,

3) The team leader is responsible for notifying JMS management personnel, and reporting the incident to NJDEP's spill control hotline, which can be reached at (609) 292-7172.

10.0 EQUIPMENT DECONTAMINATION

The following procedures will be used during the investigation of the CSD facility to insure that there is no significant cross-contamination between sampling events. All water samples (ground and surface) will be collected using laboratory cleaned dedicated samplers, therefore decontamination procedures for this equipment has not been included.

10.1 DRILL RIG CLEANING PROCEDURES

10.1.1 Drill Rig Preparation

Prior to use on the CSD site, the drill rig must be thoroughly cleaned. The field manager will be responsible for inspecting the drill rig upon arrival at CSD. The field manager will inspect and document the condition of all drilling equipment and down hole tools for use at the site. All tools must arrive in a clean condition, otherwise the rig will be rejected.

10.1.2 Drilling Equipment Cleanup Procedures Between Sampling Locations

Following removal and initial cleaning of the auger flights, the rear portion of the rig will be cleaned of all loose material and soil. After preliminary cleaning has been completed, drilling equipment, such as augers and tools which came in contact with the soil, will be cleaned using the following procedure:

a) Removal of all loose dirt or debris;

b) Thorough washing with detergent and tap water utilizing a scrub brush;

c) Rinse with tap water;

d) Steam clean; and,

e) Air dry.

This cleanup will be performed after each sampling location has been completed and prior to movement of any equipment to the next location.

If, in the opinion of the Site Manager, the drill rig itself needs cleaning other than specific equipment listed above, it will be taken to an area where it can be cleaned according to the procedures outlined above, and prior to moving to the next location.

10.1.3 Split Barrel and Sampling Tool Cleaning Procedures

Prior to soil sampling, all split barrel and soil sampling tools will be cleaned in the following manner:

1) Detergent and tap water wash;

2) Tap water rinse;

3) Alconox and distilled water rinse;

4) Acetone rinse;

5) Air dry;

6) Distilled deionized water rinse; and,

7) Total air dry.

After each boring is completed and before moving to another location, the auger must be cleaned using the procedures specified in Section 10.2.

10.2 SMALL EQUIPMENT DECONTAMINATION

10.2.1 Prevention

Prevention - the first step in decontamination is prevention of contamination through implementation of the following standard operating procedures:

- Use of remote sampling, handling and container-opening techniques;
- Protection of monitoring or sampling equipment (e.g. bags, coverings, etc.);
- Minimization of contact with hazardous substances;
- Use of disposable outer garments;
- Use of disposable equipment wherever possible; and,
- Enclosure of contamination sources.

All personnel, clothing, equipment and samples leaving the work area will undergo decontamination. Decontamination may include physical separation from waste, chemical detoxification, or both. There is no decontamination required for Level D; however, the level and type of decontamination for Level D will be determined by the field manager who will base this decision on site-specific factors such as the waste types present and visual examination of individuals for contamination exposure potential. If decontamination is deemed necessary, workers leaving Level D areas will exit the site at the "Decon-D" exit point and follow the procedures for Level C outlined below, except where indicated otherwise by an asterisk (*).

Personnel - wash, rinse boots and gloves in trisodiumn phosphate (TSP) or similar detergent (4 cups per 10 gallons of water), rinse again with special attention to the soles of the boots. Remove gloves, remove coveralls, then surgical gloves *. Wash hands and face. Shower and wash hair as soon as possible after leaving the site.

Equipment - equipment such as the Hnu will be placed on the ground with plastic beneath it. After daily use, equipment will be wiped with water, wiped with acetone, and again wiped with water. (Viewing windows will not be wiped). Small equipment not easily decontaminated will be bagged.

(* - Does not pertain to decontamination procedures for Level D).

Drilling and other heavy equipment will be washed with detergent, rinsed with water, and steam cleaned. All washwater used for decontaminating equipment and clothing will be collected and contained for appropriate disposal *. Sampling equipment will be detergent-washed, water-rinsed, acetone-rinsed, and distilled water-rinsed from a sprayer.

All cleaned equipment will be placed on clean plastic. Decontamination wash and rinse waters will be changed as necessary.

Necessary equipment includes the following:

- Large buckets (3)
- Small buckets for hand and face washing
- Paper towels
- TSP or substitute detergent
- Plastic ground sheets
- Long-handled brush for scrubbing boots
- Brushes for equipment wash
- Plastic water sprayer
- 2 trash cans
- Plastic trash bags
- Decontamination basins or wash tubs (4)
- Mobile high-pressure hot water washer
- Auger wash bin

(* - Does not pertain to decontamination procedures for Level D).

STATION LAYOUT - The decontamination station layout is depicted on Figure 5, and is outlined below:

Decontamination Station Process

STATION A - A plastic ground sheet on which field equipment is placed.

STATION B*- For decontamination of washable outer garments:
A washtub filled with a decontamination solution.
A second washtub filled with rinse solution.
A third washtub filled with decontamination solution.
A fourth washtub filled with rinse solution. Each washtub will be equipped with a large sponge and brush.

STATION C - For decontamination of boots and gloves:
Two buckets filled with decontamination solution.
One bucket filled with rinse solution.

STATION D - A trash can with plastic liner for rubber items.

STATION E*- A plastic ground sheet for respirator placement (depending on the type of equipment used, this station could be before Station D).

STATION F - Site exit inspection.

(* - Does not pertain to decontamination procedures for Level D).

INVESTIGATION-DERIVED MATERIAL DISPOSAL - Disposable protective clothing, respirator cartridges, and similar items will be double-bagged*. Decontamination solutions will be containerized for appropriate disposal. These waste will be labeled and disposed in accordance with applicable regulations.

SAFETY EQUIPMENT - A portable eyewash station and first aid kit will be located at the decontamination station(s). A portable wash hose will be located at the "Decon-C" area.

MONITORING REQUIREMENTS - All site personnel will be visually monitored by the team leader during warm weather operations for heat stress. Indicator parameters will include a flush face, respiratory distress, and body water loss.

SITE ACCESS - The work area will be considered a restricted area accessible only to the site management and investigation team and other personnel involved in evaluative and remedial actions. No individual will be allowed on-site without the approval of the field manager, and then only with the protective equipment designated according to the approved RI Phase I Plan. Signs will be posted to prohibit access by unauthorized personnel.

(* - Does not pertain to decontamination procedures for Level D).

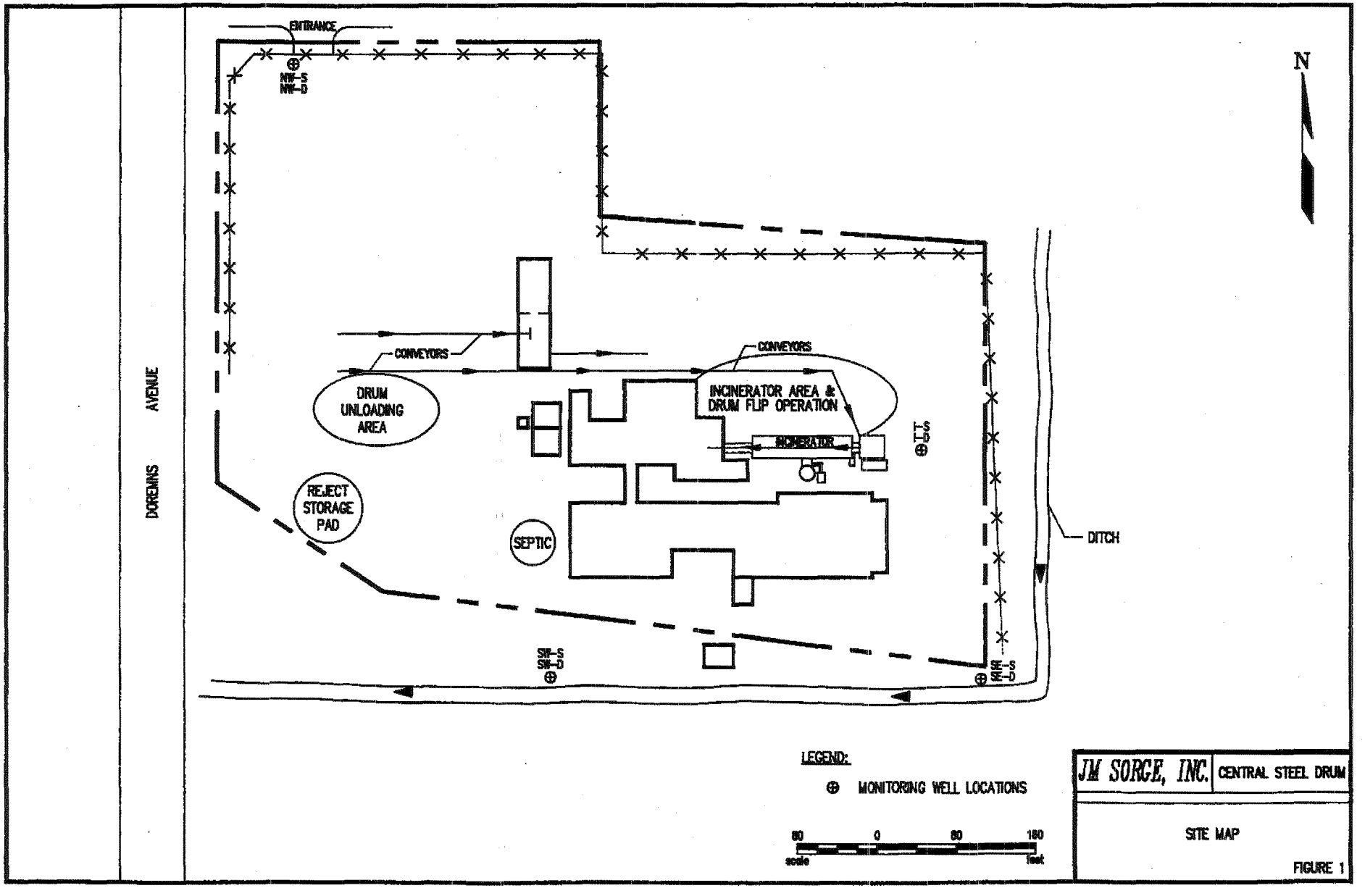
TABLE 1

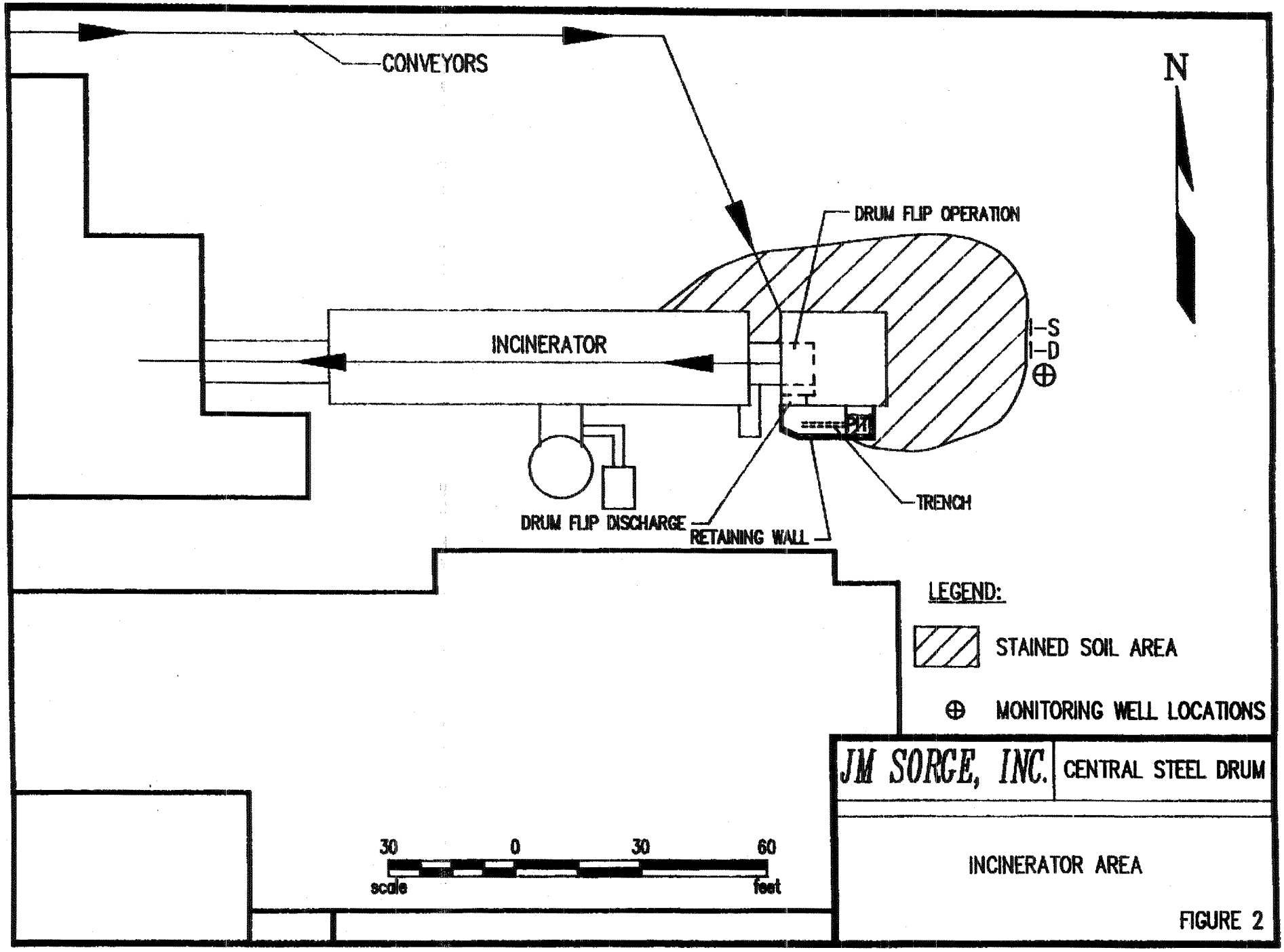
PHASE I - SAMPLING SUMMARY

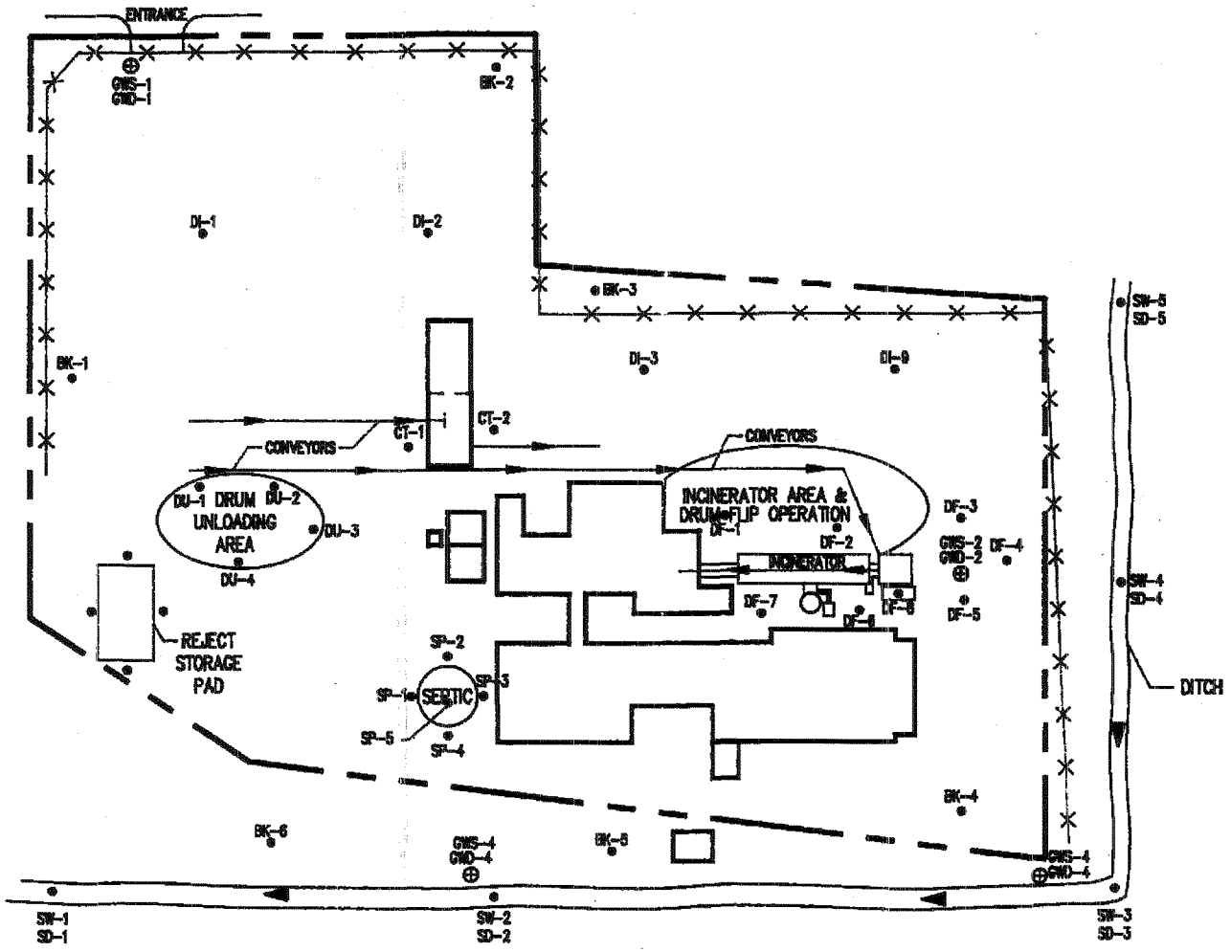
Sample # *	Area/Objective	Media	Analysis/QAQC
BK-1,6	Background/Fill Characterization	Soil	PP+40 CLP-Tier I **
DI-1,4	Drum Area Inventory/ Characterization	Soil	PP+40 CLP-Tier I **
DU-1,4	Drum Unloading Area	Soil	PP+40 CLP-Tier I **
RD-1,4	Rejected Drum Storage Area	Soil	PP+40 CLP-Tier I **
SP-1,5	Septic Tank Area	Soil/ Sludge	40 CLP-Tier I **
IF-1,8	Incinerator/Drum Flip Operation	Soil/ Sludge	CLP-Tier I **
CT-1,2	Conveyor Transfer Area	Soil	CLP-Tier I **
SW-1,5	Surface Water	Water	CLP-Tier I **
SD-1,5	Sediment	Sediment	CLP-Tier I **
GWS-1,4	Shallow Groundwater	Water	CLP-Tier I **
GWD-1,4	Deeper Groundwater	Water	CLP-Tier I **

* Additional Tier II analysis will be conducted as needed.

** Complete CLP analysis all organics and inorganics, plus appropriate searches.


ENTRANCE
NW-S
NW-D
N
CONVEYORS
CONVEYORS
DRUM UNLOADING AREA
INCINERATOR AREA & DRUM FLIP OPERATION
INCINERATOR
REJECT STORAGE PAD
SEPTIC
DITCH
SW-S
SW-D
SE-S
SE-D
DOREMUS AVENUE
LEGEND:
MONITORING WELL LOCATIONS
80
0
80
160
scale
feet
JM SORGE, INC.
CENTRAL STEEL DRUM
SITE MAP
FIGURE 1


CONVEYORS
N
DRUM FLIP OPERATION
INCINERATOR
I-S
I-D
PIT
TRENCH
DRUM FLIP DISCHARGE
RETAINING WALL
LEGEND:
STAINED SOIL AREA
MONITORING WELL LOCATIONS
30
0
30
60
scale
feet
JM SORGE, INC.
CENTRAL STEEL DRUM
INCINERATOR AREA
FIGURE 2



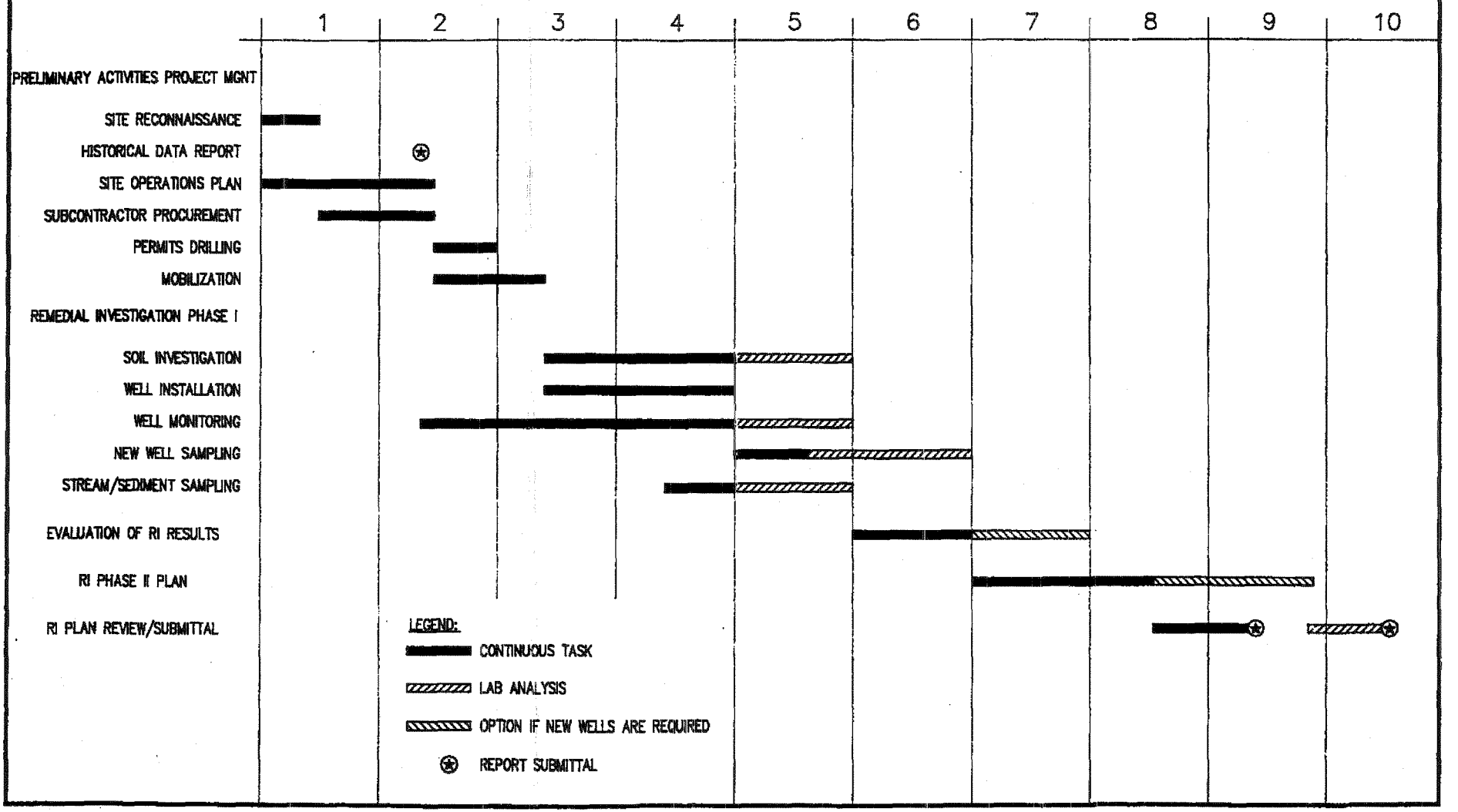
DOREMUS AVENUE

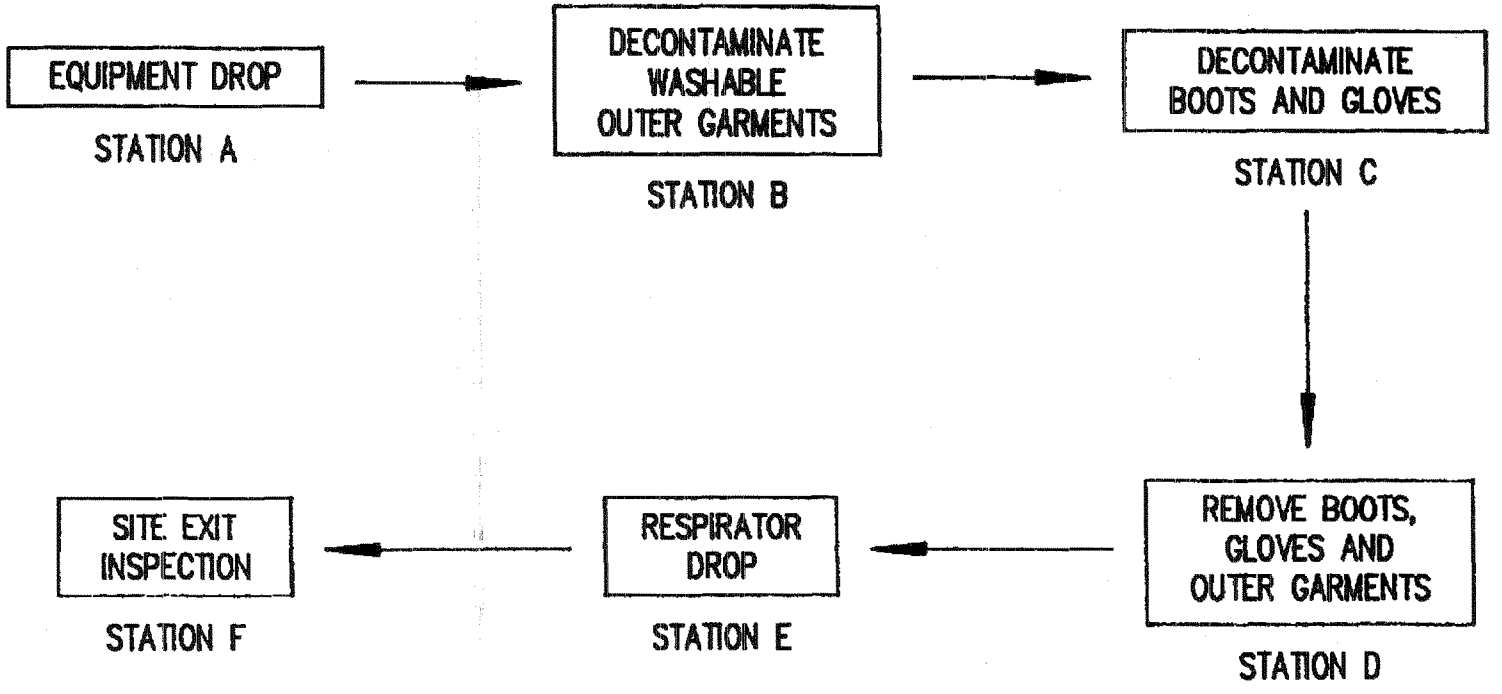
JM SORGE, INC. | CENTRAL STEEL DRUM

SAMPLE LCOATION MAP

FIGURE 3

FIGURE 4
REMEDIAL INVESTIGATION – PHASE I SCHEDULE
CENTRAL STEEL DRUM





NOTE:

* – LEVEL D DECONTAMINATION DOES NOT INCLUDE THESE STEPS

JM SORGE, INC.	CENTRAL STEEL DRUM
DECONTAMINATION STATION LAYOUT	
FIGURE 5	

ATTACHMENT 1

PLANT INVENTORY/CONTROL INFORMATION

RIGHT-TO-KNOW INVENTORY

NEWARK HAZARDOUS MATERIALS FACILITY PERMIT

CSD - CONTINGENCY PLAN

JUL-16-90 TUE

DEQ-094
9/89

State of New Jersey
DEPARTMENT OF ENVIRONMENTAL PROTECTION

COMMUNITY RIGHT TO KNOW SURVEY FOR 1989

to satisfy requirements under SARA, Title III, Section 312 and New Jersey Community Right to Know

NJEIN	SIC	COUNTY/MUNIC.	DUE DATE

9235700000 3412 0714
CENTRAL STEEL DRUM COMPANY CORP.
ATTN: NEIL FISCHER
704 DOREMUS AVENUE
NEWARK, NJ 07105

PEEL HERE

Indicate changes to mailing address on label

IMPORTANT: A separate survey must be completed for each facility.

(A) FACILITY LOCATION
If the facility or township location is different than the mailing address on the label, enter location address or township below.

Check here if you would like your survey mailed to above address ☐

(B) Does this facility use, store, or produce any hazardous materials which must be reported under the N.J. Worker & Community Right to Know Act or Section 312, Title III of the Superfund Amendments and Reauthorization Act?

☒ Yes ☐ No

(See Reportable Substances and Thresholds)

(C) Briefly describe the nature of the operations or business conducted at this facility STEEL DRUM RECONDITIONING

(D) Number of employees at facility: 97

(E) *Number of facilities in New Jersey* 1

(F) *Dun and Bradstreet No.*

(G) *Check the box if you were granted a R&D exemption last year or if you wish to receive an application questionnaire.* ☐

(H) CERTIFICATION OF OWNER/OPERATOR OR AUTHORIZED REPRESENTATIVE — I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document, and that based on my inquiry of those individuals responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete.

Signature [signature] Date 2/15/90 Phone Number (201) 344-8500

Name (Print) NEIL FISCHER Title Sec Treas

(I) POLICE AND FIRE DEPARTMENT — Enter the respective phone numbers, names and addresses (including Zip Code) of your local police and fire departments in the spaces below.

POLICE DEPT	FIRE DEPT.
Phone Number ( ) 733 6190	Phone Number (201) 733-2515
Name NEWARK EAST WARD	Name NEWARK
Address 61 MARKET ST	Address DOREMUS AVE AND PORT ST
Municipality NEWARK Zip	Municipality NEWARK Zip 07105

(J) FACILITY EMERGENCY CONTACT

Name NEIL FISCHER Title SEC-TREAS

Facility Phone Number 344-8500 Emergency Contact Phone Number (201) 344-8500

NOTE: Make copies of this survey! The law requires that you send a copy to your County Lead Agency, Local Emergency Planning Committee and your local police and fire departments.

(County agency and local committee addresses in instructions)

Return original to:
RIGHT TO KNOW PROGRAM
CN 405
Trenton, NJ 08625-0405

IMPORTANT! Read all instructions before completing. Photocopy this sheet, if you need additional forms. Please print or type all responses. Complete sections A-F before making photocopies of this page.

Reporting Period: January 1 - December 31, 1989

FACILITY IDENTIFICATION AND SITE LOCATION

A. NJEIN 197357000000

B. Facility Name CENTRAL STEEL DRUM CO

C. Location Address 704 OGDEN AVE

D. City NEWARK E. State NJ F. Zip 07105

CHEMICAL DESCRIPTION	HAZARDS	Inventory (Ranges)	STORAGE CODES AND LOCATIONS
Substance FUEL OIL CAS No. - - DOT No. 1993 Substance No. (if available) 2444 Percent 60 (Code) State L (Code) Trade Secret ☐ (Check if claiming)	(Codes for all that apply.) 70	(Enter Code) Max. Daily 14 Avg. Daily 13 Days Onsite 365 (Actual Number)	(Enter Codes, except Location(s); supply narrative.) Container 49 Conditions 01 01 Location(s) FRONT YARD - TRACTOR SHED
Substance CAS No. - - DOT No. Substance No. (if available) Percent (Code) State (Code) Trade Secret ☐ (Check if claiming)		Max. Daily Avg. Daily Days Onsite (Actual Number)	Container Conditions Location(s)
Substance CAS No. - - DOT No. Substance No. (if available) Percent (Code) State (Code) Trade Secret ☐ (Check if claiming)		Max. Daily Avg. Daily Days Onsite (Actual Number)	Container Conditions Location(s)
Substance CAS No. - - DOT No. Substance No. (if available) Percent (Code) State (Code) Trade Secret ☐ (Check if claiming)		Max. Daily Avg. Daily Days Onsite (Actual Number)	Container Conditions Location(s)
Substance CAS No. - - DOT No. Substance No. (if available) Percent (Code) State (Code) Trade Secret ☐ (Check if claiming)		Max. Daily Avg. Daily Days Onsite (Actual Number)	Container Conditions Location(s)
Substance CAS No. - - DOT No. Substance No. (if available) Percent (Code) State (Code) Trade Secret ☐ (Check if claiming)		Max. Daily Avg. Daily Days Onsite (Actual Number)	Container Conditions Location(s)
Substance CAS No. - - DOT No. Substance No. (if available) Percent (Code) State (Code) Trade Secret ☐ (Check if claiming)		Max. Daily Avg. Daily Days Onsite (Actual Number)	Container Conditions Location(s)

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 2
290 BROADWAY
NEW YORK, NY 10007-1866

NOV 26 1997

VIA CERTIFIED MAIL--
RETURN RECEIPT REQUESTED

See Addressees

Re: Request for Information Pursuant to Section 104(e) of CERCLA, 42 U.S.C. § 9604(e); Central Steel Drum, Superfund Site, Newark, Essex County, New Jersey

Dear Sir or Madam:

This letter seeks your cooperation in providing information and documents relating to the contamination of the Central Steel Drum Superfund Site in Newark, Essex County, New Jersey ("Site").

We encourage you to give this matter your immediate attention and provide a complete and truthful response to this Information Request and attached questions within 30 days of your receipt of this letter.

The United States Environmental Protection Agency ("EPA") is conducting a cleanup action addressing the release and threat of release of hazardous substances, pollutants, or contaminants at the Site. This cleanup is being conducted pursuant to our authorities under the federal "Superfund" law (the Comprehensive Environmental Response, Compensation and Liability Act ("CERCLA"), 42 U.S.C. Sections 9601-9675).

EPA conducted a removal investigation at the Site and determined that the presence of hazardous substances discovered at the Site posed a threat to human health and the environment. Therefore, EPA is currently conducting a removal action at the Site. The Agency expects to complete the removal action in January of 1998.

Recycled/Recyclable • Printed with Vegetable Oil Based Inks on 100% Recycled Paper (40% Postconsumer)

INFORMATION REQUEST

Under Section 104(e)(2) of CERCLA, 42 U.S.C. Section 9604(e)(2), EPA has broad information gathering authority which allows EPA to require persons to provide information and/or documents relating to:

> (A) The identification, nature, and quantity of materials which have been or are generated, treated, stored, or disposed of at a vessel or facility or transported to a vessel or facility.
>
> (B) The nature or extent of a release or threatened release of a hazardous substance or pollutant or contaminant at or from a vessel or facility.

While EPA seeks your cooperation in this investigation, compliance with the Information Request is required by law. In addition, providing false, fictitious, or fraudulent statements or representations may subject you to criminal penalties under 18 U.S.C. Section 1001. The information you provide may be used by EPA in administrative, civil or criminal proceedings. When you have prepared your response to the Request for Information, please sign and have notarized the enclosed "Certification of Answers to Request for Information", and return that Certification to EPA along with your response.

Some of the information EPA is requesting may be considered by you to be confidential. Please be aware that you may not withhold the information upon that basis. If you wish EPA to treat the information confidentially, you must advise EPA of that fact by following the procedures outlined in the Instructions, including the requirement for supporting your claim for confidentiality.

If you have information about other parties who may have information which may assist the Agency in its investigation of the Site or may be responsible for the contamination at the Site, that information must be submitted within the time frame noted above.

Section 104 of CERCLA, 42 U.S.C. Section 9604, authorizes EPA to pursue penalties for failure to comply with that section or for failure to respond adequately to requests for submissions of required information.

This Information Request is not subject to the approval requirements of the Paperwork Reduction Act of 1980, 44 U.S.C. §3501 et seq.

Your response to this Request for Information should be postmarked or received at EPA within thirty (30) calendar days of the date of this letter, and should be mailed to:

Suzanne Becker
Removal Action Branch
Emergency and Remedial Response Division
U.S. Environmental Protection Agency, Region II
2890 Woodbridge Avenue
Edison, NJ 08837

with a copy to:

Michael van Itallie, Esq.
Office of Regional Counsel
U.S. Environmental Protection Agency, Region II
290 Broadway, 17th Floor
New York, NY 10007.

If you have any questions about this letter, you may contact the Central Steel Drum hotline at 732-321-4433. We appreciate and look forward to your prompt response to this Information Request.

Sincerely yours,

Richard L. Caspe,
Director, Emergency and Remedial Response Division

Attachment

INSTRUCTIONS FOR RESPONDING TO REQUEST FOR INFORMATION

A. Directions

1. A complete and separate response should be given for each question. For each question contained in this letter, if information or documents responsive to this information request are not in your possession, custody, or control, please identify the person(s) from whom such information may be obtained.

2. Identify each answer with the number of the question and the subpart to which it responds. For each document produced in response to this Request for Information, indicate on the document, or in some other reasonable manner, the question to which it applies.

3. Provide responses to the best of your ability, even if the information sought was never put down in writing or if the written documents are no longer available. Consult with all present and past employees and agents of your company whom you have reason to believe may be familiar with the matter to which the question pertains.

4. In answering each question, identify each individual and any other source of information (including documents) that were consulted in the preparation of the response to the question.

5. If additional information or documents responsive to this Request becomes known or available to you after you respond to this Request, EPA hereby requests pursuant to CERCLA Section 104(e) that you supplement your response to EPA.

6. If you have reason to believe that an individual other than one employed by your company may be able to provide additional details or documentation in response to any question, state that person's name, last known address, phone number and the reasons for your belief.

7. If a document is requested but not available, state the reason for its unavailability. To the best of your ability, identify the document by author, date, subject matter, number of pages and all recipients of the documents with their addresses.

8. If anything is omitted from a document produced in response to the Request for Information, state the reason for, and the subject matter of, the omission.

9. If you cannot provide a precise answer to a question, please approximate but, in any such instance, state the reason for your inability to be specific.

10. Whenever this Request for Information requests the identification of a natural person, or other entity, the person or entity's full name and present or last know address also should be provided.

11. The information requested herein must be provided even though you may contend that it includes confidential information or trade secrets. You may assert a confidentiality claim covering part or all of the

    2. the period of time for which confidential treatment is desired (e.g., until a certain date, until the occurrence of a specific event, or permanently);

    3. measures taken by you to guard against the undesired disclosure of the information to others;

    4. the extent to which the information has been disclosed to others, and the precautions taken in connection therewith;

    5. pertinent confidentiality determinations, if any, by EPA or other federal agencies, and a copy of any such determinations or reference to them, if available; and

    6. whether you assert that disclosure of the information would likely result in substantial harmful effects on your business' competitive position, and if so, what those harmful effects would be, why they should be viewed substantial, and an explanation of the causal relationship between disclosure and such harmful effects.

To make a confidentiality claim, please stamp, or type, "confidential" on all confidential responses and any related confidential documents. Confidential portions of otherwise nonconfidential documents should be clearly identified. You should indicate a date, if any, after which the information need no longer be treated as confidential. Please submit your response so that all non-confidential information, including any redacted versions of documents are in one envelope and all materials for which you desire confidential treatment are in another envelope.

All confidentiality claims are subject to EPA verification. It is important that you satisfactorily show that you have taken reasonable measures to protect the confidentiality of the information and that you intend to continue to do so, and that it is not and has not been obtainable by legitimate means without your consent. Information covered by such claim will be disclosed by EPA only to the extent permitted by CERCLA Section

104(e). If no such claim accompanies the information when it is received by EPA, then it may be made available to the public by EPA without further notice to you.

B. Definitions

1. As used herein, the terms "Central Steel Drum" or the "Site" shall refer to the property located at 704 Doremus Avenue in Newark, Essex County, New Jersey and identified as Lot 1 of Block 5074.

2. As used herein, the terms "the Company" or "your Company" refer not only to your Company as it is currently named and constituted, but also to all predecessors in interest of your Company and subsidiaries, divisions and branches of your Company.

3. The term "you" or "Respondent" shall include any officers, managers, employees, contractors, trustees, successors, assignees, and agents of your Company.

4. The term "person" shall include any individual, firm, unincorporated association, partnership, corporation, trust, or other entity.

5. The term "hazardous substances" shall have the same definition as that contained in Section 101 (14) of CERCLA, and includes any mixtures of such hazardous substances, products or other nonhazardous substances.

6. The term "identify" means, with respect to a natural person, to set forth the person's name, present or last known employer and business address and business telephone number, present or last known home address and home telephone number, and present or last known job title, occupation, position or business.

7. With respect to a corporation, partnership, business trust or other association or business entity (including a sole proprietorship) the term "identify" means to provide its full name, address, and affiliation with the individual and/or company to whom/with this request is addressed.

8. The term "document" and "documents" includes any written, recorded computer generated, or visually or aurally reproduced material of any kind in any medium in your possession, custody, or control or known by you to exist, including originals, all prior drafts, and all non-identical copies.

9. The term "arrangement" means every separate contract or other agreement between two or more persons, whether written or oral.

10. The term "material" or "materials" shall mean any and all objects, goods, substances, or matter of any kind, including, but not limited to, wastes.

11. All terms not defined herein shall have their ordinary meaning, unless such terms are defined in CERCLA or RCRA, in which case the statutory definitions shall apply.

REQUEST FOR INFORMATION

General Information About your Company

1. a. State the correct legal name of the Company.

   b. Identify the legal status of the Company (corporation, partnership, sole proprietorship, specify if other) and the state in which the Company was organized.

   c. State the names(s) and address(es) of the officers of the Company.

   d. If the Company has subsidiaries or affiliates, or is a subsidiary of another organization, identify these related companies and state the names(s) and address(es) of the officers of those organizations. Provide such information for any further parent/subsidiary relationships.

   e. If the Company is a successor to, or has been succeeded by, another company, identify such other company and provide the same information requested above for the predecessor or successor company.

   f. If the Company transacted business with Central Steel Drum in the name of an entity not disclosed above, give the name of such entity and state its relationship to the Company.

2. Describe in detail the nature of your Company during the years 1980-1994. If the nature of the business has not been constant, describe the changes that have occurred, including any name changes, and when they occurred.

3. Briefly describe your Company's operations. Also, identify any chemical substances used to clean equipment or machinery.

Company's Relationship to Central Steel Drum (CSD)

4. a. State whether the Company or any Company facility transacted any business with CSD for the disposal, treatment, or storage of any barrels, drums, or other containers (hereinafter collectively referred to as "Containers").

b. If so, describe the relationship (nature of services rendered or products sold to the Company) between the Company and CSD;

c. Provide copies of any contracts or agreements between the Company and CSD;

5. a. For each facility identified in Question 4, state the nature of the operations conducted at the facility, including the time period in which the facility operated;

b. State the name, address, and current RCRA Identification Number of each facility;

6. For each transaction between the Company and CSD, provide the following information:

a. Identify the specific dates of each transaction. Where an exact date cannot be provided for a transaction, provide an approximation by month and year;

b. Identify the number of Containers that were the subject of each such transaction;

c. Generically describe each Container that was the subject of each such transaction (example: closed-head steel drums, etc.);

d. Identify the intended purpose of each such transaction;

e. State whether each Container that was the subject of the transaction contained any substance at the time of the transaction. As to each Container that contained any substance:

(1) Identify each such substance, including its specific chemical constituent, physical state, quantity by volume and weight, and other characteristics; and

(2) Provide all written analyses that may have been made for each such substance or which may be in the custody or control of the Company and all material safety data sheets, if any, relating to each such substance;

7. Provide copies of all documents relating in any way to each transaction, including copies of delivery receipts, invoices, or payment devices.

8. Identify all persons who might have knowledge of the transaction or who had any responsibility regarding the transaction.

9. If you contend that any such Container did not contain any substance at the time of the transaction, state whether such Container had previously been used by the Company to contain any substance, and if so:

   a. Identify all substances previously contained within such Container, including its specific chemical constituent, physical state, and other characteristics; and

   b. Provide as to such substances, all written analyses that may have been made for each such substance or which may be in the custody or control of the Company and all material safety data sheets, if any, relating to each such substance;

10. Describe in detail any treatment of any Container that may have been performed by or on behalf of the Company prior to the time that the Container was transferred from the Company, including any process or procedure by which the Container was emptied or cleaned.

11. If you sent any Container by means of any third party transporter, identify each such transporter, including the name and address of such transporter, and identify in which of the transactions such transporter acted.

12. Identify each person consulted in responding to these questions and correlate each person to the question on which he or she was consulted.

13. Identify any other person (e.g., individual, company, partnership, etc.) having knowledge of facts relating to the questions which are the subject of this inquiry. For each such person that you identify, provide the name, address, and telephone number of that person, and the basis of your belief that he or she has such knowledge. For past and present employees, include their job title and a description of their responsibilities.

14. Supply any additional information or documents that may be relevant or useful to identify other sources who disposed of or transported Containers to the Site.

CERTIFICATION OF ANSWERS TO REQUEST FOR INFORMATION

State of _____

County of _____

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document (response to EPA Request for Information) and all documents submitted herewith, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete, and that all documents submitted herewith are complete and authentic unless otherwise indicated. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

_____
NAME (print or type)

_____
TITLE (print or type)

_____
SIGNATURE

Sworn to me before this

day of , 199

_____
Notary Public

CENTRAL STEEL DRUM
104(E) Address List

A.B.M. Drum Company
1275 15th Street
Fort Lee, NJ 07024

A.M.F. Drum Company
81 Oaks Forest Road
Sicklerville, NJ 08081

Abbey Drum Company
1440 Chesapeake Avenue
Baltimore, MD 21226-1009

Abe Kemp
311 Miller Street
Reading, PA 19206

Acme Container Company
14 S. Bryn Mawr Avenue
Bryn Mawr, PA 19010-3216

Active Industries, Inc.
20 Solar Drive
Clifton Park, NY 12065-3401

Active Industries of America, Inc.
877 Long Island Avenue
Deer Park, NY 11729-3709

Adchem Industry, Inc.
1852 Old Country Road
Riverhead, NY 11901-3144

Advanced Coatings
P.O. Box 457
Westminster, MA 01473

Agate Lacquer Manufacturi Co.
1113 43rd Road
Long Island City, NY 11101-6825

Akzo
500 Jersey Avenue
P.O. Box 638
New Brunswick, NJ 08903

Akzo Chemical
100 Belmont Street
Somerset, NJ 08873-1204

Alcan Building Products
11 Cricket Lane
Woodbridge, NJ 07095-1540

Alford Packaging
Industrial Avenue
Ridgefield, NJ 07660

Allied Corp., Fibers Division
Margaret & Bermuda Streets
Philadelphia, PA 19137

Allied Drum & Barrel Corp.
15 Ron Court
Commack, NY 11725-4812

Allied Tube & Conduit Corp.
11350 Norcom Road
Philadelphia, PA 19154-2399

Amerada Hess
420 Lower Hook Road
Bayonne, NJ 07002

Amerada Hess
1111 Delancey Street
Newark, NJ 07105-4819

American Inks & Coatings Corp.
P.O. Box 803
Valley Forge, PA 19482-0803

American Pail & Packaging Co.
704 Doremus Avenue
Newark, NJ 07105

American Ref-Fuel Co.
183 Raymond Blvd.
Newark, NJ 07105-4725

Apache Industrial
P.O. Box 1189
Fort Lee, NJ 07024

Archer-Daniels-Midland Co.
554 S. Front Street
Elizabeth, NJ 07202-3096

Armstrong World Industries
P.O. Box 3001
Lancaster, PA 17604-3001

Arshonoff Co., Ltd.
2079 Rue Pigeon
La Salle, Quebec H8N1A

ASI
11 East 24th Street
Paterson, NJ 07514

Atlantic City Electric Company
6801 Black Horse Pike
Egg Harbor Township, NJ
08234-4130

Atlas Minerals & Chemicals, Inc.
Farmington Road
Mertztown, PA 19539-1207

Aurachem Corp.
300 S. 3rd Street
Harrison, NJ 07029-2130

Baker Sealants & Coatings
P.O. Box B
234 Suydam Avenue
Jersey City, NJ 07304

Balford Farms
3100 Marwin Road
Bensalem, PA 19020-6525

Baltimore Adhesive Co., Inc.
10500 Reistertown Road
Owings Mills, MD 21117-3508

BASF Corp. Coatings &
Colorants
200 Gregg Street
Lodi, NJ 07644-2605

Beacon Chemical Company
125 S. MacQuesten Pkwy.
Mount Vernon, NY 10550-1724

Bel Ray Company, Inc.
P.O. Box 526
Farmingdale, NJ 07727-0526

Bergen Barrel & Drum Co., Inc.
43 Obrien Street
Kearny, NJ 07032-4212

Bergen Generating Station
Victoria Terrace
Ridgefield, NJ 07657

The Berkeley Products Co., Inc.
405 South 7th Street
Akron, PA 17501-1466

Bern-Lit Enterprises
Turnpike Bs Center
Bristol, PA 19007

Berton Plastics
170 Wesley Street
S. Hackensack, NJ 07606

Berwick & Sons, Inc.
c/o Berwick
405 Old Mt. Carmel Road
Brandon, FL 33511

The Betham Corp.
Lincoln Blvd. & River Road
Middlesex, NJ 08846-1649

Betz Entec, Inc.
200 Witmer Road
Horsham, PA 19044-2252

Blue Chip Products, Inc.
1101 New Ford Mill Road
Morrisville, PA 19067-3701

Bob O'Donnell Steel Drum
83rd & Buist Avenues
Philadelphia, PA 19153

Borden & Remington Corp.
106 Ferry Street
Fall River, MA 02721-1110

Borden Chemical
c/o Borden, Inc.
Law Department - 27th Floor
180 East Broad Street
Columbus, OH 43215-3799

Boston Printing Ink Company
92 Union Street
Mineola, NY 11501-3426

Bradley Laboratories
P.O. Box 806
Sandy, OR 97055-0806

Bridgeport Drum Service
1558 Barnum Avenue
Bridgeport, CT 06610

Bronstein Container Co., Inc.
Rockcut Road Corner Rams
Gulch Road
Jamesville, NY 13078

Brooklyn Barrel
75-40 Bell Blvd.
Bayside, NY 11364

The Brooklyn Union Gas
Company
195 Montague Street
Brooklyn, NY 11201-3631

Brown & Langer
39 Norman Avenue
Brooklyn, NY 11222

BTL Specialty Resins Corp.
77 Lowell Junction Road
Andover, MA 08815

CPS Chemical Co., Inc.
Old Waterworks Road
Old Bridge, NJ 08857-4730

C .J. Osborn Chemicals, Inc.
P.O. Box 1310
Merchantville, NJ 08109-0310

C.L. Hathaway
Prime Polymer Division
638 Summer Street
Lynn, MA 01905

C. Z. Inks, Division of James Riv
Corp.
210 Phillips Road
Exton, PA 19341-1308

California Products Corp.
169 Waverly Street
Cambridge, MA 02139-4246

Caloric Corporation
P.O. Box 6255
Florence, SC 29502-6255

Caravan Products
P.O. Box 147
Totowa, NJ 07511-0147

Cardinal Color Company
50-56 First Avenue
Paterson, NJ 07524-2029

Cardolite Corporation
500 Doremus Avenue
Newark, NJ 07105-4805

Carlin Foods
53 Bancker Street
Englewood, NJ 07631

Catalyst Technology
P.O. Box 158
Mickleton, NJ 08056

Central Abatement
124 N. Narbeth Avenue
Narbeth, PA 19072

Charles Fernicola Cooperage Co.
135 Harper Street
Newark, NJ 07114-2803

Chemcoat Laboratories Co., Inc.
14 West Street
East Hanover, NJ 07936-2822

Chem Pak Corp.
167 Mill Street
Cranston, RI 02905-1017
(401) 467-3820 - Phone

Chem Ray Coatings
209 N. Michigan Avenue
Kenilworth, NJ 07033-1264

Chem-Sol Company, Inc.
3709 Darby Road
Bryn Mawr, PA 19010-2009

Chemical Equipment Lab
1260 Woodland Avenue
Springfield, PA 19065

Chemical Leaman Tank Lines
80 Doremus Avenue
Newark, NJ 07105-4805

Chemical Management
340 Eastern Parkway
Farmingdale, NY 11735

Chemical Waste Disposal Corp.
4214 19th Avenue
Astoria, NY 11105-1018

Chemos
225 Emmet Street
Newark, NJ 07105

Chiyoda America, Inc.
378 Thousand Oaks Blvd.
Morgantown, PA 19543-9769

Chromatic Paint
P.O. 690
Stony Point, NY 10980

Ciba Geigy Corp. Pigments
Division
205 S. James Street
Newport, DE 19804-2424

Cinelli Iron & Metal Co.
c/o Scarinci & Hollenback
500 Plaza Drive
P.O. Box 3189
Secaucus, NJ 07096-3189
Attn: Patrick J. McNamara, Esq.

Citrus Cold Storage
1000 Ferry Road
Pt. Wilmington, DE 19801

Clement Coverall
623 Van Hook Street
Camden, NJ 08104

Clement Pappas & Co.
1045 Parsonage Road
Seabrook, NJ 08302-4229

Cleveland Steel Container Corp.
12818 Coit Road
Cleveland, OH 44108-1678

Clifton Adhesive, Inc.
48 Burgess Place
Wayne, NJ 07470-6734

Colfax of Philadelphia, Inc.
2500 E. Tioga Street
Philadelphia, PA 19134-5410

Colonial Printing Ink Co., Inc.
180 E. Union Avenue
E. Rutherford, NJ 07073-2176

Columbia Can Co., Inc.
4802 25th Avenue
Long Island City, NY 11103-1006

Compliance Services, Inc.
P.O. Box 512
Southeastern, PA 19399-0512

Comtrack, Inc.
P.O. Box 750897
Memphis, TN 38175-0897

Consolidated Edison of New York
4 Irving Place
New York, NY 10003-3502

Conestoga Foundry Supply
W. State & Hill Road
Hamburg, PA 19526

Congoleum Corporation
Ridge and Yates Avenues
Marcus Hook, PA 19061-4396

Connolly GPM
P.O. Box 244
Elizabeth, NJ 07206

Consolidated Beef
262 Heyward Street
Brooklyn, NY 11206-2945

Container Recyclers of South Philadelphia
10 Wolf Street
Philadelphia, PA 19148

Container Service
P.O. Box 93
Albany, NY 31702

Continental Technology, Inc.
1285 Flushing Avenue
Brooklyn, NY 11237-1301

Converters Ink Co.
1301 S. Park Avenue
Linden, NJ 07036-1605

Cookson Pigments
256 Vanderpool Street
Newark, NJ 07114-2413

Copeland Construction Co.
131 Willow Street
Chesire, CT 06410

Corbin Chemical Corp.
126 25th Street
Brooklyn, NY 11232-1403

Covar Corporation
252 Wright Street
Newark, NJ 07114-2631

Craig Adhesives & Coatings Co.
80 Wheeler Point Road
Newark, NJ 07114-2738

Crompton & Knowles Colors, Inc.
Flavor & Fragrance Division
17-01 Nevins Road
Fair Lawn, NJ 07410

Crystal, Inc.
P.O. Box 950
Lansdale, PA 19446-0664

Cumberland Farms, Inc.
U.S. Highway 130 &
Cumberland Blvd.
Burlington, NJ 08016

Custom Chemicals Corp.
30 Paul Kohner Place
Elmwood Park, NJ 07407-2621

D.A. Stuart Oil Company
4580 Weaver Parkway
Warrenville, IL 60555

D.C. Filter & Chemical, Inc.
1517 5th Street
Sandusky, OH 44870-3937

Daicolor-Pope, Inc.
33 6th Avenue
Paterson, NJ 07524-1096

Darmex Industrial Corp.
71 Jane Street
Roslyn, NY 11576

Del Val Ink & Color, Inc.
1301 Taylors Lane
Riverton, NJ 08077-2509

Delaware Container
West 11th Avenue & Valley Road
Coatsville, PA 19320

Devon Tape Corporation
c/o Pitney, Hardin, Kipp & Szuch
P.O. Box 1945
Morristown, NJ 07962-1945
Attn: Peter Hertzberg, Esq.

Dock Resins Corporation
1512 West Elizabeth Avenue
Linden, NJ 07036

Donald B. Kelly Co., Inc.
2008 Federal Street
Camden, NJ 08102

Dowell-Schlumberger Co.
300 Schlumberger Drive
Sugarland, TX 77478
(281) 285-8400 - Phone

Drum Service Of Newark
51 Stanton Street
Newark, NJ 07114-1621

Dublon, Inc.
84 Waydell Street
Newark, NJ 07105-4618

Durey-Libby Edible Nuts, Inc.
100 Industrial Road
Carlstadt, NJ 07072-1614

Dye Specialties, Inc.
407 Ege Avenue
Jersey City, NJ 07304-1014

E.F. Houghton & Co.
Madison & Van Buren Avenues
Valley Forge, PA 19482-1905

E.I. DuPont De Nemours & Co.
2000 Cannonball Road
Pompton Lakes, NJ 07442-1707

E.I. DuPont De Nemours & Co.
Route 130 Chamber Works Plant
Deepwater, NJ 08023-1707

E.I. DuPont De Nemours & Co.
Cheesquake Road
Parlin, NJ 08859-1038

E.I. DuPont De Nemours & Co.
1007 N. Market Street
Wilmington, DE 19898-0001

Carpenter Insulation Company
P.O. Box 129
Fogelsville, PA 18051

E.V. Banta & Co., Inc.
P.O. Box 9
Cedar Grove, NJ 07009-0009

E.W. Kaufman Co.
1320 Industrial Highway
Churchville, PA 18966-4060

Eastern Chemical Waste
1307B S. Pennsylvania Avenue
Morrisville, PA 19067

Ecology & Environment, Inc.
1528 Walnut Street
Philadelphia, PA 19102-3604

Empire State Varnish Co., Inc.
38 Varick Street
Brooklyn, NY 11222-3817

Emulsion Systems, Inc.
70 E. Sunrise Highway
Valley Stream, NY 11581-1233

Enequist Chemical Co., Inc.
100 Varick Avenue
Brooklyn, NY 11237-1217

Ennar Latex, Inc.
1075 Hull Street
Baltimore, MD 21230-5315

Esselite Pendaflex Corp.
Clinton Road
Garden City, NJ 11530

Evergard Steel Corp.
1825 Pennsylvania Avenue
Linden, NJ 07036-1421

Everite Products Corp.
P.O. Box 236
Carlstadt, NJ 07072

Everseal Manufacturing Co., Inc.
32 Buffington Avenue
Irvington, NJ 07111-4706

FMC Corp. Phosphorous
Chemical
500 Roosevelt Avenue
Carteret, NJ 07008-3504

Fairfield Maintenance, Inc.
4 Commerce Road
Fairfield, NJ 07004-1602

Felton Worldwide, Inc.
599 Johnson Avenue
Brooklyn, NY 11237-1311

Fiberglass Master
1609 Harmer Street
Levittown, PA 19057-4789

Fine Container
106 Kenny Place
Saddlebrook, NJ 07662

Firestone Tire & Rubber Co.
Locust Point
Baltimore, MD 21227-1105

First State Steel Drum Co.
4030 New Castle Avenue
Wilmington, DE 19801

Flint Ink Corp.
40 Albion Road
Lincoln, RI 02865-3798

Flint Ink Corp.
6 Corn Road
Dayton, NJ 08810-1527

Flint Ink Corp.
100 Unico Drive
West Hazelton, PA 18201-1170

Food Oils
145 Grand Street
Carlstadt, NJ 07072

Frank J. Cisek
P.O. Box 81
Columbus, OH 08022

Fruehauf Corp.
c/o Holland Hitch Company
P.O. Box 2099
Holland, MI 49422-2099

Fuel Tank Maintenance Service
P.O. Box 305
Ridgefield, NJ 07660-0305

Galasso Trucking, Inc.
8 Kilmer Road
Larchmont, NY 10538-2636

Gane's Chemical Works, Inc.
630 Broad Street
Carlstadt, NJ 07072-1114

General Electric Company
6001 Tonnelle Avenue
North Bergen, NJ 07047-3307

General Container Corp.
620 Ramsey Avenue
Hillside, NJ 07205-1010

General Foods Corporation
c/o Kraft Foods, Inc.
1 Kraft Court
Glenview, IL 60025

General Printing Ink
c/o Eletha L. Duffy, Esq.
1138-H Easton Avenue
Somerset, NJ 08873

The Gilbert Spruance Co.
Levick & Horrocks Streets
Philadelphia, PA 19149

The Glidden Co.
301 Bern Street
Reading, PA 19601

Glines & Rhodes, Inc.
189 East Street
Attleboro, MA 02703-4210

Globe Products
750 Bloomfield Avenue
P.O. Box 1927
Clifton, NJ 07015

Glue-Fast Equipment Co., Inc.
727 Commercial Avenue
Carlstadt, NJ 07072-2602

Goodman Bros. Steel Drum
Company, Inc.
18 Division Place
Brooklyn, NY 11222

Graphics Packaging Corp.
Matthews and Cedar Hollow
Paoli, PA 19301

GTE Products
1012 Corporate Drive
Export, PA 15632-8905

H.B. Fuller Company
P.O. Box 64683
Saint Paul, MN 55164-0683

H. Schock & Sons
329 Frelinghuysen Avenue
Newark, NJ 07114-1415

Hart Products Corp.
207 Van Vorst Street
Jersey City, NJ 07302-4420

Hartin Paint & Filler Co., Inc.
225 Broad Street
Carlstadt, NJ 07072-1903

Whittaker Corp., Haynes
Division
1955 N. Surveyor Avenue
Simi Valley, CA 93036-3386

Henkel Corp./ Kepec Products
7760 S. 6th Street
Oak Creek, WI 53154-2022

Herb Toy
P.O. Box 245.
Franklinville, NJ 08322

Heucotech, Ltd.
99 Newbold Road
Fairless Hills, PA 19030-4307

Heveatex Corp.
P.O. Box 2573
Fall River, MA 02722-2573

Hicks & Otis Prints, Inc.
9 Wilton Avenue
Norwalk, CT 06851-4515

Hoffman Container Corp.
1826 E. Livingston Avenue
Columbus, OH 43205-4002

Hoffman-LaRoche, Inc.
240 Kingsland Street
Nutley, NJ 07110-1143

Howard Steel Drum
P.O. Box 2068
Newark, NJ 07114

Howet Dover Casting Division
Roy Street
Dover, NJ 07801

Huls America
Oak Hill Road
Mountain Top, PA 18707

The Humphrey Chemical
Company, Inc.
45 Devine Street
North Haven, CT 06473-2204

I P I
P.O. Box 70
Elkton, MD 21922-0070

I.T.I., Inc.
3371 Route 1, Suite 209
Lawrenceville, NJ 08648

IFS Industries, Inc.
P.O. Box 1053
Reading, PA 19603-1053

Impact Chemical Company
P.O. Box 2562
Paterson, NJ 07509-2562

Industrial Finishing Products, Inc.
465 Logan Street
Brooklyn, NY 11208-2519

Industrial Resource Network, Inc.
707 S. Church Street
Wilmington, DE 19801-5540

Industrial Drum Co., Inc.
P.O. Box 586
Glassboro, NJ 08028-0586

Insurance Restoration Specialists
777 New Durham Road
Edison, NJ 08817-2859

Interamerican Juice Company
154 Marsh Street
Newark, NJ 07114-3237

Interstate Metals
275 Duke Street
Kearny, NJ 07032

J. Landau & Co., Inc.
214 Washington Avenue
Carlstadt, NJ 07072-3000

J. M. Huber Corporation
333 Thornall Street
Edison, NJ 08837-2220

J. L. Prescott
27 Elizabeth Avenue
Passaic, NJ 07055

J. R. Cooperage Co., Inc.
58-22 183 Street
Flushing, NY 11365

J. T. M. Drums
P.O. Box 169
Sayreville, NJ 08872

Jacob Kline Cooperage, Inc.
701-703 E. Highland Street
Allentown, PA 18103

James T. Warring Sons, Inc.
4545 "S" Street
Capital Heights, MD 20743-6713

Jema-American, Inc.
Dept. TR, P.O. Box 206
Dunnellen, NJ 08812

Johnson & Johnson Research Center
One Johnson & Johnson Plaza
New Brunswick, NJ 08933-7002

Johnson Matthey Chemical Products
2001 Nolte Drive
Paulsboro, NJ 08066-1727

Jomac Products, Inc.
863 Easton Road
Warrington, PA 18976-1874

Joyva Corp.
53 Varick Avenue
Brooklyn, NY 11237-1523

K. J. Quinn & Co., Inc.
135 Folly Mill Road
Seabrook, NH 03874-4012

Kaplan Brothers
Old Montgomery Pike Road
S. Williamsport, PA 17701-1711

Kaplan Container Corp.
P.O. Box 107
E. Rochester, NY 14445-0107

Kearny Steel Container Corp.
401 South Street
Newark, NJ 07105-1976

Keith Industries, Inc.
248 Astor Street
Newark, NJ 07114-2616

Ken's Marine Service, Inc.
P.O. Box 4001
Bayonne, NJ 07002-8001

Kernis Drum Corp.
4345 Obrien Street
Kearny, NJ 07032-3215

Keystone Distribution Center, Inc.
350 Poplar Street
Hanover, PA 17331-2358
(717) 637-5981 - Phone

King Barrel
1156 Bergen Avenue
Brooklyn, NJ 11234

Kingsland Drum & Barrel Company, Inc.
c/o Lowenstein, Sandler, Kohl, Fisher & Boylan
65 Livingston Street
Roseland, NJ 07068-1791

Kirker Chemical Corp.
55 E. 6th Street
Paterson, NJ 07524-1103

KTK Corporation
Meadow Road
Edison, NJ 08817-3153

LRC Enterprises, Inc.
12888 SE U.S. Highway 441
Belleview, FL 34420-4566

L. Liebman
1721 Kenneth Avenue
Union, NJ 07083

Lakeland Drum Service, Inc.
2006 Thornhill Road
Auburndale, FL 33823-4709

Lanco Industries
1723 Ginesi Drive
Freehold, NJ 07728-8851

Lenmar, Inc.
150 S. Calverton Road
Baltimore, MD 21223-2151

Lightman Drum Company
c/o Robert Aaron Greenberg, Esq.
89 N. Haddon Avenue
Haddonfield, NJ 08033

Lilly Industries, Inc.
733 S. West Street
Indianapolis, IN 46255

Long Island Paint & Chemical Co.
1 Continental Hill
Glen Cove, NY 11542-2934

Lyndet Corporation
925 Coats Road
Meadow Brook, PA 19046

M. Schock Container
P.O. Box 1332
Mountainside, NJ 07092

Mace Adhesive & Coating Corp.
Converse Road
Webster, MA 01570

Mahogony
Hamilton Industrial Park
P.O. Box 99
Mays Landing, NJ 08830

Maher Terminals, Inc.
1 Journal Square Plaza
Jersey City, NJ 07306-4004

Manion Steel Barrel Co.
Dept. 839
Cincinnati, OH 45269

Marine Pollution Control
375 S. Dunton Avenue
Patchogue, NY 11772-6145

Marisol, Inc.
125 Factory Lane
Middlesex, NJ 08846-1043

Marks Adhesive Company
224 Pegasus Avenue
Northvale, NJ 07647-1904

Maas & Waldstein Co.
P.O. Box 340
Little Falls, NJ 07424

Mazer Corp.
226 Bay Colony Drive
Naperville, IL 60565-1260

Mercury Paint Corp.
4808 Farragut Road
Brooklyn, NY 11203-6612

Merit Oil Corp.
551 Lancaster Avenue
Haverford, PA 19041-1419

Metallurgical Industries, Inc.
One Cold Stream Way
Tinton Falls, NJ 07724

Middlesex Quality Container
909 Somerset Street
Somerset, NJ 08873-3523

Midland Color
481 River Road
Clifton, NJ 07015

Milford Barrel Co., Inc.
100 Warwick Street
New Haven, CT 06513-4642

Milltown Drilling & Excavating, Inc.
50 County Line Road
Somerville, NJ 08876-3467

3M
P.O. Box 33121
Saint Paul, MN 55133

Monsanto Chemical - Indian Orchard Plant
730 Worcester Street
Springfield, MA 01151-1089

Monsey Products Co., Inc.
P.O. Box 368
Kimberton, PA 19442-0368

Moore Business Forms & Systems
110 4th Street
Honesdale, PA 18431-1800

Mortell Company
501 S. Wisteria Street
Mansfield, TX 76063-2407

Morton Chemical Division
P.O. Box 2184
Greenville, SC 29602-2184

Morton International
CN 6008
1470 Jersey Avenue
N. Brunswick, NJ 08902

MPC Environmental Services
Marine Pollution Control
P.O. Box 610
Calverton, NY 11933

Nappi Trucking Corporation
P.O. Box 510
Matawan, NJ 07747-0510

National Casein Co.
601 W. 80th Street
Chicago, IL 60620-2502

National Corporate Disposal
560 Hudson Street
Hackensack, NJ 07601

National Drum & Barrel Corp.
18 Division Place
Brooklyn, NY 11222-5199

National Lecithin, Inc.
P.O. Box 349
Pompton Lakes, NJ 07442

National Packaging Corp.
68 33rd Street
Brooklyn, NY 11232-1912

National Starch & Chemical Co.
10 Finderne Avenue
Bridgewater, NJ 08807-3355

National Starch & Chemical Co.
1735 West Front Street
Plainfield, NJ 07063-3355

National Starch & Chemical Co.
225 Bellville Avenue
Bloomfield, NJ 07003-3500

National Starch & Chemical Co.
Humboldt Industrial Park
White Birch Road
R.R. #1, Box 409C3
Hazelton, PA 18201-9801

Naval Air Station JRB
Commanding Officer
Willow Grove, PA 19090

Nepera, Inc.
Route 17
Harriman, NY 10940

Nestle Foods Corp.
c/o Nestle USA
800 North Brand Blvd.
Glendale, CA 91203

New England Barrel Co., Inc.
326 Old Maple Avenue
New Haven, CT 06473-3248

New England Container
George Washington Highway
Smithfield, RI 02917

New England Resins & Pigments Corp.
316 New Boston Road
Woburn. MA 01801

Nick Cereste
656 Golf Terrace
Union, NJ 07083

Nick Foglia Steel Drum Co.
94 Ford Road
Denville, NJ 07834-1353

Nimco Shredding Co.
252 Doremus Avenue
Newark, NJ 07105-4805

Non-Fluid Oil Corp.
2140 S. 88th Street
Kansas City, KS 66111-1756

Nortech Adhesive Corp.
136 Halladay Street
Jersey City, NJ 07304-3214

North American Paint
3504 Rose Avenue
Asbury Park, NJ 07712-3908

Northeast Chemical & Industrial
Supply
7 Thompson Lane
Elizabeth, NJ 07201-2518

Norton & Son Company
148 E. 5th Street
Bayonne, NJ 07002-4252

Nyacol Products, Inc.
P.O. Box 349
Ashland, MA 01721-0349

O.C. Adhesives Corp.
125 5th Avenue
Paterson, NJ 07524-1204

Orelite Chemical Coatings, Inc.
62 Woolsey Street
Irvington, NJ 07111-4012

P V O Foods, Inc.
39 Plymouth Street
Fairfield, NJ 07004-1615

Palmer Asphalt Co
195 West 5th Street
Bayonne, NJ 07002-11

Para-Chemical Southern, In
Rorer & Ontario Streets
Philadelphia, PA 19134-4125

Fernicola Fibre & Steel Drums
261 Elm Street
Newark, NJ 07105-2609

Patrick J. Kelly
208 Cowbell Road
Willow Grove, PA 19090

PDM Incorporated
3512 Silverside Road
Wilmington, DE 19810-4941

Pecora Corporation
165 Wambold Road
Harleysville, PA 19438-2014

Pennsylvania Electric Company
1001 Broad Street
Johnstown, PA 15906-2437

Penske Truck Leasing
P.O. Box 563
Reading, PA 19603-0563

Pentagon Paint
421 20th Street
Brooklyn, NY 11215

Performance Industries
33 Tucker Street
Trenton, NJ 08618-4705

Phelps Dodge
48 Bayway Avenue
Elizabeth, NJ 07202

Philadelphia Steel Drum Co.
8 Woodside Drive
Richboro, PA 18954

Philadelphia Rust Proof
Amber & Willard Streets
Philadelphia, PA 19134

Pioneer-Leimel Fabrics, Inc.
2250 E. Ontario Street
Philadelphia, PA 19134-2694

Pollution Solutions of Vermont, Inc.
2 Avenue A
Williston, VT 05495-9768

Polymer Plastics Corporation
65 Davids Drive
Hauppauge, NY 11788-2004

Princeton University
Plasma Physics Lab
P.O. Box 451
Princeton, NJ 08543-0451

Prior Coated Metals, Inc.
2233 26th Street SW
Allentown, PA 18103-6699

Prismacolor Corp.
120 E. Halsey Road
Parsippany, NJ 07054-3720

Products Research & Chemical Corp.
410 Jersey Avenue
Glouster City, NJ 08030-2391

Progressive Disposal Group, Inc.
510 E. Barnard Street
West Chester, PA 19382-3463

Progresso Quality Foods
500 Elmer Road
Vineland, NJ 08360-6304

Public Service Electric & Gas Co.
P.O. Box 570
Newark, NJ 07101-0570

Puro-Lite Co.
3620 G Street
Philadelphia, PA 19134-1321

Pyrock Chemical Corp.
214 40th Street
Brooklyn, NY 11232-2810

Pyrolac Corporation
50 Park Place
Newark, NJ 07102-4301

Quaker City Chemicals, Inc.
7360 Milnor Street
Philadelphia, PA 19136-4289

Quaker City Chemicals, Inc.
7360 Milnor Street
Philadelphia, PA 19136

R & A Leather Finish Co., Inc.
812 E. 43rd Street
Brooklyn, NY 11210-3595

Radiac Research Corp.
261 Kent Avenue
Brooklyn, NY 11211-4120

Rahway Steel, Inc.
625 Leesville Avenue
Rahway, NJ 07065-4821

RBH Dispersions, Inc.
5 Factory Lane
Bound Brook, NJ 08805

Reichhold Chemicals, Inc.
Fork Branch Road
Cheswold, DE 19936-1563

Reitech Corporation
3146 Marion Street
Reading, PA 19605-2746

Reliable Industries, Inc.
P.O. Box 4
Smoketown, PA 17576

Research, Inc.
20 Water Street
P.O. Box 206
Somerville, MA 02143

Rhodes Drums, Inc.
1555 S. 6th Street
Camden, NJ 08104-1474

Rhone-Poulenc Chemicals
103 College Road East
Princeton, NJ 08540

Richmond Barrel & Box Co., Inc.
1705 E. Commerce Road
Richmond, VA 23224-7525

Riverdale Color
153 Classon Avenue
Brooklyn, NY 11203-2636

Rohm Tech, Inc. Specialty Chemicals
195 Canal Street
Malden, MA 02148-6701

Rose Container
27 Mountain Road
Wilton, CT 06897

Royal Athletics
55 Lamar Street
W. Babylon, NY 11704

Russell-Stanley East, Inc.
14 Convery Blvd.
Woodbridge, NJ 07095-2649

Ryerson Steel Co.
40 Stanley Street
Buffalo, NY 14206-1018

S & S Chemical Co., Inc.
333 Jericho Turnpike
Jericho, NY 11753-1104

Safeguard Industrial Equipment Co.
27 Washington Avenue
Bellsville, NJ 07109-2922

Sanncor Industries, Inc.
c/o B.F. Goodrich
300 Whitney Street
Leominster, MA 01453-3202

Sau-Sea Foods, Inc.
1000 Saw Mill River Road
Yonkers, NY 10710-3211

Schuster Meat Corp.
817 Washington Street
New York, NY 10014-1405

Scranton Cooperage, Inc.
989 Providence Road
Scranton, PA 18508-2560

Seaboard Printing Inks, Inc.
1617 N. Second Stret
Philadelphia, PA 19122-3194

Seagrave Coatings
209 N. Michigan Avenue
Kenilworth, NJ 07033-1264

Sentry Paint & Chemcial Co.
237 Mill Street
Darby, PA 19023-2016

Sherwin-Williams Company
60 Lister Avenue
Newark, NJ 07105-4524

Shieldalloy Metallurgical Corp.
12 West Blvd.
Newfield, NJ 08344-9558

Sinclair & Valentine
270 Geiger Road
Philadelphia, PA 19115-1016

Southeastern Adhesives Company
P.O. Box 2070
Lenoir, NC 28645-2070

Specialty Dispersions Company
14A Ray Place
Fairfield, NJ 07004-3096

Spraylat
716 So. Columbus Avenue
Mount Vernon, NY 10550-4717

Stan-Chem, Inc.
401 Berlin Street
East Berlin, CT 06023-1127

Standard Chlorine Chemical Co.
1035 Belleville Pike
Kearny, NJ 07032-4410

Standard Coating Corp.
461 Broad Street
Ridgefield, NJ 07657-2391

Stanley G. Flagg & Co., Inc.
1020 W. High Street
Stowe, PA 19464-6800

Stephens Scientific, Inc.
107 Riverdale Road
Riverdale, NJ 07457-1710

Stevens Paint Corp.
50 Kay Fries Drive
Stony Point, NY 10980-1904

Storonske Cooperage
P.O. Box 811
Albany, NY 12201

Stulb Paint Company
618 W. Washington Street
Norristown, PA 19401-4531

Sun Chemical Co.
135 West Lake Street
North Lake, IL 60164-2427

Superior Barrel & Drum Co., Inc.
P.O. Box 741
Glassboro, NJ 08028-0741

Superior Varnish & Drier Co.
Route 130 & Clement Avenue
Pennsauken, NJ 08110

Supreme Oil Co., Inc.
80 So. Dean Street
Englewood, NJ 07631-3514

Sussex Barrel & Drum Co.
86 Lavergne Street
Belleville, NJ 07109

Synray Chemical Corp.
209 N. Michigan Avenue
Kenilworth, NJ 07033-1264

TACC International Corp.
Air Station Industrial Park
Rockland, MA 02370

Talon Paint Products, Inc.
205 Bright Street
Jersey City, NJ 07302-4226

Taylor Lock
2034 W. Lippincott Street
Philadelphia, PA 19132

Technical Coatings Laboratories, Inc.
205 Old Farms Road
Avon, CT 06001-2244

Technical Oil Products, Inc.
190 19th Avenue
Paterson, NJ 07504-2105

Teledyne
P.O. Box 1552
York, PA 17405-1552

Thalheimer Bros.
5550 Whittaker Avenue
Philadelphia, PA 19124-1705

Theodore Stall, Inc.
P.O. Box 46291
Philadelphia, PA 19160

Transit America, Inc.
One Red Lion Road
Philadelphia, PA 19115-1012

Tri State Steel Drum Corp.
100 Central Avenue
Kearny, NJ 07032-4601

Tri-States Environmental Cleaning
9 Ladik Street
Permont, NY 10968

Triangle Ink
53 Van Dike Street
Wallington, NJ 07057-2296

Tristate Waste Disposal
R.D. #3, Box 2302
Lafayette, NJ 07848

Tunnel Barrel & Drum Co., Inc.
85 Triangle Blvd.
Carlstadt, NJ 07072-2702

U.S. Ink, A Sun Chemical Company
343 Murray Hill Road
E. Rutherford, NJ 07073-2110

U.S. Printing Ink
7942 Angus Court
Springfield, VA 22153-2801

Unico Service Corp.
57 Mall Drive
Commack, NY 11725-5703

Unitank Terminal Services
Allegheny & Delaware Avenues
Philadelphia, PA 19134

Universal Adhesive & Chemical
125 5th Avenue
Paterson, NJ 07524-1204

Universal Chemical & Coatings, Inc.
1975 Fox Lane
Elgin, IL 60123-7816

The Upjohn Company
1 Niblick Road
Enfield, CT 06082-4491

USR Optonix, Inc.
P.O. Box 409
Hacketstown, NJ 07840-0409

Vac-U-Max Company
37 Rutgers Street
Belleville, NJ 07109-3148

Vanderbilt Chemical Corp.
31 Taylor Avenue
Bethel, CT 06801-2411

Vanguard Research Ind., Inc.
239 Saint Nicholas Avenue
S. Plainfield, NJ 07080-1809

Verflex Co., Inc.
c/o Pan Chemical
1 Washington Avenue
Hawthorne, NJ 07506

W.A. Cleary Corp.
1049 Somerset Street
Somerset, NJ 08873-5014

W.L. Gore & Associates, Inc.
750 Otts Chapel Road
Newark, DE 19713-1100

Wadco
1542 S. Broadway
Camden, NJ 08104

Webcraft Technologies, Inc.
Route 1 & Adams Station
N. Brunswick, NJ 08902-9801

Webcraft Technology
4371 County Line Road
Chalfont, PA 18914-1825

Wesco Steel Drum Co.
275 Ashurton Avenue
Yonkers, NY 10701-6599

Westfield Coatings Corp.
221 Union Street
Westfield, MA 01085-2498

William H. Cooper's Sons, Inc.
320-336 Brown Street
Philadelphia, PA 19123

William J. Jones & Son, inc.
230-38 Liberty Street
Camden, NJ 08104-1030

Younstown Barrel & Drum Co.
1043 Marble Street
Youngstown, OH 44502-1313

Paddock 11C/Evans

JAN 13 1993

FILED
JAMES J. WALDRON, CLERK
JAN 12 1993
U.S. BANKRUPTCY COURT
KAREN M. VanKRUNINGEN

By: HOWARD S. GREENBERG

RAVIN, GREENBERG & MARKS, P.A.
Attorneys for Debtor/Debtor-In-Possession
101 Eisenhower Parkway
Roseland, New Jersey 07068
(201) 226-1500
HG8559

UNITED STATES BANKRUPTCY COURT
FOR THE DISTRICT OF NEW JERSEY
CASE NO. 93-20194 WFT

In the Matter of:

CENTRAL STEEL DRUM COMPANY, INC.
A New Jersey Corporation,

Debtor.

: In Proceedings for a Reorganization Under Chapter 11 of the Bankruptcy Code

ORDER TO SHOW CAUSE WHY DEBTOR-IN-POSSESSION SHOULD NOT BE AUTHORIZED TO ENTER INTO A POST-PETITION FINANCING ARRANGEMENT WITH AMBASSADOR FACTORS, A DIVISION OF FLEET FACTORS CORP.

This matter, having been opened to the Court by Ravin, Greenberg, & Marks, P.A., attorneys for Central Steel Drum Company, Inc., Debtor/Debtor-In-Possession (hereinafter referred to as the "Debtor"), upon the Application submitted herewith for approval of a Post-Petition Financing Arrangement pursuant to Bankruptcy Rule 4001(d), and the Court having considered said Application, and good and sufficient cause existing for the making and entry of this Order;

IT IS on this 12th day of JANUARY, 1993;

ORDERED, that the United States Trustee for the District of New Jersey and the Debtor's twenty (20) largest unsecured creditors, show cause before this Honorable

Court at the United States Bankruptcy Court, King Federal Building, 50 Walnut Street, Newark, New Jersey, Courtroom 3B, on the 21st day of JANUARY, 1993, commencing at 10:00 A.M., or as soon thereafter as counsel may be heard, why the Court should not enter an Order Authorizing the Debtor to enter into a Post-Petition Financing Arrangement in the form annexed to the accompanying Application; and it is further

ORDERED, that pending the hearing on the proposed entry of the Financing Order, the Debtor is authorized to borrow monies from Ambassador Factors, A Division of Fleet Factors Corp. (hereinafter referred to as "Ambassador"), on the terms and conditions set forth in the proposed Order and financing agreements, in form similar to the existing loan documents, in an amount not to exceed 75% of eligible accounts receivable (as defined in the existing loan documents); and it is further

ORDERED, that such liens and security interests shall be effective as of and from the entry of this Order, without the execution or recording of any further security interest, notice of lien, assignment, financing statement or any other document in any public recording office, provided, however, that the Debtor and Ambassador be and are hereby authorized and empowered to prepare, execute and record such documents as they deem appropriate to memorialize and perfect such liens, security interests and assignments; and it is further

ORDERED, that service of the within Order to Show Cause, together with the supporting Application and proposed Financing Order by hand delivery upon the United States Trustee for the District of New Jersey and by Federal Express upon the Debtor's twenty (20) largest unsecured creditors within 1 business days of the entry of

the within Order to Show Cause, shall be deemed good and sufficient service, in lieu of the notice otherwise required by the Rules of Bankruptcy Procedure; and it is further

ORDERED, that any objections or other submissions to the relief sought, as well as requests for hearing, must be made by notifying the Clerk of the Bankruptcy Court at least 3 days prior to the return date hereof, and by personal appearance at the above time and place before the Bankruptcy Court. Additionally, copies of any such objections or other submissions shall be served upon Ravin, Greenberg & Marks, P.A., attorneys for Central Steel Drum Company, Inc., Debtor/Debtor-in-Possession herein, 101 Eisenhower Parkway, Roseland, New Jersey 07068, Attention: Howard S. Greenberg, Esq., and Ruskin, Moscou, Evans & Faltischek, P.C., Attorneys for Ambassador Factors, A Division of Fleet Factors Corp., 170 Old Country Road, Mineola, New York 11501, Attention: Jeffrey Wurst, Esq.

WILLIAM F. TUOHEY

HONORABLE WILLIAM F. TUOHEY,
BANKRUPTCY JUDGE

By: _____
HOWARD S. GREENBERG

RAVIN, GREENBERG & MARKS, P.A.
Attorneys for the Debtor/Debtor-In-Possession
101 Eisenhower Parkway
Roseland, New Jersey 07068
(201) 226-1500
HG8559

UNITED STATES BANKRUPTCY COURT
FOR THE DISTRICT OF NEW JERSEY
CASE NO. 93-20194 WFT

In the Matter of:	: In Proceedings for a Reorganization Under Chapter 11 of the Bankruptcy Code
CENTRAL STEEL DRUM COMPANY, INC. A New Jersey Corporation,	:
Debtor.	: **APPLICATION IN SUPPORT OF THE ENTRY OF AN ORDER TO SHOW CAUSE REGARDING FINANCING ARRANGEMENT BETWEEN THE DEBTOR-IN-POSSESSION AND AMBASSADOR FACTORS, A DIVISION OF FLEET FACTORS CORP.**

TO: THE HONORABLE WILLIAM F. TUOHEY,
UNITED STATES BANKRUPTCY JUDGE

The Application of Central Steel Drum Company, Inc. by and through its Counsel, Ravin, Greenberg & Marks, P.A., respectfully shows unto the Court the following:

1. Your Applicant is a Debtor-In-Possession, having filed a Petition for Reorganization under Chapter 11 of the Bankruptcy Code on January 11, 1993.

2. Ambassador Factors, A Division of Fleet Factors Corp. (hereinafter referred to as "Ambassador"), was the primary secured lender of the Debtor prior to the

filing of the Petition, holding a first lien on the Debtor's Pre-Chapter 11 machinery and equipment, accounts receivable and inventory, together with the proceeds thereof. As of the date of filing, Ambassador was owed approximately $380,000.00, including accrued interest; the Debtor's Pre-Chapter 11 trade accounts receivable as of November 25, 1992, net of allowance, were approximately $996,000.00; the Debtor's Pre-Chapter 11 inventory was valued on a cost basis at approximately $173,000.00; the Debtor's property and equipment, net of accumulated depreciation, was valued at $94,000.00. In light of these circumstances, it appears that Ambassador's Pre-Petition debt was fully secured and collateralized.

3. Your Applicant seeks authorization from this Court to obtain Limited Post-Petition Financing from Ambassador pursuant to 11 U.S.C. Section 364.

4. In view of the fact that Ambassador has a lien on your Applicant's Pre-Chapter 11 accounts receivable and inventory, in order to permit your Applicant to continue in business, it is necessary that the lender agree to advance funds to your Applicant in accordance with the provisions of Section 364 of the Bankruptcy Code.

5. Your Applicant proposes to enter into continuing Loan and Financing Agreement with Ambassador to be evidenced by the execution of any required Notes, Security Agreements and Financing Statements, pursuant to the terms of the proposed Order, a draft of which is annexed hereto as Exhibit "A" and made a part hereof.

6. The failure to grant the relief requested on an emergent basis will cause serious damage to the continuing operation of your Applicant, since the Debtor-In-Possession is without sufficient funds to meet its on-going payroll and other normal

operating expenses.

7. Your Applicant seeks the entry of the annexed Order to Show Cause approving Ambassador's lending arrangement with the Debtor as set forth in the Loan and Financing Agreement between Ambassador and the Debtor-In-Possession. Pursuant to the provisions of said Order to Show Cause, the hearing on the Debtor's Application for Authorization to Enter Into Financing Agreements, Borrowing of Money and Grant of Security Interests, is to be conducted on short notice, with notice being given by hand delivery to the United States Trustee and by Federal Express to the Debtor's twenty (20) largest unsecured creditors.

8. No Trustee has been appointed and no committee of creditors has been selected herein.

9. No previous Application for relief herein has been made.

WHEREFORE, your Applicant respectfully prays for the entry of the annexed Order to Show Cause Regarding Financing Arrangement and Loan and Security Agreement Between the Debtor-In-Possession and Ambassador Factors, A Division of Fleet Factors Corp., together with an Order Authorizing Entry Into Financing Agreements, Borrowing of Money and Grant of Security Interests, and for such other and further relief as is just and proper.

RAVIN, GREENBERG & MARKS, P.A.
Attorneys for Central Steel Drum Company, Inc., Debtor/Debtor-In-Possession

By _____
HOWARD S. GREENBERG

DATED: January 11, 1993

By: _____
HOWARD S. GREENBERG

RAVIN, GREENBERG & MARKS, P.A.
Attorneys for Debtor/Debtor-In-Possession
101 Eisenhower Parkway
Roseland, New Jersey 07068
(201) 226-1500
HG8559

DRAFT

UNITED STATES BANKRUPTCY COURT
FOR THE DISTRICT OF NEW JERSEY
CASE NO. 93-20194

In the Matter of:

CENTRAL STEEL DRUM COMPANY, INC.
A New Jersey Corporation,

Debtor.

: In Proceedings for a Reorganization Under Chapter 11 of the Bankruptcy Code

: ORDER AUTHORIZING DEBTOR-IN-POSSESSION TO BORROW MONEY FROM, GRANT SECURITY INTEREST TO AND APPROVING AGREEMENTS WITH AMBASSADOR FACTORS, A DIVISION OF FLEET FACTORS CORP., PURSUANT TO SECTIONS 364(c) AND 364(d) OF THE CODE

TO: THE HONORABLE WILLIAM F. TUOHEY,
UNITED STATES BANKRUPTCY JUDGE

This matter being opened to the Court by Ravin, Greenberg & Marks, P.A., Counsel to Central Steel Drum Company, Inc., Debtor/Debtor-In-Possession (hereinafter referred to as the "Debtor"), for authority to borrow money from Ambassador Factors, a division of Fleet Factors Corp. (hereinafter referred to as "Ambassador"), and it appearing that prior to the commencement of this Chapter 11 Case, Ambassador made loans and advances to the Debtor secured by a first lien on, among other things, all of Debtor's

EXHIBIT
"A"
ALL-STATE LEGAL SUPPLY CO.

existing and after acquired accounts, merchandise, returns, inventory, machinery and equipment, and intangibles together with the proceeds thereof; and

It further appearing that the continued operation of the business of the Debtor is dependent on its ability to obtain further loans and advances from Ambassador; and

It further appearing that the Debtor is unable to obtain credit and the funds necessary to maintain ongoing operations except under the terms and conditions set forth herein; and

It further appearing that the loans hereunder are in the best interest of the Debtor, its estate and creditors, as well as parties in interest.

NOW, upon the reading of and the filing of the Order to Show Cause dated January 12, 1993, the Application in support thereof, and the Court being satisfied that due notice of the within hearing has been given pursuant to Section 102 of the United States Bankruptcy Code (hereinafter referred to as the "Code"), Rule 2002 of the Rules of Bankruptcy Procedure and the Local Bankruptcy Rules, and upon the proceedings held on this date and the record thereof; it is

ORDERED, that the Debtor be, and it hereby is, authorized to borrow from time to time from Ambassador in such amounts as may be determined in the sole and complete discretion of Ambassador; and it is further

ORDERED, that the Pre-Chapter 11 accounts receivable Financing Agreement and other Security Agreements entered into between Ambassador and the Debtor, copies of which are annexed to the Application as Exhibit "B", together with the security interest

provided for thereunder, be and the same hereby are affirmed, ratified and adopted by the Debtor; and it is further

ORDERED, that the Debtor be and hereby is authorized to enter into the accounts receivable, inventory and equipment, financing agreements and security agreements (hereinafter referred to as the "Financing Agreements"), with Ambassador substantially in the form annexed to the Application as Exhibit "A", with respect to the loans and advances to be made by Ambassador to the Debtor as provided by for hereunder; and it is further

ORDERED, that as security for the loans and advances from Ambassador to the Debtor, Ambassador is granted a continuing first and senior lien and security interest in and to among other things, the Debtor's accounts, contract rights, general intangibles, merchandise, returns, inventory and equipment, together with the proceeds and products of the foregoing; and it is further

ORDERED, that this Order shall be sufficient evidence of Ambassador's perfected liens and security interests in and to the Debtor's property described herein and the Debtor is authorized and directed to execute such documents including, without limitation, Uniform Commercial Code financing statements and to pay such costs and expenses as may be reasonably required to provide further evidence of the perfection of Ambassador's security interest as provided herein; and it is further

ORDERED, that the Debtor-In-Possession is authorized and directed to execute and comply with the terms of such other documents, instruments and agreements in addition to the above Financial Agreements as Ambassador may require as evidence

of and for the protection of obligations, liens, security interests and mortgages, each of which after execution shall be deemed included in the Financing Agreements; and it is further

ORDERED, that Ambassador shall not be required to file or serve financing statements, mortgages or other documents with respect to such security interests and liens, all such financing statements or similar documents being deemed to have been filed or recorded at the time and on the date of the commencement of this case; and it is further

ORDERED, that Ambassador may, in its discretion, file a certified copy of this Order in any filing or recording office in any county or other jurisdiction in which the Debtor-In-Possession has real or personal property; and it is further

ORDERED, that the provisions of this Order shall inure to the benefit of Ambassador and shall be binding upon the Debtor-In-Possession and its respective successors and assigns (including any trustee or other fiduciary herein appointed as a legal representative of the Debtor or with respect to the property of the estate of the Debtor); and it is further

ORDERED, that any equity in the collateral which Ambassador holds as security for Pre-Chapter 11 obligations due and owing to it from Debtor, after payment in full of such Pre-Chapter 11 obligations, shall constitute further security for any and all obligations or indebtedness due and owing to Ambassador from the Debtor, and as adequate protection to Ambassador for the use by the Debtor of collateral which is subject to Ambassador's PAre-Chapter 11 security interest, and in accordance with Section 361

of the Code, any equity in the collateral which Ambassador holds as security for obligations due and owing to it from the Debtor, after payment in full of such Chapter 11 obligations, shall constitute security for pre-Chapter 11 obligations of Debtor to Ambassador, and it is further

ORDERED, that the Debtor is authorized and directed to perform all acts and to make, execute and deliver any and all instruments as may be necessary to implement the terms and conditions of this Order, and the transactions described herein; and it is further

ORDERED, that pursuant to Section 364(c) of the Code, any and all obligations and liabilities of the Debtor to Ambassador arising after the date of this Order together with accrued interest and charges incidental thereto, shall have priority in payment over any other obligations or liabilities now in existence or incurred hereafter by the Debtor and of all expenses of the kind specified in Sections 503(b), 506(c), and 507(b) of the Code, except for professional fees as earned and allowed by the Court by professionals retained by the Debtor and the Creditors' Committee, if one is appointed, and quarterly fees payable to the United States Trustee, to the extent that such amount shall be set aside and reserved by Lender in a separate account (the fee account), by withholding from each advance made by Ambassador to the Debtor subsequent hereto, 3% of each such advance, which amount shall be deposited in said fee account pending the further Order of this Court, not to exceed, however, in the aggregate, the sum of $50,000.00 (the "Carve Out"), provided that any professional fees incurred with respect to the Carve Out shall expressly not include any professional fees and disbursements incurred or to be

incurred by the Debtor or the Creditors' Committee, if one is appointed, or any other party in interest, challenging the amount, validity, priority or enforceability of the Pre-Petition obligations or the liens on and security interests of Ambassador with respect to any Pre-Petition collateral or asserting any defense, claim, counterclaim or offset with respect to the Pre-Petition obligations or the liens on and the security interests of Ambassador in the Pre-Petition collateral; and it is further

ORDERED, that in the event of default by the Debtor pursuant to the Financing Agreements or pursuant to this Order, the Debtor is hereby directed to immediately instruct all account debtors and other parties, now or hereafter obligated to pay the Debtor-in-Possession, to remit their payments directly to Ambassador and upon failure of the Debtor to so instruct its account debtors and other parties on Ambassador's behalf as aforesaid, Ambassador is hereby authorized to contact such account debtors and other parties directly and request that they remit their payments directly to Ambassador; and it is further

ORDERED, that all cash collateral now in the possession of the Debtors or any other party or hereafter coming into the possession of the Debtors or any other party shall be remitted to Ambassador and Ambassador is authorized to apply such cash collateral and the proceeds thereof as set forth in this Order and the Financing Agreements; and it is further

ORDERED, that the Financing Agreements between the Debtor-in-Possession and Ambassador shall be subject to termination as provided therein, including, without limitation, the provisions that the Financing Agreements are subject to early termination by

Ambassador as to future loans and extensions of credit at any time upon notice to the Debtor-in-Possession or immediately upon the occurrence of any "Event of Default" as defined therein; and it is further

ORDERED, that the Debtor-in-Possession, is hereby authorized and directed to promptly reimburse Ambassador for all costs and expenses incurred by Ambassador to effectuate this financing transaction and as provided in the Financing Agreements, including, but not limited to, audit expenses, field examination expenses and fees of Ambassador's counsel, all of which costs and expenses shall be and are included in the obligations and indebtedness of the Debtor-in-Possession to Ambassador; and it is further

ORDERED, that in the event of (i) failure of the Debtor-in-Possession to fully perform in this Order, (ii) the occurrence of any ("Event of Default") under the Financing Agreements, (iii) termination of the Financing Agreements as provided therein; (iv) appointment of a Trustee or other fiduciary for the Debtor-in-Possession or the property of the estate of the Debtor; (v) conversion of the Debtor's Chapter 11 case to a cause under Chapter 7 of the Bankruptcy Code, or (vi) dismissal of the Debtor's Chapter 11 case (collectively; "Default Events"); then and upon the occurrence of any of the foregoing, and at all times thereafter, Ambassador may move the Court for relief from the automatic stay including, without limitation, any stay under the U. S. C. Section 362 of the Code or other restriction on enforcement of its liens; security interests and mortgages granted to it pursuant to this Order and the Financing Agreements, and Ambassador shall be and hereby is authorized, in its discretion, to take any and all actions and remedies which it may deem appropriate to proceed against and realize upon the property of the Debtor-

in-Possession or the estate of the Debtor and other collateral upon which it has been granted liens, security interests and mortgages to obtain repayment of the obligations and indebtedness owed to it including, without limitation; all such actions and remedies set forth in the Financing Agreements; and it is further

ORDERED, that no expenses of administration of the Debtor's Chapter 11 case or any future proceeding which may result from such cases, including liquidation in bankruptcy or other proceedings under the Bankruptcy Code, shall be charged against the Ambassador collateral, pursuant to 11 U.S.C. Section 506(c) of the Bankruptcy Code, or otherwise, without the prior written consent of Ambassador and no such consent shall ever be implied from any other action, inaction or acquiescence by Ambassador, except as otherwise set forth herein; and it is further

ORDERED, that the automatic stay provided by 11 U.S.C. Section 362 of the Bankruptcy Code shall be and is hereby vacated with respect to the creation, perfection and implementation of Ambassador's Post-Petition liens and security interests in the Debtor's Collateral; and it is further

ORDERED, that the Debtor be and hereby is authorized and directed in accordance with Section 363(e) of the Code, immediately to pay over to Ambassador all collections and proceeds received by the Debtor and payments of accounts, which amounts shall be applied to reduce the indebtedness due and owing to Ambassador; and it is further

ORDERED, that in the event of a default by the Debtor pursuant to its agreements with Ambassador or pursuant to this Order, Ambassador shall be deemed to

be in possession of all collateral subject to its security interest, and Ambassador shall be entitled to have the Debtor or any superseding trustee immediately surrender and/or deliver peaceful possession of such collateral to Ambassador, and Ambassador shall, at its sole election, be authorized to liquidate the collateral in accordance with the provisions of the agreements between the parties and the Uniform Commercial Code; and it is further

ORDERED, that there shall not at any time be entered in the Debtor's Chapter 11 Case or any succeeding Chapter 7 case any further Order which authorizes (a) the use of cash collateral of the Debtor-In-Possession or the sale, lease of other disposition of property of the estate of the Debtor or the Debtor-In-Possession in which Ambassador has an interest or (b) under 11 U.S.C. Section 364 the obtaining of credit or the incurring of indebtedness secured by a lien or security interest which is equal or senior to the lien or security interest held by Ambassador, or which is entitled to priority administrative status which is equal to or superior to that granted to Ambassador herein; unless (i) Ambassador shall have given its prior written consent thereto, or (ii) such order requires that there shall first be indefeasibly paid in full to Ambassador all debts and obligations of the Debtor-In-Possession which arise or result from the obligations, loans, credit, security interests and liens authorized herein; and it is further

ORDERED, that the provisions of this Order and any action pursuant thereto shall be in effect, unimpaired and shall survive entry of any order which may be entered confirming a Plan of Reorganization of the Debtor, or converting this proceeding from a Chapter 11 case to a Chapter 7 case, and the terms and provisions of this Order, as well as the priorities, liens, and security interest created hereunder, shall continue in this or any

other superseding case under the Code, and such liens and security interests shall maintain that priority provided in this Order until satisfied and discharged in full; and it is further

ORDERED, that Ambassador shall be entitled to the full protection of the provisions of 11 U.S.C. Section 364(e) of the Code with respect to debts and obligations and liens and security interests created or authorized by this order in the event that this order or any other authority contained herein is vacated, reversed or modified on appeal or otherwise by any court of competent jurisdiction; and it is further

ORDERED, that the signature of Alan I. Fischer, or any person designated in writing by the Debtor to Ambassador, appearing on any one or more of the agreements, instruments or documents referred to or, in the opinion of Ambassador, necessary or desirable to implement the terms and purposes of this Order, shall bind the Debtor; and it is further

ORDERED, that unless Ambassador expressly consents, no Plan of Reorganization confirmed in this case shall impair or otherwise modify the rights of Ambassador under this Order or the Financing Agreements; and it is further

ORDERED, that this Order has been negotiated in good faith and at arm's length between the Debtor and Ambassador, and any credit extended and loans made to the Debtor pursuant to this Order shall be deemed to be extended in good faith as that term is used in Section 364(e) of the Code; and it is further

ORDERED, that in making decisions to make a loan or loans to the Debtor under this Order or to collect the indebtedness and obligations of the Debtor, Ambassador

shall not be deemed to be in control of the operations of the Debtor or to be acting as a "responsible person" or "owner or operator" with respect to the operation or management of the Debtor (as such terms, or any similar terms, are used in the United States Comprehensive, Environmental Response, Compensation and Liability Act, as amended, or any similar Federal or state statute; and it is further

ORDERED, that the Debtor hereby waives and agrees not to assert any defenses, offsets, claims or counterclaims, if any, with respect to the Pre-Petition obligations, or to challenge the validity, priority, enforceability and perfection of the liens and security interests encumbering Ambassador Pre-Petition collateral securing the same; an it is further

ORDERED, that in the event and to the extent that any of the terms and conditions of any agreements between the Debtor and Ambassador are inconsistent or at variance with the terms and provisions of this Order, the terms of this shall control.

HONORABLE WILLIAM F. TUOHEY,
BANKRUPTCY JUDGE

SECURITY AGREEMENT
ACCOUNTS RECEIVABLE

BETWEEN

AMBASSADOR FACTORS

DIVISION OF FLEET FACTORS CORP.
1450 BROADWAY, NEW YORK, N.Y. 10018
AND

CENTRAL STEEL DRUM COMPANY

704 DOREMUS AVENUE

NEWARK, N.J. 07105

EXHIBIT
"B"
ALL-STATE LEGAL SUPPLY CO.

SECURITY AGREEMENT (ACCOUNTS RECEIVABLE) Between CENTRAL STEEL DRUM COMPANY

704 DOREMUS AVENUE, NEWARK, N.J. 07105 (designated as "First Party"), and AMBASSADOR FACTORS (DIVISION OF FLEET FACTORS CORP.), 1450 BROADWAY, N.Y.C., N.Y. 10018 (designated as "Second Party"):

SECOND PARTY AGREES:

1. That it will from time to time, at its sole and absolute discretion, make loans and advances to First Party upon the security of all of First Party's present and hereinafter created accounts receivable, contract rights, general intangibles, security deposits, trade styles, trademarks, chattel paper, notes, drafts, acceptances, leases, tax refunds, options to purchase real and personal property, stock options, customer lists, insurance claims, patents, patent applications, copyrights and any other choses in action, as such terms are defined by the Uniform Commercial Code and to any of First Party's merchandise which is represented thereby (delivered or undelivered), and of all proceeds thereof including, but not limited to, the proceeds of any insurance thereon (hereinafter referred to as "Account" or "Accounts"), whether or not specifically assigned by First Party.

2. That upon the assignment of Accounts, it will, in its sole and absolute discretion, advance to First Party up to 80 % of the net amounts of eligible accounts receivable outstanding. Net amounts of eligible accounts receivable shall be Accounts which are and at all times shall continue to be acceptable to Second Party in all respects at Second Party's sole and absolute discretion. Second Party will pay the remainder (less the compensation specified in paragraph 6, plus any overpayments by the First Party's account debtors, and less any deductions taken by such account debtors and any unpaid compensation, charges or expenses due to the Second Party), after actual receipt of payment of any such assigned Account, at such times as Second Party may determine. Notwithstanding the foregoing, no payment of such remainder need be made by Second Party if First Party shall have breached any provision hereof or shall be otherwise indebted to Second Party, in either of which events Second Party may retain and apply such remainder upon any indebtedness then or thereafter due from First Party. Any advance received by the First Party from Second Party shall be deemed as acceptance in full of the percentage first herein indicated.

FIRST PARTY WARRANTS, COVENANTS AND AGREES:

3. First Party shall be privileged to collect Accounts for Second Party, but such privilege may be terminated by Second Party at any time, in its sole and absolute discretion, and shall automatically terminate upon First Party's failure or inability to pay its debts as they mature, First Party's discontinuance of a substantial part of its business, the institution by or against First Party of any proceedings in bankruptcy, reorganization, receivership or insolvency, and for the violation or default of any warranty, covenant, term or condition of this Agreement by First Party. Any collections which Second Party permits First Party to make shall be subject to Paragraph 5 hereof. Second Party shall have the right at any time to notify the First Party's account debtors that the First Party's Accounts have been assigned to it, collect the Accounts directly in its own name and charge the collection costs and expenses to the account of First Party. Until Second Party shall give First Party other instructions, First Party shall continue to make collection of all Accounts for Second Party. All payments and other proceeds on account of an Account or Accounts shall be the specific property of Second Party; First Party shall receive such payments as Second Party's trustee and shall immediately deliver them to Second Party in their original form.

4. First Party warrants and agrees that each Account assigned to Second Party will represent a bona fide sale and delivery of merchandise usually dealt in by First Party in the course of its business, or the due performance of work, labor and/or services usually rendered by First Party, which such merchandise or such work, labor or services, as the case may be, have been finally accepted by the customer, and will be for a liquidated amount maturing as stated in the invoice rendered to such customer and the assignment thereof, and that the same shall not be subject to any offset, deduction, counterclaim, discount or condition. First Party shall deliver to Second Party a duplicate and/or original invoice, the original shipping document or other conclusive evidence of shipment, and such other documentation as Second Party may require.

5. First Party will receive in trust and deliver to Second Party, in original form and on the date of receipt thereof, all checks, drafts, notes, acceptances, cash and any other evidences of payment, applicable to any assigned Account. Merchandise received in settlement of any Assigned Account will likewise be received in trust for, segregated and delivered to or to the order of Second Party. All returns of merchandise, credits, customer claims or disputes, whether or not accepted by First Party, or allowances of any nature, will be reported by First Party or Second Party at least weekly.

6. Second Party is authorized to charge the First Party's loan account as an advance on the first of the succeeding month as its compensation on the average loan balance:

At the rate of 5% per annum over the prevailing Fleet National Bank, Providence, R.I. prime rate computed on a 360 day per annum basis. Any increase or decrease of the rate in effect on the last day of any month shall become the effective rate hereunder for the month following the change in the Fleet National Bank interest rate.

Monthly statements rendered by Second Party shall be deemed correct and to constitute the account as stated and will be fully binding on First Party unless written notice to the contrary is received by Second Party within thirty (30) days after same have been rendered. Five (5) working days shall be allowed subsequent to receipt by Second Party of all payments to permit bank clearance and collection. First Party agrees to a minimum monthly bookkeeping charge of $..... First Party agrees to promptly reimburse Second Party for all costs and expenses incurred by Second Party in connection with the effectuation of this agreement including, but not limited to, the Second Party's counsel fees.

7. That immediately upon the sale of merchandise or rendering of services, First Party will make appropriate entries upon its books disclosing such assignments of Accounts to Second Party, and will execute and deliver all papers and instruments, and do all things necessary to effectuate this Agreement and facilitate the collection of the Accounts. Second Party shall be vested with all of First Party's rights, securities and guarantees with respect to each Account, including the right of stoppage in transit. Notwithstanding the failure of First Party to execute and deliver such written assignment as aforesaid, each receivable created by First Party shall be deemed assigned to Second Party and shall become its property.

8. First Party warrants that it is solvent and that it will so remain, that its Federal, State and municipal taxes, including employment taxes, are current and will so remain, and that it has induced Second Party to advance against Accounts hereunder upon First Party's representation concerning its financial responsibility. First Party agrees to deliver certified financial statements within ninety (90) days of the end of its fiscal year and and interim financial statements, as requested, to Second Party. These financial statements are to be prepared by certified public accountants.

9. First Party agrees that every assigned Account, and any evidence of debt received thereon, will be paid in full at maturity. If any Account should not be so paid in whole or in part, First Party will, upon demand, pay Second Party the full amount remaining unpaid thereon, or at Second Party's option, such amount may be charged against and deducted from any advance then or thereafter made by Second Party to First Party. Such payment or deduction shall not constitute a reassignment, and Second Party may retain the Account as collateral for all obligations of First Party to Second Party until the same have been fully satisfied.

10. If any account-debtor of First Party shall reject or return any of the merchandise which created the Account, First Party will forthwith deliver the same to Second Party, or notify Second Party and hold the same, separate and apart from First Party's stock, in trust for and subject to the order of Second Party, and Second Party may take and sell the same, without notice, for such price and upon such terms as it may, in its sole and absolute discretion, determine. First Party shall remain liable for any difference between the original invoice price and the net proceeds of re-sale, after deducting any expenses incurred by Second Party in connection with such re-sale. At Second Party's option, First Party will pay to Second Party the original invoice price of such merchandise. In case any such merchandise should be resold, the Account thereby created shall be Second Party's property and shall be deemed assigned hereunder.

11. That none of First Party's accounts receivable and/or inventory have been previously sold or assigned to any person, firm or corporation and will not be sold or assigned, other than to Second Party, at any time during the term of this Agreement; nor will First Party executs any security agreements or UCC financing statements in favor of any other party or borrow against the security of any corporate asset without first obtaining Second Party's consent in writing. First Party does hereby grant a security interest in favor of Second Party covering all accounts as created by First Party, irrespective of whether or not the same are acceptable or ineligible for the purpose of the loans and advances contemplated hereunder.

12. That any monies, Accounts or property of First Party which may come into Second Party's possession as may, [illegible] credit of First Party may be retained by Second Party and applied to any obligation then owing by First Party to Second Party or the parent, subsidiary or any affiliate of Second Party. First Party further grants a security interest in all the aforementioned property to Second Party to secure any and all obligations, which First Party does hereby unconditionally guarantee, which may at any time be owed to Second Party or the parent, subsidiary or any affiliate of Second Party by any corporation which is a parent, subsidiary or affiliate of First Party, whether arising under this Agreement or otherwise, and whether or not then due and however created.

13. That Second Party's agents or examiners shall have the right at any time during business hours to review, inspect, examine, check and make extracts from First Party's books, accounts, records, orders, correspondence and all other papers.

14. That Second Party is authorized and empowered to compromise or extend the time for payment of any Account, for such amount and upon such terms as Second Party may determine, and to accept the return of the merchandise represented by any Account, all without notice to or consent by First Party, and without discharging or affecting First Party's obligations hereunder to any extent; and First Party will, upon demand, pay to Second Party the amount of any allowance that may be made hereunder.

15. That First Party hereby appoints Second Party or its designee as First Party's attorney, with power to redirect, to receive, open and dispose of all mail addressed to First Party; to execute and file financing statements under the Uniform Commercial Code; to endorse the name of First Party upon any notes, acceptances, checks, drafts, money orders or other evidences of payment or collateral that may come into Second Party's possession; to sign First Party's name on any invoice or bill of lading relating to any Accounts, on drafts against debtors, assignments and verifications of Accounts, and notices to debtors; to send verifications of Accounts to any debtors; and to do all other acts and things necessary to carry out this Agreement. All acts of Second Party or its designee are hereby ratified and approved, and Second Party or its designee shall not be liable for any acts of commission or omission, nor for any error of judgment or mistake of fact or of law. This power, being coupled with an interest, is irrevocable while any assigned Account shall remain unpaid.

16. That if any warranty or covenant of First Party under this Agreement shall be breached (whether caused by the act or default of First Party, an account debtor, or others), paragraph six (6) notwithstanding, Second Party's basic interest charge will immediately convert to 1/15th of 1% per day.

17. Second Party shall be entitled to recover from First Party the damages sustained by it, including, but not limited to, reasonable attorney's fees, court costs, collection charges, and all other expenses which may be incurred by Second Party; in liquidating any collateral; attempting to collect or enforce payment of any Account, either as against the account debtor, First Party, or its guarantors; or, in the prosecution or defense of any action or proceeding relating to the subject-matter of this Agreement, or otherwise, or in connection with any matter arising out of this Agreement, or otherwise.

18. That First Party waives presentment, demand, protest and notice thereof as to any instrument, as well as all other notices to which it might otherwise be entitled.

19. That Second Party's waiver of a particular breach by First Party of any covenant or warranty herein contained, or Second Party's failure at any particular time to exercise a right or privilege granted to it herein, shall not be deemed to constitute a waiver of any subsequent breach or any other right or privilege.

BOTH PARTIES AGREE:

20. First Party's obligations hereunder shall be payable on thirty days written demand, and Second Party's prior resource to collateral shall not constitute a condition of such demand. Second Party shall have the right to terminate this Agreement at any time upon the occurrence of an event of default as set forth above.

21. Unless otherwise terminated as herein provided, this Agreement shall continue in full force and effect for a period of three (3) years from the date hereof and shall be deemed renewed from year to year thereafter unless the First Party shall give the Second Party notice of its intention to cancel this Agreement at the end of any contract year. Said notice shall be sent by certified mail R.R.R. not later than thirty (30) days prior to the expiration of the third year or any renewal year. Termination shall not affect transactions having their inception prior to the effective date of termination. Notwithstanding the foregoing First Party shall have the option, on ten (10) days written notice to Second Party sent certified mail R.R.R. prior to the end of any calendar month, to terminate this Agreement as to future transactions, in which event First Party shall prepay to Second Party, at the end of said calendar month, by certified check or bank cashier's check, First Party's entire indebtedness then due thereunder, plus liquidated damages of a sum equal to 75% of Second Party's average monthly charges for the last six months or from the date of this Agreement, whichever is less, multiplied by the number of months remaining under this Agreement, but in no event less than $500. per month of the then unexpired term thereof. Prior to its actual receipt of payment as aforesaid, Second Party shall be free to exercise, without limitation, all of its rights under this Agreement or under any other agreement it may then have with First Party. First Party's breach of any warranty, covenant or undertaking set forth herein may be considered and construed at the sole option of Second Party, as a termination of this Agreement by First Party. In such event liquidated damages may likewise be computed as provided in this paragraph and shall be paid in addition to the then indebtedness of First Party to Second Party. The parties hereto agree to the liquidated damages set forth herein in lieu of attempting to determine the actual damages which Second Party will incur by reason of breach or premature termination by First Party.

22. That neither party shall be bound by anything not expressed herein, nor shall this Agreement be modified orally. This Agreement shall supersede any prior agreements between the parties.

23. If in the event of litigation between the parties over any matter connected with this Agreement or resulting from transactions hereunder, the right to a trial by jury is hereby waived.

24. That inasmuch as the transactions hereunder will take place at Second Party's Office in New York, this Agreement and all transactions, assignments and transfers hereunder, and all rights of the parties, shall be governed as to validity, construction, enforcement, and in all other respects by the laws of the State of New York. First Party waives the personal service of any and all process upon it herein, and consents that all such service of process may be by certified or registered mail, return receipt requested, directed to First Party at its address as provided herein; and service so made shall be complete two (2) days after the same shall have been posted as aforesaid. If any part of provision of this Agreement is invalid or in contravention of the applicable laws or regulations of any controlling jurisdiction, such part or provision shall be severable without affecting the validity of any other part or provision of this Agreement.

25. That this Agreement shall be binding upon the parties and their successors and assigns.

26. That this Agreement shall not become effective until accepted by Second Party at its office in New York, New York.

27. In no contingency or event whatsoever shall the interest rate charged hereunder exceed the highest rate permissible under any law which a court of competent jurisdiction shall, in a final determination, deem applicable hereto. In the event that such a court determines that Second Party has received interest hereunder in excess of the highest rate hereto, Second Party shall promptly refund such excess interest to Borrower.

28. See rider attached.

Dated, 10/23/92 19

CENTRAL STEEL DRUM COMPANY

Corporation

By ALAN FISCHER Pres. President

By NEIL FISCHER Secretary Treasurer

Witness

ACCEPTED:
AMBASSADOR FACTORS
DIVISION OF FLEET FACTORS CORP.

By William Boehle EVP

RIDER TO SECURITY AGREEMENT FOR CENTRAL STEEL DRUM COMPANY

28. First Party will pay to Second Party one percent (1%) annual facility fee for the one million dollar ($1,000,000) line of credit extended by Second Party. Said annual facility fee is payable immediately upon signing of this agreement and on each anniversary date hereafter.

21. The liquidating damages imposed for the premature cancellation by the First Party of this agreement, as described in paragraph above, shall be waived by Second Party only in the event of the First Party entering into a new financing agreement during the second year of this contract with any subsidiary or unit within the Fleet Financial Group.

RIDER TO SECURITY AGREEMENT
INVENTORY

Paragraph 4C (1) - Debtor shall give immediate written notice to the Secured Party and to insurors of loss or damage to the collateral and shall promptly file proofs of loss with insurers. Debtor hereby appoints the Secured Party the Attorney for the Debtor in obtaining, adjusting and cancelling any such insurance and endorsing settlement drafts and hereby assigns to the Secured Party all sums which may become payable under such insurance, including return premiums and dividends, as additional security for the indebtedness.

By: _____

SECURITY AGREEMENT

[Inventory]

AMBASSADOR FACTORS DIVISION
OF FLEET FACTORS CORP.

.....19.....

.....1460 BROADWAY
New York, N. Y.

Gentlemen:

This letter, when accepted by you, will become a security agreement supplementing and forming part of the Security Agreement [Accounts, Contract Rights, etc.] between us dated ....., 19.....:

1. We hereby grant a continuing Security Interest in your favor upon all of our present and hereafter-acquired Inventory, and the products and proceeds thereof. The term "Inventory" includes all our present raw materials, components, work in process, finished merchandise, and packing and shipping materials, wherever located; and all such chattels hereafter acquired by us by way of substitution, replacement, return, repossession or otherwise; and all additions and accessions thereto, and the resulting product or mass; and any documents of title representing any thereof. Your Security Interest shall attach to all of the foregoing without further act on your or our part. Upon your request, we will from time to time at our expense pledge and deliver such Inventory to you or to a third party as your bailee; or hold the same in trust for your account; or store the same in warehouse in your name; or deliver to you documents of title representing the same; or evidence your Security Interest in some other acceptable manner. The advances made and to be made hereunder are primarily to enable us to purchase raw materials and defray the cost of labor and similar manufacturing expenses which add to the value and marketability of the finished product manufactured, processed, or otherwise dealt in by us; and since such advances will be used for the foregoing purposes, your Security Interest shall be deemed to be a Purchase Money Security Interest.

2. Your said Security Interest shall secure (a) any advances which you may make hereunder, and (b) any other indebtedness which we may from time to time owe to you, fixed or contingent, whether arising under the aforesaid Security Agreement or after the termination thereof, or otherwise arising or acquired by you, and (c) all interest, charges, commissions, expenses (including attorneys' fees and legal expenses) and other items chargeable against us by reason of any of the foregoing. The term "advances" means moneys paid to us or to others for our account, or obligations to third parties incurred by you at our request.

3. We agree that the making of Inventory advances is always wholly discretionary on your part, and that you shall be the sole judge of the amount of such advances and of the total of such advances to be outstanding at any particular time. All such advances shall be repayable on demand, and shall bear interest at the same rate as specified in the aforesaid Security Agreement.

4. We warrant, covenant, and agree that:

(a) All Inventory is and shall remain free from all purchase-money or other liens or incumbrances except such as are held by you.

(b) You shall have the right at all times to immediate possession of all Inventory and its products and proceeds, and to inspect the Inventory and our records pertaining thereto.

(c) We shall insure and keep insured all Inventory for full value, with such coverage and in such companies as you may approve, at our expense, and the policies shall be duly endorsed in your favor and delivered to you. If we default in this regard, you shall have the right to insure and charge the cost to us. You assume no risk or responsibility in connection with the payment or non-payment of losses, your only responsibility being to credit us with any insurance payments received on account of losses.

(d) All excise, floor, sales and any other taxes that may be assessed upon or paid by you with respect to any of the Inventory shall be charged to and paid by us, and we agree to indemnify you against loss by reason of any such taxes. We will make due and timely payment or deposit of all Federal, State, and local taxes, assessments or contributions required of us by law, and will execute and deliver to you, on demand, appropriate Certificates attesting to the payment or deposit thereof.

(e) None of the Inventory shall be removed or disposed of without your written consent, except to bona fide purchasers thereof in the ordinary course of our business and on orders approved by you in writing. All our sales shall be promptly reported to you, and the accounts or other proceeds thereof shall be subject to your security interest in accordance with the aforesaid Security Agreement.

(f) You shall not be liable or responsible in any way for the safekeeping of any of the Inventory, or for any loss or damage thereto or for any diminution in the value thereof, or for any act or default of warehousemen or of any carrier, forwarding agency, or other person whomsoever, or for the collection of any proceeds, but the same shall be at our sole risk at all times.

(g) You shall have the right (but shall not be obliged) to pay and to charge us as an advance to us hereunder any dyeing, finishing, processing, or warehousing charges, landlord's bills, or other claims against or liens upon the Inventory.

5. Our default in the payment or performance of any obligation or undertaking on our part hereunder, or the happening of any event specified as an event of default in the aforesaid Security Agreement, shall be an event of default hereunder. Upon the happening of such or any other event of default, you shall have, in addition to all rights and remedies of a Secured Party under the Uniform Commercial Code or other applicable statute or rule, the following rights and remedies:

(a) You may peaceably by your own means or with judicial assistance enter our or any other premises and take possession of the Inventory, and remove or dispose of it on our premises, and we will not resist or interfere with such action.

(b) You may require us to assemble all or any part of the Inventory and make it available to you at any place designated by you and reasonably convenient to both parties.

(c) We agree that a notice sent to us at least 5 days before the date of any intended public sale or the date after which any private sale or other intended disposition of the Inventory is to be made, shall be deemed to be reasonable notice of such sale or other disposition. All notice is waived if the Inventory is perishable or threatens to decline speedily in value or is of a type customarily sold on a recognized market.

(d) In the event of any such public or private sale or other disposition, we will pay to you on demand any deficiency remaining after crediting the net proceeds of sale, less all expenses of taking, handling, and sale, including reasonable counsel fee. All rights of redemption are waived. You shall account to us for any surplus.

6. Until we shall notify you in writing to the contrary, you shall be justified in assuming that our Inventory is and will continue to be principally kept at our address specified below.

(*) SEE RIDER, PARAGRAPH 4.(c-1) ANNEXED HERETO AND FORMING PART OF THIS SECURITY AGREEMENT.

Very truly yours,

AMERICAN PAPER PACKAGING CO. INC.
(Name of Debtor)

by X .....
(signature)

.....
(typed or printed name of signatory)

.....
(title of signatory)

280 WRIGHT STREET
(address of Debtor)

NEWARK, N.J.

Accepted at New York, N. Y.:
AMBASSADOR FACTORS DIVISION OF FLEET FACTORS CORP.
(Name of Secured Party)

by X .....
(signature)

.....
(typed or printed name of signatory)

SECURITY AGREEMENT

[Equipment]

CENTRAL STEEL DRUM COMPANY (herein called "Debtor")

and

AMBASSADOR FACTORS DIVISION FLEET FACTORS CORP. (herein called "Secured Party") hereby agree as follows:

1. Debtor grants to Secured Party a security interest in the following Equipment (herein called "Collateral"):

A. All of Debtor's present machinery, equipment, furniture, tools, dies, jigs, and attachments (including, but not limited to, the items listed and described on the Schedule of Equipment attached); and

B. All of Debtor's additional Equipment, of like or unlike nature, to be acquired hereafter pursuant to this Security Agreement or otherwise, and all replacements, accessions, and improvements to any of the foregoing.

2. Said security interest shall secure (1) the payment of Debtor's indebtedness ~~[illegible]~~ pursuant to the terms and conditions of the Security Agreement-Accounts Receivable between Debtor and Secured Party of even date.

(2) all other existing debts and liabilities of Debtor to Secured Party; (3) all future advances made by Secured Party to or for the account of Debtor, including advances for insurance, repairs to and maintenance of the Collateral, taxes, and discharge of any other lien, security interest or encumbrance; (4) all other indebtedness, however created, arising, or acquired by Secured Party, which Debtor may now or hereafter owe to Secured Party; and (5) all costs and expenses incurred in the collection of any of the foregoing, including reasonable attorneys' fees.

3. Until default hereunder, Debtor shall be entitled to possession of the Collateral, which shall be kept only at

(Street) (City) (County) (State)

and the following additional addresses (if any)

4. Debtor warrants, covenants and agrees that: (1) Debtor is the sole owner of the Collateral free from any lien, security interest or encumbrance, has the right to grant Secured Party a security interest therein, and will defend the Collateral against the claims and demands of all persons; (2) Debtor shall not sell, lease, encumber, remove, conceal or grant or permit any further security interest in the Collateral, nor part with possession of any thereof, nor permit the same to be used for hire nor in violation of any law or ordinance; (3) Debtor shall maintain the Collateral in good condition and repair at Debtor's sole expense; (4) Debtor will pay all taxes levied on the Collateral, and will make due and timely payment or deposit of all Federal, State, and local taxes, assessments or contributions required by law and will execute and deliver to Secured Party, on demand, appropriate Certificates attesting to the payment or deposit thereof; (5) No financing statement covering the Collateral, or any part thereof, is on file in any public office, and Debtor's present or hereafter-acquired Collateral is and shall not be or become subject to any purchase-money or other lien or security interest except in favor of Secured Party; (6) Debtor shall procure and maintain insurance on the Collateral for the full term of this security agreement, against the risks of fire, theft and such other risks as Secured Party may require (including the risk of collision in case any part of the Collateral is a motor vehicle) by insurers satisfactory to Secured Party, and shall deliver to Secured Party a fully paid policy or policies of insurance properly endorsed in favor of Secured Party; (7) Debtor will permit Secured Party to inspect the Collateral at any time; (8) Loss, theft, damage, destruction or seizure of the Collateral shall not relieve the Debtor from the payment of any indebtedness secured hereby; (9) The Collateral is not now and will not hereafter be so affixed to realty as to become a part thereof or a fixture; (10) The execution and delivery hereof, if Debtor is a corporation, has been duly authorized by all necessary action of Debtor's directors and shareholders; (11) Secured Party is authorized to execute and file, at Debtor's cost, such financing statements and other instruments or documents as may be necessary to perfect and protect Secured Party's security interest; and (12) In case of Debtor's default in performing any warranty, covenant, or undertaking hereunder, Secured Party may (but shall not be obliged to) procure the performance thereof and add the cost thereof, with interest, to the indebtedness secured hereby.

5. The occurrence of any of the following events or conditions shall, at the option of Secured Party and without notice or demand, constitute an event of default hereunder: (1) Default in the due payment of any indebtedness secured hereby; or (2) Failure of Debtor to perform any covenant or undertaking on Debtor's part herein; or (3) Breach of any warranty or falsity of any representation made by Debtor to Secured Party; or (4) Attachment or seizure of or levy upon the Collateral; or (5) Institution of any proceeding by or against Debtor or Debtor's business under any bankruptcy or insolvency statute, or Debtor's assignment for benefit of creditors, or the appointment of a receiver for Debtor or the Collateral, or the filing of a tax lien notice against Debtor by any taxing authority; or (6) Reasonable insecurity of Secured Party; or (7) Loss, theft, substantial damage, destruction, sale, encumbrance, concealment, removal, or forfeiture of the Collateral or any material portion thereof.

6. Upon the occurrence of any event of default, Secured Party may declare all Debtor's indebtedness secured hereby immediately due and payable, and thereupon Secured Party shall have the right to take possession of the Collateral and shall have all other rights and remedies of a Secured Party under the Uniform Commercial Code. Unless the Collateral is perishable or threatens to decline speedily in value or is of a type customarily sold on a recognized market, Secured Party shall give Debtor reasonable notice of the time and place of any public sale thereof or of the time after which any private sale or other intended disposition thereof is to be made. Debtor agrees that the requirements of reasonable notice shall be met if notice is mailed to Debtor at the address of Debtor shown below not less than five (5) days prior to the sale or other disposition. Expenses of retaking, holding, preparing for sale, selling, or the like shall include Secured Party's reasonable attorneys' fees and legal expenses. Secured Party may require Debtor to assemble the Collateral and make it available to Secured Party at a place to be designated by Secured Party which is reasonably convenient to both parties. Secured Party is authorized to maintain, sell, or dispose of the Collateral on the premises of the Debtor. Secured Party's rights and remedies shall be cumulative and not alternative.

7. This Security Agreement shall be construed and enforced according to the laws of the State of New York. Waiver of any default shall not constitute waiver of any subsequent or other default. All rights of Secured Party shall inure to the benefit of its successors and assigns, and all obligations of Debtor shall bind his or its heirs, successors, personal representatives, successors and assigns.

Dated: Dec. 23, 19 92

(*) SEE RIDER, PARAGRAPH 4. (6a) ANNEXED HERETO AND FORMING PART OF THIS SECURITY AGREEMENT.

Debtor: CENTRAL STEEL DRUM COMPANY

by X [signature] Pres

(signature)

(typed or printed name of Signatory)

(Title of Signatory)

Debtor's Mailing Address: 704 DOREMUS AVENUE
NEWARK, NEW JERSEY 07105

Secured Party: AMBASSADOR FACTORS DIVISION FLEET FACTORS CORP

by X [signature] EVP

(signature)

(typed or printed name of Signatory)

(Title of Signatory)

Secured Party's Mailing Address: 1450 BROADWAY
NEW YORK, NY 10018

RIDER TO SECURITY AGREEMENT
EQUIPMENT

Paragraph 4. (6a) - Debtor shall give immediate written notice to the Secured Party and to insurors of loss or damage to the collateral and shall promptly file proofs of loss with insurors. Debtor hereby appoints the Secured Party the attorney for the Debtor in obtaining, adjusting and cancelling any such insurance and endorsing settlement drafts and hereby assigns to the Secured Party all sums which may become payable under such insurance, including return premiums and dividends, as additional security for the indebtedness.

By: _____

GLENN R. REYNOLDS
STATE INVESTIGATOR
BUREAU OF SPECIAL INVESTIGATIONS

DIVISION OF LAW
RICHARD J., HUGHES JUSTICE COMPLEX
CN 093
TRENTON, N.J. 08625

TELEPHONE
(609) 984-5189

STATE OF NEW JERSEY

DEPARTMENT OF LAW AND PUBLIC SAFETY
DIVISION OF LAW
MEMORANDUM

DATE: July 11, 1996

TO: George Smajda, Chief
Environmental Investigations Unit

FROM: Glenn Reynolds, Investigator
Environmental Investigations Unit

SUBJECT: Central Steel Drum
DOL DKT. NO.: 94-60323

INVESTIGATIVE SUMMARY

On April 24, 1995, I was assigned to assist DAG Anthony Drollas by investigating whether the Department can pursue Central Steel Drum (CSD) customers as responsible parties and demand their participation in the cleanup. The thrust of the investigation was to ascertain if CSD routinely accepted heavy drums or drums containing more than one inch of sediment as allowed by federal law.

On April 25, 1995, I telephoned Bruce H. Levitt, Esq., Bankruptcy Trustee for Central Steel Drum, Ph. (201) 335-0004 and received approval to copy CSD business records held by his accountant Donald Faber, 546 Valley Road, Upper Montclair, N.J. I also received approval to remove all remaining business records from the CSD facility at 704 Doremus Ave., Newark, N.J.

On May 8, 1995, I traveled to the Central Steel Drum facility at 704 Doremus Avenue, Newark, N.J. with Inv. Dick Skobo. We met with the owner of the property, Mr. Lee Baron and his Attorney Yale Lazeris reference removal of CSD records from the facility. A total of 14 boxes of records were retrieved from two office

trailers. The boxes have been marked and stored as part of this investigation.

I interviewed Mr. Baron while at the CSD site. He advised that he bought the facility from Interchemical Corporation, Printing Ink Division in 1951. The property was very clean, there were three buildings, each 100' by 150' located on the property. Mr. Baron advised that he took about a year to modify the site and install equipment for drum reconditioning. He operated the drum reconditioning plant for approximately twenty five years at which time he leased the property. He advised that the group he leased the plant to ran it into the ground and made a mess polluting the area.

I questioned Mr. Baron about Interchemical's Printing Ink Division. He advised that he had no information about the Printing Ink Division, blue prints or product information. He did say that Interchemical Corporation ran a very clean operation. Mr. Baron advised that they moved the Printing Ink Division to Elizabeth, N.J.

A review of the records revealed numerous computer printouts, which include old employee records, and business transaction records. The files also include correspondence with various customers, including the Department of Environmental Protection (DEP). A complete set of current computer discs including employee and business records are also part of the files.

The computer discs were given to Bill Davis of the Division of Law, Computer Support Team for analysis. He determined that the computer discs were encrypted with a code and therefore the information could not be accessed. In addition the software was an obsolete Tandy Company product designed to play on an old Radio Shack computer system.

The old employee computer printouts were analyzed in an attempt to develop a current employee list for interview purposes. A limited number of employees were located due to the transient nature of the CSD workers and the age of the data.

On May 9, 1995, I traveled to Faber Associates Accounting Firm, 546 Valley Road, Upper Montclair, N.J. I met with Mr. Donald Faber who assisted in identifying the companies that shipped drums to CSD.

Mr. Faber prepared a receipt and allowed me to take the records for photocopying at the Division Of Law Offices in Trenton. The records included CSD invoices and ledgers for 1992 and 1993. The CSD ledgers and invoices were photocopied and retained as evidence with this case.

On May 12, 1995, I met with Jim DeNoble, DEP, State Case Manager for Central Steel Drum. I reviewed the Bureau of State Case Management files and made copies which are part of this case file.

On May 16, 1995, I telephoned Anthony A. Mangeri, a former CSD employee who resides at 3 Carlton Ave., Spotswood, N.J. 08884, Ph. (908) 251-6505. I advised Mr. Mangeri who I was and the purpose of my inquiry. He advised that he was in maintenance and worked until CSD closed in February of 1994. He advised that he didn't know any of the truck drivers. He suggested that I call Alan Fisher or Jerry Greenberg. He stated that he didn't have any knowledge of any heavy drums being accepted by CSD.

On June 8, 1995, I telephoned Paul Adamson, a former CSD Maintenance Engineer Supervisor. Mr. Adamson resides at 126 Livingston Street, Westfield, N.J., home Ph. (908) 232-9116, work (201) 242-4882 (7am to 3pm). I advised Mr. Adamson who I was and the purpose of my inquiry. He stated that John H. Gibson was a plant manager in charge of production. He recalled that he lived in Pennsylvania, but didn't know his address. He advised that the principals Allen Fischer, Neil Fischer and Gerry Greenberg directed the plant operations. Mr Adamson stated that he didn't know any of the drivers personally and couldn't provide any information about them. I questioned Mr. Adamson about heavy drums. He stated that there was a staging area for heavy drums to go back to customers. He wasn't aware of customer information or what companies sent heavy drums. Mr. Adamson worked at CSD for approximately 13 years until it shut down in February 1994.

On June 8, 1995, I telephoned John Scuorzo a former CSD Supervisor, currently living at 142 N. 22nd St., Kenilworth, N.J., Ph. (908) 272-6145. I advised Mr. Scuorzo who I was and the purpose of my inquiry. He stated that he went to work for CSD in 1985 and worked until approximately 1988. He came back in 1991 and worked until March of 1992. When he first started he worked in the stock room area. He became a supervisor and worked in the finishing area. He stated that he took his orders from Plant Managers, Norm Cohen and

John Gibson.

I questioned Mr. Scuorzo about his knowledge of plant operations. He advised that he worked in the finishing area and wasn't familiar with the intake of drums. He didn't have any knowledge of customers shipping heavy drums.

At this point in the interview Mr. Scuorzo advised that he would consent to an in-depth interview, however he wanted to consult with his attorney first. The interview was terminated at that time.

On June 8, 1995, I also telephoned Norman Cohen, CSD, Plant Manager who currently resides at 1980 Birch St., Scotch Plains, N.J., Ph. (908) 322-8784. I advised who I was and the purpose of my inquiry. I also advised him that he may be considered a possible responsible party because of his position as a Plant Manager. He stated that from 1984 to 1988 he was assistant to the President, Alan Fischer and from 1988 through 1993 he was the Plant Manager. He advised that he was interviewed by New Jersey Division of Criminal Justice investigators in 1990 during their investigation of CSD. He stated that Criminal Justice took their records and investigated CSD in 1990 and found no laws were broken. He stated that Criminal Justice returned their business records. Mr. Cohen advised that he had nothing further to add to the statements that he has already given.

On June 14, 1995, I telephoned Investigator Mark Ferencevych, Criminal Justice, Environmental Crimes Unit, Jersey City Office, Ph. (201) 217-7249 in reference to his investigation of CSD case number 90-2505E. He advised that it was an air pollution case. Central Steel Drum had been operating an unpermitted smokestack and had 1.2 million in NOV's they hadn't paid the Department of Environmental Protection (DEP). He recalled the smokestack was not in use when they executed their search warrant. He recalled the place had sloppy housekeeping. They confiscated business records which were later returned. He advised that there were no indictments because CSD had ceased using the smokestack by the time they executed the warrant. He recalled interviewing employees about heavy drums. Heavy drums were placed on a concrete pad in front of the building to be returned to the customers. He recalled that most or all of the drums at the site and in trailers were empty. He recommended I review his investigation report for additional information.

On June 14, 1995, I reviewed the deposition of Gerald Greenburg taken in the civil matter State Of New Jersey Department Of Environmental Protection, vs. Central Steel Drum Company, Dorothy Greenburg, Bessie Baron, Jane Ratner-Mattson, and Marion Ratner-Abrams, Essex County Superior Court, Docket NO. C-152-91. The deposition was taken at the offices of Wilentz, Goldman & Spitzer, ESQS., 90 Woodbridge Center Drive, Woodbridge, N.J. on August 1, 1991. On page (7) Mr. Greenburg states that he is the Vice President in charge of operations at Central Steel Drum. He states that everyone outside the office in manufacturing reports to him. On page (8) Mr. Greenberg states that he just has one supervisor under him by the name of John Gibson. On page (41) Mr. Greenburg is questioned about the procedure for handling heavy drums. According to Mr. Greenburg CSD has a procedure in place whereby all drums are inspected for compliance with the RCRA empty standards of one inch of residue or less. The inspection is a combination of sampling of weight of the drum and visual inspection. If a drum exceeds the one inch standard it is placed in an over pack drum. The drum is then placed on a cement pad which is designated as a temporary storage area for heavy drums awaiting return to the customer.

On June 14, 1995, I reviewed the deposition of Neil Fischer taken in the above civil action at the offices of Wilentz, Goldman & Spitzer, ESQS., on July 25, 1991. On page (8) Mr. Fischer states that he is the Secretary-Treasurer of Central Steel Drum. He states that he is the Office Manager on page (11). On page (44) Mr. Fischer is questioned about the procedures for handling heavy drums. Mr. Fischer states that CSD has it's customers sign off indicating that the drums are empty or contain less than one inch of residue. Drums that they find to have more than one inch of material in them are stored on a concrete pad which is known as the heavy storage area. According to Mr. Fischer the workers unloading drums from the trucks are trained in being able to determine when a drum is heavy and when a drum is not heavy. He advised that the heavy drums are placed in over pack drums before being placed in the heavy storage area for return to the customer. On page (48) Mr. Fischer describes the procedure followed for marking the heavy drums and finding out wheat the contents are before they are stored on the pad. He advised that DEP has copies of all the labels that they place on the drums. He also states that the purpose of their labeling is to log and. The labels are are customer labels like

product labels and flammable labels,

On July 5, 1995, I obtained a copy of the Criminal Justice investigation number CJ90-2505-E from SI. Wally Stafford (see case file). A review of the file revealed that Criminal Justice Investigators executed a search warrant at Central Steel Drum Company on October 17, 1990 and interviewed numerous CSD employees. The investigation revealed that CSD had a procedure in place for checking for heavy drums and returning those found to the customer. The investigation also revealed there was no evidence of illegal dumping at the site nor were heavy drums routinely accepted at the facility.

On July 13, 1995, I interviewed Cesar Balahadia at his residence located at 153 Boyd Avenue, Jersey City, N.J., Ph. (201) 432-7405. He advised that he was employed by Central Steel Drum (CSD) until September of 1993. During his time of employment he was the company bookkeeper.

Mr. Balahadia stated that his supervisor was the Company President, Alan Fischer. Mr. Fischer supervised the whole operation on a daily basis through his subordinates. He advised that John Gibbson was the Plant Manager. Norman Cohen was an Assistant Plant Manager in charge of the Yard Department. Gerald Greenberg was Vice President in charge of Operations. Both John Gibbson and Norman Cohen reported to Greenburg. Neil Fischer was the Secretary/Treasurer and worked in the office. He was the liaison with the Department of Environmental Protection (DEP) and customers.

I questioned Mr. Balahadia about CSD procedures to deal with heavy drums. He advised that as far as he understood heavy drums would not be accepted. They would be returned to the customer or would not be unloaded. He stated that as far as he knew there were no records maintained by CSD for the return of heavy drums.

Mr. Balahadia stated that as far as his records were concerned all incoming drums complied with the law. If a drum could not be reconditioned the customer would be billed.

I asked Mr. Balahadia what type of computer he used in the CSD office and how he gained access. He stated that the office used a Great Plains Computer. He gained access to computer system by

entering his first name as the code. He believes everyone used their first name as an access code.

Mr. Balahadia stated that Alan Fischer had a Tandy Computer. The CSD back-up computer files were maintained on the Tandy Computer by Neil Fischer. He also recalled that there was a part time student employee from Rutgers named Mathew, who also maintained the back-up files. The student worked in the morning several days a week for about two years.

When questioned, Mr. Balahadia stated that he never had access to the Tandy Computer or back-up files. He advised that he didn't know the model of the computer nor did he know any access codes.

I reviewed the CSD accounts receivable and accounts payable ledgers for 1992 through 1994 with Mr. Balahadia. He stated that the accounts payable show amounts owed as well as credits. The credits are cases where CSD has paid the company, but has not received the drums, or receipt has not been entered into the books. He advised that the credits will show up at a later date once the receipts have been entered.

Mr. Balahadia stated that in 95% or more of accounts payable CSD was buying drums. He advised that an exception would be Philadelphia Department of Transportation, in which case CSD had a contract to Pick up good drums for reconditioning. He also stated that if CSD was buying drums in most cases they were also selling that customer reconditioned drums. CSD had customers that just purchased reconditioned drums. Those purchases would show up in accounts receivable.

Mr. Balahadia advised he was working the day the state executed a search warrant on CSD. He recalled being asked a few questions by a Criminal Justice investigator. He recalled that records were confiscated and later returned.

On August 14, 1995, I also spoke with Jim DeNoble, DEP, Case Manager for the CSD site. He advised that the TCLP test was not in existence in 1986 when the soil and water samples were taken at the site.

<u>Conclusions and Recommendations</u>

Based on my investigation I conclude that CSD did not routinely accept heavy drums from their customers. The company had a procedure in place for identifying and returning heavy drums. Also its was found there was no evidence of illegal dumping by CSD at the site.

I recommend that the CSD customers not be considered responsible parties based on my findings.

AKZO NOBEL

Coatings

January 16, 1998

Ms. Suzanne Becker
Removal Action Branch
Emergency and Remedial Response Division
U.S. Environmental Protection Agency, Region II
2890 Woodbridge Avenue
Edison, New Jersey 08837

RE: Request For Information Pursuant To Section 104(e) of CERCLA, 42 U.S.C. Section 9604(e); Central Steel Drum, Superfund Site, Newark, Essex County, New Jersey

Dear Ms. Becker:

Akzo Nobel Coatings Inc. ("Akzo Nobel Coatings") has received the United States Environmental Protection Agency's ("USEPA") letter of November 26, 1997, in which USEPA requests information regarding the above-referenced site pursuant to Section 104 of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). Akzo Nobel Coatings is responding to USEPA's request for information. Pursuant to my telephone conversation of December 22, 1997, with you, USEPA agreed to extend the reply date to January 21, 1998.

With respect to USEPA's request for information, Akzo Nobel Coatings objects to USEPA's instructions and questions insofar as they conflict with the Federal Rules of Civil Procedure and to the extent that USEPA's questions seek information protected by Attorney Client Privilege, Work Product and/or Self-Critical Analysis. Further, Akzo Nobel Coatings objects to each and every definition and/or question to the extent that the definition and/or question is vague, overly broad, harassing, and/or unduly burdensome. Finally, Akzo Nobel Coatings objects to providing information which: (1) is not in its possession, custody or control; (2) is in the possession, custody or control of USEPA or third parties; or (3) is beyond the scope of USEPA's authority under CERCLA Section 104.

Akzo Nobel Coatings Inc.
P.O. Box 37230
Louisville, KY 40233-7230
4730 Crittenden Drive
Louisville, KY 40209
Tel. (502) 367-6111
Fax (502) 375-5475

BBH000004

Akzo Nobel Coatings' good faith in responding to the request should not be construed as an admission or acknowledgment of any liability, or waiver of any rights or defenses by Akzo Nobel Coatings with respect to any claim which may be the subject of the request or relates in any way to the above-referenced site. Additionally, in providing this response, Akzo Nobel Coatings does not in any way waive, but specifically preserves all objections to competency, relevancy, materiality and admissibility of the responses or documents produced in any proceedings.

Subject to and without waiving the above objections, Akzo Nobel Coatings responds to USEPA's request for information as follows:

General

Akzo Nobel Coatings notes the USEPA's request for information was addressed as follows:

"Akzo Chemical
100 Belmont Street
Somerset, NJ 08873-1204"

Akzo Nobel Coatings would like to clarify that the Somerset, New Jersey plant is not owned by Akzo Chemicals, but is owned by Akzo Nobel Coatings. Therefore, Akzo Nobel Coatings is responding to USEPA's request for information. Please change your database to Akzo Nobel Coatings and send future correspondence to:

Douglas W. Butler
Akzo Nobel Coatings Inc.
4730 Crittenden Drive
Louisville, KY 40209

Further, Akzo Nobel Coatings is responding to USEPA's request for information with respect to its Somerset, New Jersey plant only. Akzo Nobel Coatings has no other manufacturing plant in the state of New Jersey, and has no manufacturing plants in the states of New York, Pennsylvania, Delaware or Maryland. To the best of its information and belief, Akzo Nobel Coatings does not believe that any other manufacturing plant of Akzo Nobel Coatings conducted business with Central Steel Drum.

USEPA Specific Requests

1. a. Akzo Nobel Coatings Inc.
   b. Corporation, Delaware
   c. Akzo Nobel Coatings objects to this request in that it is vague, overly broad, harassing and unduly burdensome. Subject to and without waiving this objection, Akzo Nobel Coatings provides the following information:

   The officers of Akzo Nobel Coatings are:

   Ove Mattsson, President
   Robert J. Torba, Vice President, General Industrial Coatings
   Pete Scolaro, Vice President, Manufacturing and Engineering
   William O. Weiss, Secretary
   Natasha Nelson, Assistant Secretary
   Terrance R. Francek, Treasurer, Controller, Industrial Coatings
   Janice Lucchesi, Tax Officer

The business address of Akzo Nobel Coatings is as follows:

Street address:

Akzo Nobel Coatings Inc.
4730 Crittenden Drive
Louisville, KY 40209

Mailing Address:

Akzo Nobel Coatings Inc.
P.O. Box 37230
Louisville, KY 40233

d. Akzo Nobel Coatings objects to this request in that it is vague, overly broad, harassing and unduly burdensome. Subject to and without waiving this objection, Akzo Nobel Coatings provides the following information.

Akzo Nobel Coatings' immediate parent corporation is Akzo Nobel Inc. The officers of Akzo Nobel Inc. are:

Piet Provo Kluit, President
Peter S. Gold, Senior Vice President, Law, General Counsel and Secretary
Eileen R. Keller, Financial Vice-President and Treasurer
Philip E. Radtke, Controller
Glenn R. Molski, Assistant Treasurer
Peter W. Mehlman, Assistant Secretary

The business address of Akzo Nobel Inc. is:

Akzo Nobel Inc.
300 South Riverside Plaza
Chicago, Illinois 60601

e. Akzo Nobel Coatings objects to this request in that it is vague, overly broad, harassing and unduly burdensome. Subject to and without waiving this objection, Akzo Nobel Coatings provides the following information.

With respect to the Somerset, New Jersey manufacturing plant of Akzo Nobel Coatings and from the time period of 1980 to date, the Somerset manufacturing plant as owned by Reliance Universal Inc. (New Jersey Corporation). On January 1, 1990, Reliance Universal Inc. (New Jersey) was merged into Reliance Universal Inc. (Kentucky Corporation). On that same date, Reliance Universal Inc. (Kentucky) was merged in Reliance Holdings Inc., and Reliance Holdings Inc. changed it name to Akzo Wood & Specialty Coatings Inc. On January 1, 1991, Akzo Wood and Specialty Coatings Inc. was merged into Akzo Coatings Inc. Akzo Coatings Inc. changed its name to Akzo Nobel Coatings Inc. on April 22, 1994.

f. Akzo Nobel Coatings objects to this request in that it is vague, overly broad, harassing and unduly burdensome. Subject to and without waiving this objection, Akzo Nobel Coatings provides the following information:

To the best of its knowledge and business, Akzo Nobel Coatings did not conduct business with Central Steel Drum in a name other than those disclosed above.

2. Akzo Nobel Coatings objects to this request in that it is vague, overly broad, harassing and unduly burdensome. Subject to and without waiving this objection, Akzo Nobel Coatings provides the following information:

The Somerset, New Jersey manufacturing plant manufactures industrial coatings and paint. The types of coatings and paint fall into two broad categories:

(1) Solvent borne coatings are made by mixing pigments, resins and aliphatic and aromatic hydrocarbons. The raw materials are mixed in tanks and containers to obtain a specified blend, then poured off into bulk tankers or smaller containers (quite often 55 gallon drums).

These coatings and paints are used in the wood coatings, business machine and coil (metal) fabricator industries as a surface coating or paint.

(2) Water borne coatings are made by mixing pigments, resins and water. The raw materials are mixed in tanks and containers to obtain a specified blend, then poured off into bulk tankers or small containers (quite often 55 gallon drums).

These coatings and paints are also used in the wood coatings, business machine and coil (metal) fabricator industries as a surface coating or paint.

The nature of the business has not changed over the period from 1980-1994.

3. Akzo Nobel Coatings objects to this request in that it is vague, overly broad, harassing and unduly burdensome. Subject to and without waiving this objection, Akzo Nobel Coatings provides the following information:

The operations at the Somerset, New Jersey location may be described in the following way:

The ingredients (called raw materials) used in the manufacturing of the coatings and paints are delivered to the operation in bulk tankers, paper and plastic bags or sacks, and in plastic, metal and fiber containers in various sizes and shapes.

The raw materials are placed in permanent or portable containers and tanks located on the manufacturing floor. The raw materials are then mixed according to a formula. Once the raw materials have reached a formulated specification, the paint or coating (called a finished good or product) is then poured or drained off into another container for shipment to the customer. The finished good or product container may be a bulk tanker, a 240 gallon tote tank, or a smaller container like a 55 gallon drum.

The chemical substances used to clean equipment or machinery is generally a material referred to as "wash solvent", which is primarily acetone or methyl ethyl ketone or a mixture of both.

4. Akzo Nobel Coatings objects to this request in that it is vague, overly broad, harassing and unduly burdensome. Subject to and without waiving this objection, Akzo Nobel Coatings provides the following information:

a. Akzo Nobel Coatings did contract with Central Steel Drum for the recycling or reconditioning of barrels, drums or other containers. During the course of the recycling or reconditioning transaction, some drums from Akzo Nobel Coatings were considered no longer usable and were defined as scrap.

b. Refer to the answer in question 4(a).

The specific nature of services rendered and products sold to Akzo Nobel Coatings, Somerset, New Jersey can be described as follows:

Central Steel Drum supplied Akzo Nobel Coatings with containers (both new and reconditioned) to be used as containers for the various paint and coating products manufactured at Somerset, New Jersey and

shipped to Akzo's customers. Central Steel Drum would deliver the new or reconditioned containers to the Akzo operation. The new or reconditioned containers were delivered to the Akzo operation in a 40 foot trailer. As the new or reconditioned containers were removed from the trailer, used empty containers that were to be reconditioned were placed on the 40 foot trailer.

Eventually, all of the new or reconditioned containers were removed from the trailer and the trailer was refilled with empty containers that were then picked up and returned to Central Steel Drum for reconditioning and reuse.

c. No written contracts or agreements between Akzo Nobel Coatings, Somerset, New Jersey and CSD were found.

5. Akzo Nobel Coatings objects to this request in that it is vague, overly broad, harassing and unduly burdensome. Subject to and without waiving this objection, Akzo Nobel Coatings provides the following information:

a. Refer to answers for questions 2 and 3 for the nature of the operation.

Construction of the Akzo Nobel Coatings operation in Somerset, New Jersey began in 1968 and manufacturing began sometime in 1970.

b. Akzo Nobel Coatings Inc.
100 Belmont Drive
Box 389
Somerset, New Jersey 08873-1204

The RCRA ID number is: NJD 00 214 2388

6. Akzo Nobel Coatings objects to this request in that it is vague, overly broad, harassing and unduly burdensome. Subject to and without waiving this objection, Akzo Nobel Coatings provides the following information:

The information sought by USEPA in this question (#6) can be answered by referring to the documents in Enclosure A.

The Enclosure A documents are copies of credit documentation that Akzo received from CSD for containers that were sent back to CSD for reconditioning. The credit memo from CSD annotates the type and number of drums returned to CSD. Attached to some of the CSD credit memos is a Reliance (Akzo) Bill of Lading. This was, quite often, not an exact count of the drums being sent back to CSD. Akzo used the CSD credit memo to arrive at an accurate count of drums sent to CSD.

a. See Enclosure A.

b. See Enclosure A (summary sheets).

c. See Enclosure A (summary sheets).

d. The purpose of the transaction was to send containers back to CSD for reconditioning.

e. The containers that were the subject of the transaction were empty. They were empty according to the guideline's directives and instructions specified by CSD (see Enclosure B).

In addition, Akzo Nobel Coatings had Safety Operating Procedures (SOP's) at the operation for insuring containers were empty (see Enclosure C).

e(1) Containers were empty.

e(2) Containers were empty.

7. Akzo Nobel Coatings objects to this request in that it is vague, overly broad, harassing and unduly burdensome. Subject to and without waiving this objection, Akzo Nobel Coatings provides the following information:

Refer to Enclosure A.

8. Akzo Nobel Coatings objects to this request in that it is vague, overly broad, harassing and unduly burdensome. Subject to and without waiving this objection, Akzo Nobel Coatings provides the following information:

The following person(s) may have knowledge of transactions or may have had responsibility regarding transactions with CSD.

(1) Ron Almquist, Manager of Manufacturing
Akzo Nobel Coatings
100 Belmont Drive
Somerset, NJ 08873-1204
(732) 469-3700

(2) Bill Baumann - previous Plant Supervisor
Address same as above. Current plant employee.

(3) S.P. (Stuart) Colangelo - previous 2nd shift Supervisor
Address same as above. Current - plant employee

(4) Tim Gordon - shipping/receiving
Address same as above.

(5) Carol Kopicki - shipping/receiving
Address same as above.

(6) Tom McLaughlin - Assistant Manufacturing Manager
Address same as above.

(7) Robert D. Scanga, Jr. - previous shipping/receiving
(address unknown)

(8) Robert D. Scanga, Sr. - previous General Manager
Kenmont Company, Inc.
410 Route 10, Suite 206
Ledgewood, NJ 07852
(973) 584-4410

9. Akzo Nobel Coatings objects to this request in that it is vague, overly broad, harassing and unduly burdensome. Subject to and without waiving this objection, Akzo Nobel Coatings provides the following information:

The empty containers sent to CSD would have contained raw materials used in the manufacturing of industrial coatings and paints. In addition, some of the empty drums sent to CSD would have, at one time, contained finished good products manufactured by Akzo Nobel Coatings - Somerset.

a. Akzo Nobel Coatings has enclosed (refer to Enclosure D) Material Safety Data Sheets that are representative of the types of substances that would have been in the containers prior to being emptied and sent to CSD. The Enclosure D material can be described as follows:

Enclosure D

1) Rhoplex WL-91 Emulsion - This is a water-base resin (liquid) raw material supplied to Akzo in a fiber drum.

2) Hycar 26092 - This is a water-base resin (liquid) raw material supplied to Akzo in a fiber drum.

3) VCAR Vehicle 452 - This is a resin (liquid) raw material supplied to Akzo in a steel drum.

4) DOWANUL PMA Glycol Ether Acetate - This is a solvent raw material supplied to Akzo in a steel drum.

5) Aromatic 100 - This is a solvent blend (liquid) raw material supplied to Akzo in a steel drum.

6) COMPAQ Beach Gray HB water-base - This is a finished good product manufactured by Akzo. This is a water-base coating.

7) RX0101078-R Lacquer Base - This is a finished good product manufactured by Akzo. This is a solvent-base coating.

b. Refer to Enclosure D.

10. Akzo Nobel Coatings objects to this request in that it is vague, overly broad, harassing and unduly burdensome. Subject to and without waiving this objection, Akzo Nobel Coatings provides the following information:

The procedures for emptying the container is outlined in Enclosure B and Enclosure C. No treatment was performed on the container by Akzo (other than to insure that it was empty) prior to transfer to CSD.

11. Akzo Nobel Coatings objects to this request in that it is vague, overly broad, harassing and unduly burdensome. Subject to and without waiving this objection, Akzo Nobel Coatings provides the following information:

No third party transporter was employed.

12. Akzo Nobel Coatings objects to this request in that it is vague, overly broad, harassing and unduly burdensome. Subject to and without waiving this objection, Akzo Nobel Coatings provides the following information:

1) Ron Almquist
(see answer to question #8)

2) Tim Gordon
(see answer to question #8)

3) Tom McLaughlin
(see answer to question #8)

4) Rosemary Ernest - Sales Correspondent & Assistant to the Controller
Akzo Nobel Coatings
100 Belmont Drive
Somerset, New Jersey 08873-1204

5) Edward K. Duplaga - Attorney
Akzo Nobel Coatings
300 South Riverside Plaza
Chicago, IL 60606
(312) 906-7500

- Mr. Almquist and Mr. McLaughlin were consulted on answering questions 2 - 14.

- Mr. Gordon was consulted on answering question #4.

- Ms. Ernest was consulted on answering question #6.

- Mr. Duplaga was consulted on answering question #1.

13. Akzo Nobel Coatings objects to this request in that it is vague, overly broad, harassing and unduly burdensome. Subject to and without waiving this objection, Akzo Nobel Coatings provides the following information:

Jerry Greenberg - Vice President Central Steel Drum
Central Steel Drum
704 Doremus Avenue
Newark, NJ 07105

OR

American Pail & Packaging Co.
704 Doremus Avenue
Newark, NJ 07105

OR

National Drum & Barrel Corporation
18 Division Place
Brooklyn, NY 11222-5199

14. No additional information was found.

CERTIFICATION OF ANSWERS TO REQUEST FOR INFORMATION

State of Kentucky

County of Jefferson

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document (response to EPA Request for Information) and all documents submitted herewith, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete, and that all documents submitted herewith are complete and authentic unless otherwise indicated. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Douglas W. Butler
NAME (print or type)

Senior Environmental Affairs Manager
TITLE (print or type)

Douglas W. Butler
SIGNATURE

Sworn to me before this
day of 16th, January, 1998

Dean Hancock
Notary Public
Notary Public, State at Large, KY.
My commission expires Apr. 6, 1999

(4)

MATERIAL SAFETY DATA SHEET

HMIS: H2 F2 R0

Date Prepared: 01/07/98
Date Revised : / /

PREPARED FOR:

/00000000 AKZO NOBEL COATINGS INC.
100 BELMONT DRIVE

SOMERSET NJ 08873

RON ALMQUIST

PREPARED BY:

AKZO NOBEL COATINGS - SOMERSET
100 BELMONT DRIVE

SOMERSET NJ 08873-1294

Emergency Phone Number: (908) 469-3700
Information Number: (908) 469-3700

SECTION I - PRODUCT INFORMATION

Tradename:	Product No.	Customer Part No.
NA	/E019	/E019

Product - Class: DOWANOL PMA GLYCOL ETHER ACETATE MII CODE: 999999

SECTION II - HAZARDOUS INGREDIENTS

Hazardous Ingredients	Ingredient Data		
1-METHOXY-2-ACETOXYPROPANE	% by Weight	> 95 %	
	CAS No.	000108-65-6	
	Vapor Pres.	3.4	mm/Hg @ 68F
	TLV-TWA	100.0	ppm
	PEL-TWA	NA	
	ORAL-LD50	8532.	mg/Kg RAT
	DERM-LD50	> 5000.	mg/Kg RABBIT

All components in this product have been verified as being on the TSCA Inventory.

SECTION III - PHYSICAL DATA

Physical state: LIQUID
Odor and appearance: NA
Odor threshold (ppm): NA
pH: NA

Boiling Range: 295 F (146 C)

Vapor is heavier than Air.

Evaporation rate is slower than ether.
% Volatile (vol) 100.00 Lb/gal(U.S.) 8.04 Sp.Gr: .96

VOC Data Lb/Gal(U.S.):

Less Water (EPA)	8.04	Total Organic Solvents	8.04
Less Water & Exempt (EPA)	8.04	Total Non-Exempt Solvents	8.04

Solvent Density 8.04

SECTION IV - FIRE AND EXPLOSION HAZARDS DATA

FP: (CLOSED) 108 F (42 C) LEL 1.50%
Flammability Class (OSHA): COMBUSTIBLE LIQUID - 2
This is the OSHA classification, DOT may be different.

XTINGUISHING MEDIA: Foam, Carbon Dioxide or Dry Chemical. damage to upper respiratory tract.

NUSUAL FIRE AND EXPLOSION HAZARDS: During emergency conditions, overexposure to decomposition products (See Section VI - Reactivity Data) may cause a health hazard; symptoms may not be immediately apparent. Obtain medical attention.

PECIAL FIREFIGHTING PROCEDURES: Water may be ineffective in fighting fire. If water is used to cool closed containers to prevent pressure build-up, fog nozzles are preferred. Full protective equipment, including self-contained breathing apparatus is needed to protect firefighters from exposure to coating's hazardous ingredients and hazardous decomposition products.

SECTION V - HEALTH HAZARD DATA AND FIRST AID PROCEDURES

FECTS OF OVEREXPOSURE :

in : CAUSES SKIN IRRITATION.

ye : CAUSES EYE IRRITATION. Other effects of eye contact may include : eye damage.

nhalation : N/AP MAY CAUSE LUNG IRRITATION.

kin absorption : CAN BE ABSORBED THROUGH THE SKIN. Effects may include : drowsiness.

ngestion : HARMFUL IF SWALLOWED.

RIMARY ROUTE(S) OF ENTRY: skin contact, ingestion, eyes.

EDICAL CONDITIONS THAT CAN BE AGGRAVATED: N/AV.

HRONIC HEALTH HAZARDS:

epeated OVEREXPOSURE to this product may cause:kidney damage, liver abnormalities, eye damage.

n accordance with 29CFR1910.1200, this product contains no ingredients

listed by NTP, IARC or OSHA as carcinogenic.

ITICE: Reports have associated repeated and prolonged OVEREXPOSURE to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents of this package may be harmful or fatal.

****EMERGENCY AND FIRST AID PROCEDURES*****.

KIN CONTACT: Wash with soap and water. Remove contaminated clothing and wash before reuse. Remove and destroy contaminated shoes.

YE CONTACT: Flush with water for at least 15 minutes.

NHALATION: Remove to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. If breathing is difficult, give oxygen. Get medical attention.

NGESTION: Get medical attention IMMEDIATELY.

SECTION VI - REACTIVITY DATA

aterial is STABLE under non-emergency conditions.

aterial WILL NOT undergo hazardous polymerization.

AZARDOUS DECOMPOSITION PRODUCTS: oxides of carbon, various hydrocarbons.

NDITIONS TO AVOID: heat, open flame, sparks.

ATERIALS TO AVOID: oxidizers.

SECTION VII - SPILL AND LEAK PROCEDURES

TEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Wear appropriate safety equipment as listed in Section VIII. Absorb on inert material and dispose of as below.

ASTE DISPOSAL METHODS: Dispose of in accordance with FEDERAL, STATE and local regulations. Incineration is the preferred method of disposal.

SECTION VIII - SAFE HANDLING AND USE INFORMATION

ESPIRATORY PROTECTION: Wear an appropriate, properly fitted respirator (NIOSH/MSHA approved) during application and handling where vapor/mist are encountered in the breathing zone. Follow respirator manufacturer's recommendation for selection and use.

ENTILATION: Sufficient ventilation should be provided to control vapor/mist levels.

ROTECTIVE GLOVES: Chemical resistant protective gloves should be worn when handling this product. Check with glove manufacturer to determine

proper glove type.

YE PROTECTION: Splash-proof chemical goggles should be worn.

THER PROTECTIVE EQUIPMENT: Eye bath and safety shower should be provided. Suitable clothing should be worn to prevent skin contact.

YGIENIC PRACTICES: Good personal hygiene practices are required at all times when handling chemicals. These practices include, but are not limited to, washing when safety equipment is removed, at the end of each shift or when going on breaks and especially if contamination occurs.

SECTION IX - SPECIAL PRECAUTIONS

RECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: Store in well-ventilated area. All equipment should be grounded. Keep containers closed when not in use. Store in a clean, dry area. Store away from ignition sources.

THER PRECAUTIONS: All precautions must be observed. Empty container may retain product residues.

SECTION X - OTHER INFORMATION

he absence of a positive finding indicates that we believe, to the best of our knowledge, that the negative is true.

isclaimer: While Akzo Nobel Coatings believes that the data contained herein are accurate and derived from qualified sources, the data are not to be taken as a warranty or representation for which Akzo Nobel Coatings assumes legal responsibility. They are offered solely for your consideration, investigation and verification. Any use of these data and information must be determined by the user to be in accordance with applicable Federal, State, Provincial and local laws and regulations.

II Proper Shipping Classification -
BBREVIATIONS USED IN PREPARING THIS MSDS:
HMIS - Workplace Hazardous Materials Information System
CA - Toxic Substances Control Act
R - Code of Federal Regulations
g/M3 - Milligrams per Meter Cubed
L - Lower Explosion Limit
- Flash Point
b/gal - Pounds Per Gallon
A - Not Available or Non-applicable
g/L - Milligrams Per Liter
pm - Parts Per Million
m/Hg - Millimeters of Mercury
- Fahrenheit
- Greater Than < - Less Than
- Percent
- Pounds
AS NU - Chemical Abstract Number
MIS - Hazardous Material Information System

RAL-LD50 - Oral Lethal Dose (50% Death)
NHAL-LC50 - Inhalation Lethal Concentration (50% Death)
ERM-LD50 - Dermal Lethal Dose (50% Death)
EL - Permissable Exposure Limit
LV - Threshold Limit Value
TEL - Short Term Exposure Limit
EIL - Ceiling Limit
- At
SHA - Occupational Safety and Health Administration
ARC - International Agency for Research on Cancer
TP - National Toxicology Program
ARA - Superfund Amendments & Reauthorization Act (1986)
OT - Department of Transportation

5

MATERIAL SAFETY DATA SHEET

HMIS: H2 F2 R1

Date Prepared: 01/07/98
Date Revised : / /

PREPARED FOR:	PREPARED BY:
7100000000 AKZO NOBEL COATINGS INC. 100 BELMONT DRIVE	AKZO NOBEL COATINGS - SOMERSET 100 BELMONT DRIVE
SOMERSET NJ 08873	SOMERSET NJ 08873-1294
RON ALMQUIST	
Emergency Phone Number:	(908) 469-3700
Information Number:	(908) 469-3700

SECTION I - PRODUCT INFORMATION

Tradename:	Product No.	Customer Part No.
NA	7R1005	7R1005

Product - Class: AROMATIC 100 MII CODE: 999999

SECTION II - HAZARDOUS INGREDIENTS

Hazardous Ingredients	Ingredient Data		
AROMATIC SOLVENT	% by Weight	55 - 65 %	
	Cas No.	- -	
	Vapor Pres.	NA	
	TLV-TWA	100.0	ppm
	PEL-TWA	NA	
1,2,4-TRIMETHYLBENZENE	% by Weight	32.0 %	
	Cas No.	000095-63-6	
	Vapor Pres.	NA	
	TLV-TWA	25.0	ppm
	PEL-TWA	25.0	ppm
	ORAL-LD50	5000.	mg/Kg RAT
	INHAL-LC50	18000.	mg/m3 RAT-4 HOUR
XYLENE, MIXED ISOMERS	% by Weight	3.0 %	
	Cas No.	001330-20-7	
	Vapor Pres.	5.1	mm/Hg @ 68F
	TLV-TWA	100.0	ppm
	PEL-TWA	100.0	ppm
	TLV-STEL	150.0	ppm 15 MINUTES
	ORAL-LD50	4300.	mg/Kg RAT
	DERM-LD50	> 1700.	mg/Kg RABBIT
	INHAL-LC50	5000.	ppm RAT-4 HOUR
CUMENE	% by Weight	1.5 %	
	Cas No.	000098-82-8	
	Vapor Pres.	NA	

TLV-TWA	50.0	ppm*
PEL-TWA	50.0	ppm*
ORAL-LD50	1400.	mg/Kg RAT
DERM-LD50	10617.	mg/Kg RABBIT
INHAL-LC50	8000.	ppm RAT-4 HOUR

This material is subject to reporting under SARA TITLE III, SECTION 313

11 components in this product have been verified as being on the TSCA Inventory.

- TOXIC EFFECTS CAN OCCUR BY SKIN ABSORPTION.

SECTION III - PHYSICAL DATA

Physical state: LIQUID
Odor and appearance: NA
Odor threshold (ppm): .1320
pH: NA

Boiling Range: 318 - 338 F (158 - 170 C)

Vapor is heavier than Air.

Evaporation rate is slower than ether.
% Volatile (vol) 100.00 Lb/gal(U.S.) 7.25 SpGr: .87

VOC Data Lb/Gal(U.S.):

Less Water (EPA)	7.25	Total Organic Solvents	7.25
Less Water & Exempt (EPA)	7.25	Total Non-Exempt Solvents	7.25

Solvent Density 7.25

SECTION IV - FIRE AND EXPLOSION HAZARDS DATA

FP: (CLOSED) 108 F (42 C) LEL 1.90%
Flammability Class (OSHA): COMBUSTIBLE LIQUID - 2
This is the OSHA classification, DOT may be different.

EXTINGUISHING MEDIA: Foam, Carbon Dioxide or Dry Chemical.

UNUSUAL FIRE AND EXPLOSION HAZARDS: During emergency conditions, overexposure to decomposition products (See Section VI - Reactivity Data) may cause a health hazard; symptoms may not be immediately apparent. Obtain medical attention.

SPECIAL FIREFIGHTING PROCEDURES: Water may be ineffective in fighting fire. If water is used to cool closed containers to prevent pressure build-up, fog nozzles are preferred. Full protective equipment, including self-contained breathing apparatus is needed to protect firefighters from exposure to coating's hazardous ingredients and hazardous decomposition products.

SECTION V - HEALTH HAZARD DATA AND FIRST AID PROCEDURES

EFFECTS OF OVEREXPOSURE :

kin : CAUSES SKIN IRRITATION. Other effects of skin contact may include : dermatitis.

ye : CAUSES EYE IRRITATION.

nhalation : MAY CAUSE NOSE AND THROAT IRRITATION. MAY CAUSE LUNG IRRITATION. Other effects of inhalation may include : nausea, shortness of breath, dehydration, dizziness, weakness, headache, fatigue, depression.

kin absorption : Effects may include : headache, depression.

ngestion : HARMFUL IF SWALLOWED. Other effects of ingestion may include : gastric disturbances, nausea, vomiting, diarrhea, weakness, headache, dizziness, fatigue, depression.

RIMARY ROUTE(S) OF ENTRY: inhalation, skin contact, ingestion, eyes.

EDICAL CONDITIONS THAT CAN BE AGGRAVATED: N/AV.

HRONIC HEALTH HAZARDS:

epeated OVEREXPOSURE to this product may cause:cardiac abnormalities.

n accordance with 29CFR1910.1200, this product contains no ingredients listed by NTP, IARC or OSHA as carcinogenic.

OTICE: Reports have associated repeated and prolonged OVEREXPOSURE to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents of this package may be harmful or fatal.

****EMERGENCY AND FIRST AID PROCEDURES*****.

KIN CONTACT: Wash with soap and water. Remove contaminated clothing and wash before reuse. Remove and destroy contaminated shoes.

YE CONTACT: Flush with water for at least 15 minutes and get medical attention.

NHALATION: Remove to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. If breathing is difficult, give oxygen. Get medical attention.

NGESTION: Get medical attention IMMEDIATELY.

SECTIUN VI - REACTIVITY DATA

aterial is STABLE under non-emergency conditions.

aterial WILL NUT undergo hazardous polymerization.

AZARDUUS DECUMPUSITIUN PRUDUCTS: oxides of carbon, fumes, various hydrocarbons, aldehydes.

INDITIUNS TU AVUID: heat, open flame, sparks.

ATERIALS TU AVUID: oxidizers.

SECTIUN VII - SPILL AND LEAK PRUCEDURES

TEPS TU BE TAKEN IN CASE MATERIAL IS RELEASED UR SPILLED: Remove all sources of ignition. Wear appropriate safety equipment as listed in Section VIII; assume for all hazardous ingredients listed in Section II, that the TLV, PEL and LEL limits will be exceeded. Absorb on inert material and dispose of as below.

ASTE DISPUSAL METHUDS: Dispose of in accordance with FEDERAL, STATE and local regulations. Incineration is the preferred method of disposal.

SECTIUN VIII - SAFE HANDLING AND USE INFURMATIUN

ESPIRATURY PRUTECTIUN: Wear an appropriate, properly fitted respirator (NIUSH/MSHA approved) during application and handling unless air monitoring demonstrates vapor/mist levels below applicable limits. Follow respirator manufacturer's recommendations for selection and use.

NTILATIUN: Sufficient ventilation must be provided to maintain airborne concentrations below TLV, PEL and LEL limits as listed in Section II.

RUTECTIVE GLUVES: Chemical resistant protective gloves should be worn when handling this product. Check with glove manufacturer to determine proper glove type.

YE PRUTECTIUN: Splash-proof chemical goggles should be worn.

THER PRUTECTIVE EQUIPMENT: Eye bath and safety shower should be provided. Rubber apron should be worn.

YGIENIC PRACTICES: Good personal hygiene practices are required at all times when handling chemicals. These practices include, but are not limited to, washing when safety equipment is removed, at the end of each shift or when going on breaks and especially if contamination occurs.

SECTION IX - SPECIAL PRECAUTIONS

RECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:Store in well-ventilated area. All equipment should be grounded. Keep containers closed when not in use. Store in a clean, dry area. Store away from ignition sources.

THER PRECAUTIONS: All precautions must be observed. Empty container may retain product residues.

his product contains the following SARA Title III, Section 313, reportable materials: cumene, xylene (mixed isomers), trimethylbenzene.

SECTION X - OTHER INFORMATION

he absence of a positive finding indicates that we believe, to the best of our knowledge, that the negative is true.

isclaimer: While Akzo Nobel Coatings believes that the data contained herein are accurate and derived from qualified sources, the data are not to be taken as a warranty or representation for which Akzo Nobel Coatings assumes legal responsibility. They are offered solely for your consideration, investigation and verification. Any use of these data and information must be determined by the user to be in accordance with applicable Federal, State, Provincial and local laws and regulations.

II Proper Shipping Classification -
BBREVIATIONS USED IN PREPARING THIS MSDS:
IMIS - Workplace Hazardous Materials Information System
CA - Toxic Substances Control Act
R - Code of Federal Regulations
g/M3 - Milligrams per Meter Cubed
L - Lower Explosion Limit
' - Flash Point
b/gal - Pounds Per Gallon
A - Not Available or Non-applicable
g/l - Milligrams Per Liter
pm - Parts Per Million
m/Hg - Millimeters of Mercury
- Fahrenheit
- Greater Than < - Less Than
- Percent
- Pounds
AS NU - Chemical Abstract Number
MIS - Hazardous Material Information System
RAL-LD50 - Oral Lethal Dose (50% Death)
NHAL-LC50 - Inhalation Lethal Concentration (50% Death)
ERM-LD50 - Dermal Lethal Dose (50% Death)
EL - Permissable Exposure Limit
LV - Threshold Limit Value
TEL - Short Term Exposure Limit
EIL - Ceiling Limit
- At

SHA - Occupational Safety and Health Administration
ARC - International Agency for Research on Cancer
TP - National Toxicology Program
ARA - Superfund Amendments & Reauthorization Act (1986)
OT - Department of Transportation

6

MATERIAL SAFETY DATA SHEET

HMIS: H3* F2 R0

Date Prepared: 01/07/98
Date Revised : 12/21/97

PREPARED FOR:

700000019 AKZO COATINGS, INC.
1000 INDUSTRIAL PARK

CLIFTON, MS 39056

PREPARED BY:

AKZO NOBEL COATINGS - SOMERSET
100 BELMONT DRIVE

SOMERSET NJ 08873-1294

Emergency Phone Number: (908) 469-5700
Information Number: (908) 469-5700

SECTION I - PRODUCT INFORMATION

Tradename: NA

Product No. 447-FE1-2035

Customer Part No.

Product - Class: COMPAW BEACH GRAY HB WATERBASE

MII CODE: 999999

SECTION II - HAZARDOUS INGREDIENTS

Hazardous Ingredients	Ingredient Data		
TITANIUM DIOXIDE	% by Weight	15 - 25 %	
	Cas No.	013463-67-7	
	Vapor Pres.	NA	
	TLV-TWA	10.0	mg/m3
	PEL-TWA	15.0	mg/m3
QUARTZ	% by Weight	10 - 15 %	
	Cas No.	014808-60-7	
	Vapor Pres.	NA	
	TLV-TWA	.1000	mg/m3
	PEL-TWA	.1000	mg/m3
ETHYL ALCOHOL	% by Weight	5 - 10 %	
	Cas No.	000064-17-5	
	Vapor Pres.	41.4	mm/Hg @ 68F
	TLV-TWA	1000.0	ppm
	PEL-TWA	1000.0	ppm
	ORAL-LD50	7060.	mg/Kg RAT
	DERM-LD50	20000.	mg/Kg RABBIT
	INHAL-LC50	20000.	ppm RAT-10 HOUR
METHYLATED M/F RESIN	% by Weight	5 - 10 %	
	Cas No.	068002-20-0	
	Vapor Pres.	NA	
	TLV-TWA	NA	
	PEL-TWA	NA	
	ORAL-LD50	12300.	mg/Kg RAT

	DERM-LD50	>10000.	mg/Kg RABBIT
SEC-BUTANOL	% by Weight	3.6 %	
	Cas No.	0000078-92-2	
	Vapor Pres.	12.0	mm/Hg @ 68F
	TLV-TWA	100.0	ppm
	PEL-TWA	150.0	ppm
	ORAL-LD50	6480.	mg/Kg RAT
AMORPHOUS FUMED SILICA	% by Weight	1 - 5 %	
	Cas No.	112945-52-5	
	Vapor Pres.	NA	
	TLV-TWA	10.0	mg/m3
	PEL-TWA	15.0	mg/m3
	ORAL-LD50	3160.	mg/Kg RAT
2-BUTOXYETHANOL (ETHYLENE GLYCOL BUTYL ETHER)	% by Weight	1.3 %	
	Cas No.	000111-76-2	
	Vapor Pres.	.6	mm/Hg @ 68F
	TLV-TWA	25.0	ppm*
	PEL-TWA	50.0	ppm*
	ORAL-LD50	470.	mg/Kg RAT
	DERM-LD50	220.	mg/Kg RABBIT
	INHAL-LC50	450.	ppm RAT-4 HOUR

This material is subject to reporting under SARA TITLE III, SECTION 313

11 components in this product have been verified as being on the TSCA Inventory.

- TOXIC EFFECTS CAN OCCUR BY SKIN ABSORPTION.

SECTION III - PHYSICAL DATA

Physical state: LIQUID
Odor and appearance: NA
Odor threshold (ppm): .1000
pH: 8.5 - 9.0

Boiling Range: 174 - 341 F (78 - 171 C)

Vapor is heavier than Air.

Evaporation rate is slower than ether.

% Volatile (vol) 56.80 Lb/gal(U.S.)10.75 SpGr: 1.29

VOC Data Lb/Gal(U.S.):

Less Water (EPA)	1.98	Total Organic Solvents	1.21
Less Water & Exempt (EPA)	1.98	Total Non-Exempt Solvents	1.21

Solvent Density 6.78

SECTION IV - FIRE AND EXPLOSION HAZARDS DATA

FP: (CLOSED) 142 F (61 C) LEL 1.70%
Flammability Class (OSHA): COMBUSTIBLE LIQUID - 3A
This is the OSHA classification, DOT may be different.

XTINGUISHING MEDIA: Foam, Carbon Dioxide or Dry Chemical.

NUSUAL FIRE AND EXPLOSION HAZARDS: During emergency conditions, overexposure to decomposition products (See Section VI - Reactivity Data) may cause a health hazard; symptoms may not be immediately apparent. Obtain medical attention.

PECIAL FIREFIGHTING PROCEDURES: Water may be ineffective in fighting fire. If water is used to cool closed containers to prevent pressure build-up, fog nozzles are preferred. Full protective equipment, including self-contained breathing apparatus is needed to protect firefighters from exposure to coating's hazardous ingredients and hazardous decomposition products.

SECTION V - HEALTH HAZARD DATA AND FIRST AID PROCEDURES

FFECTS OF OVEREXPOSURE :

kin : CAUSES SKIN IRRITATION. Other effects of skin contact may include : dermatitis, necrosis.

ye : CAUSES EYE BURNS. Other effects of eye contact may include : eye damage, tearing, redness, swelling.

nhalation : CAUSES NOSE AND THROAT IRRITATION. MAY CAUSE LUNG INJURY AND/OR BURNS. Other effects of inhalation may include : nausea, cough, shortness of breath, wheezing, dizziness, headache, anesthesia, drowsiness, chest pain, vomiting, CNS effects, incoordination.

kin absorption : CAN BE ABSORBED THROUGH THE SKIN. Effects may include : headache, nausea, dizziness, weakness, incoordination, blood effects.

ngestion : HARMFUL IF SWALLOWED. Other effects of ingestion may include : nausea, vomiting, diarrhea, weakness, headache, dizziness, drowsiness, incoordination, blood effects.

RIMARY ROUTE(S) OF ENTRY: inhalation, skin contact, ingestion, eyes.

EDICAL CONDITIONS THAT CAN BE AGGRAVATED: pulmonary conditions, skin disorders.

HRONIC HEALTH HAZARDS:

apeated OVEREXPOSURE to this product may cause:central nervous system damage, kidney damage, liver abnormalities, lung damage, blood effects, eye damage.

aution: Contains quartz/crystalline silica which has been shown to cause cancer in laboratory animals by inhalation and is listed as a suspect carcinogen by IARC (Group-2A). Contains a melamine-formaldehyde resin which, under certain conditions, could release formaldehyde in quantities sufficient to require monitoring under OSHA regulations. Formaldehyde is a suspect carcinogen.

OTICE: Reports have associated repeated and prolonged OVEREXPOSURE to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents of this package may be harmful or fatal.

****EMERGENCY AND FIRST AID PROCEDURES*****.

KIN CONTACT: Flush with plenty of water. Remove contaminated clothing and wash before reuse. Remove and destroy contaminated shoes.

YE CONTACT: Flush with water for at least 15 minutes and get medical attention.

NHALATION: Remove to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. If breathing is difficult, give oxygen. Get medical attention.

NGESTION: Get medical attention IMMEDIATELY.

SECTION VI - REACTIVITY DATA

aterial is STABLE under non-emergency conditions.

aterial WILL NOT undergo hazardous polymerization.

AZARDOUS DECOMPOSITION PRODUCTS: oxides of carbon, oxides of nitrogen. toxic fumes, various hydrocarbons, ammonia, formaldehyde.

NDITIONS TO AVOID: temperatures above 120 degrees, open flame, sparks.

ATERIALS TO AVOID: alkali, acids, oxidizers, fluorine, hydrogen fluoride, amines, chlorinated solvents, aldehydes, alkanolamines, ammonia, manganese trioxide.

SECTION VII - SPILL AND LEAK PROCEDURES

TEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Remove all sources of ignition. Wear appropriate safety equipment as listed in Section VIII; assume for all hazardous ingredients listed in Section II, that the TLV, PEL and LEL limits will be exceeded. Absorb on inert material and dispose of as below.

ASTE DISPOSAL METHODS: Dispose of in accordance with FEDERAL, STATE and local regulations. Incineration is the preferred method of disposal.

SECTION VIII - SAFE HANDLING AND USE INFORMATION

SPIRATORY PROTECTION: Wear an appropriate, properly fitted respirator (NIOSH/MSHA approved) during application and handling unless air monitoring demonstrates vapor/mist levels below applicable limits. Follow respirator manufacturer's recommendations for selection and use.

NTILATION: Sufficient ventilation must be provided to maintain airborne concentrations below TLV, PEL and LEL limits as listed in Section II.

ROTECTIVE GLOVES: Chemical resistant protective gloves should be worn when handling this product. Check with glove manufacturer to determine proper glove type.

YE PROTECTION: Face-shield should be worn.

THER PROTECTIVE EQUIPMENT: Eye bath and safety shower should be provided. Rubber apron should be worn.

YGIENIC PRACTICES: Good personal hygiene practices are required at all times when handling chemicals. These practices include, but are not limited to, washing when safety equipment is removed, at the end of each shift or when going on breaks and especially if contamination occurs.

SECTION IX - SPECIAL PRECAUTIONS

RECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:Store in well-ventilated area. All equipment should be grounded. Keep containers closed when not in use. Store in a clean, dry area. Store below 120 degrees Fahrenheit. Store away from ignition sources. DO NOT ALLOW TO FREEZE. Avoid exposure to light.Store away from open flame.

THER PRECAUTIONS: All precautions must be observed. Empty container may retain product residues.

his product contains the following SARA Title III, Section 313, reportable materials: sec-butyl alcohol, glycol ether.

SECTION X - OTHER INFORMATION

he absence of a positive finding indicates that we believe, to the best of our knowledge, that the negative is true.

isclaimer: While Akzo Nobel Coatings believes that the data contained herein are accurate and derived from qualified sources, the data are not to be taken as a warranty or representation for which Akzo Nobel Coatings assumes legal responsibility. They are offered solely for your consideration, investigation and verification. Any use of these data and information must be determined by the user to be in accordance with applicable Federal, State, Provincial and local laws and regulations.

OT Proper Shipping Classification - NOT REGULATED, .

ABBREVIATIONS USED IN PREPARING THIS MSDS:
HMIS - Workplace Hazardous Materials Information System
SCA - Toxic Substances Control Act
FR - Code of Federal Regulations
g/M3 - Milligrams per Meter Cubed
EL - Lower Explosion Limit
P - Flash Point
b/gal - Pounds Per Gallon
A - Not Available or Non-applicable
g/L - Milligrams Per Liter
pm - Parts Per Million
m/Hg - Millimeters of Mercury
- Fahrenheit
- Greater Than < - Less Than
- Percent
- Pounds
AS NU - Chemical Abstract Number
MIS - Hazardous Material Information System
RAL-LD50 - Oral Lethal Dose (50% Death)
NHAL-LC50 - Inhalation Lethal Concentration (50% Death)
ERM-LD50 - Dermal Lethal Dose (50% Death)
EL - Permissable Exposure Limit
LV - Threshold Limit Value
TEL - Short Term Exposure Limit
FIL - Ceiling Limit
- At
SHA - Occupational Safety and Health Administration
ARC - International Agency for Research on Cancer
TP - National Toxicology Program
ARA - Superfund Amendments & Reauthorization Act (1986)
UT - Department of Transportation

7

Sales NO.: 50-C3-260 RX-101078-R LACQUER BASE
Formula NO.: 50-C3-260 RX-101078-R LACQUER BASE Section

MATERIAL SAFETY DATA SHEET

HMIS: H2 F3 R0

Revised Date : 01/02/97

SECTION I - PRODUCT INFORMATION

Tradename:	Product No.	Customer Part No.
NA	50-C3-260A	

Product - Class: RX-101078-R LACQUER BASE

SECTION II - HAZARDOUS INGREDIENTS

Hazardous Ingredients	Desc.	Value	Unit	Comments
ETHYL ALCOHOL	% by Weight	46.6%		
	CAS #	000064-17-5		
	Vapor Pres.	41.4@68F	mm/Hg	
	TLV-TWA	1000.0	ppm	
	PEL-TWA	1000.0	ppm	
	ORAL-LD50	7060.	mg/Kg	RAT
	DERM-LD50	20000.	mg/Kg	RABBIT

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Formula NO.: 50-C3-260 RX-101078-R LACQUER BASE

				Section
	INHAL-LC50	20000.	ppm	RAT-10 HOU
NITROCELLULOSE (GUN COTTON)	% by Weight	29.5%		
	CAS #	009004-70-0		
	Vapor Pres.	NA		
	TLV-TWA	NA		
	PEL-TWA	NA		
	ORAL-LD50	> 5000.	mg/Kg	RAT
ISOPROPANOL (ISOPROPYL ALCOHOL)	% by Weight	15.0%		
	CAS #	000067-63-0		
	Vapor Pres.	32.8@68F	mm/Hg	
	TLV-TWA	400.0	ppm	
	PEL-TWA	400.0	ppm	
	TLV-STEL	500.0	ppm	15 MINUTES
	ORAL-LD50	5045.	mg/Kg	RAT
	DERM-LD50	12800.	mg/Kg	RABBIT
	INHAL-LC50	16000.	ppm	RAT-8 HOUR
ETHYL ACETATE	% by Weight	8.9%		
	CAS #	000141-78-6		
	Vapor Pres.	76.0@68F	mm/Hg	
	TLV-TWA	400.0	ppm	

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. Sales NO.: 50-C3-260 RX-101078-R LACQUER BASE
Formula NO.: 50-C3-260 RX-101078-R LACQUER BASE Section

PEL-TWA	400.0	ppm	
ORAL-LD50	5620.	mg/Kg	RAT
DERM-LD50	>18031.	mg/Kg	RABBIT
INHAL-LC50	1600.	ppm	RAT-8 HOUR

All components in this product have been verified as being on the TSCA Inventory.

SECTION III - PHYSICAL DATA

Physical State: LIQUID
Odor and appearance: NA
Odor threshold (ppm): 6.4000
pH: NA
Boiling Range: 168 - 181 F (75 - 82 C)
Vapor is heavier than air.
Evaporation rate is slower than ether.
% Volatile (Vol) 83.68 Lb/gal(U.S.) 7.92 SpGr: .95
VOC Data Lb/Gal(U.S):

Less Water (EPA)	5.59	Total Organic Solvents	5.59
Less Water & Exempt(EPA)	5.59	Total Non-Exempt Solvents	5.59

139 Press F3 for the Next Page or F5 for Next Inquiry.

SECTION IV - FIRE AND EXPLOSION HAZARDS DATA

FP: CLOSED 24 F (-4 C) LEL 2.20%
Flammability Class (OSHA): FLAMMABLE LIQUID - 1B

EXTINGUISHING MEDIA: Foam, Carbon Dioxide or Dry Chemical.

UNUSUAL FIRE AND EXPLOSION HAZARDS: During emergency conditions, overexposure to decomposition products (See Section VI - Reactivity Data) may cause a health hazard; symptoms may not be immediately apparent. Obtain medical attention.

SPECIAL FIREFIGHTING PROCEDURES: Water may be ineffective in fighting fire. If water is used to cool closed containers to prevent pressure build-up, fog nozzles are preferred. Full protective equipment, including self-contained breathing apparatus is needed to protect firefighters from exposure to coating's hazardous ingredients and hazardous decomposition products.

SECTION V - HEALTH HAZARD DATA AND FIRST AID PROCEDURES

EFFECTS OF OVEREXPOSURE :

Skin : CAUSES SKIN IRRITATION. Other effects of skin contact may include : dermatitis, dehydration.

Eye : CAUSES EYE IRRITATION.

Inhalation : MAY CAUSE NOSE AND THROAT IRRITATION. MAY CAUSE LUNG IRRITATION. Other effects of inhalation may include : nausea, dizziness, weakness, headache, drowsiness, fatigue, CNS effects, incoordination.

Skin absorption : CAN BE ABSORBED THROUGH THE SKIN.

Ingestion : HARMFUL IF SWALLOWED. Other effects of ingestion may include : gastroenteritis, nausea, vomiting, diarrhea, drowsiness, incoordination.

PRIMARY ROUTE(S) OF ENTRY: inhalation, skin contact, eyes.

MEDICAL CONDITIONS THAT CAN BE AGGRAVATED: N/AV.

CHRONIC HEALTH HAZARDS:

Repeated OVEREXPOSURE to this product may cause:central nervous system damage, kidney damage, liver abnormalities, lung damage, reproductive organ damage, blood effects.

In accordance with 29CFR1910.1200, this product contains no ingredients listed by NTP, IARC or OSHA as carcinogenic.

139 Press F3 for the Next Page or F5 for Next Inquiry.

NOTICE: Reports have associated repeated and prolonged OVEREXPOSURE to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents of this package may be harmful or fatal.

*****EMERGENCY AND FIRST AID PROCEDURES*****.

SKIN CONTACT: Flush with plenty of water. Remove contaminated clothing and wash before reuse. Remove and destroy contaminated shoes.

EYE CONTACT: Flush with water for at least 15 minutes and get medical attention.

INHALATION: Remove to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. If breathing is difficult, give oxygen. Get medical attention.

INGESTION: Get medical attention IMMEDIATELY.

SECTION VI - REACTIVITY DATA

Material is STABLE under non-emergency conditions.

Material WILL NOT undergo hazardous polymerization.

HAZARDOUS DECOMPOSITION PRODUCTS: oxides of carbon, oxides of nitrogen. hydrogen cyanide, toxic fumes, various hydrocarbons, aldehydes,

acids, peroxides.

CONDITIONS TO AVOID: heat, open flame, sparks, light.

MATERIALS TO AVOID: alkali, acids, oxidizers, amines.

SECTION VII - SPILL AND LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Remove all sources of ignition. Wear appropriate safety equipment as listed in Section VIII; assume for all hazardous ingredients listed in Section II, that the TLV, PEL and LEL limits will be exceeded. Absorb on inert material and dispose of as below.

WASTE DISPOSAL METHODS: Dispose of in accordance with FEDERAL, STATE and local regulations. Incineration is the preferred method of disposal.

SECTION VIII - SAFE HANDLING AND USE INFORMATION

RESPIRATORY PROTECTION: Wear an appropriate, properly fitted respirator (NIOSH/MSHA approved) during application and handling unless air monitoring demonstrates vapor/mist levels below applicable limits.

139 Press F3 for the Next Page or F5 for Next Inquiry.

Follow respirator manufacturer's recommendations for selection and use.

VENTILATION: Sufficient ventilation must be provided to maintain airborne concentrations below TLV, PEL and LEL limits as listed in Section II.

PROTECTIVE GLOVES: As a general practice, protective gloves should be worn when handling this product. Check with glove manufacturer to determine proper glove type.

EYE PROTECTION: Splash-proof chemical goggles should be worn.

OTHER PROTECTIVE EQUIPMENT: Eye bath and safety shower should be provided. Rubber apron should be worn.

HYGIENIC PRACTICES: Good personal hygiene practices are required at all times when handling chemicals. These practices include, but are not limited to, washing when safety equipment is removed, at the end of each shift or when going on breaks and especially if contamination occurs.

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: Store in well-ventilated

area. All equipment should be grounded. Keep containers closed when not in use. Store in a clean, dry area. Store away from ignition sources. Avoid exposure to light.Avoid strong oxidizing agents.

OTHER PRECAUTIONS: All precautions must be observed. Empty container may retain product residues.

This product contains the following California Proposition 65 suspect carcinogens: acetaldehyde.

SECTION X - OTHER INFORMATION

The absence of a positive finding indicates that we believe, to the best of our knowledge, that the negative is true.

Disclaimer: While Akzo Nobel Coatings believes that the data contained herein are accurate and derived from qualified sources, the data are not to be taken as a warranty or representration for which Akzo Nobel Coatings assumes legal responsibility. They are offered solely for your consideration, investigation and verification. Any use of these data and information must be determined by the user to be in accordance with applicable Federal, State, Provincial and

Sales NO.: 50-C3-260 RX-101078-R LACQUER BASE
Formula NO.: 50-C3-260 RX-101078-R LACQUER BASE Section
local laws and regulations.
DOT Proper Shipping Classification - NitrocelluloseSolFlammable, 3, UN2059, II

189 Enter Sales Number or Formula Number and an optional Section Number.

RECYCLED

AMERICAN INKS AND COATINGS CORP.
LOCATIONS: VALLEY FORGE, PA • RICHMOND, VA • FLORENCE, KY • WINSTON-SALEM, N.C.

January 19, 1998

Ms. Suzanne Becker
Removal Action Branch
Emergency and Remedial Response Division
USEPA, Region II
2890 Woodbridge Avenue
Edison, NJ 08837

RE: Responses of American Inks and Coatings Corp. to Request for Information Pursuant to Section 104 (e) of CERCLA; Central Steel Drum Superfund Site, Newark, Essex County, New Jersey

Dear Ms. Becker:

I have enclosed the responses of American Inks and Coatings Corp. to the Environmental Protection Agency's request for information concerning the Central Steel Drum Superfund Site in Newark, New Jersey. The responses include six pages of written answers to your questions plus two schedules of information concerning transactions between American Inks and Coatings Corp. and Central Steel Drum.

I have also enclosed a large packet of documents for the transactions which are summarized in schedules A and B in our responses to your request for information. There is one packet of documents which includes American Inks' purchase orders directed to Central Steel Drum. There are four additional bundles of documents which include the transactions for the years 1990 through 1993. In each bundle there are a number of separate packets of documents. Each packet comprises a series of documents relating to individual transactions. For each transaction the packet may include an invoice from Central Steel Drum, one or two copies of a Central Steel Drum bill of lading, and a receiving record from American Inks and Coatings with respect to that transaction. Some packets also include an additional set of documents which includes a bill of lading from American

P.O. BOX 803 • VALLEY FORGE, PA 19482 • 610 933-5848 • FAX 933-2173
QUALITY: AN AMERICAN TRADITION

Inks and Coatings to Central Steel Drum and Central Steel Drum's credit memo indicating receipt of drums to be recycled or disposed. These packets are arranged in the same manner as they are kept in our purchasing office.

I hope you will find these responses satisfactory.

Very truly yours,

William P. Rimel, III
President & Chief Executive Officer

WPR:pm
cc: Michael van Itallie, Esquire
Office of Regional Counsel
USEPA, Region II
290 Broadway, 17th Floor
New York, NY 10007

AMERICAN INKS AND COATINGS CORP.'S
RESPONSES TO EPA REQUEST FOR INFORMATION
CENTRAL STEEL DRUM SUPERFUND SITE

General Information About your Company

1.a. State the correct legal name of the Company.

Answer: American Inks and Coatings Corp.

1.b. Identify the legal status of the Company (corporation, partnership, sole proprietorship, specify if other) and the state in which the Company was organized.

Answer: Pennsylvania Corporation

1.c. State the name(s) and address(es) of the officers of the Company.

Answer:

William P. Rimel, III
President and Chief Executive Officer
P. O. Box 803
Valley Forge, PA 19482
610-272-8866

Mary Jane Wagner
Treasurer and Secretary
P. O. Box 803
Valley Forge, PA 19482
610-272-8866

1.d. If the Company has subsidiaries or affiliates, or is a subsidiary of another organization, identify these related companies and state the name(s) and address(es) of the officers of those organizations. Provide such information for any further parent/subsidiary relationships.

Answer: No subsidiaries or affiliates.

1.e. If the Company is a successor to, or has been succeeded by, another company, identify such other company and provide the same information requested above for the predecessor or successor company.

Answer: The Company is not a successor to another Company.

1.f. If the Company transacted business with Central Steel Drum in the name of an entity not disclosed above, give the name of such entity and state its relationship to the Company.

Answer: All transactions with Central Steel Drum ("CSD") in the name of American Inks and Coatings Corp.

2. Describe in detail the nature of your Company during the years 1980-1994. If the nature of the business has not been constant, describe the changes that have occurred, including any name changes, and when they occurred.

Answer: American Inks is a closely held corporation located at 330 Pawlings Road, Schuylkill Township, Valley Forge, Chester County, Pennsylvania. It manufactures graveure printing inks at that location which are primarily sold in the Eastern United States.

3. Briefly describe your Company's operations. Also, identify any chemical substances used to clean equipment or machinery.

Answer: Manufactures graveure printing ink, both water based and solvent based, at its plant in Valley Forge, Pennsylvania. The equipment is cleaned with mixtures of various solvents.

Company's Relationship to Central Steel Drum (CSD)

4.a. State whether the Company or any Company facility transacted any business with CSD for the disposal, treatment, or storage of any barrels, drums, or other containers (hereinafter collectively referred to as "Containers").

Answer: Yes.

4.b. If so, describe the relationship (nature of services rendered or products sold to the Company) between the Company and CSD.

Answer: The Company sent empty 55 gallon steel drums (primarily open headed) to CSD for reconditioning. It also sent empty 55 gallon fibre drums to CSD for disposal. Occasionally, other empty containers made of plastic were sent to CSD for disposal. The Company purchased reconditioned 55 gallon steel drums (primarily open headed)

from CSD.

4.c. Provide copies of any contracts or agreements between the Company and CSD.

Answer: There were no written contracts or agreements.

5.a. For each facility identified in Question 4, state the nature of the operations conducted at the facility, including the time period in which the facility operated.

Answer: See answer to question #3. Valley Forge plant in operation during entire 1980-1994 period.

5.b. State the name, address, and current RCRA Identification Number of each facility.

Answer: American Inks and Coatings Corp., 330 Pawlings Road, Phoenixville, PA, 19460; mailing address-P.O. Box 803, Valley Forge, PA, 19482; I.D.#PAD002353290.

6. For each transaction between the Company and CSD, provide the following information:

a. Identify the specific dates of each transaction. Where an exact date cannot be provided for a transaction, provide an approximation by month and year.

b. Identify the number of Containers that were the subject of each such transaction.

c. Generically describe each Container that was the subject of each such transaction (example: closed-head steel drums, etc.).

d. Identify the intended purpose of each such transaction.

Answer 6.a, b, c and d: See attached Schedule A, "Drums Sent to CSD" for each shipment of empty drums to CSD for reconditioning or disposal which identifies each such transaction from 12/27/89 to 10/18/93. See attached Schedule B "Reconditioned Drums Purchased From CSD" which identifies each purchase of drums from CSD from 12/27/89 to 12/14/93. The Company has no records prior to 12/27/89, as it maintains such records for a period of seven years; therefore, it has no records prior to 12/27/89. The Company did business with CSD prior to that date but cannot identify

any individual transactions.

6.e. State whether each Container that was the subject of the transaction contained any substance at the time of the transaction. As to each Container that contained any substance:

(1) Identify each such substance, including its specific chemical constituent, physical state, quantity by volume and weight, and other characteristics; and

(2) Provide all written analyses that may have been made for each such substance or which may be in the custody or control of the Company and all material safety data sheets, if any, relating to each such substance.

Answer-6e: All drums sent to CSD for reconditioning or disposal are believed to be empty to the extent that "empty" is defined by federal regulations, see 40 CFR §261.7.

(1) To the extent that residues remained in the drums, those residues could be any of the Company's products (i.e. graveure printing inks), raw materials (including resins, solvents, alcohol and water), pigments, or mixed cleaning solvents (described in 40 CFR §261.32 as "ink formulation" classified as K086). These are all residues of these substances and there is no way to determine the volume, weight or chemical constitutents of these residues, because the empty drums sent for reconditioning or disposal could have been used for any of a variety of purposes.

(2) See answer to question #6(e)(1). No material safety data sheets required on empty drums.

7. Provide copies of all documents relating in any way to each transaction, including copies of delivery receipts, invoices, or payment devices.

Answer: See document packet included.

8. Identify all persons who might have knowledge of the transaction or who had any responsibility regarding the transaction.

Answer: Donald Kucharik
Purchase Manager
P. O. Box 803
Valley Forge, PA 19482
610-272-8866

9. If you contend that any such Container did not contain any substance at the time of the transaction, state whether such Container had previously been used by the Company to contain any substance.

Answer: Yes.

9.a. Identify all substances previously contained within such Container, including its specific chemical constitutent, physical state, and other characteristics.

Answer: See response to question #6(e)(1).

9.b. Provide as to such substances, all written analyses that may have been made for each such substance or which may be in the custody or control of the Company and all material safety data sheets, if any, relating to each such substance.

Answer: See response to question #6(e)(2).

10. Describe in detail any treatment of any Container that may have been performed by or on behalf of the Company prior to the time that the Container was transferred from the Company, including any process or procedure by which the Container was emptied or cleaned.

Answer: The Company did not treat the empty drums prior to shipment to CSD. Many of the drums were empty drums returned from customers after use. The Company has no knowledge of any treatments performed on the empty drums by its customers.

11. If you sent any Container by means of any third party transporter, identify each such transporter, including the name and address of such transporter, and identify in which of the transactions such transporter acted.

Answer: The Company believes all drums were transported to and from CSD on CSD trucks.

12. Identify each person consulted in responding to these questions and correlate each person to the question

on which he or she was consulted.

Answer: Donald Kucharik and William P. Rimel, III.

13. Identify any other person (e.g., individual, company, partnership, etc.) having knowledge of facts relating to the questions which are the subject of this inquiry. For each such person that you identify, provide the name, address, and telephone number of that person, and the basis of your belief that he or she has such knowledge. For past and present employees, include their job title and a description of their responsibilities.

Answer: Employees of CSD - only name known is Jeffrey Skuraton.

14. Supply any additional information or documents that may be relevant or useful to identify other sources who disposed of or transported Containers to the Site.

Answer: No knowledge.

EXPLANATION OF SCHEDULES ATTACHED TO RESPONSES
OF AMERICAN INKS AND COATINGS CORP.
TO REQUEST FOR INFORMATION QUESTION #6

Schedule A is a listing of transactions where American Inks sent drums to CSD for reconditioning or disposal. Each transaction produced two documents, each bearing the same date. The first document is the American Inks and Coatings Bill of Lading ("AIC B/L#"). Schedule A sets out the bill of lading number, together with the description of the drums and total which appears on the bill of lading. These descriptions usually only distinguish between open headed, closed head and fibre drums. The second document is the Central Steel Drum Credit Memorandum ("CSD Credit Memo"). Schedule A sets out the credit memorandum number, the description of the drums received and the dollar amount of the credit ("$Credit Amount"). The description of the drums received by CSD on the memorandum is reproduced on Schedule A from the memorandum and is more technical than the description on the AIC B/L. The dollar amount of the credit was determined by the different credits given by CSD to American Inks depending on the type of drum. Open headed 17H drums generally received a credit of $6.50 per drum, while closed head drums such as 20/18 BT Cuts received a $1.00 credit. Scrap and fibre drums received no credit. The total number of drums on the AIC B/L and the CSD credit memo are the same although the description of the individual drums varies. All drums sent to CSD for reconditioning or disposal were empty.

Schedule B is a listing of transactions where American Inks purchased reconditioned drums from CSD. Each transaction created three documents, all of which have the same date. First is the Central Steel Drum bill of lading ("CSD B/L"). Schedule B sets out the bill of lading number, together with the total number of drums sent to American Inks and the number of drums rejected by American Inks as unsatisfactory. In the packet of documents, there are usually two copies of the same bill of lading - copy 2 and 3 of the multipart set. The second document is the American Inks receiving record ("AIC RR#"). Schedule B lists the RR number and the total number of drums received. The third document is the Central Steel Drum invoice ("CSD INV#"). Schedule B lists the invoice number and the total dollar amount of the invoice. All drums purchased from CSD were empty open headed drums. Occasionally, American Inks purchased rings, heads and bungs from CSD. These purchases are not listed on Schedule B although they are included in the documents produced.

SCHEDULE A

DRUMS SENT TO CSD

DATE	AIC B/L#	DESCRIPTION	CSD CREDIT MEMO #	DESCRIPTION	$CREDIT AMOUNT
12/27/89	1437	125 17H 25 closed head 34 55-gal. OH Total-184	5189	65 17H S.S. 46 17H BB/Rieke 29 20/18 STC 30 20/18 BT Cuts 14 Scrap	$ 780.50
01/22/90	2567	35 OH 32 BT 69 17H Total-136	5322	69 17H S.S. 35 20/18 STC 32 20/18 BT Cuts	515.50
02/12/90	1503	33 Closed Head empty drs. returned 124 Open Head empty drs. returned Total-157	5558	78 17H S.S. 39 20/18 STC 33 20/18 BT Cuts 7 Scrap	579.00
03/09/90	1811	182 mixed drums	5754	58 17H BB/Rieke 15 20/18 Orig. 33 20/18 STC 64 20/18 BT Cuts 12 Scrap	489.00
03/22/90	1903	22 Closed Head Drums 62 O/H Drums Total-84	5831	4 17H S.S. 41 17H BB/Rieke 9 20/18 STC 22 20/18 BT Cuts 8 Scrap	323.50
04/19/90	1887	96 Fibres Drum 116 Steel Drums Total-212	6024	2 17H S.S. 43 17H BB/Rieke 23 20/18 Orig. 40 20/18 BT Cuts 8 Scrap 96 Fibres	355.50

DATE	AIC B/L#	DESCRIPTION	CSD CREDIT MEMO #	DESCRIPTION	$CREDIT AMOUNT
05/30/90	1977	56 OH	6344	32 17H BB/Rieke 12 20/18 STC 8 20/18 BT Cuts 4 Scrap	228.00
05/11/90	1999	203 empty drums	6426	8 17H S.S. 107 17H BB/Rieke 28 20/18 STC 54 20/18 BT Cuts 6 Scrap	829.50
05/17/90	2600	31 17H OH 8 closed heads 4 OH Total-43	6472	24 17H BB/Rieke 4 20/18 STC 3 20/18 BT Cuts 10 Scrap 2 Returned	163.00
06/04/90	1644	90 OH 23 Closed Heads Total-113	6170	20 17H S.S. 36 17H BB/Rieke 21 20/18 STC 22 20/18 BT Cuts 14 Scrap	407.00
06/13/90	1668	24 17H 7 OH 27 BT 14 Drums returned subject to inspection Total-72	6563	21 17H BB/Rieke 22 20/18 BT Cuts 8 Scrap 14 Rejects	158.50 253.40
07/17/90	1763	73 empty drums being returned for credit	6751	8 17H S.S. 40 17H BB/Rieke 8 20/18 STC 8 20/18 BT Cuts 9 Scrap	328.00

DATE	AIC B/L#	DESCRIPTION	CSD CREDIT MEMO #	DESCRIPTION	$CREDIT AMOUNT
07/24/90	1781	Empty Drums: 53 BT 15 CH 65 17H Total-133	6802	62 17H BB/Rieke 13 20/18 STC 53 20/18 BT Cuts 5 Scrap	469.00
08/02/90	2006	58 Fibre Drums 35 M.T. drums Total-93	6870	20 17H BB/Rieke 7 20/18 STC 3 20/18 BT Cuts 5 Scrap 58 Fibers	140.00
08/28/90	2150	151 empty drums	7347	55 17H S.S. 27 20/18 STC 47 20/18 BT Cuts 2 Scrap 20 Rejects	431.50
09/05/90	2057	37 empty Fibre drums			
09/12/90	2083	82 17H OH 40 closed heads 6 OH 55 gals. Total-128	7433	27 17H S.S. 51 17H BB/Rieke 6 20/18 STC 38 20/18 BT Cuts 6 Scrap	551.00
09/25/90	4105	124 empty drums	7536	30 17H S.S. 38 17H BB/Rieke 2 20/18 STC 43 20/18 BT Cuts 11 Scrap	487.00
10/04/90	4135	40 17H 7 OH 7 CH 16 Fibre 6 Acid Paks 4 Plastics Total-80	7615	39 17H S.S. 7 20/18 STC 7 20/18 BT Cuts 1 Scrap 16 Fibre 10 Plastic-Acid Pak	167.50

DATE	AIC B/L#	DESCRIPTION	CSD CREDIT MEMO #	DESCRIPTION	$CREDIT AMOUNT
10/16/90	4168	54 17H OH 30 Bung Type Total-84	7681	12 17H S.S. 39 17H BB/Rieke 6 20/18 STC 13 20/18 BT Cuts 12 Scrap 2 Plastic	330.50
11/01/90	2185	21 Bung Type 2 30 gal. OH 3 Rule 40 65 17H OH Total-91	7799	15 17H S.S. 48 17H BB/Rieke 3 20/18 STC 2 30 gal. O.H. 21 20/18 BT Cuts 2 Scrap	435.50
11/13/90	3913	102 metal drums 77 Fibre drums Total-179	7871	11 17H S.S. 50 17H BB/Rieke 4 20/18 STC 20 20/18 BT Cuts 9 Scrap 85 Fibres	420.50
12/19/90	3844	239 empty drums being returned for credit	8748	41 17H S.S. 106 17H BB/Rieke 6 20/18 Orig. 69 20/18 BT Cuts 17 Scrap	1,030.50
02/05/91	3463	134 17H 38 BT 22 OH Total-194	8979	10 17H S.S. 117 17H BB/Rieke 36 20/18 BT Cuts 11 Scrap	881.50
03/14/91	3536	144 drums to be recon. 23 fibre drums Total-167	8401	20 17H S.S. 63 17H BB/Rieke 16 20/18 STC 38 20/18 BT Cuts 7 Scrap 23 Fibre	593.50

DATE	AIC B/L#	DESCRIPTION	CSD CREDIT MEMO #	DESCRIPTION	$CREDIT AMOUNT
04/01/91	3590	63 drums being returned for credit	00003	30 17H S.S. 11 20/18 STC 19 20/18 BT Cuts 3 Scrap	225.00
04/29/91	3008	84 17H OH 13 17E OH 20 closed heads 104 JUNK BASE DRS 14 W.S. drums Total-235	8516	10 17H S.S. 63 17H BB/Rieke 10 20/18 STC 20 20/18 BT Cuts 104 Scrap (Base Drums) 14 Non-CSD Leaker 14 Scrap	504.50
06/03/91	3110	38 17H drs. 46 closed head 11 17H leakers & rejects 10 OH drs. Total-105	00400	35 17H BB/Rieke 10 20/18 STC 44 20/18 BT Cuts 11 rejects	281.50
07/11/91	3174	123 return drums for recond. 55 fibre drums Total-178	00607	15 17H S.S. 46 17H BB/Rieke 8 20/18 orig. 47 20/18 BT Cuts 7 Scrap 55 Fibres	451.50
07/16/91	3191	40 empty fibre drums 23 steel Total-63	00627	4 17H S.S. 4 20/18 STC 15 20/18 BT Cuts 40 Fibers	45.00
08/21/91	3694	84 55 gp/OH	00828	42 17H BB/Rieke 30 20/18 STC 10 20/18 BT Cuts 2 Scrap	313.00

DATE	AIC B/L#	DESCRIPTION	CSD CREDIT MEMO #	DESCRIPTION	$CREDIT AMOUNT
09/09/91	4017	50 Fibre 38 17H OH 5 Rule 40 25 BT Total-118	00919	38 17H S.S. 5 20/18 STC 25 20/18 BT Cuts 50 Fibers	277.00
10/07/91	4085	117 empty drums to be recon.	01075	29 17H S.S. 28 17H BB/Rieke 11 20/18 STC 49 20/18 BT Cuts	430.50
11/12/91	3773	31 Fibre Drums 82 17H OH Total-113	01285	18 20/18 BT Cuts 31 Fibers 6 Scrap 9 20/18 orig. 49 17H BB/Rieke	345.50
10/24/91	3795	46 17H OH 27 Fibre Drums Total-73	01196	27 Fibers 28 17H S.S. 18 20/18 BT Cuts	200.00
01/09/92	3238	119 55 gal. drums returned 42 Fiber drums returned Total-161	01539	80 17H BB/Rieke 2 17H S.S. 37 20/18 BT Cuts 42 Fibers	570.00
03/05/92	4835	149 OH drums 2 leakers Total-151	01841	2 rejects 36 20/18 BT Cuts 11 20/18 STC 4 Scrap 8 17H S.S. 90 17H BB/Rieke	684.00
04/27/92	4931	77 empty fibre drums 110 OH 49 closed heads Total-236	02121	77 fibres 23 20/18 STC 45 20/18 BT Cuts 10 Scrap 6 17H S.S. 75 17H BB/Rieke	594.50

DATE	AIC B/L#	DESCRIPTION	CSD CREDIT MEMO #	DESCRIPTION	$CREDIT AMOUNT
05/18/92	4456	156 metal drums 49 fibre drums Total-205	02248	49 fibers 9 Scrap 47 20/18 BT Cuts 14 20/18 STC 86 17H BB/Rieke	620.00
07/16/92	4611	175 empty drums returned 70 empty fiber drums returned Total-245	02618	75 fibers 83 20/18 BT Cuts 7 20/18 STC 16 Scrap 21 17H S.S. 48 17H BB/Rieke	538.50
08/24/92	4662	58 Steel Drs ret'd (empty) 17H 18 Steel Drs ret'd (empty) BT 8 O/H Drs ret'd (empty) 69 Fiber Drs ret'd (empty) Total-153	02849	69 fibers 18 20/18 BT Cuts 8 20/18 STC 56 17H BB/Rieke 2 Scrap	390.00
08/13/92	4756	53 fibre drums 135 metal drums Total-188	02780	53 fibers 52 20/18 BT Cuts 14 20/18 orig. 60 17H BB/Rieke 9 Scrap	456.00
09/16/92	4252	102 M.T. drum subject to Count 60 fibre drums Total-162	02989	60 fibers 47 20/18 BT Cuts 6 Scrap 49 17H BB/Rieke	365.50
10/06/92	4793	98 17H drum 35 Bung Type 55 OH 4 Total-188	03108	20 17H S.S. 75 17H BB/Rieke 3 Scrap 35 20/18 BT Cuts 55 20/18 orig.	707.50

DATE	AIC B/L#	DESCRIPTION	CSD CREDIT MEMO #	DESCRIPTION	$CREDIT AMOUNT
11/19/92	4640	88 MT OH 32 Closed Head Total-120	03386	12 20/18 orig. 5 Scrap 35 17H S.S. 36 17H BB/Rieke 32 20/18 BT Cuts	505.50
12/10/92	4356	9 Closed Heads 37 Open Heads 41 Fibers Total-87	03446	41 Fibers 12 20/18 BT Cuts 3 Scrap 2 20/18 STC 29 17H BB/Rieke	202.50
11/30/92	2984	197 steel drums 29 Fibre drums Total-226	03458	29 Fibers 57 20/18 BT Cuts 7 Scrap 12 20/18 STC 17 17H S.S. 104 17H BB/Rieke	855.50
01/21/93	5404	124 return emptys	0000000020	15 17H SS 55 gal. 50 17H 55 gal. BB/Rieke 8 20/18 GA 55 gal. STC 39 20/18 55 gal. BT Cuts 12 Scrap	469.50
01/28/93	5417	64 Fiber Drums 15-55 gal. Steel Drums Total-79	0000000082	7 17H 55 gal. BB/Rieke 8 20/18 55 gal. BT Cuts 64 Fibre	53.50
02/17/93	00036	71 Sealed Drums 32 Fiber Drums Total-103	0000000182	38 20/18 55 gal. BT Cuts 32 Fibre 30 17H 55 gal. BB/Rieke 33 Scrap	233.00

DATE	AIC B/L#	DESCRIPTION	CSD CREDIT MEMO #	DESCRIPTION	$CREDIT AMOUNT
03/22/93	00144	120 steel drums returned 51 Fiber drums returned Total-171	00369	10 17H SS 55 gal. 16 20/18GA 55 gal. STC 57 17H 55 gal. BB/Rieke 35 20/18 55 gal. BT Cuts 2 Scrap 51 Fibre	486.50
04/07/93	5501	101 closed head drums returned; 5 open head drums returned Total-106	00497	5 17H SS 55 gal. 97 20/18 55 gal. BT Cuts 4 Scrap	129.50
05/06/93	00298	105 empty fiber Dr's 150 empty open head dr's 17 empty closed head dr's Total-272	00661	105 Fibre 38 20/18GA 55 gal. STC 106 17H 55 gal. BB/Rieke 17 20/18 55 gal. BT Cuts 6 Scrap	744.00
06/08/93	00413	61 Fiber drums 55 Open head drums 56 Closed head drums 15 leakers Total-187	00852	64 Fibre 42 17H 55 gal. BB/Rieke 15 rejects 17H 8 20/18GA 55 gal. STC 58 20/18 55 gal. BT Cuts	339.00
06/15/93	00446	60 55 gal.-open head drums (empty) 43 55 gal.-closed head drums (empty) Total-103	00881	53 17H 55 gal. BB/Rieke 5 20/18GA 55 gal. STC 45 20/18 55 gal. BT Cuts	394.50
08/09/93	00627	244 empty steel drums 48 empty fiber drums Total-292	01195	48 Fibre 75 20/18 55 gal. BT Cuts 31 20/18GA 55 gal. orig. 6 Scrap 132 17H 55 gal. BB/Rieke	964.00
09/20/93	00762	204 empty steel drums 48 empty fiber drums Total-252	01432	48 Fibre 204 17H SS 55 gal.	1,326.00

DATE	AIC B/L#	DESCRIPTION	CSD CREDIT MEMO #	DESCRIPTION	$CREDIT AMOUNT
11/16/93	00970	93 empty open-head steel drums 30 empty closed-head steel drums 83 empty fiber drums Total-206	003905	93 17H SS 55 gal.	604.50
10/18/93	00864	229 Steel drums (empty) 51 fiber drums (empty) Total-280	003927	179 17H SS 55 gal. 50 20/18 55 gal. BT Cuts 50 fibre	1,213.50

SCHEDULE B

RECONDITIONED DRUMS PURCHASED FROM CSD

DATE	CSD B/L #	DRUMS SENT/REJECTED	AIC RR #	DRUMS RECEIVED	CSD INV #	AMOUNT
12/27/89	003439	286/0	10348	286	60289	6,874.00
01/02/90	003487	276/0	10429	276	60412	6,634.00
01/22/90	005094	276/0	10499	276	60496	6,634.00
01/29/90	005154	250/0	10550	250	60560	6,010.00
02/12/90	005237	270/8	10607	262	60710	6,298.00
02/14/90	005244	276/0	10624	276	60737	6,634.00
03/09/90	005636	262/8	10753	254	60975	6,106.00
03/22/90	005720	275/0	10812	275	61084	6,610.00
04/05/90	008126	276/0	10910	276	61216	6,634.00
04/19/90	005438	276/0	10979	276	61351	6,634.00
05/03/90	008275	230/0	11052	230	61486	5,530.00
05/11/90	008394	239/25	11215	214	61581	5,146.00
05/17/90	008358	276/12	11244	264	61638	6,346.00
06/04/90	009882	250/4	11112	246	61806	5,914.00
06/13/90	009946	261/4	11168	257	61908	6,178.00
06/22/90	005751	276/0	11195	276	61999	6,634.00
07/17/90	005915	257/3	11359	254	62227	6,106.00
07/24/90	008807	232/7	11387	225	62292	5,410.00
08/02/90	008546	226/14	11425	212	62429	5,098.00
08/09/90	008597	274/14	11461	260	62541	6,250.00
08/28/90	009503	261/23	11570	238	62743	5,722.00
09/04/90	009741	260/0	11604	260	62869	6,250.00
09/12/90	009412	246/3	11639	243	62973	5,842.00
09/20/90	009007	257/16	11684	241	63074	5,794.00
09/25/90	009061	251/10	11699	241	63134	5,794.00
10/04/90	009168	281/8	11753	273	63254	6,562.00
10/16/90	006020	253/3	11814	250	10733	6,216.05
10/23/90	006082	264/0	11854	264	10794	6,526.08
11/01/90	006156	278/23	11906	255	10918	6,303.60
11/07/90	006199	231/0	11932	231	10997	5,710.32
11/13/90	006258	281/17	11953	264	11104	6,526.08
11/26/90	006350	249/0	12015	249	11216	6,155.28
11/29/90	006390	251/224	12037	27	11268	648.00
12/19/90	006631	276/14	12103	262	11465	6,476.64
01/03/91	006682	187/12	12135	175	11446	4,326.00
01/18/91	006822	259/58	12211	201	11606	4,968.72
02/05/91	006986	256/4	12276	252	11785	6,229.44
02/21/91	008156	144/0	12354	144	11951	3,559.68

DATE	CSD B/L #	DRUMS SENT/REJECTED	AIC RR #	DRUMS RECEIVED	CSD INV #	AMOUNT
03/14/91	008381	261/13	12455	248	12201	5,712.38
03/21/91	008453	271/0	12480	271	12276	5,672.73
04/01/91	008544	261/7	12522	254	12374	5,835.47
04/29/91	008848	240/0	12652	240	12710	5,543.46
05/10/91	008985	245/11	12705	234	12875	4,797.00
05/20/91	011090	269/4	12762	265	12999	5,618.00
06/03/91	011312	204/11	12812	193	13147	4,632.00
06/11/91	011394	242/0	12835	242	13228	4,961.00
06/17/91	011463	236/5	12866	231	13308	4,748.50
06/20/91	011508	138/10	12878	128	13365	3,072.00
07/11/91	011523	247/0	12983	247	13571	5,063.50
07/16/91	011559	248/0	13015	248	13603	5,532.00
07/30/91	011688	248/1	13086	247	13760	5,490.50
08/20/91	011941	250/0	13205	250	14023	5,160.00
08/29/91	007270	218/4	13250	214	14109	4,387.00
09/09/91	007360	241/5	13304	236	14186	4,838.00
09/18/91	007462	254/7	13344	247	14296	5,063.50
10/07/91	007884	200/17	13448	183	14508	3,751.50
10/24/91	007550	233/3	13561	230	14690	5,180.50
10/31/91	007614	163/0	13599	163	14762	3,341.50
11/12/91	007727	263/15	13662	248	14863	5,084.00
12/02/91	007093	233/0	13723	232	15046	4,776.50
01/08/92	013114	255/6	13901	249	15329	5,104.50
01/14/92	013157	276/0	13921	276	15399	6,137.50
02/06/92	013341	213/0	14048	213	15658	4,366.50
02/28/92	007116	276/0	14190	276	15869	6,169.00
03/05/92	013611	229/0	14218	229	15947	5,114.50
03/23/92	013544	221/0	14331	221	16101	4,866.50
04/07/92	013897	230/0	14433	230	16269	4,977.50
04/09/92	013935	251/0	14456	251	16309	5,317.00
04/27/92	012073	188/5	14543	183	16453	3,751.50
05/11/92	012222	277/0	14616	277	16612	6,019.00
05/18/92	012291	279/5	14666	274	16691	6,209.50
06/04/92	012438	258/2	14743	256	16885	5,248.00
06/09/92	012476	268/3	14777	265	16941	5,891.00
06/15/92	012776	248/13	14815	235	16995	4,817.50
07/02/92	012950	220/0	14935	220	17184	4,510.00
07/16/92	012600	241/7	14998	234	17330	5,227.50

DATE	CSD B/L #	DRUMS SENT/REJECTED	AIC RR #	DRUMS RECEIVED	CSD INV #	AMOUNT
07/23/92	012664	276/0	15046	276	17406	5,658.00
08/06/92	015299	213/0	15121	213	17577	4,366.50
08/13/92	015373	237/0	15156	237	17657	4,858.50
08/24/92	015438	261/7	15216	254	17740	5,207.00
09/16/92	015154	253/1	15355	252	000191	5,621.00
09/23/92	015234	262/0	15395	262	000293	5,371.00
10/06/92	015460	259/3	15455	256	000405	5,465.00
10/19/92	015887	242/0	15517	242	000496	4,961.00
10/22/92	015950	275/0	15548	275	000559	6,120.50
11/05/92	015625	229/2	15616	227	000698	4,653.50
11/19/92	014006	276/9	15679	267	000840	5,473.50
11/30/92	014074	264/16	15714	248	000916	5,084.00
12/10/92	014017	261/5	15752	256	001009	5,706.50
01/11/93	014327	264/4	15860	260	001248	5,578.50
01/21/93	014416	218/6	15913	212	001349	4,346.00
01/27/93	014469	255/7	15937	248	001409	5,477.50
02/04/93	014553	276/0	15968	276	001508	5,658.00
02/10/93	014590	261/9	16000	252	001563	5,617.50
02/17/93	014633	233/2	16629	231	001625	4,735.50
03/09/93	014788	281/18	16741	263	001834	5,817.10
03/16/93	014834	263/3	16770	260	001901	5,330.00
03/22/93	014878	276/2	16417	274	001968	5,928.50
03/30/93	014947	273/0	16483	273	002054	6,079.50
04/07/93	017013	252/0	16528	252	002164	5,624.50
04/21/93	017391	254/0	16592	254	002294	5,207.00
05/06/93	017044	259/3	16850	259	002453	5,309.50
05/12/93	017061	232/0	16882	232	002513	5,057.00
06/15/93	017632	265/5	17065	260	002869	5,802.50
07/08/93	017808	275/0	17173	275	003105	6,131.00
07/15/93	017868	262/0	17216	262	003182	5,371.00
06/08/93	017567	250/15	17030	235	003204	4,817.50
07/29/93	017987	273/3	17297	270	003315	5,535.00
08/09/93	018391	276/0	17362	276	003412	5,658.00
09/20/93	018973	261/0	17546	261	003784	5,823.00
09/23/93	018514	267/3	17573	264	003816	5,412.00
10/18/93	018671	153/0	17685	153	004035	3,420.00
11/02/93	018029	275/0	17759	275	004164	5,637.50
11/16/93	018079	261/0	17842	261	004282	5,350.50
12/14/93	009532	276/0	17965	276	004479	5,658.00

CERTIFICATION OF ANSWERS TO REQUEST FOR INFORMATION

State of Pennsylvania

County of Chester

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document (response to EPA Request for Information) and all documents submitted herewith, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete, and that all documents submitted herewith are complete and authentic unless otherwise indicated. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

DONALD KUCHARIK
NAME (print or type)

PURCHASING MANAGER
TITLE (print or type)

Donald Kucharik
SIGNATURE

Sworn to me before this
12th day of January, 1998

Mary Jane Wagner
Notary Public

NOTARIAL SEAL
MARY JANE WAGNER, Notary Public
Schuylkill Twp., Chester County
My Commission Expires June 22, 2000

THIS SHIPPING ORDER must be legibly filled, in ink, in indelible Pencil, or in Carbon, and retained by the Agent

Shipper's No. 006156

(Name of Carrier)

RECEIVE, subject to the classifications and tariffs in effect on the date of issue of this Shipping Order,

Carrier's No.

At **704 Doremus Ave., Newark, NJ 07105** **(201) 344-8500**

11/1, 19 80

From **CENTRAL STEEL DRUM COMPANY**

the property described below, in apparent good order, except as noted (contents and condition of contents of packages unknown), marked, consigned, and destined as indicated below, which said carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination, if on its route, otherwise to deliver to another carrier on the route to said destination. It is, mutually agreed, as to each carrier of all or any of said property over all or any portion of said route to destination, and as to each party at any time interested in all or any of said property, that every service to be performed hereunder shall be subject to all the terms and conditions of the Uniform Domestic Straight Bill of Lading set forth (1) in Uniform Freight Classification in effect on the date hereof, if this is a rail or rail-water shipment, or (2) in the applicable motor carrier classification or tariff if this is a motor carrier shipment.

Shipper hereby certifies that he is familiar with all the terms and conditions of the said bill of lading, including those on the back thereof, set forth in the classification or tariff which governs the transportation of this shipment, and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns.

(Mail or street address of consignee - For purposes of notification only.)

Consigned to AMERICAN INK & COATINGS

Destination P.O. BOX 803 State Zip Code Delivery Address ★

(★ To be filled in only when shipper desires and governing tariffs provide for delivery thereat.)

Route VALLEY FORGE, PA 19482

Delivering Carrier AP941 Car or Vehicle Initials LAMX No. 845

NO. PACKAGES	HAZARDOUS ~~MATERIALS~~	Kind of Package, Description of Articles, Special Marks, and Exceptions	*WEIGHT (SUBJECT TO CORR.)	CLASS OR RATE	CHECK COLUMN
278	SEAL	New 17 HALF CLOSED 17 HASS CAN			
		BLACK			
-23		REJECTED			
255					
TOTAL PIECES					

Subject to Section 7 of conditions of applicable bill of lading, if this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statement: The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges.

Per (Signature of Consignor.)

If charges are to be prepaid, write or stamp here, "To be Prepaid."

Received $ to apply in prepayment of the charges on the property described hereon.

Agent or Cashier.

Per (The signature here acknowledges only the amounts prepaid.)

Charges Advanced: $

† Shipper's imprint in lieu of stamp not a part of Bill of Lading approved by the Interstate Commerce Commission.

SHIPPERS CERTIFICATION This is to certify that the above-named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.

SIGNATURE: M Bunell. TITLE:

* If the shipment moves between two ports by a carrier by water, the law requires that the bill of lading shall state whether it is "carrier's or shipper's weight."

NOTE – Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property. The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding

per

CENTRAL STEEL DRUM COMPANY
704 Doremus Ave.
NEWARK, NJ 07105

Shipper, Per

Agent must detach and retain this Shipping Order and must sign the Original Bill of Lading.

Permanent post office address of shipper

2

Item # F3 Grayarc, P.O. Box 2944, Hartford, CT 06104-2944
© Wheeler Group, Inc., 1982

THIS MEMORANDUM is an acknowledgement that a Bill of Lading has been issued and is not the Original Bill of Lading, nor a copy or duplicate, covering the property named herein, and is intended solely for filing or record.

Shipper's No. 009007

(Name of Carrier)

RECEIVED, subject to the classification and tariffs in effect on the date of receipt by the carrier of the property described in the Original Bill of Lading,

Carrier's No.

At 704 Doremus Ave., Newark, NJ 07105 (201) 344-8500 _____ 20 _____, 19__

From CENTRAL STEEL DRUM COMPANY

the property described below, in apparent good order, except as noted (contents and condition of contents of packages unknown), marked, consigned, and destined as indicated below, which said carrier (the word carrier be understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination, if on its route, otherwise to deliver another carrier on the route to said destination. It is, mutually agreed, as to each carrier of all or any of said property over all or any portion of said route to destination, and as to each party at any time interested in all any of said property, that every service to be performed hereunder shall be subject to all the terms and conditions of the Uniform Domestic Straight Bill of Lading set forth (1) in Uniform Freight Classification in effect on the d hereof, if this is a rail or rail-water shipment, or (2) in the applicable motor carrier classification or tariff if this is a motor carrier shipment.

Shipper hereby certifies that he is familiar with all the terms and conditions of the said bill of lading, including those on the back thereof, set forth in the classification or tariff which governs the transportation of this shipme and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns.

(Mail or street address of consignee - For purposes of notification on

Consigned to ~~AMERICAN INK & COATINGS~~

Destination ~~P.O. BOX 303~~ State _____ County _____ Delivery Address ★ _____

Route VALLEY FORGE, PA 19482 (★ To be filled in only when shipper desires and governing tariffs provide for delivery therea

Delivering Carrier P.O. A4746 Car or Vehicle Initials B-214 No. [illegible]

NO. PACKAGES	~~HAZARDOUS~~ MATERIALS	Kind of Package, Description of Articles, Special Marks, and Exceptions	*WEIGHT (SUBJECT TO CORR.)	CLASS OR RATE	CHECK COLUMN
1	55gl	Empty 2 Metal Drums			
		Over			
-16		Leaking Heads			
241					
TOTAL PIECES					

Subject to Section 7 of con tions of applicable bill of lading, this shipment is to be delivered the consignee without recourse the consignor, the consignor sl sign the following statement: The carrier shall not make deliv of this shipment without paym of freight and all other lav charges.

Per _____ (Signature of Consignor.)

If charges are to be prepaid, writ or stamp here, "To be Prepaid."

Received $ _____ to apply in prepayment of t charges on the property describ hereon.

Agent or Cashier.

Per _____ (The signature here acknowledge only the amounts prepaid.)

Charges Advanced:

$ _____

✦ Shipper's imprint in lieu of sta not a part of Bill of Lading appro by the Interstate Commerce Co mission.

SHIPPERS CERTIFICATION This is to certify that the above-named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.

SIGNATURE: M Bivell TITLE:

* If the shipment moves between two ports by a carrier by water, the law requires that the bill of lading shall state whether it is "carrier's or shipper's weight."

NOTE – Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property. The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding

per

CENTRAL STEEL DRUM COMPANY
704 Doremus Ave.
NEWARK, NJ 07105

Shipper, Per _____ _____ **Agent, Per** _____

Permanent post office address of shipper

3

Item # F3 Grayarc, P.O. Box 2944, Hartford, CT 06104-29
© Wheeler Group, Inc., 1982

DUANE, MORRIS & HECKSCHER LLP

ATTORNEYS AT LAW

122 E. 42nd STREET, SUITE 3300
NEW YORK, NY 10168

305 NORTH FRONT STREET, 5th FLOOR
HARRISBURG, PA 17108-1003

735 CHESTERBROOK BOULEVARD
WAYNE, PA 19087-5638

968 POSTAL ROAD, SUITE 200
ALLENTOWN, PA 18109-0400

777 SOUTH FLAGLER DRIVE, SUITE 800W
WEST PALM BEACH, FL 33401

ONE LIBERTY PLACE
PHILADELPHIA, PA 19103-7396
(215) 979-1000

FAX
(215) 979-1020

1667 K STREET N.W., SUITE 700
WASHINGTON, D.C. 20006-1608

1201 MARKET STREET, SUITE 1500
WILMINGTON, DE 19801-0195

314 S. STATE STREET
DOVER, DE 19901

51 HADDONFIELD ROAD, SUITE 340
CHERRY HILL, NJ 08002-4810

ONE GATEWAY CENTER, SUITE 1210
NEWARK, NJ 07102

600 TRAVIS, SUITE 6500
HOUSTON, TX 77002

January 21, 1998

LARRY SILVER
DIRECT DIAL: (215) 979-1825
DIRECT FAX: (215) 979-1020

VIA FEDERAL EXPRESS

Suzanne Becker
Removal Action Branch
Emergency and Remedial Response Division
U.S. Environmental Protection Agency, Region II
2890 Woodbridge Avenue
Edison, NJ 08837

Re: Central Steel Drum Superfund Site
Armstrong World Industries, Inc.'s Response to Section 104(e) Request

Dear Ms. Becker:

I am responding on behalf of Armstrong World Industries, Inc. ("Armstrong") to a letter to Armstrong date-stamped November 26, 1997 from Richard L. Caspe, Director of the Emergency and Remedial Response Division of EPA Region II. The November 26, 1997 letter is identified as a CERCLA Section 104(e) information request for the Central Steel Drum Superfund Site. On or about December 18, 1997, Armstrong was provided an enlargement of time by Ms. Donna Murphy, an EPA contractor assigned to the Central Steel Drum Site, until January 21, 1998 to reply to Mr. Caspe's letter.

Armstrong's responses to the Section 104(e) Information Request are provided on the attachment to this letter in numbered paragraphs which track the questions in the 104(e) Information Request. Armstrong's investigation into the information requested by EPA is

ongoing and the responses provided represent the most complete information that can be provided in the time available; accordingly, Armstrong reserves the right to supplement or amend its answers as new information becomes available.

Sincerely,

Larry Silver
for DUANE, MORRIS & HECKSCHER LLP

LDS:kmb
PH2\242197.1
cc: Michael van Itallie, Esquire

QUESTIONS AND RESPONSES OF ARMSTRONG WORLD INDUSTRIES, INC. TO EPA'S INFORMATION REQUESTS

General Information About your Company

1. a. State the correct legal name of the Company.

Armstrong World Industries, Inc. (hereinafter "Armstrong")

b. Identify the legal status of the Company (corporation, partnership, sole proprietorship, specify if other) and the state in which the Company was organize.

Corporation, Incorporated in Pennsylvania, 1891

c. State the name(s) and address(es) of the officers of the Company

G. A. Lorch	**Chairman of the Board & President**
M. R. Olivié	**President, Worldwide Building Products Operations**
R .J. Shannon	**President, Worldwide Floor Products Operations**
J. E. Humphrey	**President, Floor Products - Americas**
S. E. Stockwell	**President, Corporate Retail Accounts Division**
D. K. Owen	**Sr. Vice President, Secretary & General Counsel**
F. A. Riddick, III	**Sr. Vice President, Finance**
D. L. Boles	**Sr. Vice President, Human Resources**
M. E. Adamczyk	**Vice President**
A. L. Burnaford	**Vice President**
E. R. Case	**Vice President & Treasurer**
C. L. Collova	**Vice President**
B. A. Leech, Jr.	**Controller**
T. J. Considine, Jr.	**Assistant Treasurer**
W. M. Posey	**Assistant Treasurer**
D. D. Wilson	**Assistant Secretary**
J. R. DeSanto	**Director, Taxes**

d. If the Company has subsidiaries or affiliate, or is a subsidiary of another organization, identify these related companies and state the name(s) and address(es) of the officers of those organizations. Provide such information for any further parent/subsidiary relationships.

Armstrong has a number of domestic and foreign subsidiaries, none of which are involved in any way to the subject of this information request. The connection of Armstrong to the site in question is described below. If a list of subsidiaries and their officers is still needed, it will be provided upon request.

e. If the Company is a successor to, or has been succeeded by, another company, identify such other company and provide the same information requested above for the predecessor or successor company.

The name of the corporation was changed from Armstrong Cork Company to Armstrong World Industries, Inc. on May 15, 1980.

f. If the Company transacted business with Central Steel Drum in the name of an entity not disclosed above, give the name of such entity and state its relationship to the Company.

Not applicable.

2. Describe in detail the nature of your Company during the years 1980-1994. If the nature of the business has not been constant, describe the changes that have occurred, including any name changes, and when they occurred.

Armstrong is a manufacturer and marketer of branded products and services for use in finishing the interiors of residential and commercial buildings. Products include floor coverings, ceilings, adhesives and certain industrial products, notably insulation and gasket materials.

3. Briefly describe your Company's operations. Also, identify any chemical substances used to clean equipment or machinery.

Company operations relative to the Site include the Company's Lancaster, Pennsylvania, Floor Plant and the Company's Lancaster, Pennsylvania, Innovation Center. The Floor Plant manufactures a variety of residential and commercial resilient sheet and tile floor coverings. Floor Plant equipment was cleaned with 1,1,1 trichloroethane until about 1992, and then replaced by a citrus/water-based cleaner. Floor Plant machinery parts have been cleaned using Safety-Kleen. The Innovation Center provides central offices for its operations, as well as marketing research and product research and development to support the Company's manufacturing activities. Innovation Center equipment and machinery have been cleaned using Safety-Kleen since about 1989; prior to that, the Innovation Center used 1,1,1 trichloroethane.

<u>Company's Relationship to Central Steel Drum (CSD)</u>

4. a. State whether the Company or any Company facility transacted any business with CSD for the disposal, treatment, or storage of any barrels, drums, or other containers (hereinafter collectively referred to as "Containers").

Yes, see answer to paragraph 4b, below.

b. If so, describe the relationship (nature of services rendered or products sold to the Company) between the Company and CSD;

Armstrong sent empty 55-gallon and 30-gallon drums to CSD from Armstrong's Floor Plant and Innovation Center in Lancaster, Pennsylvania. Drums were picked up by CSD from those two facilities. In general, the Floor Plant provided the large majority of Armstrong drums sent to CSD. Typically, the Innovation Center would request a pick up of empty drums when the Innovation Center's designated staging area for empty drums was at or near capacity. A CSD truck would make the Innovation Center pick up, which typically was not a full load; as a consequence, the CSD truck would then drive to the Floor Plant and fill the remaining space on its truck with empty drums from the Floor Plant. On other occasions, CSD would pick up drums solely from the Floor Plant.

c. Provide copies of any contracts or agreements between the Company and CSD;

Contracts and agreements are provided as Exhibit A hereto.

5. a. For each facility identified in Question 4, state the nature of the operations conducted at the facility, including the time period in which the facility operated;

See answer to Question 3 above. The Floor Plant has operated since the early 1900s. The Innovation Center has operated since the 1950s.

b. State the name, address, and current RCRA Identification Number of each facility;

Floor Plant
P.O. Box 3001
Lancaster, Pennsylvania 17604
RCRA I.D. No. PAD001307792

Innovation Center
2500 Columbia Avenue
Lancaster, Pennsylvania 17603
RCRA I.D. No. PAD000730515

6. a. Identify the specific dates of each transaction. Where an exact date cannot be provided for a transaction, provide an approximation by month and year;

Armstrong has documents reflecting removal of empty drums by CSD from the Floor Plant and Innovation Center for the period June 10, 1987 to

February 18, 1994. Armstrong may also have used CSD for removal of empty drums prior to June 10, 1987; however the documents reflecting those transactions could not be located and have probably been destroyed. Our information is that Armstrong may have been using CSD to remove drums by the early 1980s; our investigation is continuing as to whether Armstrong utilized CSD prior to that time.

We have no information as to specific dates of transactions prior to June 10, 1987. The dates of the transactions for which documents exist are shown in Table I, hereto.

b. Identify the number of Containers that were the subject of each such transaction;

Armstrong has no information as to the number of Containers that were the subject of any transaction with CSD prior to June 10, 1987. Table I provides the number of Containers (as derived from the existing documents) that appear to have been the subject of transactions for which documents exist.

c. Generically describe each Container that was the subject of each such transaction (example: closed-head steel drums, etc.);

Armstrong has no specific information other than the limited information shown on Table I (as derived from the documents provided) concerning the generic description of the Containers that were the subject of particular transactions with CSD. In general, Containers sent by Armstrong to CSD included both 55-gallon and 30-gallon empty drums and both closed-head and open-head empty steel drums.

d. Identify the intended purpose of each such transaction;

Armstrong has no specific information concerning Armstrong's or CSD's intended purpose of particular transactions with CSD. In general, Armstrong's intended purpose in sending drums to CSD was to remove excess empty drums from the Floor Plant and Innovation Center.

e. State whether each Container that was the subject of the transaction contained any substance at the time of the transaction. As to each Container that contained any substance:

(1) Identify each such substance, including its specific chemical constituent, physical state, quantity by volume and weight, and other characteristics; and

(2) Provide all written analyses that may have been made for each such substance or which may be in the custody or control of the Company and all material safety data sheets, if any, relating to each such substance;

To the best of Armstrong's knowledge, all drums that were sent to CSD were empty, in accordance with applicable company protocol.

7. Provide copies of all documents relating in any way to each transaction, including copies of delivery receipts, invoices, or payment devices.

Documents responsive to this Request are attached as Exhibit B.

8. Identify all persons who might have knowledge of the transaction or who had any responsibility regarding the transaction.

For the Innovation Center: Robert E. Ricedorf,
Robert L. Snyder,
Joseph A. Kiely

For the Floor Plant: Jack B. Headly,
Karen Lewis,
John Spayd

(See answer to paragraph 12 below for titles, addresses and phone numbers)

9. If you contend that any such Container did not contain any substance at the time of the transaction, state whether such Container had previously been used by the Company to contain any substance, and if so:

a. Identify all substances previously contained within such Container, including its specific chemical constituent, physical state, and other characteristics; and

Armstrong has no specific knowledge as to whether a particular Container involved in a particular transaction contained particular substances prior to the empty Container being picked up by CSD.

In general, the empty Containers sent to CSD contained substances at some point in time while in the possession of Armstrong. In general, the substances that had been in the empty Containers were raw materials purchased from vendors and used in various plant processes. These substances included stabilizers (including organic salts) plasticizers (including pthalates), 1,1,1 trichloroethane, acrylic latexes, alcohols and acrylate coatings. MSDS sheets for some of these substances or similar substances that had been in the empty drums are attached as Exhibit C.

b. Provide as to such substances, all written analyses that may have been made for each such substance or which may be in the custody or control of the Company and all material safety data sheets, if any, relating to each such substance;

MSDS sheets responsive to this Request are attached as Exhibit C.

10. Describe in detail any treatment of any Container that may have been performed by or on behalf of the Company prior to the time that the Container was transferred from the Company, including any process or procedure by which the Container was emptied or cleaned.

All Containers picked up by CSD were required by Armstrong to be both RCRA and DOT empty. Armstrong maintained a drum crew to ensure that all drums were turned over to empty out the contents. The Floor Plant maintained a rack for the purpose of emptying drums. The Innovation Center required that the drums be emptied at the department of origin prior to collecting the drums at a staging area. Drums were inspected by the Armstrong drum crew before loading onto CSD trucks; additionally, CSD drivers inspected the drums prior to shipment to confirm that the drums were empty and clean of hard residue.

11. If you sent any Container by means of any third party transporter, identify each such transporter, including the name and address of such transporter, and identify in which of the transactions such transporter acted.

Not applicable.

12. Identify each person consulted in responding to these questions and correlate each person to the question on which he or she was consulted.

Joseph A. Kiely
Contractor Sales Manager
Armstrong World Industries, Inc.
2500 Columbia Avenue
Lancaster, PA 17603
(717) 396-5205
(Questions 3, 4, 5, 6, 7, 8, 9, 10, 11)

Robert E. Ricedorf
Master Service Specialist
Armstrong World Industries, Inc.
2500 Columbia Avenue
Lancaster, PA 17603
(717) 396-5119
(Questions 4, 6, 8, 9, 10, 11)

Jack B. Headley
Chief Environmental Chemist
Armstrong World Industries, Inc.
313 West Liberty Street
Lancaster, PA 17603
(717) 396-2031
(Questions 3, 4, 5, 6, 8, 9, 10, 11)

John Spayd
Retired Team Coordinator, Investment Recovery and Yard Operations
Contacted through Armstrong
(Questions 4, 6, 8, 9, 10)

Robert L. Snyder
Master Service Specialist
Armstrong World Industries, Inc.
2500 Columbia Avenue
Lancaster, PA 17603
(717) 396-6259
(Questions 4, 6, 8, 9, 10, 11)

John A. Ackiewicz
Staff Engineer
Armstrong World Industries, Inc.
2500 Columbia Avenue
Lancaster, PA 17603
(717) 396-5373
(Questions 2, 3, 4, 5, 6, 7, 8, 9, 10, 11)

Karen Lewis
Team Coordinator, Investment Recovery and Yard Operations
Floor Department
Armstrong World Industries, Inc.
313 West Liberty Street
Lancaster, PA 17603
(717) 396-3610
(Questions 3, 4, 5, 6, 7, 8, 9, 10, 11)

13. Identify any other person (e.g., individual, company, partnership, etc.) having knowledge of facts relating to the questions which are the subject of this inquiry. For each such person that you identify, provide the name, address, and telephone number of that person, and the basis of your belief that he or she has such knowledge. For past and present employees, include their job title and a description of their responsibilities.

None.

14. Supply any additional information or documents that may be relevant or useful to identify other sources who disposed of or transported Containers to the Site.

None.

TABLE I
DOCUMENTED TRANSACTIONS BETWEEN ARMSTRONG AND CSD

DATE OF TRANSACTION	# OF CONTAINERS REMOVED	GENERAL DESCRIPTION OF CONTAINERS
June 10, 1987	85	Empty Containers; size unknown
June 12, 1987	80	Empty Containers; size unknown
July 30, 1987	125	Empty Containers; size unknown
August 5, 1987	179	Empty Containers; size unknown
August 5, 1987	149	Empty Containers; size unknown
August 11, 1987	101	Empty Containers; size unknown
October 22, 1987	82	Empty Containers; size unknown
October 28, 1987	111	Empty Containers; size unknown
November 4, 1987	105	Empty Containers; size unknown
November 16, 1987	113	Empty Containers; size unknown
November 25, 1987	163	Empty Containers; size unknown
December 9, 1987	122	Empty Containers; size unknown
December 17, 1987	240	Empty Containers; size unknown
January 29, 1988	218	Empty Containers; size unknown
February 17, 1988	196	Empty Containers; size unknown
February 25, 1988	155	Empty Containers; size unknown
March 1, 1988	139	Empty Containers; size unknown
March 9, 1988	178	Empty Containers; size unknown
March 10, 1988	159	Empty Containers; size unknown
March 21, 1988	181	Empty Containers; size unknown
March 23, 1988	198	Empty Containers; size unknown
April 13, 1988	191	Empty Containers; size unknown
June 27, 1988	154	Empty Containers; size unknown

DATE OF TRANSACTION	# OF CONTAINERS REMOVED	GENERAL DESCRIPTION OF CONTAINERS
July 1, 1988	190	Empty Containers; size unknown
August 3, 1988	229	Empty Containers; size unknown
August 25, 1988	104	Empty Containers; size unknown
September 22, 1988	138	Empty Containers; size unknown
October 3, 1988	164	Empty Containers; size unknown
February 14, 1989	146	Empty Containers; size unknown
February 21, 1989	105	Empty Containers; size unknown
March 6, 1989	169	Empty Containers; size unknown
March 30, 1989	184	Empty Containers; size unknown
April 18, 1989	105	Empty Containers; size unknown
April 24, 1989	175	Empty Containers; size unknown
May 10, 1989	192	Empty Containers; size unknown
May 16, 1989	123	Empty Containers; size unknown
June 6, 1989	196	Empty Containers; size unknown
August 1, 1989	159	Empty Containers; size unknown
August 18, 1989	170	Empty Containers; size unknown
September 12, 1989	161	Empty Containers; size unknown
September 18, 1989	145	Empty Containers; size unknown
September 20, 1989	176	Empty Containers; size unknown
September 27, 1989	261	Empty Containers; size unknown
October 5, 1989	229	Empty Containers; size unknown
October 26, 1989	153	Empty Containers; size unknown
November 1, 1989	72	Empty Containers; size unknown
December 13, 1989	174	Empty Containers; size unknown
February 8, 1990	185	Empty Containers; size unknown

DATE OF TRANSACTION	# OF CONTAINERS REMOVED	GENERAL DESCRIPTION OF CONTAINERS
February 22, 1990	193	Empty Containers; size unknown
March 1, 1990	185	Empty Containers; size unknown
March 12, 1990	285	Empty Containers; size unknown
March 23, 1990	166	Empty Containers; size unknown
April 11, 1990	177	Empty Containers; size unknown
May 9, 1990	221	Empty Containers; size unknown
May 22, 1990	256	Empty Containers; size unknown
June 8, 1990	249	Empty Containers; size unknown
June 11, 1990	188	Empty Containers; size unknown
July 9, 1990	182	Empty Containers; size unknown
September 5, 1990	194	Empty Containers; size unknown
September 5, 1990	196	Empty Containers; size unknown
September 14, 1990	215	Empty Containers; size unknown
September 20, 1990	222	Empty Containers; size unknown
October 2, 1990	184	Empty Containers; size unknown
October 23, 1990	183	Empty Containers; size unknown
November 5, 1990	133	Empty Containers; size unknown
November 14, 1990	217	Empty Containers; size unknown
December 26, 1990	211	Empty Containers; size unknown
January 10, 1991	207	Empty Containers; size unknown
February 14, 1991	247	Empty Containers; size unknown
February 25, 1991	121	Empty Containers; size unknown
March 4, 1991	178	Empty Containers; size unknown
April 1, 1991	213	Empty Containers; size unknown
April 22, 1991	211	Empty Containers; size unknown

DATE OF TRANSACTION	# OF CONTAINERS REMOVED	GENERAL DESCRIPTION OF CONTAINERS
May 20, 1991	185	Empty Containers; size unknown
May 29, 1991	197	Empty Containers; size unknown
July 8, 1991	215	Empty Containers; size unknown
July 23, 1991	167	Empty Containers; size unknown
August 14, 1991	214	Empty Containers; size unknown
September 16, 1991	263	Empty Containers; size unknown
September 19, 1991	179	Empty Containers; size unknown
October 8, 1991	219	Empty Containers; size unknown
October 10, 1991	264	Empty Containers; size unknown
October 24, 1991	150	Empty Containers; size unknown
December 2, 1991	259	Empty Containers; size unknown
December 10, 1991	265	Empty Containers; size unknown
January 14, 1992	192	Empty Containers; size unknown
February 24, 1992	38	Empty Containers; size unknown
March 3, 1992	222	Empty Containers; size unknown
March 5, 1992	221	Empty Containers; size unknown
March 26, 1992	61	Empty Containers; size unknown
April 8, 1992	161	Empty Containers; size unknown
November 2, 1992	53	Empty Containers; size unknown
November 18, 1992	179	Empty Containers; size unknown
March 3, 1993 (?)	56	Empty 55-gallon metal drums - 33 Empty 30-gallon metal drums - 23
July 1, 1993	216	Empty steel drums; size unknown
July 6, 1993	264	Empty closed head drums - 234; size unknown Empty open head drums - 30; size unknown

DATE OF TRANSACTION	# OF CONTAINERS REMOVED	GENERAL DESCRIPTION OF CONTAINERS
July 14, 1993	264	Empty steel closed head drums; size unknown
July 19, 1993	227	Empty open head steel drums - 170; size unknown Empty closed head steel drums - 57; size unknown
August 5, 1993	239	Empty steel drums; size unknown
August 5, 1993	251	Empty closed steel drums - 115; size unknown Empty open steel drums - 136; size unknown
August 30, 1993	264	Empty closed steel drums - 189; size unknown Empty open steel drums - 75; size unknown
October 20, 1993	215	Empty open steel drums - 191; size unknown Empty closed steel drums - 24; size unknown
October 21, 1993	241	Empty closed head drums; size unknown
November 18, 1993	237	Empty open head drums - 81; size unknown Empty closed head drums - 156; size unknown
February 18, 1994	180	Empty steel drums; size unknown

PH2\242232.1

CERTIFICATION OF ANSWERS TO REQUEST FOR INFORMATION

Commonwealth of Pennsylvania

County of Philadelphia

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document (response to EPA Request for Information) and all documents submitted herewith, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete, and that all documents submitted herewith are complete and authentic unless otherwise indicated. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Larry Silver
NAME (print or type)

Attorney
TITLE (print or type)

SIGNATURE

Sworn to me before this
21st day of January, 1998.

Theresa M Carson
Notary Public

Notarial Seal
Theresa M. Carson, Notary Public
Philadelphia, Philadelphia County
My Commission Expires Nov. 12, 2001

Member, Pennsylvania Association of Notaries

3M General Offices
3M Center
St. Paul, Minnesota 55144-1000
612/733-1110

01-18
1292

MATERIAL SAFETY
DATA SHEET

3M

MAY 10, 1994

CG-75-CG49469-BZF9624

ARMSTRONG WORLD INDS INC
LANCASTER PLANT
LANCASTER PA 17604-3812

Dear Customer:

Enclosed are Material Safety Data Sheets (MSDSs) for products that your company recently purchased from 3M. Your purchase order numbers are listed on the last page of this packet for your reference.

Our objective in sending this information is to help you protect the health and safety of your personnel and to comply with the OSHA Hazard Communication Standard and Title III of the Superfund Amendments and Reauthorization Act of 1986. The OSHA standard requires that all personnel who may be exposed to hazardous materials must be provided by their employer with accurate information on the potential hazards of the materials and trained in proper work practices to minimize any risk.

Please forward the attached MSDS(s) to the individual in your organization responsible for implementing these regulations. If your purchase order designated that the material be shipped to an address other than the billing address, both addresses received a copy of the MSDS.

If you are a distributor and resell this product, OSHA and EPA require that you transmit this MSDS information to your customers at the time of first shipment or whenever you receive revised MSDSs from 3M.

3M MSDSs are now available to 3M customers on CD-ROM at a low annual subscription cost. Please call 1-800-944-2345 or complete and return the enclosed card to take advantage of this offer. The customer number, which is located in the top right hand corner of this letter, confirms your eligibility.

3M is committed to meeting our customer requirements and we ask that you contact your 3M customer service or sales representative if you have any questions or problems in this regard. If you do not know who to contact, please call the 3M Product Information Center at 1-800-364-3577.

Sincerely,

J. L. Butenhoff, Ph.D
Manager, Toxicology Services
3M Medical Department

bah (161-MSDS1)
Enclosure(s)

Exhibit C

179670

3M General Offices
3M Center
St. Paul, Minnesota 55144-1000
612/733-1110

DEC 15 1997

01-18
1293 7/95
update

MATERIAL SAFETY
DATA SHEET

3M

DIVISION: SPECIALTY CHEMICALS DIVISION
TRADE NAME:
FC-170C FLUORAD Brand Fluorochemical Surfactant

3M I.D. NUMBER: ZF-0002-1021-9 ZF-0002-1027-6 ZF-0002-6052-9 98-0211-0638-4
98-0211-0639-2 98-0211-0892-7 98-0211-6607-3 98-0211-7221-2

ISSUED: APRIL 25, 1994
SUPERSEDES: MARCH 25, 1994
DOCUMENT: 10-3809-0

1. INGREDIENT	C.A.S. NO.	PERCENT		
FLUOROALIPHATIC OXYETHYLENE ADDUCT (C8)	29117-08-6			70.0
POLYOXYETHYLENE GLYCOL	25322-68-3			12.0
FLUOROALIPHATIC OXYETHYLENE ADDUCT (C5)	68298-80-6	0.1	-	10.0
FLUOROALIPHATIC OXYETHYLENE ADDUCT (C4)	68298-79-3	0.1	-	10.0
FLUOROALIPHATIC OXYETHYLENE ADDUCT (C7)	68298-81-7	0.1	-	10.0
FLUOROALIPHATIC OXYETHYLENE ADDUCT (C6)	56372-23-7	0.1	-	10.0
WATER	7732-18-5	0.1	-	7.0
1,4-DIOXANE	123-91-1	0.1	-	0.3

NOTE: The ingredients of this material are included on TSCA.

THIS PRODUCT CONTAINS THE FOLLOWING TOXIC CHEMICAL OR CHEMICALS SUBJECT TO THE REPORTIN REQUIREMENTS OF SECTION 313 OF TITLE III OF THE EMERGENCY PLANNING ANDCOMMUNITY RIGHT-T ACT OF 1986 AND 40 CFR PART 372:
1,4-DIOXANE

2. PHYSICAL DATA

BOILING POINT:	ca. 210 C Initial
VAPOR PRESSURE:	ca. 31 mmHg Calc. @ R.T.
VAPOR DENSITY:	ca. 0.61 Air = 1 Calc. @ R.T.
EVAPORATION RATE:	< 1.0 Butyl Acetate = 1
SOLUBILITY IN WATER:	apprec.
SP. GRAVITY:	ca. 1.3 Water = 1
PERCENT VOLATILE:	ca. 7 %
VOLATILE ORGANICS:	N/A
VOC LESS H2O & EXEMPT SOLVENT	N/A
pH:	6-8
VISCOSITY:	N/D
MELTING POINT	N/A
APPEARANCE AND ODOR:	Yellow, viscous liquid, moderately strong odor.

Abbreviations: N/D - Not Determined N/A - Not Applicable

179670 Rec'd 7/95

3M General Offices
3M Center
St. Paul, Minnesota 55144-1000
612/733-1110

MATERIAL SAFETY
DATA SHEET

3M

MSDS: FC-170C FLUORAD Brand Fluorochemical Surfactant
APRIL 25, 1994

3. FIRE AND EXPLOSION HAZARD DATA

FLASH POINT:..... > 148 C Setaflash
FLAMMABLE LIMITS - LEL: ..... N/A
FLAMMABLE LIMITS - UEL: ..... N/A
AUTOIGNITION TEMPERATURE: ... N/A
EXTINGUISHING MEDIA:
Water, Carbon dioxide, Dry chemical, Foam
SPECIAL FIRE FIGHTING PROCEDURES:
Wear full protective clothing, including helmet, self-contained, positive pressure or pressure demand breathing apparatus, bunker coat and pants, bands around arms, waist and legs, face mask, and protective covering for exposed areas of the head.
UNUSUAL FIRE AND EXPLOSION HAZARDS:
See Hazardous Decomposition section for products of combustion.

4. REACTIVITY DATA

STABILITY: Stable
INCOMPATIBILITY - MATERIALS TO AVOID:
None Known
HAZARDOUS POLYMERIZATION: Will Not Occur
HAZARDOUS DECOMPOSITION PRODUCTS:
Carbon Monoxide and Carbon Dioxide Hydrogen Fluoride Toxic Vapors, Gases or Particulates

5. ENVIRONMENTAL INFORMATION

SPILL RESPONSE:
Refer to other sections of this MSDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment. Call (612) 733-1110 or (612) 733-6100 for 24-hour spill assistance. Cover with absorbent material. Collect spilled material. Clean up residue. Place in a U.S. DOT-approved container.

RECOMMENDED DISPOSAL:
Discharge spent solutions and small quantities (less than 5 gal.(19 L)) to a wastewater treatment system. Incinerate in an industrial or commercial facility. Combustion products will include HF.

ENVIRONMENTAL DATA:
A 3M Product Environmental Data Sheet (PED) is available.

Chemical Oxygen Demand (COD): 1.07 g/g; 5-Day Biochemical Oxygen Demand (BOD5): Nil; BOD20: 0.107 g/g; 48-Hr EC50, Water Flea (Daphnia magna): 1.5 mg/l; 96 Hr. LC50, Bluegill Sunfish (Lepomis macrochirus): 255 mg/l.

EPCRA HAZARD CLASS:
FIRE HAZARD: No **PRESSURE:** No **REACTIVITY:** No **ACUTE:** Yes **CHRONIC:** Yes

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St. Paul, Minnesota 55144-1000
612/733-1110

MATERIAL SAFETY
DATA SHEET

3M

6. SUGGESTED FIRST AID

EYE CONTACT:
Immediately flush eyes with large amounts of water for at least 15 minutes. Get immediate medical attention.

SKIN CONTACT:
Flush skin with large amounts of water. If irritation persists, get medical attention.

INHALATION:
If signs/symptoms occur, remove person to fresh air. If signs/symptoms continue, call a physician.

IF SWALLOWED:
Drink two glasses of water. Call a physician.

7. PRECAUTIONARY INFORMATION

EYE PROTECTION:
Avoid eye contact. Wear vented goggles.

SKIN PROTECTION:
Avoid skin contact. Wear appropriate gloves when handling this material. A pair of gloves made from the following material(s) are recommended: butyl rubber. Use one or more of the following personal protection items as necessary to prevent skin contact: coveralls.

VENTILATION PROTECTION:
Use with appropriate local exhaust ventilation. Provide sufficient ventilation to maintain emissions below recommended exposure limits. If exhaust ventilation is not adequate, use appropriate respiratory protection.

RESPIRATORY PROTECTION:
Avoid breathing of vapors, mists or spray. Select one of the following NIOSH approved respirators based on airborne concentration of contaminants and in accordance with OSHA regulations: full-face supplied air respirator.

PREVENTION OF ACCIDENTAL INGESTION:
Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water. Wash hands after handling and before eating. Do not ingest.

RECOMMENDED STORAGE:
Store in a cool place. Store away from acids. Store away from heat. Store out of direct sunlight. Keep container dry. Keep container in well-ventilated area.

FIRE AND EXPLOSION AVOIDANCE:
Keep container tightly closed. Keep away from heat, sparks, open

3M General Offices
3M Center
St. Paul, Minnesota 55144-1000
612/733-1110

MATERIAL SAFETY
DATA SHEET

3M

MSDS: FC-170C FLUORAD Brand Fluorochemical Surfactant
APRIL 25, 1994

8. HEALTH HAZARD DATA (continued)

Irritation (upper respiratory): signs/symptoms can include soreness of the nose and throat, coughing and sneezing.

IF SWALLOWED:
Ingestion is not a likely route of exposure to this product.

Illness may occur after a single swallowing of relatively large quantities of this material.

CANCER:
1,4-DIOXANE (123-91-1) is a potential cancer hazard causing nasal cavity, liver, skin and gall bladder tumors by the drinking water and topical routes of exposure in laboratory animal studies (NTP anticipated human carcinogen, IARC possible human carcinogen 2B, Calif. Proposition 65).

MUTAGENICITY:
Mutagenicity assays indicate the product is not mutagenic.

SECTION CHANGE DATES

HEADING	SECTION CHANGED SINCE MARCH 25, 1994 ISSUE

Abbreviations: N/D - Not Determined N/A - Not Applicable

The information on this Data Sheet represents our current data and best opinion as to the proper use in handling of this material under normal conditions. Any use of the material which is not in conformance with this Data Sheet or which involves using the material in combination with any other material or any other process is the responsibility of the user.

3M General Offices

3M Center
St. Paul, Minnesota 55144-1000
612/733-1110

01-18
1298

3M

THIS PACKET CONTAINS MSDS TEXTS FOR THE
FOLLOWING PURCHASE ORDERS:
463230013

3M General Offices
3M Center
St. Paul, Minnesota 55144-1000
612/733-1110

01-18
1292

MATERIAL SAFETY
DATA SHEET

3M

MAY 10, 1994

CG-75-CG49469-BZF9624

ARMSTRONG WORLD INDS INC
LANCASTER PLANT
LANCASTER PA 17604-3812

Dear Customer:

Enclosed are Material Safety Data Sheets (MSDSs) for products that your company recently purchased from 3M. Your purchase order numbers are listed on the last page of this packet for your reference.

Our objective in sending this information is to help you protect the health and safety of your personnel and to comply with the OSHA Hazard Communication Standard and Title III of the Superfund Amendments and Reauthorization Act of 1986. The OSHA standard requires that all personnel who may be exposed to hazardous materials must be provided by their employer with accurate information on the potential hazards of the materials and trained in proper work practices to minimize any risk.

Please forward the attached MSDS(s) to the individual in your organization responsible for implementing these regulations. If your purchase order designated that the material be shipped to an address other than the billing address, both addresses received a copy of the MSDS.

If you are a distributor and resell this product, OSHA and EPA require that you transmit this MSDS information to your customers at the time of first shipment or whenever you receive revised MSDSs from 3M.

3M MSDSs are now available to 3M customers on CD-ROM at a low annual subscription cost. Please call 1-800-944-2345 or complete and return the enclosed card to take advantage of this offer. The customer number, which is located in the top right hand corner of this letter, confirms your eligibility.

3M is committed to meeting our customer requirements and we ask that you contact your 3M customer service or sales representative if you have any questions or problems in this regard. If you do not know who to contact, please call the 3M Product Information Center at 1-800-364-3577.

Sincerely,

J. L. Butenhoff, Ph.D
Manager, Toxicology Services
3M Medical Department

bah (161-MSDS1)
Enclosure(s)

Henkel

Henkel Corporation

300 Brookside Avenue
Ambler, Pennsylvania 19002

MATERIAL SAFETY DATA SHEET

ARMSTRONG WORLD IND. INC.
LANCASTER PLANT
LIBERTY & CHESTNUT STS.
LANCASTER PA 17604

Customer # 034590118

1 PRODUCT INFORMATION

PRODUCT TRADE NAME	PERENOL E-2 (179770)
SYNONYMS	Trade Secret Blend
DOT PROPER SHIPPING NAME	Not Applicable
DOT HAZARD CLASSIFICATION	Not Applicable

HEALTH 1 FLAMMABILITY 1 REACTIVITY 0

National Fire Protection Association (NFPA) Rating

HEALTH 1 FLAMMABILITY 1 REACTIVITY 0

Hazardous Materials Identification System (HMIS) Rating

This Material Safety Data Sheet complies with 29 CFR 1910.1200 OSHA Hazard Communication Standard

TELEPHONE NUMBER 215/628-1504 EMERGENCY NUMBER 215/628-1000

2 INGREDIENTS & HAZARDS

MATERIAL	CAS NO.	CONTENTS (% WT/WT)	HAZARD DATA	
Trade secret	Trade	100	PEL:	None established
ingredients	Secret		TLV:	None established

LISTED AS CARCINOGEN BY: IARC NO NTP NO OSHA NO ACGIH NO OTHER NO

PEL = OSHA Permissible Exposure Limit TLV = ACGIH Threshold Limit

STEL = Short Term Exposure Limit TWA = Time Weighted Average

3 PHYSICAL DATA

APPEARANCE Pale yellow liquid	SOLUBILITY IN WATER, % BY Weight Negligible
ODOR Bland	pH Not Available
SPECIFIC GRAVITY (Water = 1) 0.92	BOILING POINT (760 mm Hg) >212°F (100°C)
VAPOR PRESSURE Not Available	FREEZING POINT Not Available
VAPOR DENSITY (Air = 1) Not Available	MELTING POINT Not Applicable
EVAPORATION RATE (Butyl Acetate = 1) Not Available	VISCOSITY Not Available
DENSITY @ 20°C 7.7 lb/gal	% VOLATILES BY VOLUME Nil

4 FIRE & EXPLOSION DATA

FLASH POINT (Test Method) >200°F (93°C) PMCC AUTOIGNITION TEMPERATURE Not Available

FLAMMABLE LIMITS IN AIR, % by Volume LOWER Not Available UPPER Not Available

EXTINGUISHING MEDIA Water spray, carbon dioxide, foam and dry chemical.

UNUSUAL FIRE OR EXPLOSION HAZARDS

None

SPECIAL FIRE FIGHTING PROCEDURES

Cool exposed containers with water spray. Self-contained breathing apparatus in confined areas.

5 REACTIVITY DATA

STABLE [X] UNSTABLE [ ]

CONDITIONS TO AVOID

None

INCOMPATIBLE MATERIALS

Strong oxidizing agents.

HAZARDOUS POLYMERIZATION WILL OCCUR [ ]
WILL NOT OCCUR [X]

CONDITIONS TO AVOID

None

HAZARDOUS DECOMPOSITION PRODUCTS

Carbon dioxide and carbon monoxide.

6 HEALTH HAZARD DATA

HEALTH HAZARD DATA

Conclusions are drawn from sources other than direct testing.

ROUTES OF EXPOSURE

INHALATION

Not considered hazardous under normal conditions of use. Exposure to mist or spray may cause irritation of respiratory passages.

SKIN CONTACT

Possible mild transient skin irritation on prolonged contact.

SKIN ABSORPTION

No data.

EYE CONTACT

May cause mild transient eye irritation.

INGESTION

May cause nausea, vomiting and diarrhea.

EFFECTS OF OVEREXPOSURE

ACUTE OVEREXPOSURE

Possible eye, skin and respiratory tract irritation.

CHRONIC OVEREXPOSURE

No data.

7 FIRST AID RECOMMENDATIONS

EYES

Flush at once with large amounts of water for at least 15 minutes holding lids apart. Washing within one minute is essential to achieve maximum effectiveness. Get medical attention.

SKIN

Wash thoroughly with soap and water, remove contaminated clothing and footwear. Wash clothing before reuse. Get medical attention if irritation should develop.

INHALATION

Remove to fresh air.

INGESTION

Do not induce vomiting. If vomiting should occur spontaneously, keep airway clear. Get medical attention. Never give anything by mouth to an unconscious person.

NOTES TO PHYSICIAN

None

8 SPILL PROCEDURES & WASTE DISPOSAL

SPILL & LEAK PROCEDURES

Stop leaks. Clean up large spills with vacuum truck. Soak up small spills with absorbent material and place in labeled waste container for disposal. Wear adequate personal protective clothing and equipment.

WASTE DISPOSAL METHOD

Dispose of product in an approved chemical waste landfill or incinerate in accordance with applicable Federal, State and local regulations.

9 PERSONAL PROTECTION

VENTILATION REQUIREMENTS	Local exhaust ventilation recommended.
PERSONAL PROTECTIVE EQUIPMENT	
EYE PROTECTION	Chemical splash goggles or face shield.
SKIN PROTECTION	Rubber or plastic gloves.
RESPIRATORY PROTECTION	NIOSH/MSHA approved respirator if necessary. Follow manufacturer's recommendations.
OTHER REQUIRED EQUIPMENT	Standard work clothing and work shoes.

10 SPECIAL PRECAUTIONS & STORAGE

PRECAUTIONARY STATEMENTS

CAUTION!
MAY CAUSE IRRITATION.
Avoid contact with eyes, skin, and clothing.
Avoid breathing spray or mist.
Wear chemical splash goggles, gloves and protective clothing when handling.
Use with adequate ventilation and employ respiratory protection where spray or mist may be generated.
Wash thoroughly after handling.
FOR INDUSTRIAL USE ONLY.

OTHER HANDLING & STORAGE REQUIREMENTS

Always mix well before using. Product may congeal or stratify if cold.
Warm to 122°F (50°C) and mix well before using.

11 OTHER REGULATORY INFORMATION

NOTICE: This product does not contain any ingredients subject to the reporting requirements of Section 313, Title III, Part 372.

SARA Section 311/312: Not Applicable.

TSCA: Components found in TSCA Inventory.

New Jersey Trade Secret Registry Number: 679485-5376P.

PREPARED BY	William J. Meyers	DATE	08-04-93
TITLE	Product Safety Specialist	LAST REVISED	03/10/93

CHEMICAL EMERGENCY TELEPHONE (CHEMTREC) 1-800-424-9300

All information, recommendations, and suggestions appearing herein concerning our product are based upon tests and data believed to be reliable. However, it is the user's responsibility to determine the safety, toxicity, and suitability for his own use of the product described herein. Since the actual use by others is beyond our control, no guarantee, expressed or implied, is made by Henkel Corporation as to the effects of such use, the results to be obtained, or the safety and toxicity of the product nor does Henkel Corporation assume any liability arising out of use, by others, of the product referred to herein. The information herein is not to be construed as absolutely complete since additional information may be necessary or desirable when particular or exceptional conditions or circumstances exist or because of applicable laws or government regulations.

179587 120 DATE RECVD 6/8

Air Products and Chemicals, Inc.
Box 538
Allentown, PA 18105

MATERIAL SAFETY DATA SHEET

AIR PRODUCTS

EMERGENCY TELEPHONE NUMBERS
800-523-9374 (except PA) 800-322-9092 (PA only) 215-481-4911 (outside U.S.A.)

SURFYNOL® 104A SURFACTANT

I--PRODUCT IDENTIFICATION

Manufacturing Site
Calvert City, Kentucky

Business Contact
Product Manager
Specialty Additives
Performance Chemicals Division

Sales Office
P.O. Box 538
Allentown, Pennsylvania 18105

Sales Phone
800-345-3148
322 9067
215 481 6799

Issue Date, Revision 2
August 1983

Trade Name
SURFYNOL® 104A Surfactant

Chemical Names and Synonyms
Mixture of 2,4,7,9-tetramethyl-5-decyne-4 7-diol and 2-ethylhexanol
Mixture of SURFYNOL 104 and 2-ethylhexanol

Chemical Family
Alcohols

Formula
$C_{14}H_{26}O_2$ and $C_8H_{18}O$

Chemical Abstract Registry Numbers
For $C_{14}H_{26}O_2$ - (126-86-3)
For $C_8H_{18}O$ - (104-76-7)

This Material Safety Data Sheet is furnished without charge to responsible persons who use it at their discretion and risk. Although the information and suggestions contained herein have been compiled, as of the issue date above, from sources believed to be reliable, there is no warranty of any kind, express or implied, as to the completeness or accuracy thereof.

179587 120 DATE RECVD 6/86

Air Products and Chemicals, Inc.
Box 538
Allentown, PA 18105

MATERIAL SAFETY DATA SHEET

AIR PRODUCTS

II--HAZARDOUS INGREDIENTS

SURFYNOL® 104A surfactant is a liquid mixture of 2,4,7,9-tetramethyl-5 decyne-4,7-diol and 2-ethylhexanol. It is a high boiling liquid with low vapor pressure and flashpoint above 180°F. Direct contact with the eyes may cause irritation.

As an industrial chemical, SURFYNOL 104A surfactant do not require a toxic label.

III--PHYSICAL DATA

Appearance	Clear, pale yellow liquid
Odor	Slight menthol-like
Boiling Point	Greater than 360°F
Solubility in Water	Slightly soluble
Specific Gravity (H_2O =1)	0.87

IV--FIRE AND EXPLOSION DATA

Flash Point
(Tag Open Cup >180°F (>82°C)

The product is classified as a combustible liquid of Class III B by the Occupational Safety and Health Act definition (1910.106 (a) (18)). It presents no unusual explosion hazard.

Extinguishing Media

To extinguish fires involving SURFYNOL 104A surfactant, use water spray, dry chemical, carbon dioxide (CO_2) or foam.

Special Fire Fighting Procedures

Acrid fumes and toxic carbon monoxide gas generated during a fire demand the use of a self-contained air breathing apparatus when fighting fires in enclosed areas. Contain liquids following a fire for proper disposal (See Section VII). Prevent contamination of natural bodies of water.

V--HEALTH HAZARD INFORMATION

There are no known reports of industrial systemic intoxication resulting from exposure to SURFYNOL 104A surfactant. SURFYNOL 104 surfactant, a component of the product, is an eye irritant. Thus, product contacting the eyes may cause irritation.

Routes of Exposure

Exposure to SURFYNOL 104A surfactant is most likely to occur by contact with the skin. The product is not readily absorbed through the skin and poses no known toxicological hazard by this route.

As indicated, contact with the eyes may cause irritation.

Ingestion of SURFYNOL 104A surfactant is unlikely in industrial usage when good personal hygiene practices are followed.

The low vapor pressures exhibited by SURFYNOL 104A surfactant under ambient conditions makes inhalation of significant amounts of vapor unlikely. The consequences of inhaling vapors or aerosols generated by heating or misting, however, have not been studied. Under such conditions, repiratory protection is recommended.

Toxicological Studies

Tests have not been conducted on SURFYNOL 104A surfactant as sold. However, acute toxicity tests, as well as primary skin and eye irritation tests, have been conducted on the tetramethyldecynediol (SURFYNOL 104A surfactant) component by an independent testing laboratory, using methodology described in the Federal Hazardous Substances Act (see 16 CFR 1500.3, 1500.40, 1500.41, 1500.42). The results are given below:* (for tetramethyldecynediol)

SURFYNOL 104 surfactant

Acute Oral LD_{50}	4700 mg/kg (in rats)
Acute Dermal LD_{50}	>1000 mg/kg (in rabbits)
Acute Inhalation LC_{50}	>20 mg/l (in rats)

An industrial chemical such as SURFYNOL 104 surfactant with the acute toxicity values shown above would not require a toxic label according to the American National Standard for Precautionary Labeling of Hazardous Industrial Chemicals (ANSI Z129.1-1982).

SURFYNOL 104 surfactant is not a primary skin irritant (16 CFR 1500.41).

SURFYNOL 104 surfactant is an eye irritant (16 CFR 1500.42).

*Air Products and Chemicals, Inc. data. Report available upon request.

The 2-ethylhexanol component of SURFYNOL 104A surfactant possesses a low degree of toxicity. LD_{50}'s, both oral and dermal, of 3200 mg/kg have been report.** Its low vapor pressure under ambient conditions (0.05 mm HG @ 20°C) greatly minimizes the possiblility of exposure to significant vapor concentrations and an inhalation hazard is not expected.

SURFYNOL 104A surfactant is a blend of SURFYNOL 104 surfactant and 2 ethyl hexanol. They are completely miscible and not easily separated after mixing, and remain unaltered chemically. The toxicity of SURFYNOL 104A surfactant is predicted from the toxicity of the components. On this basis, a toxic label is not required.

FIRST AID

Eye Contact:

Immediately flush eyes gently with copious quantities of water for a minimum of 15 minutes. Use fingers to separate eyelids to assure that the eyes are being irrigated. Call a physician.

Skin Contact:

Wash exposed skin with copious quantities of soapy water.

Inhalation:

There has been no clinical experience with overexposure via the respiratory route. If such overexposure should occur, remove patient to fresh air. If breathing is impaired, assisted respiration (e.g., mouth-to-mouth) may be indicated. Supplemental oxygen may be indicated. Seek medical advice.

Ingestion:

The consequences of ingestion in man are unknown. In cases of ingestion it is recommended that the stomach be emptied by induced vomiting or gastric suction. Medical advice should be obtained if ingestion has occurred.

VI--REACTIVITY DATA

The product is stable under ambient conditions. When heated to decomposition, acrid fumes are evolved. Complete pyrolysis products have been identified as carbon dioxide and water.

Hazardous polymerization does not occur.

**Patty, Frank A., Industrial Hygiene and Toxicology, Vol. 2, pp. 1462-1464, New York, 1958.

VII--SPILL OR LEAK PROCEDURES

If the material is released or spilled, wear protective clothing, boots, gloves and eye protection.

Eliminate sources of ignition. Contain and recover material, "if without risk," to prevent contamination of natural bodies of water.

Ventilate the area.

Mix with absorbent material. Scoop into containers, such as 55 gallon drums. Seal for disposal.

Waste Disposal:

Dispose in a landfill in accordance with local, state and federal regulations or incinerate.

VIII--SPECIAL PROTECTION INFORMATION

Use products in well-ventilated areas.

Respiratory Protection:

Generally, respiratory protection is unnecessary provided there is adequate ventilation. In the event of a fire, a self-contained breathing apparatus should be utilized.

Eye:

Use safety glasses with side shields or chemical splash goggles. Emergency eye wash facilities must be readily accessible in work areas. Contact lenses should not be used by persons who work with SURFYNOL 104A surfactant.

Body:

Prevent contact with skin. Use rubber gloves. Wash hands prior to smoking, consuming food.

IX--SPECIAL PRECAUTIONS

Label:

SURFYNOL® 104A
SURFACTANT

WARNING! CAUSES EYE
IRRITATION.

Wash thoroughly after handling.

Avoid contact with eyes.

First Aid: In case of contact, immediately flush eyes with large quantities of water for at least 15 minutes. Call a physician.

Other Handling and Storage Requirements:

Do not get in eyes or on the skin. Avoid breathing vapors.

Keep containers tightly closed.

Store in a cool, dry place.

Regulatory Concerns:

The product is not a restricted article according to Department of Transportation (DOT) and International Air Transport Association (IATA) regulations.

All components of SURFYNOL 104A are listed in the Environmental Protection Agency's regulation 40 CFR 180.1001 (d). It is exempted from the requirements of tolerance when used in good agricultural practice as an inert ingredient in pesticide formulations applied to growing and harvested crops and to animals with the limitation that SURFYNOL 104A surfactant not exceed 2.5% of the pesticide formulation.

179114

Akzo Chemie America
Interstab Chemicals

500 Jersey Avenue, P.O. Box 638
New Brunswick, New Jersey 08903
201/247-2202

MATERIAL SAFETY DATA SHEET

IN CASE OF EMERGENCY	TRANSPORTATION—CHEMTREC 800-424-9300	NFPA 704 HAZARD RATING 4 = Extreme 3 = High 2 = Moderate 1 = Slight 0 = Minimal * = Chronic Health Hazard (SEE SECT. 9)	HEALTH 1	MSDS NO. 76081183- -1
	AKZO CHEMIE AMERICA 201-247-2209		FIRE 2	PRODUCT CODE NO. 76081183
	BUS. NO. AKZO CHEMIE AMERICA 201-247-2202		REACTIVITY 0	ISSUED 10/31/85 / REVISED

1 PRODUCT IDENTITY

PRODUCT NAME (LABEL): Interstab ABC-18

CHEMICAL FAMILY: Zinc Salt of an Organic Acid

CHEMICAL NAME SYNONYMS: NA Mixture

CAS NO: See Below

TSCA INV NO: All compounds are on the TSCA Inventory

FORMULA: Mixture

CARCINOGEN REFERENCE APPLIES: ↓

2 HAZARDOUS INGREDIENTS

CAS NO.	COMPONENTS	%	ACGIH TLV PPM OR *mg/M³	OSHA PEL PPM OR *mg/M³	CARCINOGEN REFERENCE APPLIES ↓
CBI	Zinc Salt of an Organic Acid (As Zn)	18	5mg/M³	5mg/M³	NA
64741-41-9	Hydrocarbon Solvent (Aliphatic)	18	100 ppm	500 ppm	NA

3 SHIPPING DATA

DOT SHIPPING NAME: Paint Drier, Liquid

DOT HAZARD CLASSIFICATION: Combustible Liquid

IMCO CLASS	UN NO	NA NO	IATA NO	CORROSIVE PER DOT
3.3	UN 1168	UN 1168	N.D.	[ ] To Skin [ ] To Steel [X] To Neither

4 PHYSICAL PROPERTIES

INITIAL BOILING POINT	MELTING/FREEZING POINT	POUR POINT	MOLECULAR WEIGHT	SPECIFIC GRAVITY (H₂O = 1)
>150 °C >300 °F @ Of Solvent 760 mmHg	ND °C ND °F	ND °C ND °F	Mixture	1.070 @ 25 °C

VAPOR PRESSURE (mmHg)	VAPOR DENSITY (AIR = 1)	SOLUBILITY IN WATER (% By Weight)	% VOLATILES BY WEIGHT	EVAPORATION RATE – BUTYLACETATE = 1
< 10 @ 25 °C	> 1	Negligible	18	< 1

APPEARANCE & ODOR: Clear Liquid, Petroleum Distillate Odor.

5 FIRE AND EXPLOSION DATA

FLASH POINT	TEST METHOD	FLAMMABLE LIMITS IN AIR	AUTO IGNITION TEMPERATURE	DOT EMERGENCY GUIDE NO.
42 °C 108 °F	T.C.C.	0.9-6.0 % By vol.	ND °C ND °F	26

EXTINGUISHING MEDIA: [ ] Not Combustible [ ] Water fog or spray [X] CO_2 [X] Dry Chemical [ ] Alcohol Foam [X] Foam [ ] Earth or mud

SPECIAL FIRE FIGHTING PROCEDURES: Water or foam may cause frothing. If water is used, fog nozzles are recommended. Moderate fire hazard.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Isolate from all sources of ignition. Toxic fumes may be produced under combustion.

6 REACTIVITY DATA

STABILITY: [X] Stable [ ] Unstable

CONDITIONS CONTRIBUTING TO INSTABILITY: [ ] Thermal decomposition [ ] Photo degradation [ ] Polymerization [ ] Contamination

HAZARDOUS POLYMERIZATION: [X] Will Not Occur [ ] May Occur

INCOMPATABILITY – AVOID CONTACT WITH: [X] Strong acids [ ] Strong alkalis [X] Strong oxidizers

HAZARDOUS DECOMPOSITION PRODUCTS – THERMAL AND OTHER (LIST): Hydrocarbon decomposition products and metal oxide fumes.

CONDITIONS TO AVOID: [X] Ignition sources [ ] Temperatures above °C °F

7 SPILL OR LEAK

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED: [X] Keep upwind [X] Avoid skin contact [ ] Flush with water [X] Absorb with sand or inert material [ ] Neutralize [X] Shovel or scoop out and remove [X] Prevent spread of spill

WASTE DISPOSAL – *Consult federal, state, or local authorities for proper disposal procedures.*

UNDER RCRA THIS PRODUCT IS CLASSIFIED AS: [X] Ignitable [ ] Corrosive [ ] Reactive [ ] EP Toxic [ ] Listed [ ] Not a RCRA hazardous waste, but see supplement

UNDER CERCLA (SUPERFUND) REPORTABLE QUANTITY: RQ = ND Pounds

CONTINUED ON REVERSE SIDE ▶

NA—NOT APPLICABLE ND—NOT DETERMINED <—LESS THAN >—GREATER

CBI—CONFIDENTIAL BUSINESS INFORMATION

179114 120 DATE RECVD 10/8

Before using product, read and follow directions and precautions on product label and bulletins.

MSDS NO. 76081183-2

8 TOXICITY

ACUTE

DERMAL (SKIN)
ND Considered irritating to skin.

EYE
ND Considered irritating to eyes.

INHALATION
ND Narcosis in high concentration.

ORAL
ND Considered a severe irritant to mouth and stomach.

OTHER
Inhalation studies of a solvent similar to the one used in this product on laboratory animals (rats) indicate that exposure to vapors in air for 8 hours at 100 ppm may cause kidney damage. Work is continuing to validate these findings.

HEALTH HAZARD INFORMATION

9 Effects of Over Exposure

DERMAL Direct and prolonged skin contact may result in irritation with redness, swelling & dermatitis.

EYE
Direct eye contact may result in irritation.

INHALATION Symptoms may range from irritation of the respiratory tract and mild depression (dizziness, headaches, nausea) to convulsions and loss of consciousness.

INGESTION
May cause severe irritation to the mouth, throat and stomach.

10 Emergency First Aid

DERMAL
Wash affected area thoroughly with soap and water after removing contaminated clothing.

EYE CONTACT
[X] Immediately flush with water for at least 15 minutes! Contact lenses should be removed if the initial flush doesn't wash them out
[X] Get medical attention

INHALATION
[X] Remove to fresh air
[X] If not breathing, give artificial respiration
[X] Give oxygen if needed
[X] Get medical attention, if indicated

INGESTION (NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON)
[X] Do not induce vomiting
[ ] Induce vomiting
[ ] Give plenty of water
[X] Get medical attention

11 SPECIAL PROTECTION INFORMATION

HANDS (GLOVE MATERIALS TO MINIMIZE CHEMICAL CONTACT)
[X] Neoprene [ ] Natural rubber [ ] Poly-ethylene [ ] Butyl rubber [ ] Polyvinyl alcohol [ ] Polyvinyl chloride

EYES
Chemical splash goggles or safety glasses.

VENTILATION REQUIREMENTS – Always maintain exposure below permissible exposure limits Use explosion proof equipment.
Sufficient to prevent hazardous accumulation of vapors.

RESPIRATOR TYPE – *For reducing contaminant concentration in inhaled air*
[ ] Filter - dust, fume, mist
[X] Can or cartridge gas or vapor
(Organic vapor or supplied air respirator)

OTHER
[X] Safety shower and/or eye wash should be available
Long sleeve clothing.

12 SPECIAL PRECAUTIONS

[ ] Do not store near combustibles
[X] Wash thoroughly after handling
[X] Do not get in eyes, on skin or clothing
[X] Do not breathe dust, vapor, mist, gas
[X] Keep container closed
[ ] Keep from freezing
[X] Empty container may contain hazardous residues
[X] Keep away from heat, sparks, and open flames
[X] Use explosion proof equipment

13 OTHER

Store in cool area. Avoid prolonged or repeated contact with the skin or breathing of vapor.

PREPARED BY – PRODUCT GROUP	REVIEWED BY: SAFETY	HEALTH	TOXICOLOGY	ENVIRONMENTAL
Sal J. Graziadei				

PLEASE NOTE This information is furnished without warranty, expressed or implied, except that it is accurate to the best knowledge of Akzo Chemie America. The data on this sheet relates only to the specific material designated herein. Akzo Chemie America assumes no legal responsibility for use or reliance upon this data.

Required under OSHA Safety and Health Regulations for Shipyard Employment (29 CFR 1915)

Occupation 179465 120 DATE RECVD 3/88

OMB No. 1218-0074
Expiration Date 05/31/86

New

Section I

Manufacturer's Name: H. N. CHEMICAL COMPANY

Emergency Telephone Number: (201) 256-7777

Address (Number, Street, City, State, and ZIP Code): 90 Maltese Dr.
Totowa, N.J. 07512

Chemical Name and Synonyms:

Trade Name and Synonyms: Polystab 405

Chemical Family: Organo Metallic

Formula:

Section II - Hazardous Ingredients

Paints, Preservatives, and Solvents	%	TLV (Units)	Alloys and Metallic Coatings	%	TLV (Units)
Pigments			Base Metal		
Catalyst			Alloys		
Vehicle			Metallic Coatings		
Solvents: Mineral Spirits	35.1	500	Filler Metal Plus Coating or Core Flux		
Additives			Others		
Others					

Hazardous Mixtures of Other Liquids, Solids or Gases

	%	TLV (Units)
Barium, Zinc Phosphite Complex	65	NA

Section III - Physical Data

Boiling Point (°F)	380	Specific Gravity (H_2O=1)	.97
Vapor Pressure (mm Hg.)		Percent Volatile by Volume (%)	35
Vapor Density (AIR=1)		Evaporation Rate Ether =1)	Slower

Solubility in Water: Negligible

Appearance and Odor: Pale bland liquid

Section IV - Fire and Explosion Hazard Data

Flash Point (Method Used)	Flammable Limits	Lel	Uel
104 °F TCC		.7	6

Extinguishing Media: Foam, CO^2, Dry chemicals

Special Fire Fighting Procedures: Self contained breathing apparatus is recommended

Unusual Fire and Explosion Hazards:

179465 120 DATE RECVD 3/88

Section V - Health Hazard Data

Threshold Limit Value

500 ppm

Effects of Overexposure

This material is poisonous if swallowed and may cause skin irritation after prolonged or repeated contact.

Emergency First Aid Procedures

Wash thoroughly with soap and water.

Section VI - Reactivity Data

Stability	Unstable		Conditions to Avoid
	Stable	x	

Incompatability (Materials to Avoid)

Peroxides

Hazardous Decomposition Products

Phosphorous acids.

Hazardous Polymerization	May Occur		Conditions to Avoid
	Will Not Occur	x	

Section VII - Spill or Leak Procedures

Steps to be Taken in Case Material is Released or Spilled

Absorb with filter aid or dry inert powder and shovel up.

Waste Disposal Method

Dispose of in accordance with local, state and federal regulations.

Section VIII - Special Protection Information

Respiratory Protection (Specify Type)

Ventilation	Local Exhaust X	Special NA
	Mechanical (General)	Other NA

Protective Gloves Neoprene rubber	Eye Protection Safety goggles

Other Protective Equipment

Wear protective coveralls.

Section IX - Special Precautions

Precautions to be Taken in Handling and Storing

Do not store in high temperature area or in area of fire or open flame.

179510 120 DATE RECVD 5/88

ROHM AND HAAS COMPANY

CORPORATE PRODUCT INTEGRITY DEPARTMENT
INDEPENDENCE MALL WEST
PHILADELPHIA, PA 19105

EMERGENCY TELEPHONE
215-592-3000 (ROHM AND HAAS)
800-424-9300 (CHEMTREC)

HAZARD RATING
4=EXTREME
3=HIGH
2=MODERATE
1=SLIGHT
0=INSIGNIFICANT
*=SEE SECTION IV

TOXICITY 3 | 1 | 0 REACT | SPECIAL

BS173
LIST 7

MATERIAL SAFETY DATA SHEET

OSHA HAZARDOUS

MATERIAL	CODE	KEY	DOT HAZARD CLASS
TRITON® X-100 Surfactant	61572	904147-7	NONREGULATED
	DATE ISSUED 05/24/88		

FORMULA	CHEMICAL NAME OR SYNONYMS
Not applicable	Octylphenoxypolyethoxyethanol nonionic surfactant

I – COMPOSITIONAL INFORMATION

	CAS REG. NO.	APPROX WT %	TWA/TLV
Octylphenoxypolyethoxyethanol	9036-19-5	100	R&H OSHA ACGIH NE NE NE NE = None established

II – PHYSICAL PROPERTY INFORMATION

APPEARANCE - ODOR - pH			VISCOSITY
Clear viscous liquid; mild odor; pH (5% solution) = 6 - 8			240 cps
MELTING OR FREEZING POINT	BOILING POINT	VAPOR PRESSURE (mm Hg)	VAPOR DENSITY (AIR=1)
7C/45F pour point	270C/520F	Less than 1 @20C/68F	Greater than 1
SOLUBILITY IN WATER	PERCENT VOLATILE (BY WEIGHT)	SPECIFIC GRAVITY (WATER=1)	EVAPORATION RATE (BUTYL ACETATE=1)
Complete	0	1.07	Less than 1

III – FIRE AND EXPLOSION HAZARD INFORMATION

FLASH POINT	AUTO IGNITION TEMPERATURE	LOWER EXPLOSION LIMIT (%)	UPPER EXPLOSION LIMIT (%)
288C/550F COC	NA	NA	NA

EXTINGUISHING MEDIA

☐ FOAM ☐ "ALCOHOL" FOAM ☒ CO_2 ☒ DRY-CHEMICAL ☒ WATER SPRAY ☐ OTHER

SPECIAL FIRE FIGHTING PROCEDURES

Wear respirator (pressure-demand, self-contained breathing apparatus, MSHA/NIOSH-approved or equivalent) and full protective gear.

UNUSUAL FIRE AND EXPLOSION HAZARDS

IV – HEALTH HAZARD INFORMATION

ROHM AND HAAS RECOMMENDED WORK PLACE EXPOSURE LIMITS

STEL = None established

EFFECTS OF OVEREXPOSURE

Eye Contact: Severely irritating to eyes; possibly permanent injury.

Skin Contact: Irritating to the skin upon repeated or prolonged exposure.

EMERGENCY AND FIRST AID PROCEDURES

Inhalation: Move subject to fresh air. Give artificial respiration if breathing has stoppe

Eye and Skin Contact: IMMEDIATELY flush eyes with a large amount of water for at least 15 minutes. Get prompt medical attention. Flush skin thoroughly with water. Remove and wash clothing before reuse.

Ingestion: If swallowed dilute by giving [illegible] of water to drink. See a physician. Never give anything by mouth to an unconsc

179510 120 DATE RECVD 5/88

V — REACTIVITY INFORMATION

ABILITY	CONDITIONS TO AVOID
[X] STABLE [ ] UNSTABLE	NA

ZARDOUS DECOMPOSITION PRODUCTS

ZARDOUS POLYMERIZATION	CONDITIONS TO AVOID
[ ] MAY OCCUR [X] WILL NOT OCCUR	NA

COMPATIBILITY (MATERIALS TO AVOID)
[ ] WATER [X] OTHER Strong oxidizing and reducing agents.

VI — SPILL OR LEAK PROCEDURE INFORMATION

EPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED
vacuate the spill area. Floor may be slippery; use care to avoid falling. Wear eye rotection. Dike and contain spill with inert material (e.g., sand, earth). Scoop or shovel olid material into a suitable container for recovery or disposal. Keep dust to a minimum. ransfer liquid to containers for recovery or disposal and solid diking material to separate ontainers for disposal. Thoroughly launder clothing before reuse. DO NOT take clothing home o be laundered. Keep spills and cleaning runoffs out of municipal sewers and open bodies of ater.

ASTE DISPOSAL METHODS Incinerate liquid and contaminated diking material at a permitted facility ccording to local, state and federal regulations.

VII — SPECIAL PROTECTION INFORMATION

NTILATION TYPE
ormal room ventilation.

SPIRATORY PROTECTION
one required if good ventilation is maintained. Wear respirator (MSHA/NIOSH-approved or quivalent) suitable for concentrations and types of air contaminants encountered.

OTECTIVE GLOVES	EYE PROTECTION
pervious	Chemical splash goggles (ANSI Z-87.1 or approved equivalent)

THER PROTECTIVE EQUIPMENT
afety shower, eyewash facility, protective clothing

VIII — STORAGE AND HANDLING INFORMATION

ORAGE TEMPERATURE	INDOOR	HEATED	REFRIGERATED	OUTDOOR
AX. MIN.	YES	NO	NO	YES

ow temperature storage can cause handling problems. Viscosity of material will increase.

IX — TOXICITY INFORMATION

cute toxicity data for this product: Oral LD50 (rat): <5 g/kg
halation LC50 (rat): >21.5 mg/L Dermal LD50 (rabbit): >3 g/kg
ye irritation (rabbit): severe irritation; (rat) permanent corneal damage at concentrations 10%.
kin irritation (rabbit): practically non-irritating (primary irritation score = 0.0)

X — MISCELLANEOUS INFORMATION

oxicity data continued:
kin irritation (human): patch tests of undiluted material on fifty (50) subjects produced no rimary irritation or sensitization reaction.

cotoxicity data: (aquatic)
Bluegill Sunfish 96 hr (static) - >10 mg/L

RITON® IS A TRADEMARK OF ROHM AND HAAS COMPANY OR ONE OF ITS SUBSIDIARIES OR AFFILIATES.

* = NOT APPLICABLE C = CEILING VALUE	KEY	DATE OF ISSUE	SUPERSEDES
	904147-7	05/24/88	06/20/86

THE INFORMATION CONTAINED HEREIN IS BASED ON DATA CONSIDERED ACCURATE. HOWEVER, NO WARRANTY IS EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THESE DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF.

ROHM AND HAAS COMPANY ASSUMES NO RESPONSIBILITY FOR PERSONAL INJURY OR PROPERTY DAMAGE TO VENDEES, USERS OR THIRD PARTIES CAUSED BY THE MATERIAL. SUCH VENDEES OR USERS ASSUME ALL RISKS ASSOCIATED WITH THE USE OF THE MATERIAL.

MATERIAL SAFETY DATA SHEET

For Coatings, Resins and Related Materials

Printed : 11/15/91

For Customer: CA3938 Armstrong World Industries

Revised : 11/09/91

SECTION I - PRODUCT IDENTIFICATION

Manufacturer: Sanncor Industries, Inc.
300 Whitney Street
Leominster MA 01453

Information Phone: (508) 537-4748
Emergency Phone: 1-800-424-9300
CHEMTREC Phone: 1-800-424-9300

Hazard Ratings: Health - 1
none -> extreme Fire - 1
0 ---> 4 Reactivity - 0

Product Class:
Trade Name : SANCURE WATERBORNE URETHANE
Product Code : 2014
C.A.S. Number: TSCA Compliant
Customer's No: 169402 (A) spec. #
Prepared By : Matthew R. Stundtner
Title : Government Complicance Officer
D.O.T. Hazard Class : UN #:
Proper Shipping Name: RESIN SOLUTION (NON HAZARDOUS)

SECTION II - HAZARDOUS INGREDIENTS

Ingredients	CAS #	Weight %	Exposure Limits ACGIH/TLV	Exposure Limits OSHA/PEL	VP mm HG
2-PYRROLIDINONE,1-METHYL	872-50-4	7.34	N.E.	N.E.	.3
100 ppm is the manufacturer's recommended TLV level.					
MORPHOLINE,4-METHYL	109-02-4	2.35	N.E.	N.E.	18

N.E. = Not Established

SECTION III - PHYSICAL DATA

Boiling Range: 212 - 396 Deg. F
Evap. Rate: Slower than n-Butyl Acetate
Volatiles volume: 71.3 %
Vapor Density: Heavier than Air.
Liquid Density: Heavier than Water.
Wgt per gallon: 8.55 Pounds.
Appearance: TRANSLUCENT TO CLEAR LOW VISCOSITY LIQUID

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

Flammability Class: IIIB Flash Point: None LEL: None

EXTINGUISHING MEDIA:
Water for dried polymer.

SPECIAL FIREFIGHTING PROCEDURES:
Wear full body protective clothing and MESA/NOISH approved self-contained breathing apparatus. Use water to cool fire exposed containers.

UNUSUAL FIRE & EXPLOSION HAZARDS:
No unusual fire or explosion hazards known.

SECTION V - HEALTH HAZARD DATA

PERMISSIBLE EXPOSURE LEVEL:

Not established for complete product, exposure limits for the individual components, if established, are listed in Section II.

EFFECTS OF OVEREXPOSURE:

Inhalation may irritate respiratory tract. Contact with skin or eyes may cause irritation. Ingestion may cause nausea, vomiting, diarrhea.

NMP Testing:

NMP administered orally to pregnant female rats, at a high dose level of 750 mg/kg body weight, caused maternal and feto toxicity in certain subjects. In the dermal study NMP was embryotoxic at very high dose levels; this was attributed to maternal toxicity. In the inhalation studies NMP was not embryo or maternal toxic, and did not cause carcinogenic or other life shortening effects in rats at 10 and 100 ppm level over two years.

FIRST AID:

Inhalation: If affected by inhalation, remove to fresh air. If not breathing start mouth to mouth resuscitation and get medical help.

Eye Contact: Flush with water for at least 15 minutes and get prompt medical attention.

Skin Contact: Wash skin thoroughly with soap and water. If irritation develops consult a physician.

Ingestion: Call physician immediately.

SECTION VI - REACTIVITY DATA

TABLITY: [ ] Unstable [x] Stable

AZARDOUS POLYMERIZATION: [ ] May occur [x] Will not occur

INCOMPATIBILITY

Acidic conditions will cause the urethane resin to precipatate out of solution.

CONDITIONS TO AVOID:

Keep product from freezing.

HAZARDOUS DECOMPOSITION PRODUCTS:

By fire: oxides of carbon and possible oxides of nitrogen.

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Avoid breathing vapors. Wear goggles, coveralls and impervious gloves and boots. Add dry absorbent and shovel or sweep up. Place in an appropriate container and seal. Wash all clothing before reuse. In the event of a large spill use the emergency telephone number shown on page one of this MSDS.

SECTION VII - SPILL OR LEAK PROCEDURES (cont.)

WASTE DISPOSAL METHOD:
Dispose of material in accordance with federal, state and local regulations.

SECTION VIII - SPECIAL PROTECTION INFORMATION:

RESPIRATORY PROTECTION:
NOISH approved respirators recommended if vapors and mists are generated as in spray applications.

VENTILATION:
Provide general dilution or local exhaust sufficient to keep TLV and LEL of hazardous ingredients in Section II below stated limit.

PROTECTIVE GLOVES:
The gloves used should be resistant to the hazardous ingriedents listed in Section II of this MSDS, and be appropriate to the operation being performed.

EYE PROTECTION:
Splashproof goggles

OTHER PROTECTIVE EQUIPMENT:
Eyewash facility, emergency shower, protective clothing.

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING:
Keep from freezing. Do not puncture or stack drums.

OTHER PRECAUTIONS:
Do not leave containers open. Avoid repeated or prolonged contact with skin. Empty containers retain product residue, observe all safety precautions. Do not reuse container.

SECTION X - ADDITIONAL REGULATORY INFORMATION

SARA TITLE III SECTION 313
This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right To Know Act of 1986 and of 40 CFR 372:

CAS#	Chemical Name	Percent by Weight
	None	

MATERIAL SAFETY DATA SHEET

EASTMAN

100000228/F/USA
Approval Date: 06/02/1994
Print Date: 02/06/1995
Page 1

(A) Spec. # 1C9377

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1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: "EASTMAN" Chlorinated Polyolefin 343-1 (25% Solids in Xylene)

Product Identification Number(s): SPC 19379

Manufacturer/Supplier: Eastman Chemical Company, Kingsport, Tennessee 37662

MSDS Prepared by: Eastman Health, Safety, and Environmental Services, Eastman Chemical Company, Kingsport, TN 37662

For Emergency Health, Safety & Environmental Information, call 800-EASTMAN

For Emergency Transportation Information, call CHEMTREC at 800-424-9300 or call 800-EASTMAN

For Other Information, call your Eastman representative or the Eastman operator at 615-229-2000 (USA)

Chemical Name: not applicable

Synonym(s): EAN 308214; PM 06362-00;

Molecular Formula: not applicable

Molecular Weight: not applicable

Product Use: adhesive

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2. COMPOSITION/INFORMATION ON INGREDIENTS

Weight %	Component - (CAS Registry No.)
25	chlorinated polyolefin (068609-36-9)
<75	xylene (001330-20-7)
<2.5	epoxidized oil (061788-72-5)
<1	chlorobenzene (000108-90-7)
<0.02	benzene (contained in xylene) (000071-43-2)

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3. HAZARDS IDENTIFICATION

WARNING!
FLAMMABLE LIQUID AND VAPOR
HARMFUL IF INHALED
CAUSES SKIN AND EYE IRRITATION

HMIS Hazard Ratings: Health - 2, Flammability - 3, Chemical Reactivity - 0

NFPA Hazard Ratings: Health - 2, Flammability - 3, Chemical Reactivity - 0

NOTE: HMIS and NFPA ratings involve data and interpretations that may vary from company to company. They are intended only for rapid, general identification of the magnitude of the specific hazard. To deal adequately with the safe handling of this material, all the information contained in this MSDS must be considered.

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4. FIRST-AID MEASURES

Inhalation: Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Eyes: Immediately flush with plenty of water for at least 15 minutes. Get medical attention.

Skin: Immediately remove contaminated clothing and shoes and wash skin with soap and plenty of water. Get medical attention. Wash contaminated clothing before reuse. Destroy or thoroughly clean contaminated shoes.

Ingestion: Only induce vomiting at the instruction of medical personnel. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately.

---

5. FIRE FIGHTING MEASURES

Extinguishing Media: water spray, dry chemical, carbon dioxide (CO_2), foam

Special Fire-Fighting Procedures: Wear self-contained breathing apparatus and protective clothing. USE WATER WITH CAUTION. Since this material is lighter than water and relatively insoluble, the fire could easily be spread by the use of water in an area where the water could not be contained. Use water spray to keep fire-exposed containers cool. Water may be ineffective in fighting the fire.

Hazardous Combustion Products: carbon dioxide, carbon monoxide

Unusual Fire and Explosion Hazards: Flammable. Vapors may cause a flash fire or ignite explosively. Vapors may travel considerable distance to a source of ignition and flash back. Prevent buildup of vapors or gases to explosive concentrations.

---

6. ACCIDENTAL RELEASE MEASURES

Eliminate all ignition sources. Absorb spill with vermiculite or other inert material, then place in a container for chemical waste.

For Large Spills: Use water spray to disperse vapors and flush spill area. Prevent runoff from entering drains, sewers, or streams.

7. HANDLING AND STORAGE

Personal Precautionary Measures: Avoid contact with eyes, skin, and clothing. Avoid breathing mist or vapor. Use only with adequate ventilation. Wash thoroughly after handling.

Prevention of Fire and Explosion: Keep away from heat, sparks, and flame. Keep from contact with oxidizing materials. Comply with all national, state, and local codes pertaining to the storage, handling, dispensing, and disposal of flammable liquids.

Storage: Keep container closed. Storage above 50°C (122°F) may affect product quality.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Limits:

ACGIH Threshold Limit Value (TLV):

xylene: 100 ppm TWA; 150 ppm STEL
benzene: 10 ppm TWA

ACGIH Threshold Limit Value (TLV) - Notice of Intended Change: benzene: 0.1 ppm TWA, skin

An ACGIH Biological Exposure Index (BEI) is available for xylene; benzene.

OSHA (USA) Permissible Exposure Limit (PEL, 1989 Table Z-1-A values or section-specific standards):

xylene: 100 ppm TWA; 150 ppm STEL
benzene: 1 ppm TWA

OSHA (USA) Action Level: benzene: 0.5 ppm TWA

Ventilation: Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. Use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits.

Respiratory Protection: If engineering controls do not maintain airborne concentrations below recommended exposure limits, an approved respirator must be worn. Respirator type: mist; organic vapor. If respirators are used, a program should be instituted to assure compliance with OSHA Standard 29 CFR 1910.134.

Eye Protection: Wear safety glasses with side shields (or goggles) and a face shield.

Skin Protection: Wear impervious gloves, boots, and protective clothing appropriate for the risk of exposure.

Recommended Decontamination Facilities: eye bath, washing facilities, safety shower

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9. PHYSICAL AND CHEMICAL PROPERTIES

- Physical Form: viscous liquid
- Color: amber
- Odor: aromatic
- Odor Threshold: 1 ppm - Data for xylene
- Specific Gravity at 22°C (71°F) (water = 1): 0.911
- Vapor Pressure at 20°C (68°F): 8 mbar (6 mm Hg)
- Vapor Density (Air = 1): 4.0
- Evaporation Rate (n-butyl acetate = 1): 0.6
- Boiling Point: 140°C (284°F)
- Melting Point: not available
- Viscosity: not available
- Solubility in Water: negligible
- pH: not applicable
- Octanol/Water Partition Coefficient: not available
- Flash Point (Tag closed cup): 27°C (81°F)
- Lower Explosive Limit: 1 volume %
- Upper Explosive Limit: 7 volume %
- Autoignition Temperature (ASTM D 659-78): 550°C (1020°F)
- Sensitivity to Mechanical Impact: not available
- Sensitivity to Static Discharge: not available

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10. STABILITY AND REACTIVITY

Stability: stable

Incompatibility: Material can react violently with strong oxidizing agents.

Hazardous Polymerization: will not occur

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11. TOXICOLOGICAL INFORMATION

Effects of Exposure:

Inhalation: Harmful if inhaled.

Eyes: Causes irritation. Mist or vapor irritating.

Skin: Causes irritation.

Ingestion: May cause irritation of the gastrointestinal tract.

Acute Toxicity Data:

Data for chlorinated polyolefin:

Oral LD-50 (rat): >3200 mg/kg
Inhalation LC-50 (rat): >0.14 mg/L/6 hour(s) (highest concentration obtainable)
Dermal LD-50 (rat): >1000 mg/kg (highest dose tested)
Skin irritation (guinea pig): very slight
Skin sensitization (guinea pig): none

Data for xylene:

Oral LD-50 (rat): 4.3 g/kg
Inhalation LC-50 (rat): 6700 ppm/4 hour(s)
Dermal LD-50 (rabbit): 14 mL/kg
Skin irritation (rabbit): moderate
Repeated skin application (rabbit): moderate irritation
Eye irritation (rabbit): slight to moderate

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12. ECOLOGICAL INFORMATION

This material has not been tested for environmental effects.

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13. DISPOSAL CONSIDERATIONS

Discharge, treatment, or disposal may be subject to national, state, or local laws. Mix with compatible chemical which is less flammable and incinerate.

Since emptied containers retain product residue, follow label warnings even after container is emptied. Residual vapors may explode on ignition; do not cut, drill, grind, or weld on or near this container.

---

14. TRANSPORT INFORMATION

- DOT (USA) Status: regulated.
- Class 3, packing group III
- Proper Shipping Name and Number: Xylene Solution, UN 1307
- DOT Reportable Quantity: 1333 lb (605 kg)

- TDG (Canada) Status: regulated.
- Class 3, packing group III
- Proper Shipping Name and Number: Xylene Solution, UN 1307

- TDG Subsidiary Risk: 9.2
- TDG Regulated Limit: 67 kg (147 lb)

- Air - International Civil Aviation Organization (ICAO)
- ICAO Status: regulated.
- Class 3, packing group III
- Proper Shipping Name and Number: Xylene Solution, UN 1307

- Sea - International Maritime Dangerous Goods (IMDG)
- IMDG Status: regulated.
- Class 3.3, packing group III
- Proper Shipping Name and Number: Xylene Solution, UN 1307

15. REGULATORY INFORMATION

- This document has been prepared in accordance with the MSDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.
- OSHA hazardous chemical(s): xylene; benzene; chlorobenzene

- California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986): material(s) known to the State to cause cancer: benzene
- California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986): material(s) known to the State to cause adverse reproductive effects: none
- Massachusetts Substance List: xylene; benzene; chlorobenzene
- New Jersey Workplace Hazardous Substance List: xylene; benzene; chlorobenzene
- Pennsylvania Hazardous Substance List: xylene; benzene; chlorobenzene

- This document has been prepared in accordance with the MSDS requirements of the WHMIS Controlled Products Regulation.
- WHMIS (Canada) Ingredient Disclosure List: xylene; benzene; chlorobenzene
- WHMIS (Canada) Status: controlled
- WHMIS (Canada) controlled material(s): xylene; benzene; chlorobenzene
- WHMIS (Canada) Hazard Classification: B/2, D/2/B

- Carcinogenicity Classification (components present at 0.1% or more):

  - International Agency for Research on Cancer (IARC): not listed
  - American Conference of Governmental Industrial Hygienists (ACGIH): benzene: suspected human carcinogen
  - National Toxicology Program (NTP): not listed
  - Occupational Safety and Health Administration (OSHA): not listed

- Chemical(s) subject to the reporting requirements of Section 313 or Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372: xylene; benzene; chlorobenzene
- SARA (U.S.A.) Sections 311 and 312 hazard classification(s): delayed (chronic) health hazard, fire hazard, immediate (acute) health hazard

- US Toxic Substances Control Act (TSCA): All components of this product are listed on the TSCA inventory or otherwise comply with TSCA premanufacture notification requirements.

- Canadian Environmental Protection Act (CEPA) and Domestic Substances List (DSL): This product is listed on the DSL or otherwise complies with CEPA new substance notification requirements.

- European Inventory of Existing Commercial Chemical Substances (EINECS): All components of this product are listed on EINECS or have been approved in the European Union by new substance notification.

- Australian Inventory of Chemical Substances (AICS) and National Industrial Chemicals Notification and Assessment Scheme (NICNAS): All components of this product are listed on AICS or otherwise comply with NICNAS.

- Japanese Handbook of Existing and New Chemical Substances: One or more components or reactants of this product are not listed in the Handbook. In Japan, its use is restricted to research and development purposes only.

16. OTHER INFORMATION

Label Statements:

WARNING!
FLAMMABLE LIQUID AND VAPOR
HARMFUL IF INHALED
CAUSES SKIN AND EYE IRRITATION

Keep away from heat, sparks, and flame.
Avoid breathing mist or vapor.
Avoid contact with eyes, skin, and clothing.
Keep container closed.
Use only with adequate ventilation.
Wash thoroughly after handling.

FIRST AID: If swallowed, only induce vomiting as directed by medical personnel. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately. In case of eye contact, immediately flush eyes with plenty of water for at least 15 minutes. Immediately remove contaminated clothing and shoes and wash skin with soap and plenty of water. Get medical attention. Wash clothing before reuse. Destroy or thoroughly clean contaminated shoes. If inhaled, move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

IN CASE OF FIRE: Use water spray, dry chemical, carbon dioxide (CO_2), foam. Use water spray to keep fire-exposed containers cool. Water may be ineffective in fighting the fire.

IN CASE OF SPILL: Eliminate all ignition sources. Use water spray to disperse vapors and flush spill area. Prevent runoff from entering drains, sewers, and streams.

Since emptied containers retain product residue, follow label warnings even after container is emptied. Residual vapors may explode on ignition; do not cut, drill, grind, or weld on or near this container.

NOTICE! Storage above 50°C (122°F) may affect product quality.

CAUTION: FOR MANUFACTURING, PROCESSING OR REPACKING BY TRAINED PERSONNEL

The information contained herein is based on current knowledge and experience; no responsibility is accepted that the information is sufficient or correct in all cases. Users should consider these data only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use and disposal of these materials and the safety and health of employees and customers and the protection of the environment.

Rohm and Haas Company
Independence Mall West
Philadelphia, PA 19105

HEALTH EMERGENCY : 215-592-3000
SPILL EMERGENCY : 215-592-3000
CHEMTREC : 800-424-9300

557093

(A) exp. # 153300 new

MATERIAL SAFETY DATA SHEET

RECEIVED JUL 0 6 1993

PRODUCT IDENTIFICATION

ACRYLOID® A-10S 30% Resin

Product Code	:	68552
Key	:	892635-3
MSDS Date	:	05/30/91
Supersedes	:	08/20/85

Rohm and Haas Hazard Rating		Scale
Toxicity	1	4=EXTREME
Fire	2	3=HIGH
Reactivity	0	2=MODERATE
Special	-	1=SLIGHT
		0=INSIGNIFICANT

COMPONENT INFORMATION

No.		CAS REG NO.	AMT.(%)
1	Acrylic copolymer	Not Hazardous	29-31
2	Residual monomers	Not Required	1.0 MAX
3	Propylene glycol methyl ether acetate	108-65-6	69-71

EMERGENCY RESPONSE INFORMATION

FIRST AID PROCEDURES

Inhalation

Move subject to fresh air. Give artificial respiration if breathing has stopped.

Ingestion

If swallowed, give 2 glasses of water to drink. Consult a physician. Never give anything by mouth to an unconscious person.

Eye and Skin Contact

IMMEDIATELY flush eyes with a large amount of water for at least 15 minutes. See a physician. Wash affected skin areas thoroughly with soap and water. Remove and wash contaminated clothing thoroughly.

Note to Physician

Managenent of PM acetate overdoses is supportive.

FORM 30348 Recycled and Recyclable!

FIRE FIGHTING INFORMATION

Unusual Hazards

Vapors can travel to a source of ignition and flash back. Heated material can form flammable or explosive vapors with air.

Extinguishing Agents

Use the following extinguishing media when fighting fires involving this material:
- polar solvent (alcohol) foam - carbon dioxide - water spray - dry chemical

Personal Protective Equipment

Wear self-contained breathing apparatus (pressure-demand MSHA/NIOSH approved or equivalent) and full protective gear.

Special Procedures

Use water spray to cool containers exposed to fire.

SPILL OR LEAK HANDLING INFORMATION

Personal Protection

Appropriate protective equipment must be worn when handling a spill of this material. See the **PERSONAL PROTECTION MEASURES** Section for recommendations. If exposed to material during clean-up operations, see the **FIRST AID PROCEDURES** Section for actions to follow.

Procedures

Eliminate all ignition sources. Evacuate the spill area. Floor may be slippery; use care to avoid falling. Contain spills immediately with inert materials (e.g. sand, earth). Transfer liquids and solid diking material to separate suitable containers for recovery or disposal. Keep dust to a minimum.
CAUTION: Keep spills and cleaning runoff out of municipal sewers and open bodies of water.
NOTE: Spills on porous surfaces can contaminate groundwater.

HAZARD INFORMATION

HEALTH EFFECTS FROM OVEREXPOSURE

Primary Routes of Exposure

Inhalation
Skin Contact
Eye Contact

CONTINUED

CONTINUATION

Inhalation

Inhalation of high vapor or mist concentrations can cause the following:
- irritation of nose and throat - drowsiness - slurred speech - headache - nausea - dizziness - stupor - unconsciousness

Eye Contact

Direct contact with material can cause the following:
- moderate irritation

Skin Contact

This material can be absorbed through intact skin in harmful amounts.
Material will cause the following:
- slight skin irritation

Delayed Effects

Prolonged or repeated overexposure to propylene glycol monomethyl ether acetate can cause the following: - liver damage - kidney damage

FIRE AND EXPLOSIVE PROPERTIES

Flash Point	42°C/108°F Setaflash Closed Cup
Auto-ignition Temperature	No Data
Lower Explosive Limit	1.5% Estimate
Upper Explosive Limit	7.0% Estimate

REACTIVITY INFORMATION

Instability

This material is considered stable.

Hazardous Decomposition Products

There are no known hazardous decomposition products for this material.

Hazardous Polymerization

Product will not undergo polymerization.

Incompatibility

Product can combine with oxygen to form potentially explosive peroxides on exposure to air over long periods.

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ACCIDENT PREVENTION INFORMATION

COMPONENT EXPOSURE INFORMATION

Component Information

No.		CAS REG NO.	AMT.(%)
1	Acrylic copolymer	Not Hazardous	29-31
2	Residual monomers	Not Required	1.0 MAX
3	Propylene glycol methyl ether acetate	108-65-6	69-71

Exposure Limit Information

Component		ROHM AND HAAS		OSHA		ACGIH	
No.	Units	TWA	STEL	TWA	STEL	TLV	STEL
1		None	None	None	None	None	None
2		a	a	a	a	a	a
3	ppm	30 Skin	90 Skin	None	None	None	None

a Not Required

PERSONAL PROTECTION MEASURES

Respiratory Protection

For airborne concentrations up to 10 times the TWA/TLV's listed in the **COMPONENT EXPOSURE INFORMATION** Section wear a MSHA/NIOSH approved (or equivalent) half-mask, air-purifying respirator. For airborne concentrations up to 100 times the TWA/TLV's listed in the **COMPONENT EXPOSURE INFORMATION** Section wear a MSHA/NIOSH approved (or equivalent) full-facepiece air purifying respirator. Air-purifying respirators should be equipped with organic vapor cartridges.

Eye Protection

Use chemical splash goggles (ANSI Z87.1 or approved equivalent).

Hand Protection

The glove(s) listed below may provide protection against permeation. Gloves of other chemically resistant materials may not provide adequate protection:
- Nitrile

Gloves should be removed and replaced immediately if there is any indication of degradation or chemical breakthrough.

CONTINUED

CONTINUATION

Other Protection

Use chemically resistant apron or other impervious clothing to avoid prolonged or repeated skin contact.

FACILITY CONTROL MEASURES

Ventilation

Use explosion proof local exhaust ventilation with a minimum capture velocity of 100 ft/min. (30 m/min.) at the point of vapor evolution. Refer to the current edition of Industrial Ventilation: A Manual of Recommended Practice published by the American Conference of Governmental Industrial Hygienists for information on the design, installation, use, and maintenance of exhaust systems.

Other Protective Equipment

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

STORAGE AND HANDLING INFORMATION

Storage Conditions

Material can burn; limit indoor storage to approved areas equipped with automatic sprinklers. Store away from excessive heat (e.g. steampipes, radiators), from sources of ignition and from reactive materials. Low temperature storage can cause handling problems. Viscosity of material will increase.

Handling Procedures

Ground all containers when transferring material.

Other

CONTAINERS HAZARDOUS WHEN EMPTY. Since emptied containers retain product residue (vapors and/or liquid), follow all MSDS and label warnings even after container is emptied. Residual vapors in empty containers may explode on ignition. DO NOT cut, drill, grind or weld on or near container.

SUPPLEMENTAL INFORMATION

TYPICAL PHYSICAL PROPERTIES

Appearance	Clear
Color	Colorless
State	Liquid
Odor Characteristic	Fruity odor
Viscosity	1400 CPS Maximum
Specific Gravity (Water = 1)	1.028

CONTINUED

FORM 3014B Recycled and Recyclable!

CONTINUATION

Vapor Density (Air = 1)	> 1
Vapor Pressure	3 mm Hg @20°C/68°F Estimate
Melting Point	No Data
Boiling Point	141°C/286°F Initial
Solubility in Water	Appreciably soluble
Percent Volatility	71-73 %
Evaporation Rate (BAc = 1)	< 1

TOXICITY INFORMATION

Acute Data

The information shown in the **HEALTH EFFECTS FROM OVEREXPOSURE** Section is based on toxicity profiles of similar materials or on the solvents present in this material.
The toxicity data listed are typical.
Dermal LD50 - rabbit: >5000 mg/kg
Oral LD50 - rat: >5000 mg/kg
Skin Irritation - rabbit: slight irritation
Eye Irritation - rabbit: moderate irritation

WASTE DISPOSAL

Procedure

For disposal, incinerate this material at a facility that complies with local, state, and federal regulations.

REGULATORY INFORMATION

WORKPLACE CLASSIFICATIONS

This product is considered hazardous under the OSHA Hazard Communication Standard (29CFR 1910.1200).

This product is a 'controlled product' under the Canadian Workplace Hazardous Materials Information System (WHMIS).

TRANSPORTATION CLASSIFICATIONS

US DOT Hazard Class . . . . . COMBUSTIBLE LIQUID

The above information applies to the U.S. DOT classification of this material (49 CFR 172.101). Various exemptions and/or restrictions may apply.

EMERGENCY PLANNING & COMMUNITY RIGHT-TO-KNOW (SARA TITLE 3)

Section 311/312 Categorizations (40CFR 370)

This product is a hazardous chemical under 29CFR 1910.1200, and is categorized as an immediate and delayed health, and flammability physical hazard.

Section 313 Information (40CFR 372)

This product does not contain a chemical which is listed in Section 313 above de minimis concentrations.

CERCLA INFORMATION (40CFR 302.4)

Releases of this material to air, land, or water are not reportable to the National Response Center under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) or to state and local emergency planning committees under the Superfund Amendments and Reauthorization Act (SARA) Title III Section 304.

RCRA INFORMATION

When a decision is made to discard this material as supplied, it is classified as a RCRA hazardous waste with the characteristic of ignitability, hazardous waste number: D001

CHEMICAL CONTROL LAW STATUS

All components of this product are listed or are excluded from listing on the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

STATE RIGHT-TO-KNOW LAWS

Any material listed as "Not Hazardous" in the CAS REG NO column of the **COMPONENT INFORMATION** Section of this MSDS is trade secret under the provisions of the Pennsylvania Worker and Community Right-to-Know Act.

ACRYLOID® is a trademark of Rohm and Haas Company or one of its subsidiaries or affiliates.

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ABBREVIATIONS:

ACGIH = American Conference of Governmental Industrial Hygienists
OSHA = Occupational Safety and Health Administration
TLV = Threshold Limit Value
PEL = Permissible Exposure Limit
TWA = Time Weighted Average
STEL = Short-Term Exposure Limit
BAc = Butyl acetate
Bar denotes a revision from previous MSDS in this area.

The information contained herein relates only to the specific material identified. Rohm and Haas Company believes that such information is accurate and reliable as of the date of this material safety data sheet, but no representation, guarantee or warranty, express or implied, is made as to the accuracy, reliability, or completeness of the information. Rohm and Haas Company urges persons receiving this information to make their own determination as to the information's suitability and completeness for their particular application.

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FORM # : MSDSIMP N-2547

KING INDUSTRIES, INC.
SCIENCE RD., P.O. BOX 588
NORWALK, CT 06852

MATERIAL SAFETY DATA SHEET

HEALTH	2
FLAMMABILTY	1
REACTIVITY	1
PERSONAL PROTECTIVE EQUIPMENT	B

EMERGENCY TELEPHONE NO.
(203) 866-5551
INFORMATION TELEPHONE NO.
(203) 866-5551
DATE OF PREPARATION MAY 15, 1990
SUPERSEDES MSDS JAN. 5, 1990

SECTION I - PRODUCT IDENTIFICATION

PRODUCT NUMBER N-2547
PRODUCT NAME NACURE 2547
PRODUCT CLASS Latent Catalyst

SECTION II - HAZARDOUS INGREDIENTS

INGREDIENT	CAS #	PERCENT BY WEIGHT	VAPOR PRESSURE mm Hg 20C
p-TOLUENE SULFONIC ACID, COMPOUND WITH AMINE	Trade Secret	45-55	N/E*

* NOT ESTABLISHED

OCCUPATIONAL EXPOSURE LIMITS	OSHA FINAL RULE LIMITS 29 CFR 1910.1000							ACGIH TLV BIOLOGICAL EXPOSURE INDICES				
	TWA		STEL		CEILING		SKIN	TWA		STEL		SKIN
	ppm	mg/M3	ppm	mg/M3	ppm	mg/M3		ppm	mg/M3	ppm	mg/M3	
p-TOLUENE SULFONIC ACID, COMPOUND WITH AMINE	N/L**	N/L	N/L	N/L	N/L	N/L	N/L	N/L	N/L	N/L	N/L	N/L

** NOT LISTED

SECTION III - PHYSICAL DATA

BOILING RANGE 100°-110°C
VAPOR DENSITY : Heavier than air
EVAPORATION RATE: Slower than ether
VOLATILE VOLUME % 83
WT/GAL 9.18 lbs.

SECTION IV - FIRE AND EXPLOSION HAZARD DATA NACURE 2547

FLASH POINT SETA FLASH CC Not applicable

LEL Not determined

FLAMMABILITY CLASSIFICATION

OSHA	Not regulated
DOT	Not regulated

EXTINGUISHING MEDIA

ALCOHOL FOAM WATER FOG DRY CHEMICAL

UNUSUAL FIRE AND EXPLOSIVE HAZARDS

Sulfur dioxide (SO2) and nitrogen oxides may be given off during fire.

SPECIAL FIRE FIGHTING PROCEDURES

Wear self contained breathing apparatus with full face piece, operated in positive pressure demand mode.

SECTION V - HEALTH HAZARD DATA

EFFECT OF OVEREXPOSURE

Liquid may cause eye burns and skin irritation. Irritating to mucous membranes.

TOXICITY DATA

ACUTE ORAL	Not known
ACUTE INHALATION	Not known
ACUTE DERMAL TOXICITY	Not known
SKIN SENSITIZATION	Not known
SKIN IRRITATION	Skin irritant
EYE IRRITATION	Causes burns

MEDICAL CONDITIONS PRONE TO AGGRAVATION BY EXPOSURE

Not known

PRIMARY ROUTE(S) OF ENTRY

Dermal

EMERGENCY AND FIRST AID PROCEDURES In case of eye contact flush eyes with water for 15 minutes. Call a physician. For skin contact wash thoroughly with plenty of water.

SECTION VI - REACTIVITY DATA NACURE 2547

STABILITY Stable

HAZARDOUS POLYMERIZATION Will not occur

HAZARDOUS DECOMPOSITION PRODUCTS

Sulfur dioxide, carbon dioxide, carbon monoxide, ammonia, nitrogen oxides, and other low molecular weight organic fragments.

CONDITIONS TO AVOID

None known

INCOMPATIBILITY

None known

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Dike spill with sand, earth, clay granules or other absorbent solid material. Wear full protective clothing (gas mask, Neoprene or butyl rubber gloves, boots, Tyvek suit, eye protection) during clean up. Shovel up spill and place in drums with appropriate inner drum surface.

WASTE DISPOSAL

Use approved waste treatment system and dispose of in accordance with local, state and federal regulations.

SECTION VIII - SAFE HANDLING AND USE INFORMATION

RESPIRATORY PROTECTION Generally not required. If misting conditions prevail due to machinery mist or spray applications wear NIOSH approved respirator or air supply mask.

VENTILATION	Local exhaust if needed.
PROTECTIVE GLOVES	Wear protective gloves (Neoprene or butyl rubber).
EYE PROTECTION	Wear face shield, side shield safety glasses or chemical splash goggles.
HYGIENIC PRACTICES	Wash thoroughly after handling. Wash contaminated clothing before reuse.

OTHER PROTECTIVE EQUIPMENT

Rubber apron, boots recommended. Eye wash fountain.

SECTION IX - SPECIAL PRECAUTIONS

NACURE 2547

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING

Store in cool location.

OTHER PRECAUTIONS

Avoid skin contact.
Avoid breathing mist.
Do not get in eyes.
Should not be stored in high heat for long periods of time.

SECTION X -REGULATORY INFORMATION

SARA TITLE III

	Section 313			Section 304/302		
CHEMICAL NAME	STATUS	% WEIGHT	CAS#	TPQ (lb.)	RQ (lb.)	RCRA
p-TOLUENE SULFONIC ACID,						
COMPOUND WITH AMINE	NOT LISTED			NONE	NONE	NONE

Ingredients are not listed under The National Toxicology Programs Annual Report on Carcinogens (NTP) or The International Agency for Research on Cancer Monographs (IARC).

TSCA status: All ingredients are TSCA listed

DOT SHIPPING CLASSIFICATIONS

Proper shipping name: Not regulated
DOT Identification: Not regulated

Reviewed by L J Collins

The data and recommendations contained in this publication are believed to be accurate and reliable to the best of King Industries' knowledge. Since the use of this information and the conditions of the use of this product are not within the control of King Industries, it is the user's obligation to determine the conditions of safe use of this product.

135161

135161 120 date recieved 6/90 1643

New

MATERIAL SAFETY DATA SHEET

EASTMAN CHEMICAL PRODUCTS, INC.
EASTMAN KODAK COMPANY
Kingsport, Tennessee 37662

For Health Hazard Information, Call: (615) 229-6094

For Other Information, Call Your Eastman Representative

Eastman Operator: (615) 229-2000 Date of Preparation 07-29-87

SECTION I. IDENTIFICATION

-- Name:

"TEXANOL" Ester-Alcohol

-- Synonyms: PM 2104; 2,2,4-Trimethyl-1,3-pentanediol monoisobutyrate
-- Formula: $C_{12}H_{24}O_3$
-- Molecular Weight: 216.36

SECTION II. COMPONENT AND PRECAUTIONARY DATA

A. COMPONENTS:	Approx Weight %	CAS Reg No	Eastman Kodak No
2,2,4-Trimethyl-1,3-pentanediol monoisobutyrate	100	25265-77-4	000701

B. PRECAUTIONARY LABEL STATEMENTS:

LOW HAZARD FOR USUAL INDUSTRIAL HANDLING

FOR MANUFACTURING USE ONLY

SECTION III. PHYSICAL DATA (1)

-- Appearance and Odor: Clear liquid, mild characteristic odor.
-- Boiling Point: 244°C (471°F).
-- Specific Gravity (H_2O = 1): 0.95 at 20°/20°C.
-- Vapor Pressure: 1 mm Hg at 87°C; 125 mm Hg at 180°C.
-- Percent Volatile by Volume: >99%.
-- Vapor Density (Air = 1): 7.45.
-- Evaporation Rate (n-butyl acetate = 1): 0.002.
-- Solubility in Water: Negligible.

SECTION IV. FIRE AND EXPLOSION HAZARD DATA (1)

-- Flash Point: 120°C (248°F); Method Used: Cleveland Open Cup.
-- Autoignition Temperature: 393°C (740°F); Method Used: ASTM D 2155.
-- Flammable Limits: LEL 0.62% at 149°C
UEL 4.24% at 201°C

135161 120 date recieved 6/90

SECTION VII. VENTILATION AND PERSONAL PROTECTION

A. VENTILATION

Good general ventilation (typically 10 air changes per hour) should be sufficient to control airborne levels. Ventilation rates should be matched to conditions. Supplementary local exhaust ventilation, closed systems, or respiratory protection may be needed in special circumstances such as poorly ventilated spaces, evaporation from large surfaces, spraying, heating, etc.

B. RESPIRATORY PROTECTION

If respiratory protection is needed, an appropriate NIOSH-approved respirator for organic vapor should be worn. If respirators are used, a program should be established to assure compliance with OSHA Standard 29 CFR 1910.134.

C. SKIN AND EYE PROTECTION

Safety glasses with side shields (or goggles) are recommended for any type of industrial chemical handling. Good industrial hygiene practice should be followed which includes preventing eye contact and minimizing skin contact.

SECTION VIII. SPECIAL STORAGE AND HANDLING PRECAUTIONS

Keep from contact with oxidizing materials.

SECTION IX. SPILL, LEAK, AND DISPOSAL PRACTICES

Steps to be Taken in Case Material is Released or Spilled: Small spills may be collected with absorbent materials. For large spills, flush area with water spray. Prevent runoff from entering drains, sewers, or streams.

Waste Disposal Method: Incineration. Observe all federal, state, and local laws concerning health and environment.

SECTION X. ENVIRONMENTAL EFFECTS DATA

A. SUMMARY

This product has been tested for environmental effects. Results of these tests have been used to provide the following estimate of environmental impact:

This product has a moderate potential to affect aquatic organisms and secondary waste treatment microorganisms. It has a low potential to affect the germination and growth of some plants. This product is expected to be moderately biodegradable and has a moderate potential to bioconcentrate. The direct, instantaneous discharge to a receiving body of water of an amount of this product which will rapidly produce by dilution a final concentration of 3 mg/L or less is not expected to cause an adverse environmental effect.

B. OXYGEN DEMAND DATA (2)

-- COD: 2.28 g O_2/g

*Hazardous Materials Identification System's [HMIS] Revised RAW MATERIALS RATING MANUAL, National Paint & Coatings Association, Fall 1984.

**NFPA 704 Standard System for the Identification of the Fire Hazards of Materials, National Fire Protection Association, 1985.

The information contained herein is furnished without warranty of any kind. Users should consider these data only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use and disposal of these materials and the safety and health of employees and customers.

TX1264S/000701/R-1, S-1, F-1, C-0

MONSANTO PRODUCT NAME
SANTICIZER® 377 PLASTICIZER

MONSANTO COMPANY
800 N. LINDBERGH BLVD.
ST. LOUIS, MO 63167
EMERGENCY PHONE NO.
(CALL COLLECT)
314-694-1000

PRODUCT IDENTIFICATION

Synonyms: Modified phthalate ester
Chemical Name: Not applicable, a mixture of organic hydrocarbons
Components: Butyl benzyl phthalate, CAS No. 85-68-7
Benzene, C_{10-16} alkyl derivatives, CAS No. 68648-87-3
Paraffins (petroleum), normal C_{5-20}, CAS No. 64771-71-7
DOT Proper Shipping Name: ORM-E, Liquid, N.O.S.
DOT Hazard Class/I.D. No.: ORM-E/NA9188
DOT Label: Not Applicable
U.S. Surface Freight Classification: Resin Plasticizer
Reportable Quantity (RQ) Under
DOT (49 CFR) and CERCLA Regulations: Package of 133 lbs. or more contains 100 lb. RQ of butyl benzyl phthalate

SARA Hazard Notification

Hazard Categories under criteria of
SARA Title III rules (40 CFR Part 370): Not Applicable

Section 313 Toxic Chemical(s):

This product contains the following substance which is defined as a toxic chemical under, and subject to the reporting requirements of, Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372:

Butyl benzyl phthalate, CAS No. 85-68-7 (75% by wt. of product)

In addition to the above listed SARA 313 chemical, this product contains the following substances which are identified as hazardous chemicals under the criteria of the OSHA Hazard Communication Standard (29 CFR 1910.1200);

Benzene, C_{10-16} alkyl derivatives, CAS No. 68648-87-3
Paraffins (petroleum), normal C_{5-20}, CAS No. 64771-71-7

PRECAUTIONARY MEASURES AND FIRST AID

HANDLE IN ACCORDANCE WITH GOOD INDUSTRIAL HYGIENE AND SAFETY PRACTICES. THESE PRACTICES INCLUDE AVOIDING UNNECESSARY EXPOSURE AND REMOVAL OF THE MATERIAL FROM EYES, SKIN AND CLOTHING.

OCCUPATIONAL CONTROL PROCEDURES

Eye Protection: SANTICIZER® 377 causes only slight eye irritation. No special protection is required. Avoid eye contact as good industrial practice.

Skin Protection: Although SANTICIZER 377 plasticizer does not present a significant skin concern, skin contamination should be minimized as good industrial practice. Wearing of protective gloves is recommended. Wash hands and contaminated skin after handling.

Respiratory Protection: Avoid breathing vapor and/or mist. Use NIOSH/MSHA approved equipment when airborne exposure guidelines (see below) are exceeded. Consult respirator manufacturer to determine appropriate type equipment for given application. Observe respirator use limitations specified by NIOSH/MSHA or the manufacturer. Respiratory protection programs must comply with 29 CFR 1910.134.

Ventilation: Provide sufficient ventilation to control exposure levels below airborne exposure limits (see below). Use local mechanical exhaust ventilation at sources of air contamination such as open process equipment.

Airborne Exposure Limits:

Product: SANTICIZER 377 plasticizer

OSHA PEL: None established
ACGIH TLV: None established

Component: Butyl benzyl phthalate wt. % ~75

Although OSHA and ACGIH have not established specific exposure limits for this material, they have established limits for several dialkyl phthalate esters:

For dimethyl, dibutyl and di(2-ethylhexyl) phthalates

OSHA PEL/8-hour Time-weighted average: 5 mg/m^3

For dimethyl, diethyl, dibutyl and di(2-ethylhexyl) phthalates

ACGIH TLV/8-hour Time-weighted average: 5 mg/m^3

Monsanto has adopted a general guideline that exposure to phthalate esters should be kept below 5 mg/m^3 (8-hour time-weighted average).

Component: Benzene, C_{10-16}-alkyl derivatives wt. % ~17

OSHA PEL: None established
ACGIH TLV: None established

Component: Paraffins (petroleum), C_{5-20} wt. % ~8

OSHA PEL: None established
ACGIH TLV: None established

FIRE PROTECTION INFORMATION

Flash Point: >250°F

Extinguishing Media: Water spray, foam, dry chemical, carbon dioxide or other Class B extinguishing agents.

Special Firefighting Procedures: Firefighters and others exposed to vapors or products of combustion should wear full protective clothing and a self-contained breathing apparatus.

Unusual Fire and Explosion Hazards: None known.

REACTIVITY DATA

This material possesses no particular hazardous chemical reactivity properties. It is not a primary oxidant nor reducing agent and is not reactive with water or oxygen under ambient conditions.

HEALTH EFFECTS SUMMARY

The following information presents both human experience and the results of scientific experiments used by qualified experts to assess the effects of SANTICIZER 377 plasticizer on the health of exposed individuals and to support the Precautionary Measures and Occupational Control Procedures recommended in this document. Proper evaluation of these health-related data may require the assistance of individuals trained in interpretation of this type of information.

Effects of Exposure

Inhalation and dermal contact are expected to be the primary routes of occupational exposure to SANTICIZER 377 plasticizer. Occupational exposure to this material has not been reported to cause any significant adverse human health effects. On the basis of available information, exposure to SANTICIZER 377 plasticizer is not expected to produce significant adverse human health effects when recommended safety precautions are followed.

Toxicological Data

Data from Monsanto studies indicate the following:

Oral LD_{50} (Rat): >10,000 mg/kg, Practically Nontoxic
Dermal LD_{50} (Rabbit): >7,940 mg/kg, Practically Nontoxic
Eye Irritation (Rabbit): (FHSA) 2.7 on a scale of 110.0, Slightly Irritating
Skin Irritation (Rabbit): (FHSA) 1.8 on a scale of 8.0, Slightly Irritating

HEALTH EFFECTS SUMMARY (continued)

Components:

Data from Monsanto studies and from the available scientific literature on the components of SANTICIZER 377 plasticizer are discussed below:

Butyl Benzyl Phthalate

Oral LD_{50} (Rat): 20,400 mg/kg, Practically Nontoxic
Dermal LD_{50} (Rabbit): >10,000 mg/kg, Practically Nontoxic
Eye Irritation (Rabbit): (FHSA) 1.4 on a scale of 110.0, Practically Nonirritating
Skin Irritation (Rabbit): (FHSA) 0.7 on a scale of 8.0, Practically Nonirritating
Aerosol Inhalation (Rat): No mortalities occurred when rats were exposed to butyl benzyl phthalate at a concentration of 6.7 mg/l for 4 hours.

Butyl benzyl phthalate did not cause immediate or delayed hypersensitivity reactions when evaluated in a series of tests to determine the allergic responses of mice and guinea pigs to butyl benzyl phthalate.

A repeat insult patch test with butyl benzyl phthalate conducted on 200 human volunteers produced no positive reactions following the initial or subsequent applications. On the basis of this test, it is concluded that this product is not a primary skin irritant, a cumulative irritant or sensitizing agent.

Butyl benzyl phthalate was administered to rats in the diet at concentrations equivalent to 160, 480 or 1,600 mg of test material/kg of body weight per day for 14 days. Liver enlargement and testicular atrophy were observed in rats administered the high dose.

Four-week oral toxicity studies with rats were conducted using butyl benzyl phthalate. In both studies, rats were fed diets containing concentrations equivalent to 0, 500, 1,000, 1,500, 2,000 or 3,000 mg of the test material per kg body weight. Depressed body weight gain, with decreased food consumption, was noted in the high-dose groups. Weakness and loss of coordination in the pelvic area were observed in the animals receiving a dosage of 2,000 or 3,000 mg/kg. In one of these studies, there was a 5 week recovery period during which rats were administered normal diets. During this time, a remission of effects was observed.

Rats were administered butyl benzyl phthalate at dietary concentrations of 2,000, 5,000 and 12,000 ppm for 90 days. Increased liver weights were observed in all dose groups. Depressed weight gain and focal liver necrosis were noted in the high-dose level animals. Increased kidney weights were observed in the mid- and high-dose groups, and pancreatic lesions were found in the mid-dose animals.

HEALTH EFFECTS SUMMARY (continued)

The National Toxicology Program (NTP) reported the results of a carcinogenic bioassay with butyl benzyl phthalate. Groups of 50 male and 50 female Fischer 344/N rats and B6C3F1 mice were fed diets containing 0, 6,000 and 12,000 ppm butyl benzyl phthalate for 2 years. No indication of a carcinogenic response was found in either male or female mice. An increased incidence of myelomonocytic leukemia, a common spontaneous disease in this strain of rats, was observed in female rats given the high dose. No effects were seen at the low dose. The NTP report concluded that butyl benzyl phthalate was "probably carcinogenic for female F344/N rats, causing an increased incidence of mononuclear cell leukemias" under conditions of the assay. All groups of male rats in this bioassay were terminated after 6 months because of excessive treatment-related mortality. Since male rats were inadequately tested for chronic effects, NTP is expected to repeat that portion of the bioassay.

In a four week vapor inhalation study, rats were exposed to butyl benzyl phthalate at concentrations of 0.36, 1.0 or 2.1 mg/l of air for 6 hours per day, 5 days per week. Decreased body weight was observed in all the high-dose animals, and atrophic spleens and reproductive organs were noted in the high-dose males. However, no significant adverse effects were observed in another 4 week inhalation study in which rats were exposed to 0.05, 0.15 or 0.50 mg butyl benzyl phthalate per liter of air.

A 90 day vapor inhalation study was conducted with rats exposed to 0.0, 0.051, 0.218 or 0.799 mg butyl benzyl phthalate per liter of air for 6 hours per day, 5 days per week for 13 weeks. Increased liver and kidney weights were observed in the high exposure groups and increased kidney weights were noted in the mid-dose groups. The no-effect level was 0.051 mg butyl benzyl phthalate per liter of air.

Female rabbits were treated orally with butyl benzyl phthalate at dosages of 0, 3 or 10 mg/kg body weight on days 6 through 18 of gestation. No maternal toxicity, fetotoxicity or teratogenic effects were observed in any of the treatment groups.

Butyl benzyl phthalate was evaluated in the L5178TK mouse lymphoma mutation assay and in microbial mutagenicity assays. The microbial mutagenicity assays employed five Salmonella strains and one yeast strain with and without mammalian microsomal activation. No mutagenic effects were observed in these assays.

Neurotoxicity and neuropathological studies were conducted with butyl benzyl phthalate in chickens and rats:

> In the neurotoxicity study, ten adult hens were dosed orally with 5.0 g/kg for 3 consecutive days. This dosing regimen was repeated 21 days later to give a cumulative dose of 30.0 g/kg of butyl benzyl phthalate. No behavioral or microscopic treatment-related changes were observed. Butyl benzyl phthalate did not induce delayed neurotoxicity.
>
> A neuropathological study was conducted using rats administered butyl benzyl phthalate in their diets at concentrations equivalent to 500, 1,500 or 3,000 mg/kg/day for 6 weeks. Body weight gain depressions and sporadic decreases in food consumption were seen in the mid- and high-dose groups. Hind limb stiffness was noted in some of the high-dose animals. Under the conditions of this test, butyl benzyl phthalate did not produce changes consistent with a neurotoxic response involving structural breakdown of nervous system tissue.

HEALTH EFFECTS SUMMARY (continued)

A myelin degeneration study was also conducted with rats given a single 4,000 mg/kg oral dose of butyl benzyl phthalate. No treatment related degenerative changes were noted for these rats.

Single oral administration of ^{14}C butyl benzyl phthalate to rats at concentrations of either 16, 160 or 1,600 mg/kg indicated that the product and its metabolites were quantitatively excreted within 5 days following administration. The major route of elimination was the urine.

Heavy recycle paraffin

Oral LD_{50} (Rat): >10,000 mg/kg, Practically Nontoxic
Dermal LD_{50} (Rabbit): >5,010 mg/kg, Practically Nontoxic
Eye Irritation (Rabbit): (FHSA) 0.9 on a scale of 110.0, Practically Nonirritating
Skin Irritation (Rabbit): (FHSA) 5.7 on a scale of 8.0, Severely Irritating

Benzene C_{10-16}-alkyl derviatives (ALKYLATE 215)

Oral LD_{50} (Rat): 17,000 mg/kg, Practically Nontoxic
Dermal LD_{50} (Rabbit): >10,200 mg/kg, Practically Nontoxic
Eye Irritation (Rabbit, 24-hr): 11.4 on a scale of 110.0, Slightly Irritating
Skin Irritation (Rabbit, 24-hr): 3.6 on a scale of 8.0, Moderately Irritating
Inhalation 4-hr LC_{50} (Rat): >1.82 mg/l air. 2 out of 10 animals died following exposure to ALKYLATE 215 at a concentration of 1.82 mg/l, the highest achievable atmospheric concentration in this study.

ALKYLATE 215 was considered to possess no mutagenic or genotoxic activity in microbial assays using four Salmonella strains, with and without mammalian microsomal activation, or in an in vivo rat bone marrow cell clastogenesis assay.

Patch testing of 205 human volunteers with ALKYLATE 215 produced positive reaction in 62 individuals following initial application; 87 subject demonstrated a cumulative irritation response during subsequent repeated exposures in the induction phase. No sensitization reactions were observed on challenge. ALKYLATE 215 is considered a primary irritant and a possible cumulative irritant.

Rats and mice were exposed by inhalation to ALKYLATE 215 at concentrations of 0.10, 0.34 and 0.83 mg/l for 6 hour per day, 5 days per week for 4 weeks. Irritation of the eyes and nose, decreased in mean body weight and changes in organ or organ body weight ratios were observed at the mid- and high-exposure concentrations. A loss of abdominal fat was noted at the highest concentration. No adverse histopathological effects were observed. The no-effect level is 0.10 mg/l.

ALKYLATE 215 was administered to rats at dietary concentrations of 2,500, 5,000, 7,500, 10,000 and 20,000 ppm for 4 weeks. Reductions in body weight and food consumption were noted at all exposure levels. No gross pathological effects were observed.

PHYSICAL DATA

Appearance: Clear, oily liquid
Odor: Hydrocarbon
Specific Gravity @ 25/25°C: 1.029
Vapor Pressure @ 40°C: 0.1 mm Hg
@ 100°C: 2.5 mm Hg
@ 150°C: 17.5 mm Hg
@ 200°C: 82 mm Hg
Solubility in Water @ 25°C: Insoluble
Evaporation Rate: Negligible

NOTE: These physical data are typical values based on material tested but may vary from sample to sample. Typical values should not be construed as a guaranteed analysis of any specific lot or as specifications for the product.

SPILL, LEAK & DISPOSAL INFORMATION

Waste Disposal: When discarded, SANTICIZER 377 plasticizer is not a "hazardous waste" as that term is defined in 40 CFR 261, "Identification and Listing of Hazardous Waste". Burn in an approved incinerator or dispose of in an approved commercial landfill in accordance with all applicable local, state and federal laws and regulations. Consult your attorney or appropriate regulatory officials for information on such disposal.

Spill or Leakage Procedures: Spills should be confined and absorbed on a suitable medium such as saw-dust, clay, or filtercel and disposed of as recommended above. This material should not be spilled, dumped, rinsed, or washed into sewers or public waterways.

ENVIRONMENTAL EFFECTS

Butyl benzyl phthalate

96-hr LC_{50} Fathead Minnow: 2.1 mg/l, Moderately Toxic
96-hr LC_{50} Rainbow Trout: 3.3 mg/l, Moderately Toxic
96-hr LC_{50} Bluegill Sunfish: 1.7 mg/l, Moderately Toxic
96-hr LC_{50} Sheepshead Minnow: 3.0 mg/l, Moderately Toxic
96-hr LC_{50} Mysid Shrimp: 0.9 mg/l, Highly Toxic
48-hr EC_{50} *Chironomus Tentans*: 1.7 mg/l, Moderately Toxic
48-hr EC_{50} *Paratanytarsus Parthenogenetica*: 7.2 mg/l, Moderately Toxic
48-hr LC_{50} *Daphnia Magna*: 3.7 mg/l, Moderately Toxic

Butyl benzyl phthalate was evaluated in a river die-away test. Degradation of 50% required 2 days. Butyl benzyl phthalate was readily biodegradable in this assay.

Butyl benzyl phthalate was evaluated in a 24 hour semi-continuous activated sludge (SCAS) test without acclimation and in a Thompson-Duthie-Sturm biodegradability test. Primary degradation was >88<99% in the SCAS test. Theoretical CO_2 evolution was approximately 96.0% using the Thompson-Duthie-Sturm method. Butyl benzyl phthalate was readily biodegradable in both assays.

ENVIRONMENTAL EFFECTS (continued)

When evaluated in an environmental fate assay in lake water sediment, butyl benzyl phthalate underwent rapid and essentially complete biodegradation in 13 days.

Butyl benzyl phthalate was evaluated in a bioconcentration, distribution and elimination assay using bluegill sunfish. The results of this assay indicated that butyl benzyl phthalate has a low potential to bioaccumulate in fish.

Benzene, C_{10-16}-alkyl derivatives (ALKYLATE 215)

48-hr EC_{50} *Daphnia Magna*: 0.08 mg/l, Very Highly Toxic
48-hr LC_{50} Scud: >1.4 mg/l, No more than Moderately Toxic
48-hr LC_{50} Midge Larvae: >1.4 mg/l, No more than Moderately Toxic
96-hr LC_{50} Rainbow Trout: >1,000 mg/l, Practically Nontoxic
96-hr LC_{50} Fathead Minnow: >1,000 mg/l, Practically Nontoxic
96-hr LC_{50} Bluegill Sunfish: >1,000 mg/l, Practically Nontoxic
96-hr LC_{50} Mysid Shrimp: >500 µg/l, Very Highly Toxic

The bioconcentration potential of the C_{12} homolog of ALKYLATE 215 was measured over a 96-hour period. It was determined that this material has a low potential to bioaccumulate in fish.

ALKYLATE 215 was evaluated in the shake flask carbon dioxide evolution assay to determine its biodegradability. CO_2 evolution ranged from 46 to 64%. ALKYLATE 215 was classified as moderately biodegradable.

DATE 12/88 SUPERSEDES 11/87

MSDS NUMBER M00007625

FOR ADDITIONAL NON-EMERGENCY INFORMATION, CONTACT:

Manager, Product Safety
Plasticizers Division
Monsanto Chemical Company
A Unit of Monsanto Company
314-694-1000

Although the information and recommendations set forth herein (hereinafter "Information") are presented in good faith and believed to be correct as of the date hereof, Monsanto Company makes no representations as to the completeness or accuracy thereof. Information is supplied upon the condition that the persons receiving same will make their own determination as to its suitability for their purposes prior to use. In no event will Monsanto Company be responsible for damages of any nature whatsoever resulting from the use of or reliance upon Information. NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OF ANY OTHER NATURE ARE MADE HEREUNDER WITH RESPECT TO INFORMATION OR THE PRODUCT TO WHICH INFORMATION REFERS.

SANTICIZER® is a registered trademark of Monsanto Company
© Monsanto Company 1988

(A) Spen # 149215

New Sapphire Rec'd 7/95

Material Safety Data Sheet

May be used to comply with OSHA's Hazard Communication Standard, 29 CFR 1910.1200. Standard must be consulted for specific requirements.

U.S. Department of Labor
Occupational Safety and Health Administration
(Non-Mandatory Form)
Form Approved
OMB No. 1218-0072

IDENTITY (As Used on Label and List) HODAG 20-L	Note: Blank spaces are not permitted. If any item is not applicable, or no information is available, the space must be marked to indicate that
Section I PEG 200 MONOLAURATE	CAS #61791-29-5 H.M.I.S.# 1-1-0
Manufacturer's Name HODAG CORPORATION THRU EAST FALLS CORP.	Emergency Telephone Number (708) 675-3950
Address (Number, Street, City, State, and ZIP Code) 7247 NORTH CENTRAL PARK AVENUE	Telephone Number for Information SAME AS ABOVE
SKOKIE, ILLINOIS. 60076	Date Prepared JANUARY 1, 1990
	Signature of Preparer (optional)

Section II — Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity; Common Name(s))	OSHA PEL	ACGIH TLV	Other Limits Recommended	% (optional)
NONE				

Section III — Physical/Chemical Characteristics

Boiling Point	N/A	Specific Gravity (H_2O = 1) @ 20/20°C	0.990
Vapor Pressure (mm Hg.)	N/A	Melting Point	N/A
Vapor Density (AIR = 1)	N/A	Evaporation Rate (Butyl Acetate = 1)	N/A

Solubility in Water
DISPERSIBLE

Appearance and Odor
YELLOW LIQUID; BLAND ODOR

Section IV — Fire and Explosion Hazard Data

Flash Point (Method Used) ABOVE 350°F (COC)	Flammable Limits	LEL	UEL

Extinguishing Media
CARBON DIOXIDE; WATER SPRAY

Special Fire Fighting Procedures
NONE

149215 Rec'd 7/95

Unusual Fire and Explosion Hazards
NONE

Section V — Reactivity Data

Stability	Unstable		Conditions to Avoid
	Stable	X	DIRECT FIRE

Incompatibility (*Materials to Avoid*)
NONE

Hazardous Decomposition or Byproducts
NONE

Hazardous Polymerization	May Occur		Conditions to Avoid
	Will Not Occur	X	DIRECT FIRE

Section VI — Health Hazard Data

Route(s) of Entry: Inhalation? Skin? Ingestion?
N/A

Health Hazards (*Acute and Chronic*)
NONE EXPECTED

Carcinogenicity: NTP? IARC Monographs? OSHA Regulated?
N/A

Signs and Symptoms of Exposure
NONE EXPECTED

Medical Conditions Generally Aggravated by Exposure
NONE EXPECTED

Emergency and First Aid Procedures
WASH SKIN WITH WITH WATER AND MILD SOAP

Section VII — Precautions for Safe Handling and Use

Steps to Be Taken in Case Material Is Released or Spilled
WASH WITH LARGE QUANTITIES OF WATER

Waste Disposal Method
IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL REGULATIONS

Precautions to Be Taken in Handling and Storing
GOOD MANUFACTURING PROCEDURES FOR HANDLING AND STORAGE.
STORE IN A COOL DRY PLACE, PROTECT FROM PHYSICAL DAMAGE

Other Precautions
NONE

Section VIII — Control Measures

Respiratory Protection (*Specify Type*)
NOT REQUIRED

Ventilation	Local Exhaust	Special
	SATISFACTORY	-----
	Mechanical (General) SATISFACTORY	Other -----

Protective Gloves	Eye Protection
NEOPRENE	SAFETY GOGGLES

Other Protective Clothing or Equipment
NONE

Work/Hygienic Practices
GOOD MANUFACTURING PROCEDURES

* U.S.G.P.O.: 1988—491-529/457

Section V — Reactivity Data

Stability	Unstable		Conditions to Avoid
	Stable	X	DIRECT FIRE

Incompatibility (*Materials to Avoid*)
NONE

Hazardous Decomposition or Byproducts
NONE

Hazardous Polymerization	May Occur		Conditions to Avoid
	Will Not Occur	X	DIRECT FIRE

Section VI — Health Hazard Data

Route(s) of Entry: Inhalation? Skin? Ingestion?
N/A

Health Hazards (*Acute and Chronic*)
NONE EXPECTED

Carcinogenicity: NTP? IARC Monographs? OSHA Regulated?
N/A

Signs and Symptoms of Exposure
NONE EXPECTED

Medical Conditions Generally Aggravated by Exposure
NONE EXPECTED

Emergency and First Aid Procedures
WASH SKIN WITH WITH WATER AND MILD SOAP

Section VII — Precautions for Safe Handling and Use

Steps to Be Taken in Case Material Is Released or Spilled
WASH WITH LARGE QUANTITIES OF WATER

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Precautions to Be Taken in Handling and Storing
GOOD MANUFACTURING PROCEDURES FOR HANDLING AND STORAGE.
STORE IN A COOL DRY PLACE, PROTECT FROM PHYSICAL DAMAGE

Other Precautions
NONE

Section VIII — Control Measures

Respiratory Protection (*Specify Type*)
NOT REQUIRED

Ventilation	Local Exhaust	Special
	SATISFACTORY	-----
	Mechanical (General) SATISFACTORY	Other -----

Protective Gloves	Eye Protection
NEOPRENE	SAFETY GOGGLES

Other Protective Clothing or Equipment
NONE

Work/Hygienic Practices
GOOD MANUFACTURING PROCEDURES

© U.S.G.P.O.: 1986—491-329/457

"RECONDITIONED AND RELINED DRUMS"

CENTRAL STEEL DRUM CO.

704 DOREMUS AVE. • NEWARK, NEW JERSEY 07105/(201) 344-8500/NEW YORK (212) 267-3248
FAX NO. (201) 344-8181

INVOICE NO. 78500

INVOICE 004801

SOLD TO: D2400
ARMSTRONG WORLD INDUSTRIES
P.O. BOX 3001

LANCASTER , PA 17604

SHIPPED TO: LANCASTER FLOOR PLANT

PLEASE PAY FROM THIS INVOICE. NO MONTHLY STATEMENT WILL BE SENT.

ORDERED BY: Gate Pass# 51453

TAKEN BY:

REQUISITION NO.	DATE ORDERED	CUSTOMER ORDER	APPROX. DATE PROMISED	DRIVER	TRAILER	DATE
B/L # 1481		58490				02/18/9-

QTY ORDERED (APPROX.)	QTY. SHIPPED	55 GAL.	30 GAL.	TYPE DRUM SPEC. NO.	TYPE HEAD	TYPE RING	LINED	BLASTED	GASKETS	BOLTS & NUTS	ASSEMBLED	UNIT PRICE	AMOUNT
180	180		TRUCKING HANDLING	AND SHREDDING								5.00	$900.0(

RECEIVED FEB 1994

PAID MAR 7 1994

KL. 3-4-94

SALES TAX: $.0(

FREIGHT: $.0(

COMMENTS:

PAY THIS AMOUNT $900.0

SALE	INVENTORY	COLOR OF BODY	COLOR OF HEAD

MAXIMUM LIABILITY FOR ANY CAUSE WHATSOEVER IS LIMITED TO REPLACEMENT OF CONTAINERS ONLY.

ALL CLAIMS FOR DEFECTS MUST BE REPORTED WITHIN FIFTEEN DAYS FROM RECEIPT OF SHIPMENT.

RECEIVED BY:

CUSTOMER INVOICE

LOADER'S TALLY

Armstrong
Armstrong World Industries, Inc.

LANCASTER FLOOR PLANT

No. 1481

Sold To: CENTRAL DRUM CO.
704 DOREMUS AVE
NEWARK, N.J
07105

Shipped To: SAME

Date 2/18/94

Rtg. CENTRAL DRUM

Vehicle Gate Pass No. 51453

Quan. Shipped Amount	Unit	DESCRIPTION
180	ea.	STEEL DRUMS
	Del #	421848

Gross Weight	—
Tractor In	
Tractor Out	
Tare	
Net Weight	

WEIGHED BY:

DELIVERED BY: Mark Herbert
(Loading Employee)

(When Not Weighed by Plant Guard)
(Supervisor)

RECEIVED BY:
(Vehicle Driver)

Form 9208 4/81J

White - PURCHASING; Yellow - SALVAGE
Pink - PLANT PROTECTION; Goldenrod - CARRIER

180 drums @

U.
3-3-94

John.

Does this have a P.O.#? If not please approve and give me an acct code.

120-13400-030-000-572-072

Thanks,

DHorst

428

CENTRAL STEEL DRUM COMPANY

"Reconditioned and Relined Drums"

TELEPHONE
(201) 344-8500
NEW YORK PHONE
(212) 267-3248

NO 46840

704 DOREMUS AVENUE
NEWARK, N.J. 07105

CREDIT MEMO

DATE 6/12 19 87

RECEIVED FROM Allstone

Type	Drums	Price	Total
17H S.S.	22	300	66.00
17H B/B	76	175	133.00
18 Orig.			
18 STC			
20/18 Orig.	8	150	12.00
20/18 STC			
RIEKE			
B/B O. H.			
30 Gal. O. H.			
30 Gal. B. T.			
58 Gal. O. H.			
BT Cuts			
End Use	80	—	
Scrap - No Value			
Heads Over			211.00
Heads Short			
Rings Over			
Rings Short			
Bungs Short			

CENTRAL STEEL DRUM COMPANY

"Reconditioned and Relined Drums"

TELEPHONE
(201) 344-8500
NEW YORK PHONE
(212) 267-3248

NO 46821

704 DOREMUS AVENUE
NEWARK, N.J. 07105

CREDIT MEMO

DATE 6/10/ 1987

RECEIVED FROM Armstrong

Type	Drums	Price	Total
17H S.S.	20	3.00	60.00
17H B/B	70	1.75	122.50
18 Orig.			
18 STC			
20/18 Orig.	46	1.50	69.00
20/18 STC			
RIEKE			
B/B O. H.			
30 Gal. O. H.			
30 Gal. B. T.			
58 Gal. O. H.			
BT Cuts			
End Use			
Scrap - No Value	85		
Heads Over			
Heads Short			
Rings Over			251.50
Rings Short			
Bungs Short			
2586			

RECYCLED

American National Can

PECHINEY GROUP

December 30, 1997

Ms. Suzanne Becker
Removal Action Branch
Emergnecy & Remedial Response Division
U.S. Environmental Protection Agency, Region II
2890 Woodbridge Avenue
Edison, NJ 08837

RE: Central Steel Drum Superfund Site
Newark, New Jersey

Dear Ms. Becker:

I am writing to advise you that American National Can Company is still in the process of assembling materials in order to respond to the CERCLA Section 104(e) request for information on the above Site. American National Can Company is requesting a 30 day extension past the original deadline of January 10, 1998, to allow time for a thorough investigation and a complete response to the information request.

If there are any problems with this request, please call me at (773) 399-3642.

Very truly yours,

Tim Guerra, Esq.

cc: E. Burns Lerum

January 20, 1998

Suzanne Becker
Removal Action Branch
Emergency and Remedial Response Division
U. S. Environmental Protection Agency, Region II
2890 Woodbridge Avenue
Edison, NJ 08837

RE: Central Steel Drum Superfund Site in Newark, New Jersey

Dear Ms. Becker:

This letter is submitted by American National Can Company ("ANCC") in response to the request by the U.S. Environmental Protection Agency ("U.S. EPA") under the authority of Section 104 of CERCLA, for information concerning the above-referenced site.

The following response is based upon the present knowledge, information, and belief of ANCC, as derived from the knowledge of present or retired employees gained in their capacity as such, and from a diligent search of available records of ANCC that would likely contain the information sought by the U.S. EPA In replying to the request for information, ANCC shall not be deemed to have admitted any liability or responsibility with respect to the Central Steel Drum Superfund Site. ANCC expressly denies any such liability and responsibility and reserves any and all defenses as may exist at law or in equity. Additionally, ANCC reserves the right to modify, supplement or amend these responses should additional or different information be found concerning the subject matter of the request for information. Notwithstanding this response or a modification, supplement, or amendment hereto, none of the information contained in this response should be deemed an admission of fact, and ANCC reserves the right to object to the introduction of any information contained herein in any administrative or judicial proceeding.

ANCC requests that neither the U.S. EPA, nor any of its employees or consultants contact any employee or retiree of ANCC without first contacting the undersigned.

ANCC has made diligent efforts to comply with the Information Request and to provide complete and comprehensive answers to the questions forwarded by the U.S. EPA To reserve its rights, however, ANCC objects to the Information Request on the basis that various portions of it are unduly burdensome, overbroad, vague, unreasonable, and request information that has no relevance to the site at issue. ANCC reserves its right to challenge the lawfulness of this

Information Request including the Information Request Definitions and Instructions and to assert any legal defenses that may be available to it. In addition, ANCC specifically reserves its right to challenge U.S. EPA's authority and legal basis to request this information relating to ANCC.

Subject to the foregoing, ANCC answers as follows:

Request # 1.

a. State the correct legal name of the Company
b. Identify the legal status of the Company (corporation, partnership, sole proprietorship, specify if other) and the state in which the Company was organized.
c. State the names(s) and address(es) of the officers of the Company.
d. If the Company has subsidiaries or affiliates, or is a subsidiary of another organization, identify these related companies and state the names(s) and address(es) of the officers of those organizations. Provide such information for any further parent/subsidiary relationships.
e. If the company is a successor to, or has been succeeded by, another company, identify such other company and provide the same information requested above for the predecessor or successor company.
f. If the Company transacted business with Central Steel Drum in the name of an entity not disclosed above, give the name of such entity and state its relationship to the Company.

Response to Request #1

a. American National Can Company
b. ANCC is a Corporation incorporated in the State of Delaware.
c. **ANCC objects to Information request No. 2 on the grounds that it is overbroad and unduly burdensome. Without waiving these objections, see response to Request 1(e).**
d. ANCC objects to Information request No. 2 on the grounds that it is overbroad and unduly burdensome. Without waiving these objections, see response to Request 1(e).
e. ANCC objects to Information request No. 2 on the grounds that it is overbroad and unduly burdensome. Without waiving these objections, the following transactions were completed to form ANCC: on May 1, 1985,

Triangle Acquisition Corporation (TAC), a wholly-owned subsidiary of Triangle Industries, Inc. (TII) purchased and owned approximately 94% of the outstanding shares of National Can Corporation ("NCC"). A merger of TAC and NCC was completed on June 28, 1985 with NCC being the surviving corporation. On April 30, 1987, American Can Packaging Inc., (the packaging assets of American Can Company and a wholly-owned subsidiary of TII) and Trafalgar Industries, Inc. (a wholly-owned subsidiary of TII) merged with and into NCC. Upon the effective date of the Merger, NCC changed its name to American National Can Company (ANCC). In January 1989, Pechiney Corporation purchased the stock of TII, which included ANCC.

f. Not applicable.

Request # 2.

Describe in detail the nature of your Company during the years 1980-1994. If the nature of the business has not been constant, describe the changes that have occurred, including any name changes, and when they occurred.

<u>Response to Request #2</u>

ANCC objects to this request on the grounds that it is beyond the scope of EPA authority under CERCLA Section 104(e), unduly burdensome and not relevant to the site to describe the Company's various business. ANCC further objects to Information request No. 2 on the grounds unduly burdensome and vague as to the term "nature." Without waiving these objections, ANCC states its Washington, NJ plant from 1980-1994 manufactured single-layer plastic tubes and closures, and high-barrier laminate tubes composed of plastic, metal foil or, in some cases, paper. These laminate tubes were manufactured by converting purchased webstock into a tube through an injection molding process. Closures were manufactured by an injection molding process. Plastic tubes were formed by an extruder and an injection molding process. In addition, from 1980 - 1988 the Washington, NJ plant manufactured aerosol two piece cans. This operation included a coating and printing operation. Further answering, see response to Request 1(e).

Request # 3.

Briefly describe your Company's operations. Also, identify any chemical substances used to clean equipment or machinery.

Response to Request #3

ANCC objects to this request on the grounds that it is beyond the scope of EPA authority under CERCLA Section 104(e), unduly burdensome and vague as to the phrase "describe your Company's operation." Without waiving these objections, see response to Request #2. Further answering, chemical substances used to clean equipment or machinery were small amounts of trichloroethylene and mop water.

Request # 4.

a. State whether the Company or any Company facility transacted any business with CSD for the disposal, treatment, or storage of any barrels, drums, or other containers (hereinafter collectively referred to as "Containers")
b. If so, describe the relationship (nature of services rendered or products sold to the Company) between the Company and CSD;
c. provide copies of any contracts or agreements between the Company and CSD;

Response to Request #4

a. Yes
b. ANCC Washington, NJ plant transacted business with CDS for the disposal of empty drums and the purchase of empty drums.
c. See attached exhibit #1.

Request # 5.

a. For each facility identified in Request 4, state the nature of the operations conducted at the facility including the time period in which the facility operated,
b. State the name, address, and current RCRA Identification number of each facility;

Response to Request #5

a. ANCC objects to this request on the grounds that it is beyond the scope of EPA authority under CERCLA Section 104(e), unduly burdensome and vague as to the phrase "nature of the operations." Without waiving these objections, see response to Request #2.

b. American National Can Company
Route 31, North
Washington, NJ 07882
RCRA ID: NJD002397834

Request # 6.

For each transaction between the Company and CSD, provide the following information:

a. Identify the specific dates of each transaction. Where an exact date cannot be provided for a transaction, provide an approximation by month and year;
b. Identify the number of Containers that were the subject of each such transaction;
c. Generically describe each Container that was the subject of each such transaction (example: closed-head steel drums, etc.);
d. Identify the intended purpose of each such transaction;
e. State whether each Container that was the subject of the transaction contained any substance at the time of the transaction. As to each Container that contained any substance:
   (1) Identify each such substance, including its specific chemical constituent; physical state, quantity by volume and weight, and other characteristics; and
   (2) Provide all written analyses that may have been made for each such substance or which may be in the custody or control of the Company and all material safety data sheets, if any, relating to each such substance;

Response to Request #6

Document no. 001

a. 5/22/89.
b. 81 empty steel drums and 37 empty poly lined drums.
c. See answer to Request 6b.
d. ANCC objects to this request on the grounds that it is beyond the scope of

EPA authority under CERCLA Section 104(e) and vague as to the phrase "intended purpose." Without waiving these objections, see document no. 001. Further answering, these drums were hauled and disposed of by Central Steel Drum.

e. The drums shipped to Central Steel Drum contained very small quantities of residue and in all case would be considered RCRA empty under 40 CFR Section 261.7. It is unknown what, if any, substances were present in the drums shipped to Central Steel Drum.

Document 002

a. 6/8/90.

b. 82 empty steel drums and 32 plastic lined drums.

c. See answer to Request 6b.

d. ANCC objects to this request on the grounds that it is beyond the scope of EPA authority under CERCLA Section 104(e) and vague as to the phrase "intended purpose." Without waiving these objections, see document no. 002. Further answering, these drums were shredded and recycled by Central Steel Drum.

e. The drums shipped to Central Steel Drum contained very small quantities of residue and in all case would be considered RCRA empty under 40 CFR Section 261.7. It is unknown what, if any, substances were present in the drums shipped to Central Steel Drum.

Document 003

a. 7/21/89.

b. 6 empty open head steel drums.

c. See answer to Request 6b.

d. ANCC objects to this request on the grounds that it is beyond the scope of EPA authority under CERCLA Section 104(e) and vague as to the phrase "intended purpose." Without waiving these objections, see document no. 003. Further answering, ANCC purchased 6 reconditioned steel drums from Central Steel Drum.

e. No.

Document 004

a. 5/17/89.

b. 250 empty steel drums and 80 plastic lined drums.

c. See answer to Request 6b.

d. ANCC objects to this request on the grounds that it is beyond the scope of EPA authority under CERCLA Section 104(e) and vague as to the phrase "intended purpose." Without waiving these objections, see document no. 004. Further answering, these drums were hauled and disposed of by Central Steel Drum.

e. The drums shipped to Central Steel Drum contained very small quantities of residue and in all case would be considered RCRA empty under 40 CFR Section 261.7. It is unknown what, if any, substances were present in the drums shipped to Central Steel Drum.

Document 005

a. 7/5/90.

b. 7 empty steel drums and 2 eighty-five-gallon plastic overpacks.

c. See answer to Request 6b.

d. ANCC objects to this request on the grounds that it is beyond the scope of EPA authority under CERCLA Section 104(e) and vague as to the phrase "intended purpose." Without waiving these objections, see document no. 005. Further answering, ANCC purchased 7 reconditioned steel drums and 2 eighty-five-gallon plastic overpacks from Central Steel Drum.

e. No.

Document 006

a. 11/17/89.

b. 8 empty open head steel drums.

c. See answer to Request 6b.

d. ANCC objects to this request on the grounds that it is beyond the scope of EPA authority under CERCLA Section 104(e) and vague as to the phrase "intended purpose." Without waiving these objections, see document no. 006. Further answering, ANCC purchased 8 reconditioned steel drums from Central Steel Drum.

e. No.

Document 007

a. 5/30/90.

b. 8 empty open head steel drums.

c. See answer to Request 6b.

d. ANCC objects to this request on the grounds that it is beyond the scope of

EPA authority under CERCLA Section 104(e) and vague as to the phrase "intended purpose." Without waiving these objections, see document no. 007. Further answering, ANCC purchased 8 reconditioned steel drums from Central Steel Drum.

e. No.

Document 008

a. 2/19/90.

b. 8 empty open head steel drums.

c. See answer to Request 6b.

d. ANCC objects to this request on the grounds that it is beyond the scope of EPA authority under CERCLA Section 104(e) and vague as to the phrase "intended purpose." Without waiving these objections, see document no. 008. Further answering, ANCC purchased 8 reconditioned steel drums from Central Steel Drum.

e. No.

Document 009

a. 7/19/90.

b. 6 empty open head steel drums.

c. See answer to Request 6b.

d. ANCC objects to this request on the grounds that it is beyond the scope of EPA authority under CERCLA Section 104(e) and vague as to the phrase "intended purpose." Without waiving these objections, see document no. 009. Further answering, ANCC purchased 6 reconditioned steel drums from Central Steel Drum.

e. No.

Document 010

a. 3/20/91.

b. 8 empty open head steel drums.

c. See answer to Request 6b.

d. ANCC objects to this request on the grounds that it is beyond the scope of EPA authority under CERCLA Section 104(e) and vague as to the phrase "intended purpose." Without waiving these objections, see document no. 010. Further answering, ANCC purchased 8 reconditioned steel drums from Central Steel Drum.

e. No.

Document 011

a. 11/9/92.

b. 12 empty open head steel drums and 3 empty closed head steel drums.

c. See response to Request 6b.

d. ANCC objects to this request on the grounds that it is beyond the scope of EPA authority under CERCLA Section 104(e) and vague as to the phrase "intended purpose." Without waiving these objections, see document no. 011. Further answering, ANCC purchased 15 drums from Central Steel Drum.

e. No.

Document 012

a. 11/9/93.

b. 15 empty open head steel drums.

c. See response to Request 6b.

d. ANCC objects to this request on the grounds that it is beyond the scope of EPA authority under CERCLA Section 104(e) and vague as to the phrase "intended purpose." Without waiving these objections, see document no. 012. Further answering, ANCC purchased 15 reconditioned steel drums from Central Steel Drum.

e. No.

Document 013

a. 8/11/93.

b. 10 empty open head steel drums.

c. See response to Request 6b.

d. ANCC objects to this request on the grounds that it is beyond the scope of EPA authority under CERCLA Section 104(e) and vague as to the phrase "intended purpose." Without waiving these objections, see document no. 013. Further answering, ANCC purchased 10 reconditioned steel drums from Central Steel Drum.

e. No.

Document 014

a. 6/23/93.

b. 10 empty open head steel drums.

c. See response to Request 6b.

d. **ANCC objects to this request on the grounds that it is beyond the scope of EPA authority under CERCLA Section 104(e) and vague as to the phrase "intended purpose." Without waiving these objections, see document no. 014. Further answering, ANCC purchased 10 reconditioned steel drums from Central Steel Drum.**

e. **No.**

Document 015

a. **10/28/91.**

b. **4 empty open head steel drums and 6 closed head steel drums.**

c. **See response to Request 6b.**

d. **ANCC objects to this request on the grounds that it is beyond the scope of EPA authority under CERCLA Section 104(e) and vague as to the phrase "intended purpose." Without waiving these objections, see document no. 015. Further answering, ANCC purchased 10 reconditioned steel drums from Central Steel Drum.**

e. **No.**

Document 016

a. **9/10/91.**

b. **8 empty open head steel drums and 6 closed head steel drums.**

c. **See response to Request 6b.**

d. **ANCC objects to this request on the grounds that it is beyond the scope of EPA authority under CERCLA Section 104(e) and vague as to the phrase "intended purpose." Without waiving these objections, see document no. 016. Further answering, ANCC purchased 14 reconditioned steel drums from Central Steel Drum.**

e. **No.**

Request # 7.

Provide copies of all documents relating in any way to each transaction, including copies of delivery receipts, invoices, or payment devices.

Response to Request #7

See attached exhibit #1.

Request # 8.

Identify all persons who might have knowledge of the transaction or who had any responsibility regarding the transaction.

Response to Request #8

1. **Bill Miller - plant engineer at ANCC Washington, NJ plant.**

2. **Louis Manise - Former Environmental Engineer at ANCC Washington, NJ plant.**

Request # 9.

If you contend that any such Container did not contain any substance at the time of the transaction state whether such container had previously been used by the company to contain any substance, and if so:

a. Identify all substances previously contained within such Containers including its specific chemical constituent, physical state, and other characteristics; and

b. Provide as to such substances, all written analyses that may have been made for each such substance or which may be in the custody or control of the Company and all material safety data sheets, if any, relating to each such substance;

Response to Request #9

The drums shipped to Central Steel Drum contained very small quantities of residue and in all case would be considered RCRA empty under 40 CFR Section 261.7. It is unknown what, if any, substances were present in the drums shipped to Central Steel Drum. All drums purchased by ANCC were reconditioned and completely empty without any substances in the drum.

Request # 10.

Describe in detail any treatment of any Container that may have been performed by or on behalf of the Company prior to the time that the Container was transferred from the

Company, including any process or procedure by which the container was emptied or cleaned.

Response to Request #10

ANCC drained, by gravity, the remaining raw material from the drum before shipping the empty drum.

Request # 11.

If you sent any Container by means of any third party transporter, identify each such transporter, including the name and address of such transporter, and identify in which of the transactions such transporter acted.

Response to Request #11

Empty drums were shipped to Central Steel Drum by their own haulers. Reconditioned drums purchased by ANCC were shipped by Mantek and Lynch Trucking. Mantek phone number was (201) 566-4861. Lynch Trucking's phone number was (908) 689-4019.

Request # 12.

Identify each person consulted in responding to these Questions and correlate each person to the question on which he or she was consulted.

Response to Request #12

ANCC states that Tim Guerra, of counsel to ANCC, provided information in order to respond to all of the interrogatories. In addition, Bill Miller, current ANCC employee, provided information to respond to Requests 2 through 14.

Request # 13.

Identify any other person (e.g., individual, company, partnership, etc.) having knowledge of facts relating to the questions which are the subject of this inquiry. For each such person that you identify provide the name, address and telephone number of that person; and the basis of your belief that he or she has such knowledge. For past and present

employees, include their job title and a description of their responsibilities.

Response to Request #13

Louise Manis is a former environmental engineer at the Washington, NJ plant. Ms. Manis was responsible for the shipping of, or purchase of, empty drums at the Washington, NJ facility. Her last know address is 1701 Brandywine Rd., Allentown, PA 18104. Her last known phone number is (601) 391-0311.

Request # 14.

Supply any additional information or documents that may be relevant or useful to identify other sources who disposed of or transported Containers to the Site.

Response to Request #14

ANCC does not have additional information to provide the U.S. EPA that would be responsive to this request.

The foregoing represents the complete response of ANCC to the subject request for information. If there are questions concerning any response or attachment, please contact me at (773) 399-3642.

Very truly yours,

Tim Guerra, Esq.

Enc.

cc: E. Burns Lerum
T. Webster

REQUISITIONED BY: L MANIS

DELIVER TO: MANIS

ACCOUNT REFERENCE: 84/821

PROJECT NO.:

WORK ORDER NO.

American National Can™

VENDOR NOTE

THIS IS NOT A VALID ORDER FOR ITEMS TOTALING MORE THAN $500 UNLESS BLANKET ORDER IS SHOWN

CENTRAL STEEL DRUM CO
704 DOREMUS AVE
NEWARK NJ
201 344-15500

NUMBER: 357- 23813 DATE: 9/10/91

BLANKET ORDER NO.

COMMODITY: 136E

F.O.B.: DOCK NJ TERMS: NET 30

American National Can Company

SHIP TO: American National Can Company
ROUTE 31
WASHINGTON, NJ 07882

TRIPLICATE INVOICES TO (SAME AS SHIP TO UNLESS INDICATED)

SHIP VIA: MANTEK

SHIP TO ARRIVE:

TAXABLE: YES ☐ NO ☒

ITEM	ACCOUNT NO.	QUANTITY	UNIT	DESCRIPTION	NET UNIT PRICE	TOTAL
1	84/821	6	ea	55 GALLON 6D CLOSED HEAD DRUMS (NEW) ACCEPTABLE BY DOT FOR ACID & Hazardous Waste Disposal	55.00	330.00
2	84/821	8	ea	55 GALLON RECONDITIONED 17H STEEL DRUMS 5/8" BOLT, NO OUTSIDE RUNGS ALONG WALL (1) GASKET + BOLT	20	160.00
3	84/821	4	ea	GASKET + 5/8" BOLT FOR 17H Drums (replace 6D GASKET + 5/16" BOLT)	No charge .00	.00
				Pickup Mantek (201) 564-4561	0	016

Pick up Friday 9/13/91

C. Corcoran

CONFIRMING DO NOT DUPLICATE

REQUISITIONER: MANIS

TOTAL ORDER AMOUNT 490.00

IMPORTANT

SHOW ORDER NUMBER AND BLANKET ORDER NUMBER ON ALL INVOICES, CORRESPONDENCE AND SHIPPING PACKAGES

AUTHORIZED SIGNATURE

FORM 3727-R REV. 10/90 MADE IN U.S.A.

REQUISITION - RELEASE ORDER
REQUISITIONER

AP & P
Atlantic Polymers & Products Inc

APOLAN®
International

P.O. Box 790
Oakhurst, NJ 07755 - 0790
Fax: USA 732-938-3376
Phone: 732-922-6570
Atlantic Polymers

20 January 1998

Suzanne Becker
Removal Action Branch
Emergency and Remedial Response Division
U.S. Environmental Protection Agency, Region II
2890 Woodbridge Avenue
Edison, NJ 08837

RE: **Request for Information Pursuant to Section 104 (e) of CERCLA, 42 U.S.C. & 9604 (e); Central Steel Drum, Superfund Site, Newark, Essex County, New Jersey**

Dear Miss/Ms./Mrs. Becker,

1.) a.) APOLAN International, Inc
P.O. Box 790
Oakhurst, NJ 07755-0790

Formerly:
Atlantic Polymers & Products, Inc.
P.O. Box 790
Oakhurst, NJ 07755-0790

(Name Change only - see attached Amendment)

b.) Corporation of the State of NJ

c.) Peter Graefe (President)
30 Tudor Dr.
Wayside, NJ 07712-3262

Steven P. Holmes (Vice President)
8 Bucks Dr.
Barnegat, NJ 08005

d.) N/A

e.) N/A

f.) Name Change (see 1a.)

2.) Manufacturing, engineering goods using two component, thermoset, polyurethane. (Name Change (see - 1a.). All other aspects of company remain unchanged since 1985.

AP & P
Atlantic Polymers & Products Inc

APOLAN®
International

P.O. Box 790
Oakhurst, NJ 07755 - 0790
Fax: USA 732-938-3376
Phone: 732-922-6570

3.) Processing of two component, thermoset, polyurethane. Cleaning of machines involves use of methylene chloride. Removal of waste products from cleaning machines was not handled by Central Steel Drum (CSD). Instead this type of waste was given to:

- Federal Environmental Services, Inc.
  1100 Northmeadow Parkway
  Suite 108
  Roswell, GA 30076

4.) a.) Yes, Atlantic Polymers & Products, Inc.

b.) CSD picked up empty containers for washing and re-sale or re-use according to EPA Regulation # 40 CFR 261.7.

c.) No contracts - see invoices below:

Invoice #'s (copies attached)	Date
69344	05/21/92
70660	10/30/92
81896	05/17/93
77566	10/15/93

5.) a.) Only one facility. Same as answers to Questions #2 and #3.

b.) Facility Name & Address:
See Question 1a.)

RCRA Identification Number:
EPA ID No. NJD982186835

6.) a.) b.)

Date	# Containers
05/21/92	192
10/30/92	90
05/17/93	144
10/15/93	129

c.) Empty closed-head steel drums

d.) At the time of transaction it was standard practice to re-use the type of containers sold to CSD.

6.) e.) The containers were empty

1.) N/A
2.) N/A

AP & P
Atlantic Polymers & Products Inc

APOLAN®
International

P.O. Box 790
Oakhurst, NJ 07755 - 0790
Fax: USA 732-938-3376
Phone: 732-922-6570

7.) Same as 4c.) - copies attached.

8.) Peter Graefe & Steven P. Holmes (see 1c.)

9.)

a.) Substance	b.) Written Analyses
Uniroyal Vibrathane 6020	MSDS (attached)
BASF 1,4-Butanediol	MSDS (attached)

10.) All containers were drained upside down for a minimum of 12 hours before considered empty. At this point any material not drained from the containers will have reacted with moisture from the air to a hard polyurethane elastomer.

11.) N/A

12.) Peter Graefe & Steven P. Holmes - (all questions)

13.) Peter Graefe & Steven P. Holmes - (all questions)

- Peter Graefe (President)
  30 Tudor Dr.
  Wayside, NJ 07712-3262
  PHONE: 732-922-6570

- Steven P. Holmes (Vice President)
  8 Bucks Dr.
  Barnegat, NJ 08005
  PHONE: 732-922-6570

14.) No others known. We dealt with CSD direct.

The Certification Of Answers To Request For Information is attached.

ATT: Certification Of Answers To Request For Information
Company Name Change Amendment
Copies of CSD Invoices
Copies of MSDS Sheets

cc: Michael van Itallie, Esq.
Office of Regional Counsel
U.S. Environmental Protection Agency, Region II
290 Broadway, 17th Floor
New York, NY 10007

CERTIFICATION OF ANSWERS TO REQUEST FOR INFORMATION

State of New Jersey

County of Monmouth

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document (response to EPA Request for Information) and all documents submitted herewith, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete, and that all documents submitted herewith are complete and authentic unless otherwise indicated. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Peter Graefe (President)

Steven P. Holmes (Vice President)

NAME (print or type)

Listed Above

TITLE (print or type)

SIGNATURE

Sworn to me before this

21st day of January, 1998

Notary Public

CAROL C. MEGILL
NOTARY PUBLIC OF NEW JERSEY
My Commission Expires July 24, 2001

FILED

DEC 20 1996

LONNA R. HOOKS
Secretary of State

CERTIFICATE OF AMENDMENT OF
THE CERTIFICATE OF INCORPORATION OF
ATLANTIC POLYMERS & PRODUCTS, INC.

TO: SECRETARY OF STATE
STATE OF NEW JERSEY

This is to certify that the Certificate of Incorporation of Atlantic Polymers & Products, Inc. (herein referred to as the "Corporation") which was filed and recorded in the office of the Secretary of State, State of New Jersey on July 31, 1985, is hereby amended pursuant to the provisions of N.J.S.A. 14A:9-2 of the "New Jersey Business Corporation Act."

ARTICLE I NAME OF CORPORATION

The name of the Corporation is Atlantic Polymers & Products, Inc.

ARTICLE II DATE OF ADOPTION AND TEXT OF AMENDMENT

The following amendment to the Certificate of Incorporation of Atlantic Polymers & Products, Inc. (the "Amendment") was adopted by the Corporation's shareholders (the "Shareholders") by the unanimous written consent of the shareholders on December 17, 1996 to be effective December 31, 1996.

The First Article of the Corporation's Certificate of Incorporation is amended to read in its entirety as follows:

The name of the Corporation is APOLAN International, Inc.

ARTICLE III APPROVAL OF AMENDMENT

The Corporation has 760 shares of Common Stock outstanding, the holders of which are entitled to vote to approve the Amendment. A Unanimous Written Consent of the Shareholders of Atlantic Polymers & Products, Inc. was executed as of December 17, 1996, by the shareholders approving the Amendment, with 760 shares of Atlantic Polymers & Products, Inc. Common Stock consenting to the Amendment.

Atlantic Polymers & Products, Inc.

By: _____
PETER U. GRAEFE,
President

v1/A-Team/Atlantic Polymers//NAM/D Cert/Amend

UNIROYAL CHEMICAL

Material Safety Data Sheet

Uniroyal Chemical Company, Inc.
World Headquarters
Middlebury, CT 06749

UNIROYAL Emergency Phone: (203) 723-3670
CHEMTREC Transportation Emergency Phone: 1-800-424-9300
SAFETY DATA Information (203) 573-3303

MSDS No. V766011 Date Issued: 10/25/85

Date Revised: 5/5/92; Supercedes: 12/9/91 R-3

IDENTIFICATION

Trade Name: VIBRATHANE® 6020 CAS Number: NA

Chemical Name: Reaction product of a polyester with diphenylmethane diisocyanate (MDI) Chemical Family: Polyurethane

SPECIAL REGULATORY HAZARDS

Ingredient	CAS No.	Exposure Limit	OSHA (1910.1200)	EEC*
MDI	101-68-8	0.02 ppm, ceiling (OSHA) 0.005 ppm, TWA (ACGIH)	Sensitizer	Sensitizer

Hazard assessment based on available data.

Transportation: NA

PHYSICAL DATA

Appearance and Odor: Viscous liquid; slight odor

Solubility: Reacts in water, soluble in THF, DMF, or methylene chloride

Melting Point: ND

Boiling Point: ND

Other Data: Solidification Point: 60°F (22°C)
Reactive Isocyanate (NCO): 2.4 - 9.3

Specific Gravity (H_2O = 1): 1.15 - 1.22

Vapor Pressure @ 20° C. ND

Vapor Density (Air = 1): ND

Volatility @ 70° F: Low

FIRE AND EXPLOSION HAZARD DATA

Flash Point: 400°F (204°C) CC

Autoignition Temp: ND

Extinquishing Media: Water spray, dry chemical

Flammable Limits: ND

Special Fire Fighting Procedures: Protect against inhalation of cyanate vapors and other decomposition/combustion products.

Unusual Hazards: None identified.

REACTIVITY DATA

Stability: Stable at ambient temperatures and pressures.

Incompatibility: Avoid contamination with water, solvents and any foreign matter.

Decomposition Products: High temperatures will release cyanates and hydrocarbons. Oxides of carbon, nitrogen and small amount of HCN under burning conditions.

NA = Not Applicable ND = Not Determined *European Economic Community

Uniroyal makes no representation or warranty with respect to the information in this Material Safety Data Sheet. The information is however, as of this date provided, true and accurate to the best of Uniroyal's knowledge. This list of information is not intended to be all inclusive. Actual conditions of use and handling may require considerations of information other than, or in addition to, that which is provided herein.

SPECIAL PROTECTION INFORMATION

Engineering Controls: Local exhaust ventilation strongly recommended.

Personal Protection Equipment: Chemical resistant gloves and goggles should be worn. Avoid breathing vapors. In the absence of good ventilation, under emergency situations or for high concentrations, self-contained or air-supplied respiratory protection is recommended.

STORAGE, SPILLS AND DISPOSAL INFORMATION

Storage: Store away from sources of direct heat and moisture. Seal containers with a dry nitrogen blanket and keep closed when not in use. Moisture contamination will evolve CO_2 and create pressure in closed systems.

Spills: Absorb on inert carrier. Transfer to open containers outside or in well-ventilated area. Soak with dilute ammonia hydroxide or water alcohol mixture. Allow time for reaction to be complete before disposal.

Disposal: In a well ventilated area, fill drums with a couple of inches of water. Leave bung off and slowly shake and roll drum to allow water contact. Leave open to air for sufficient time to cure. Cured polyurethane is not a RCRA hazardous waste. Dispose of in accordance with local, state or federal regulations regarding polymeric waste. WARNING! Burning this material can produce toxic fumes.

Environmental Information: Environmental effects have not been determined.

HEALTH RELATED DATA

Specific Hazard(s): Contact with eyes and skin may cause irritation. Repeated, minimal contact with skin may cause sensitization. Exposure to vapor can cause irritation to eyes, lungs and mucous membranes. Repeated inhalation of minimal amounts of vapor can cause respiratory sensitization and asthma. Individuals with respiratory problems should avoid exposure to this material.

Primary Route(s) of Entry: Inhalation, skin absorption.

First Aid Procedures: **Eye contact:** Flush with water for 15 minutes. Get medical attention.
Skin contact: Wipe excess. Wash with rubbing alcohol, if available, followed by soap and water. Discard shoes if contaminated.
Inhalation: Remove to fresh air. **Physician** - treat for potential respiratory irritation.

Toxicology Information:

Sensitization: Respiratory and dermal sensitizer based upon human experience (MDI)

Mutagenicity: Ames *Salmonella* - positive (MDI)

SARA TITLE III (40CFR 372)
SECTION 313 TOXIC CHEMICALS NOTIFICATION

TOXIC CHEMICAL	CAS #	% (BY WT.)
Diphenylmethane diisocyanate	101-68-8	11.9

Carcinogenic per NTP _____ IARC _____ OSHA _____ None X

Material Safety Data Sheet

BASF Wyandotte Corporation

100 Cherry Hill Road
Parsippany, New Jersey 07054
201/263-3400

SECTION I

598061

CHEMICAL NAME	1,4-Butanediol	TRADE NAME	Butanediol
SYNONYMS	1,4-Butylene glycol	CHEMICAL FAMILY	Glycols
MOLECULAR WEIGHT	90.1	FORMULA	$HOCH_2CH_2CH_2CH_2OH$
CAS REGISTRY NO.	[110-63-4]		

SECTION II - INGREDIENTS

NAME	%	TLV	TOXICOLOGICAL DATA
1,4-Butanediol	100	50ppm*	Rat, Oral LD_{50} 1.5 g/kg. (1780 mg/kg.) Rabbit, skin--non-irritating Rabbit, eye--slightly irritating

*BASF Wyandotte Corporation recommendation

SECTION III - PHYSICAL DATA

Boiling/Melting Point @ 760 mm Hg	229°C	pH	7 - 8 at 500 gm/l H_2O
Vapor Pressure mm Hg @ 20°C	< 1	Vapor density	3.1
Specific Gravity or Bulk Density	1.0154 @ 25°/4°C	Melting point 20°C	
Solubility in Water	Miscible		
Appearance	Colorless oily liquid	Odor	Nearly Odorless Intensity

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT *(TEST METHOD)*	134°C DIN 51758	AUTOIGNITION TEMPERATURE	370°C DIN 51974
FLAMMABILITY LIMITS IN AIR (% BY VOL.)	LOWER	UPPER	

EXTINGUISHING MEDIUM	☒ Water Fog ☒ Foam Alcohol ☒ CO_2 ☒ Dry Chemical ☐ Other
SPECIAL FIREFIGHTING PROCEDURES	Firefighters should be equipped with self-contained breathing apparatus and turn-out gear.
UNUSUAL FIRE AND EXPLOSION HAZARDS	Low, when exposed to heat or flames. Can react with oxidizing materials.

EMERGENCY TELEPHONE NUMBER

CHEMTREC: 800-424-9300 (201)-263-3400

This number is available days, nights, weekends, and holidays.

598061

SECTION V — HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE 50 ppm (BWC recommendation)

EFFECTS OF OVEREXPOSURE

Mild irritation may occur on contact with skin and eyes. If swallowed, 1,4-butanediol is a depressant. Symptoms of overexposure include narcosis and loss of reflexes. Kidney damage has been reported following ingestion.

FIRST AID PROCEDURES

EYES: FLUSH WITH FLOWING WATER AT LEAST 15 MINUTES	Eyes--Flush eyes with flowing water at least 15 minutes. If irritation develops, consult a physician. Skin--Wash affected skin areas thoroughly with soap and water. If irritation develops, consult a physician. Ingestion--If swallowed, dilute with water or milk and induce vomiting. Get immediate medical attention. Inhalation--If inhaled, move to fresh air. Aid in breathing, if necessary, and get medical attention.	NEVER GIVE FLUIDS OR INDUCE VOMITING IF PATIENT IS UNCONSCIOUS OR HAVING CONVULSIONS

SECTION VI — REACTIVITY DATA

STABILITY	STABLE	X	CONDITIONS TO AVOID:
	UNSTABLE		

CHEMICAL INCOMPATIBILITY Oxidizers

HAZARDOUS DECOMPOSITION PRODUCTS

HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID:
	DOES NOT OCCUR	X	

CORROSIVE TO METAL [X] NO [ ] YES, TYPE: OXIDIZER: [X] NO [ ] YES

SECTION VII — SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION

Approved organic vapor/mist respirator.

VENTILATION LOCAL EXHAUST: To control to recommended P.E.L.

MECHANICAL (GENERAL):

EYE PROTECTION

Chemical goggles

PROTECTIVE CLOTHING

Gloves, coveralls, apron, boots as necessary to minimize skin contact.

OTHER

SECTION VIII - ENVIRONMENTAL DATA

598061

ENVIRONMENTAL TOXICITY DATA

Not established

SPILL AND LEAK PROCEDURES

Butanediol is not a RCRA regulated product. Spills should be contained, absorbed and placed in suitable containers for disposal.

HAZARDOUS SUBSTANCE "SUPERFUND" ☒ NO ☐ YES → RQ

WASTE DISPOSAL METHOD

Incinerate or bury as a solid after absorption or cementation in a licensed facility. Do not discharge into waterways or sewer systems.

HAZARDOUS WASTE 40CFR261 ☒ NO ☐ YES → HAZARDOUS WASTE NUMBER

CONTAINER DISPOSAL

Dispose of in licensed facility. Recommend crushing or other means to prevent unauthorized reuse.

SECTION IX - SHIPPING DATA

D.O.T. PROPER SHIPPING NAME (49CFR172.101)	HAZARDOUS SUBSTANCE (40CFR116)
None	REPORTABLE QUANTITY (RQ)

D.O.T. HAZARD CLASSIFICATION (49CFR172.101)

PRIMARY *SECONDARY*

None

D.O.T. LABELS REQUIRED (49CFR172.101)	D.O.T. PLACARDS REQUIRED	POISON CONSTITUENT (49CFR173.343)
None	None	

BILL OF LADING DESCRIPTION	CC NO.
Butylene Glycol	331
	UN/NA CODE None

DATE PREPARED 6/28/83

While BASF Wyandotte Corporation believes the data set forth herein are accurate as of the date hereof, BASF Wyandotte Corporation makes no warranty with respect thereto and expressly disclaims all liability for reliance thereon. Such data are offered solely for your consideration, investigation, and verification.

Butanediol

CAUTION:
CONTACT WITH EYES AND SKIN MAY RESULT IN MILD IRRITATION.
IF SWALLOWED, 1,4-BUTANEDIOL IS A DEPRESSANT. SYMPTOMS OF OVEREXPOSURE INCLUDE NARCOSIS AND LOSS OF REFLEXES. KIDNEY DAMAGE HAS BEEN REPORTED FOLLOWING INGESTION.

Use with local exhaust to control to recommended P.E.L. Wear an approved organic vapor/mist respirator, chemical goggles, gloves, coveralls, apron, boots and other protective clothing as necessary to prevent contact.

FIRST AID:

Eyes - Immediately wash eyes with running water for 15 minutes. Get medical attention if irritation develops.

Skin - Wash affected areas with soap and water. Get medical attention if irritation develops.

Ingestion - If swallowed, dilute with water and immediately induce vomiting by sticking finger down victim's throat. Never give fluids or induce vomiting if the victim is unconscious or having convulsions. Get immediate medical attention.

Inhalation - Move to fresh air. Aid in breathing if necessary and get immediate medical attention.

IN CASE OF FIRE:
Use water fog, alcohol foam, CO_2 or dry chemical extinguishing media. Firefighters should be equipped with self contained breathing apparatus and turnout gear. Can react with oxidizing materials.

EMPTY CONTAINERS:
All labeled precautions must be observed when handling, storing and transporting empty containers due to product residues. Do not reuse this container unless it is professional cleaned and reconditioned.

DISPOSAL:
Spilled material, unused contents and empty containers must be disposed of in accordance with local, state and federal regulations. Refer to our Material Safety Data Sheet for specific disposal instructions.

IN CASE OF CHEMICAL EMERGENCY:
Call CHEMTREC day or night for assistance and information concerning spilled material, fire, exposure and other chemical accidents. 800-424-9300

ATTENTION:
This product is sold solely for use by industrial institutions.

Refer to our Technical Bulletin and Material Safety Data Sheet regarding safety, usage, applications, hazards, procedures and disposal of this product. Consult your supervisor for additional information.

Made in U.S.A.

AP & P
Atlantic Polymers & Products Inc

APOLAN®
International

P.O. Box 790
Oakhurst, NJ 07755 - 0790
Fax: USA 732-938-3376
Phone: 732-922-6570

30 December 1997

Suzanne Becker
Removal Action Branch
Emergency and Remedial Response Division
U.S. Environmental Protection Agency, Region II
2890 Woodbridge Avenue
Edison, NJ 08837

RE: **Request for Information Pursuant to Section 104 (e) of CERCLA, 42 U.S.C. & 9604 (e); Central Steel Drum, Superfund Site, Newark, Essex County, New Jersey**

Dear Miss/Ms./Mrs. Becker,

We are writing to advise you that we have received an extension for the completion of this report until 21 January 98. The extension was granted via phone by EPA Contractor, Donna Murphy.

Please note our **"Company Name Change"**:

FROM:
Atlantic Polymers & Products, Inc.
P.O. Box 790
Oakhurst, NJ 07755-0790

TO:
APOLAN International
P.O. Box 790
Oakhurst, NJ 07755-0790

Regards,

Steve Holmes
Vice President

SH/cao

cc: Michael van Itallie, Esq.
Office of Regional Counsel
U.S. Environmental Protection Agency, Region II
290 Broadway, 17th Floor
New York, NY 10007

RECYCLED

BRESSLER, AMERY & ROSS
A PROFESSIONAL CORPORATION
COUNSELLORS AT LAW
P. O. BOX 1980
MORRISTOWN, N. J. 07962
(973) 514-1200

TELECOPIER: (973) 514-1660

HAND DELIVERY:
325 COLUMBIA TURNPIKE
FLORHAM PARK, N. J. 07932

NEW YORK OFFICE
17 STATE STREET
NEW YORK, NEW YORK 10004
(212) 425-9300

BERNARD BRESSLER
BRIAN F. AMERY
LAWRENCE D. ROSS
DAVID W. REGER
J. MICHAEL RIORDAN
RICHARD V. JONES
RICHARD R. SPENCER, JR.
MARK T. McMENAMY
DAVID P. SCHNEIDER
MARK M. TALLMADGE
EDWIN A. ZIPF
THOMAS L. WEISENBECK
GEORGE R. HIRSCH
CYNTHIA J. BORRELLI
ERIC L. CHASE
DAVID H. PIKUS
EDWARD P. McKENZIE
JORDAN S. WEITBERG
DAVID J. LIBOWSKY
ERIC J. NEMETH
MICHAEL V. COLVIN
DONALD J. CAMERSON, II
DAVID F. BAUMAN
JEFFREY W. GERBER

OF COUNSEL
DAVID J. OLESKER
ROBERT BRANTL
EDWIN W. ORR, JR.

MARTIN A. ROTHENBERG
(1918-1988)

GLADYS W. ORR
JOAN H. BEYER
GENEVIEVE K. LAROBARDIER
KEITH S. BARBAROSH
KEVIN B. WALKER
RANDY SAMUELS
SEAN T. O'NEIL
JANE J. KIM
NOREEN M. FIERRO
MICHAEL J. CONNOLLY
DOMINICK F. EVANGELISTA
ROGER V. JONES
DANIEL T. KOPEC
SAMUEL J. THOMAS
FRANK J. CUCCIO
LINDA S. MIRSKY
ANTONIO J. CASAS
FRANCIS J. HELVERSON
JENNIFER E. BIRMINGHAM
IAN W. SIMINOFF
DANIEL T. SURTZ
URSULA D. CLAY

WRITER'S DIRECT LINE:

January 29, 1998

VIA FACSIMILE AND
CERTIFIED MAIL - RRR
Ms. Marisa Truono
Removal Action Branch
Emergency and Remedial Response Div.
U.S.E.P.A. - Region II
2890 Woodbridge Avenue
Edison, New Jersey 08837

RE: Central Steel Drum Superfund Site
Newark, Essex County, New Jersey
104(e) Information Request

Dear Ms. Truono:

Enclosed please find BASF Corporation's response to USEPA's §104(e) Request for Information in connection with the above-referenced site.

BASF's internal investigation of any alleged connection to Central Steel Drum is continuing. BASF reserves the right to amend or supplement its response if additional relevant information is discovered. To the extent any additional information is discovered, it will be promptly forwarded to your attention.

If you have any questions concerning BASF's response, please do not hesitate to call me.

Very truly yours,

BRESSLER, AMERY & ROSS, P.C.

David P. Schneider

David P. Schneider

Enclosure
cc: Michael van Itallie, Esq. (w/enclosure certified mail)

CENTRAL STEEL DRUM
SECTION 104(e) INFORMATION REQUEST

RESPONSE OF BASF CORPORATION

1. General Information About the Company

a. **State the correct legal name of the Company.**

BASF Corporation

b. **Identify the legal status of the Company (corporation, partnership, sole proprietorship, specify if other) and the state in which the Company was organized.**

BASF Corporation is a corporation incorporated in the State of Delaware.

c. **State the name(s) and address(es) of the officers of the Company.**

Eggert Voscherau
Chief Executive Officer and Chairman of the Board
3000 Continental Drive - North
Mt. Olive, New Jersey 07828

d. **If the Company has subsidiaries or affiliates, or is a subsidiary of another organization, identify these related companies and state the name(s) and address(es) of the officers of those organizations. Provide such information for any further parent/subsidiary relationships.**

BASF objects to this question on the grounds that it is overbroad and unduly burdensome insofar as it seeks information concerning all related subsidiaries and affiliates and all of their officers, and not relevant to the subject matter of this inquiry. Without waiving and subject to the foregoing objection, BASF states that BASF Corporation was formed December 31, 1985 as a wholly-owned subsidiary of BASF America Corporation. On July 31, 1986, BASF America Corporation's name changed to BASFIN Corporation. The legal address for BASFIN Corporation is 3000 Continental Drive - North, Mt. Olive, New Jersey 07828.

e. **If the Company is a successor to, or has been succeeded by, another company, identify such other company and provide the same information requested above for the predecessor or successor company.**

BASF Corporation is the corporate successor to BASF Wyandotte Corporation and Inmont Corporation. In 1968, BASF Corporation, a New York corporation, was formed. On December 31, 1970, BASF Corporation merged into Wyandotte Chemicals Corporation, a Michigan corporation, whose name was simultaneously changed to BASF Wyandotte Corporation, a Michigan corporation. On December

12, 1973, BASF Wyandotte Corporation was purchased by Luchem Corporation, a Delaware corporation. On June 19, 1978, Luchem Corporation's name was changed to BASF America Corporation (Delaware).

On April 15, 1969, Interchemical Corporation, an Ohio corporation, changed its name to Inmont Corporation. MEW Corporation, a wholly-owned subsidiary of Carrier Corporation, was incorporated in Delaware on August 11, 1977 to act as a vehicle into which Inmont Corporation (Ohio) would be merged. On December 27, 1977, Inmont Corporation merged into MEW Corporation whose name was simultaneously changed to Inmont Corporation, a Delaware corporation. Carrier Corporation, through a merger on July 6, 1979, became a wholly-owned subsidiary of United Technologies Corporation. On June 30, 1981, Carrier Corporation transferred all issued and outstanding shares of Inmont Corporation (Delaware) to United Technologies Corporation.

On or about August 21, 1985, BASF America Corporation acquired Inmont Corporation from United Technologies Corporation. Thereafter, on December 31, 1985, BASF Wyandotte Corporation was merged into Inmont Corporation, which simultaneously changed its name to BASF Corporation, the current corporate entity.

f. If the Company transacted business with Central Steel Drum in the name of an entity not disclosed above, give the name of such entity and state its relationship to the Company.

Not applicable.

2. Describe in detail the nature of your Company during the years 1980-1994. If the nature of the business has not been constant, describe the changes that have occurred, including any name changes, and when they occurred.

See response to Questions 5.a. - b.

3. Briefly describe your Company's operations. Also, identify any chemical substances used to clean equipment or machinery.

See response to Questions 5.a. - b.

<u>Company's Relationship to Central Drum (CSD)</u>

4. a. State whether the Company or any Company facility transacted any business with CSD for the disposal, treatment, or storage of any barrels, drums, or other containers (hereinafter collectively referred to as "Containers");

BASF's internal investigation and the documents received from EPA indicate that Inmont Corporation may have used the services of Central Steel Drum to recondition empty product drums.

BASF does not concede that any such transactions constitute an arrangement for disposal, treatment, or storage under CERCLA §107(a), or that BASF otherwise has any liability with respect to environmental conditions at the Central Steel Drum site.

b. If so, describe the relationship (nature of services rendered or products sold to the Company) between the Company and CSD;

BASF's investigation indicates that Inmont offered its customers a credit for the return of empty Inmont product drums. These drums were then sent to a reconditioner, either directly by the customers or first returned to the Inmont facility from which the product had been purchased and then sent to the drum reconditioner. Drums returned to Inmont remained at the facility until a sufficient number were collected. Inmont then arranged for a third-party to transport the drums to a drum reconditioner or called the reconditioner to pick up the drums. During BASF's investigation, some former Inmont employees indicated that Central Steel Drum was one of several reconditioners used by the Inmont facilities identified below.

c. Provide copies of any contracts or agreements between the Company and CSD.

BASF has not located any such documents. To the extent any of these documents exist, they have likely been destroyed in accordance with BASF's record retention policy.

5. a. For each facility identified in Question 4, state the nature of the operations conducted at the facility, including the time period in which the facility operated;

b. State the name, address, and current RCRA Identification Number of each facility;

a.- b. The following former Inmont facilities may have used Central Steel Drum for drum reconditioning services:

Inmont Corporation
McWhorter Street
Newark, New Jersey
Manufactured industrial finishes, varnish
Facility operated from approximately 1944 to 1972

Inmont Corporation
200 Gregg Street
Lodi, New Jersey 07644
Manufactured gravure ink
Facility operated 1936 to 1993

Inmont Corporation
150 Wagaraw Road
Hawthorne, New Jersey 07506
Manufactured pigments and ink bases; some dye manufacturing prior to 1985
Facility closed in 1986

BASF has not identified any other Inmont facilities that may have used Central Steel Drum for drum reconditioning services. However, the following location identified on a document provided by the EPA may have served as the invoice processing and/or payment location for the above-listed facilities:

BASF Corporation
Coatings and Colorants Division
1255 Broad Street
Clifton, New Jersey 07015
Offices and laboratories (research in inks, paints and other products)
Facility operated 1964 to 1994 - Corporate headquarters beginning in approximately 1981

6. For each transaction between the Company and CSD, provide the following information:

a. Identify the specific dates of each transaction. Where an exact date cannot be provided for a transaction, provide an approximation by month and year;

b. Identify the number of Containers that were the subject of each such transaction;

a. - b. Other than the documents provided to BASF by EPA, which EPA alleges evidence specific transactions, BASF's investigation has not produced any documents evidencing any transactions with Central Steel Drum. BASF's internal investigation did indicate that the Inmont facilities listed in response to Question 5.a. - b. transacted with several drum reconditioners during various periods of time, one of which may have been Central Steel Drum.

c. Generically describe each Container that was the subject of each such transaction (example: closed-head steel drums, etc.);

The Inmont facilities identified above used both open and closed-head drums.

d. Identify the intended purpose of each such transaction;

The intended purpose of any transactions with Central Steel Drum would have been to have Inmont's drums reconditioned.

e. State whether each Container that was the subject of the transaction contained any substance at the time of the transaction. As to each Container that contained any substance:

(1) Identify each such substance, including its specific chemical constituent, physical state, quantity by volume and weight, and other characteristics; and

(2) Provide all written analyses that may have been made for each such substance or which may be in the custody or control of the Company and all material safety data sheets, if any, relating to each such substance.

BASF's internal investigation indicates that some empty customer drums may have contained residual amounts of product material when they were sent for reconditioning. However, documents provided by EPA, which EPA alleges evidence transactions with Central Steel Drum, indicate that drums taken to Central Steel Drum were empty as that term is defined in 40 CFR 261.7.

7. Provide copies of all documents relating in any way to each transaction, including copies of delivery receipts, invoices, or payment devices.

See response to Questions 4.c. and 6.a. - b.

8. Identify all persons who might have knowledge of the transaction or who had any responsibility regarding the transaction.

Phil Alampi (retired)
Production Manager
Inmont Corporation
Lodi, New Jersey

James Dole (retired)
Purchasing Manager
Inmont Corporation
New York, New York and Clifton, New Jersey

Gus Gagis
Plant Manager
Inmont Corporation
Hawthorne, New Jersey

Rosa Meyer (former employee)
Accounts Payable
Inmont Corporation
Lodi, New Jersey

Walter Mock (retired)
Project Engineer
Inmont Corporation
Lodi, New Jersey

Arthur Newman (retired)
Purchasing Agent
Inmont Corporation
Newark, New Jersey

9. If you contend that any such Container did not contain any substance at the time of the transaction, state whether such Container had previously been used by the Company to contain any substance, and if so:

a. Identify all substances previously contained within such Container, including its specific chemical constituent, physical state, and other characteristics; and

b. Provide as to such substances, all written analyses that may have been made for each such substance or which may be in the custody or control of the Company and all material safety data sheets, if any, relating to each such substance.

a. - b. The Inmont facilities identified above produced industrial finishes, varnishes and inks which were sold in steel drums, tank wagons, or one and five gallon containers. BASF's internal investigation indicates some empty customer drums may have contained residual amounts of these materials when they were sent for reconditioning. BASF's internal investigation has not revealed whether empty customer drums returned to Inmont's facilities were treated prior to shipment to the drum reconditioner. The tank wagons and one and five gallon containers were not reconditioned.

BASF's investigation has not produced written records of any analyses which may have been performed on residual substances, if any, remaining in Inmont's empty drums. However, documents provided by EPA, which EPA alleges evidence transactions with Central Steel Drum, indicate that drums taken to Central Steel Drum were empty as that term is defined in 40 CFR 261.7.

10. Describe in detail any treatment of any Container that may have been performed by or on behalf of the Company prior to the time that the Container was transferred from the Company, including any process or procedure by which the Container was emptied or cleaned.

See response to Questions 9.a. - b. above.

11. If you sent any Container by means of any third party transporter, identify each such transporter, including the name and address of such transporter, and identify in which of the transactions such transporter acted.

Documentation provided by EPA indicates that in November 1989, the following company may have transported Inmont empty product drums to Central Steel Drum:

Tri-State Carrier, Inc.
P.O. Box 44
Carlstadt, New Jersey 07072

12. Identify each person consulted in responding to these questions and correlate each person to the question on which he or she was consulted.

BASF's response was prepared by outside counsel in consultation with the following individuals:

Phil Alampi (retired) Production Manager Inmont Corporation Lodi, New Jersey	Questions 4.a. - b., 5.a - b., 6.c.
James Dole (retired) Purchasing Manager Inmont Corporation New York, New York and Clifton, New Jersey	Questions 4.a. - b., 5.a - b., 6.c.
Gus Gagis Plant Manager Inmont Corporation Hawthorne, New Jersey	Questions 4.a. - b., 5.a. - b., 6.c.
Rosa Meyer (former employee) Accounts Payable Inmont Corporation Lodi, New Jersey	Questions 4.a. - b., 5.a. - b.
Walter Mock (retired) Project Engineer Inmont Corporation Lodi, New Jersey	Questions 4.a. - b., 5.a. - b.
Arthur Newman (retired) Purchasing Agent Inmont Corporation Newark, New Jersey	Questions 4.a. - b., 5.a. - b., 6.c.

13. Identify any other person (e.g., individual, company, partnership, etc.) having knowledge of facts relating to the questions which are the subject of this inquiry. For each such person that you identify, provide the name, address, and telephone number of that person, and the basis of your belief that he or she has such knowledge. For past and present employees, include their job title and a description of their responsibilities.

At this time, BASF's internal investigation has not identified any other person having knowledge of facts relating to the questions which are the subject of this inquiry.

14. Supply any additional information or documents that may be relevant or useful to identify other sources who disposed of or transported Containers to the Site.

BASF's investigation to date has not produced any other information or documents that may be useful in identifying other sources who may have transacted with Central Steel Drum.

CERTIFICATION OF ANSWERS TO REQUEST FOR INFORMATION

State of New Jersey

County of Morris

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document (response to EPA Request for Information) and all documents submitted herewith, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete, and that all documents submitted herewith are complete and authentic unless otherwise indicated. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Nancy Lake Martin
NAME (print or type)

Senior Counsel
TITLE (print or type)

Nancy Lake Martin
SIGNATURE

Sworn to before me this 29th day of January, 1998.

Sandra M. DiLeo
Notary Public

Sandra M. DiLeo
A Notary Public of New Jersey
My Commission Expires September 17, 2001

BOREMCO
A TILLOTSON COMPANY

BORDEN & REMINGTON CORP.

106 Ferry Street
P.O. Box 2573
Fall River, Massachusetts 02722

Tel: (508) 675-0096
Fax: (508) 672-5670
Toll Free: (800) 543-5393

January 15, 1998

Ms. Suzanne Becker
Removal Action Branch
Emergency and Remedial Response Division
U.S. Environmental Protection Agency, Region II
2890 Woodbridge Avenue
Edison, NJ 08837

RE: RFI regarding
Central Steel Drum
Newark, NJ

Dear Ms. Becker,

I have performed an investigation by examining all available files and interviewing long term employees of Borden & Remington to prepare this response to the above referenced Request for Information (RFI). The file search revealed invoices (enclosed) which indicate that Borden & Remington purchased significant numbers of re-conditioned steel drums from Central Steel Drum (CSD). What was not apparent in the archived files was documentation that would indicate an accurate accounting of the number of drums that were sent back to CSD, by Borden & Remington, for re-conditioning. Interviews with long term employees indicate that the number of steel drums returned to CSD probably range from 50% to 80% of what was purchased from CSD.

I have concluded from the interviews that the drums that were returned to CSD for re-conditioning were empty as defined by 40 CFR 261.7 and were properly prepared for transport under 49 CFR 173.29. If I can be of further assistance, please contact me at your convenience.

Sincerely

Kevin P. Halligan
EH+S Director

Enclosures

pc: Michael van Itallie, Esq.

NACD Responsible Distribution Process
Quality • Responsibility • Stewardship

Southeastern New England's Leading Chemical Distributor

BOREMCO
A TILLOTSON COMPANY

BORDEN & REMINGTON CORP.
106 Ferry Street • P.O. Box 2573 • Fall River, Massachusetts 02722
Southeastern New England's Leading Chemical Distributor

RESPONSE TO REQUEST FOR INFORMATION PURSUANT TO SECTION 104(e) OF CERCLA, 42 U.S.C. 9604(e); CENTRAL STEEL DRUM, SUPERFUND SITE, NEWARK, ESSEX COUNTY, NEW JERSEY

1. a. Correct legal name of the Company: Borden & Remington Corp.

   b. Legal status of the Company: Corporation.

   State in which the company was organized: Massachusetts

   c. The names and addresses of the officers of the Company:

   Daniel E. Bogan, President

   Business Address: 106 Ferry Street
   Fall River, MA 02722

   Business Telephone Number: (508)-675-0096

   Home Address: 659 Pearce Street
   Fall River, MA 02720

   Home Telephone Number: (508)-676-1294

   Grafton J. Corbett III, Clerk

   Business Address: Tillotson Corporation
   59 Waters Avenue
   Everett, MA 02149

   Business Telephone Number: (617)-387-9400

TELEPHONE: (508) 675-0096
FAX: (508) 672-5670

TOLL FREE:
(800) 543-5393

Home Address: 53 Magaletta Drive

Westwood, MA 02090

Home Telephone Number: (781)-329-4938

Neil Tillotson, Treasurer

Business Address: Tillotson Corporation

59 Waters Avenue

Everett, MA 02149

Business Telephone Number: (617)-387-9400

Home Address: 89 Commercial Wharf

Boston, MA 02110

Home Telephone Number: (617)-227-3368

d. The Company does not have subsidiaries or affiliates and is not a subsidiary of another organization.

e. The Company is not a successor to another company. The Company has not been succeeded by another company.

f. The Company did not transact business with Central Steel Drum in the name of an entity not disclosed above.

2. Borden & Remington Corp. is a chemical distributor providing chemicals to municipalities for use in water treatment, sewage treatment, water purification, swimming pool chemicals, etc. The Company is the largest importer of caustic soda and potash in the northeast.

Borden & Remington Corp. has also done business under the name BOREMCO Specialty Chemicals from 1983 to the present. BOREMCO Specialty Chemicals is a manufacturer of superplasticizers and

also oxidizes and bisulfinated fish oil.

3. The Company's operations include bulk chemical receiving, bulk chemical storage, bulk chemical repackaging and chemical distribution in both bulk and non-bulk form.

4. a. The Company transacted business with CSD for the purchase refurbished steel drums.

   b. The Company purchased reconditioned steel drums and CSD reconditioned empty steel drums.

   c. There were/are no express contracts or agreements between the Company and CSD.

5. a. See Item 2.

   b. MAD 088977186.

6. See TABLE I: TRANSACTIONS BETWEEN BORDEN & REMINGTON AND CSD.

   a. The specific dates of each transaction can be found in the column entitled "Date of Transaction".

   b. The number of Containers that were the subject of each transaction can be found in the column entitled "Number of Containers".

   c. A general description of the Containers that were the subject of each transaction can be found in the column entitled "Description of Container". In this column the word "Recon." is used in place of the word "Reconditioned". The word "Seamers" is used in place of "Re-built Closed Head Drums". The initials "OH" are used in place of the word "Open Head Drums".

d. The intended purpose of each such transaction can be found in the column entitled "Purpose of Transaction". In this column the word "Recon." is used in place of the word "Reconditioned" or "Reconditioning".

e. Information about any substance being in the Container at the time of the transaction can be found in the column entitled "Contents of Container".

7. For copies of all documents relating in any way to each transaction, including copies of invoices, see APPENDIX I for COPIES OF INVOICES FOR THE PURCHASE OF NEW RE-CONDITIONED DRUMS FROM CSD; see APPENDIX II for COPIES OF DOCUMENTS RELATED TO THE RETURN OF USED STEEL DRUMS TO CSD FOR RE-CONDITIONING.

8. People who have knowledge of the transactions or who had any responsibility regarding the transactions are those who are currently employed by Borden & Remington and include:

Daniel E. Bogan, President

Stephen Donnelly, Supervisor

Jeff Carey, Warehouse Manager

Tracy L. Resendes, Accounts Payable

Michael Relihan, Controller

Those who had knowledge of transactions with CSD but no longer work for Borden & Remington are:

George Ottilige

Job Title: Traffic Manager

Job Description: Scheduled freight

Current Business: Crown Auto Truck Sales and Services Inc.

Route 6

Rehoboth, MA 02769

Current Business Telephone Number: 800-466-3023

Home Address: 550 Reed Road

Swansea, MA 02777

Home Telephone Number: (508)-676-5542

9. The Company previously used the Containers to package and distribute chemicals.

   a. The drums had once stored the following liquids:

Acetone	Di-2-Ethylhexyl Maleate
Antifoam A-107	Di-2-Ethylehexyl Phthalate
Antifreeze U-900	Diethylene Glycol
Benzoflex 50 Plasticizer	Diisodecyl Phthalate
Benzoflex 9-88 Plasticizer	Dimethylaminopropylamine
Benzoflex 9-88SG Plasticizer	Dioctyl Adipate
Coconut Oil Soap	Drapex 412
Denatured Alcohol	Eastman TXIB Plasticizer
Dibutyl Maleate	Epoxidized Soybean Oil
Dibutyl Phthalate	Ethyl Acetate
Diethanolamine	Ethylene Glycol
Diethyl Sulfate	2- Ethylhexanol
	Glycerin U.S.P.
	Glycol Ether DB

Glycol Ether EB

Hexylene Glycol

Isobutyl Acetate

Isopropyl Alcohol

Kronitex 50

Methanol

Methyl Normal Amyl Ketone

Methyl Ethyl Ketone

Methyl Isobutyl Ketone

Methylhydrogen-
polysoloxane F9W9

Methylene Chloride

Mineral Spirits

Perchloroethylene

Oleic Acid

PEG 400

PEG 600

Propylene Glycol

Reomol TOP

Remflex 4

Rhodorsil Fluid

Shellflex 131

Sodium Silicate
Solution N

Sodium Silicate
Solution Star

Toluene

Triethanolamine-85%

Triethanolamine-99%

Triethylamine

Xylene

b. The material safety data sheets for such substances may be found in APPENDIX III: MATERIAL SAFETY DATA SHEETS.

10. The Containers were filled by the Company and sold to various customers. The Containers were returned to the Company empty as required by the U.S. Department of Transportation. The Company did not perform any treatment to the Containers prior to the time the Containers were transferred from the Company to CSD.

11. Information available at this time indicates that the Containers were not sent by means of any third party transporter.

12. Jeff Carey and Steven Donnelly were consulted concerning questions 9-11.

13. All individuals having knowledge of facts relating to the questions that are the subject of this inquiry have been identified in response # 8.

14. The Company has no additional information or documents that may be relevant or useful to identify other sources who disposed or transported Containers to the Site.

TABLE I

TRANSACTIONS BETWEEN

BORDEN & REMINGTON AND CSD

Date of Transaction	Number of Containers	Description of Container	Purpose of Transaction	Contents of Container
01-09-90	255	Seamers	Purchase Recon. Drums	Empty
02-22-90	261	Seamers	Purchase Recon. Drums	Empty
02-22-90	261	Used Seamers	Return for Recon.	Empty
04-12-90	288	Seamers	Purchase Recon. Drums	Empty
06-22-90	263	Seamers	Purchase Recon. Drums	Empty
07-12-90	257	Seamers	Purchase Recon. Drums	Empty
07-24-90	159	Lined 17H 50 gal.	Purchase Recon. Drums	Empty
07-24-90	60	Lined 17H 30 gal.	Purchase Recon. Drums	Empty
08-13-90	252	Seamers	Purchase Recon. Drums	Empty
08-30-90	285	Seamers	Purchase Recon. Drums	Empty
09-18-90	263	Seamers	Purchase Recon. Drums	Empty
10-23-90	258	Seamers	Purchase Recon. Drums	Empty
11-07-90	273	Seamers	Purchase Recon. Drums	Empty
11-29-90	264	Seamers	Purchase Recon. Drums	Empty
12-14-90	273	Seamers	Purchase Recon. Drums	Empty
01-18-91	264	Seamers	Purchase Recon. Drums	Empty
02-12-91	273	Seamers	Purchase Recon. Drums	Empty
02-12-91	200	Used Seamers	Return for Recon.	Empty
03-01-91	240	Seamers	Purchase Recon. Drums	Empty
04-11-91	258	Seamers	Purchase Recon. Drums	Empty
04-11-91	6	Used Seamers	Return for Recon.	Empty
05-20-91	274	Seamers	Purchase Recon. Drums	Empty
05-20-91	2	Used Seamers	Return for Recon.	Empty
06-14-91	287	Seamers	Purchase Recon. Drums	Empty
08-05-91	247	Seamers	Purchase Recon. Drums	Empty
08-12-91	230	Used Seamers	. Return for Recon	Empty
09-11-91	276	OH	Fish Oil Project	Empty
09-16-91	264	Seamers	Purchase Recon. Drums	Empty
09-16-91	250	Used Seamers	Return for Recon.	Empty
09-23-91	279	Recon. Drums	Fish Oil Project	Empty
10-03-91	253	Phenolic Lined Seamers	Purchase Recon. Drums	Empty
10-30-91	264	Steel Drums	Fish Oil Project	Empty
11-21-91	93	Epoxy Lined Steel	Purchase Recon. Drums	Empty
12-09-91	264	Seamers	Purchase Recon. Drums	Empty
12-12-91	261	Steel Epoxy Lined Open Drums	Fish Oil Project	Empty
01-09-92	232	Recon. Epoxy Lined Open Head	Fish Oil Project	Empty
01-27-92	190	Used Seamers	Return for Recon.	Empty
01-27-92	264	Seamers	Purchase Recon. Drums	Empty

Date of Transaction	Number of Containers	Description of Container	Purpose of Transaction	Contents of Container
02-07-92	278	Recon. Drums Epoxy Lined	Fish Oil Project	Empty
02-28-92	264	OH	Fish Oil Project	Empty
03-06-92	256	Seamers	Purchase Recon. Drums	Empty
03-18-92	278	OH	Fish Oil Project	Empty
04-02-92	264	Recon. Drums Epoxy Lined	Fish Oil Project	Empty
04-02-92	100	Extra Gaskets		Empty
04-08-92	276	Seamers	Purchase Recon. Drums	Empty
04-21-92	256	OH	Fish Oil Project	Empty
05-11-92	216	Seamers	Purchase Recon. Drums	Empty
05-20-92	248	Recon. Drums Epoxy Lined	Fish Oil Project	Empty
06-11-92	276	Seamers	Purchase Recon. Drums	Empty
06-15-92	197	OH	Fish Oil Project	Empty
	79	Seamers	Purchase Recon. Drums	Empty
07-01-92	266	OH	Fish Oil Project	Empty
07-16-92	215	OH	Fish Oil Project	Empty
08-05-92	104	Seamers	Purchase Recon. Drums	Empty
08-07-92	276	OH	Fish Oil Project	Empty
08-12-92	132	Seamers	Purchase Recon. Drums	Empty
08-26-92	240	Seamers	Purchase Recon. Drums	Empty
08-28-92	228	Seamers	Purchase Recon. Drums	Empty
09-15-92	263	OH	Fish Oil Project	Empty
10-23-92	254	OH	Fish Oil Project	Empty
11-06-92	279	Seamers	Purchase Recon. Drums	Empty
12-07-92	276	OH	Fish Oil Project	Empty
01-05-93	242	OH	Fish Oil Project	Empty
01-22-93	276	OH	Fish Oil Project	Empty
01-25-93	266	Seamers	Purchase Recon. Drums	Empty
02-11-93	102	Seamers	Purchase Recon. Drums	Empty
02-17-93	209	OH	Fish Oil Project	Empty
03-11-93	273	Seamers	Purchase Recon. Drums	Empty
03-18-93	265	OH	Fish Oil Project	Empty
04-19-93	282	Seamers	Purchase Recon. Drums	Empty
04-22-93	272	OH	Fish Oil Project	Empty
05-10-93	215	OH	Fish Oil Project	Empty
05-21-93	68	Seamers	Purchase Recon. Drums	Empty
05-25-93	272	OH	Fish Oil Project	Empty
06-16-93	275	OH	Fish Oil Project	Empty
07-12-93	276	OH	Fish Oil Project	Empty
07-13-93	114	Seamers	Purchase Recon. Drums	Empty
08-10-93	276	Seamers	Purchase Recon. Drums	Empty

Date of Transaction	Number of Containers	Description of Container	Purpose of Transaction	Contents of Container
08-16-93	276	OH	Fish Oil Project	Empty
09-23-93	264	OH	Fish Oil Project	Empty
10-13-93	132	OH	Fish Oil Project	Empty
11-02-93	264	Seamers	Purchase Recon. Drums	Empty
11-03-93	242	OH	Fish Oil Project	Empty
12-03-93	276	OH	Fish Oil Project	Empty
12-08-93	145	Seamers	Purchase Recon. Drums	Empty
11-02-93	264	Seamers	Purchase Recon. Drums	Emtpy
01-14-94	260	OH	Fish Oil Project	Empty
02-04-94	240	OH	Fish Oil Project	Empty
03-15-94	256	OH	Fish Oil Project	Emtpy

RECONDITIONED AND RELINED

CENTRAL STEEL DRUM CO.

204 DOREMUS AVE., NEWARK, NEW JERSEY 07105/(201) 344-8500/NEW YORK (212) 267-3248
FAX NO. (201) 344-8181

INVOICE NO. 725013
15330

SOLD TO: 1570
BRONSTEIN CONTAINER CO., INC.
2 JAMAR DRIVE
FAYETTEVILLE NY, 13066

SHIPPED TO: BRONSTEIN CONTAINER CO., INC.
2 JAMAR DRIVE
FAYETTEVILLE NY, 13066

PLEASE PAY FROM THIS INVOICE. NO MONTHLY STATEMENT WILL BE SENT.

ORDERED BY	TAKEN BY

REQUISITION	DATE ORDERED	CUSTOMER ORDER	APPROX. DATE PROMISED	DRIVER	TRAILER	DATE
[illegible] 13098		B-214 VIA SCRAN				01/08/92

QTY. ORDERED (APPROX.)	QTY. SHIPPED	55 GAL.	30 GAL.	TYPE DRUM SPEC. NO.	TYPE HEAD	TYPE RING	LINED	BLASTED	GASKETS	BOLTS & NUTS	ASSEMBLED	UNIT PRICE	AMOUNT
Sale	261	X		17HS	2BO	17H		X	X			14.50	3,784.50
Sale	15	X		17HS	2BO	17H		X	X			14.50	217.50
													=========
													$4,002.00
	3 NO GOOD DRUMS WERE RETURNED FOR CREDIT @ $14.50												-43.50
													$3958.50

PAY THIS AMOUNT ~~$4,002.00~~

SALE	INVENTORY	COLOR OF BODY	COLOR OF HEAD
		BLACK	WHITE

MAXIMUM LIABILITY FOR ANY CAUSE WHATSOEVER IS LIMITED TO REPLACEMENT OF CONTAINERS ONLY.

ALL CLAIMS FOR DEFECTS MUST BE REPORTED WITHIN FIFTEEN DAYS FROM RECEIPT OF SHIPMENT.

RECEIVED BY:

CUSTOMER INVOICE

BORDEN CHEMICAL, INC.

KATHLEEN ADDLESPERGER
Administrative Secretary

February 2, 1998

Via Fax and Courier

Suzanne Becker
Removal Action Branch
Emergency and Remedial Response Division
U.S. Environmental Protection Agency, Region II
2890 Woodbridge Avenue
Edison, NJ 08837

Re: Request for Information, Central Steel Drum

Dear Ms. Becker:

Enclosed please find our answers to the Request for Information in regard to Central Steel Drum Superfund Site, Newark, Essex County, New Jersey. Pursuant to an extension received by Paralegal Laura Young, we are timely filing this report on February 2, 1998. Hard copy will follow by overnight courier.

The information contained in the form was located after an extensive search of our records. Under the provisions of the Freedom of Information Act, we request that any and all information collected by the Environmental Protection Agency that connects Borden Chemical, Inc. to the site by forwarded to us.

We will continue to update the information we send to you today as more information becomes available.

Sincerely,

Kathleen Addlesperger

Kathleen Addlesperger

180 East Broad Street, Columbus, Ohio 43215-3799 • Telephone: 614-225-4000

REQUEST FOR INFORMATION

General Information About your Company

1. a. State the correct legal name of the company

Borden Chemical, Inc.

b. Identify the legal status of the Company (corporation, partnership, sole proprietorship, specify if other) and the state in which the Company was organized.

corporation, registered in Delaware

c. State the name(s) and address(es) of the officers of the Company.

Primary Address:
180 E. Broad St.
Columbus, OH 43215

Jorge Alfert
Vice President - Manufacturing & Technology

Ellen German Berndt
Assistant Secretary

Lawrence Dieker
General Counsel
Secretary
Vice President

Michael E. Ducey
Chief Operation Officer
Executive Vice President

William T. Gerson
Executive Vice President

Frederic R. Huber
Executive Vice President

Edward H. Inbusch
Treasurer

Edward F. Krainer
Executive Vice President

C. Douglas MacLeod
Vice President - Administration

John L. Russ III
Executive Vice President - Forest Products

Joseph M. Saggese
Chief Executive Officer
President

Ronald P. Starkman
Assistant Treasurer

James O. Stevning
Chief Financial Officer
Executive Vice President

Diane E. Strayer
Vice President - Health, Safety & Environmental

d. If the Company has subsidiaries or affiliates, or is a subsidiary of another organization, identify these related companies and state the name(s) and address(es) of the officers of those organizations. Provide such information for any further parent/subsidiary relations.

Borden Chemical, Inc. is a wholly-owned subsidiary of:
Borden Chemical Holdings, Inc.

Ellen German Berndt
Assistant Secretary

Lawrence L. Dieker
General Counsel
Secretary
Vice President

Edward Inbusch
Assistant Treasurer

Joseph M. Saggese
President

Ronald P. Starkman
Treasurer

Phyllis R. Yeatman
Assistant Secretary
Assistant Treasurer

e. If the Company is a successor to, or has been succeeded by, another company, identify such other company and provide the same information requested above for the predecessor or successor company.

f. If the Company transacted business with Central Steel Drum in the name of an entity not disclosed above, give the name of such entity and state its relationship to the Company.

2. Describe in detail the nature of your Company during the years 1980-1994. If the nature of the business has not been constant, describe the changes that have occurred, including any name changes, and when they occurred.

We sent to CSD 250 steel 50 gallon drums every week approximately from 1980 to 1994.

3. Briefly describe your Company's operations. Also, identify any chemical substances used to clean equipment or machinery.

We manufactured printing inks. We clean equipment with a solvent mixture of toluol methyl ethyl ketone and ethyl acetate.

<u>Company's Relationship to Central Steel Drum (CSD)</u>

4. a. State whether the Company or any Company facility transacted any business with CSD for the disposal, treatment, or storage of any barrels, drums, or other containers (hereinafter collectively referred to as "Containers");

Containers were cleaned by CSD and returned clean within one week.

b. If so, describe the relationship (nature of services rendered or products sold to the Company) between the Company and CSD;

No products sold by Borden Chemical to CSD.

c. Provide copies of any contracts or agreements between the Company and CSD.

N/A

5. a. For each facility identified in Question 4, state the nature of the operations conducted at the facility, including the time period in which the facility operated;

We manufactured printing inks. We clean equipment with a solvent mixture of toluol methyl ethyl ketone and ethyl acetate.

b. State the name, address, or current RCRA Identification Number of each facility.

Borden Chemical, Inc.
8-10 22nd St.
Fair Lawn, NJ 07411

RCRA NJD001374883

6. For each transaction between the Company and CSD, provide the following information:

a. Identify the specific dates of each transaction. Where an exact date cannot be provided for a transaction, provide an approximation by month and year;

We sent to CSD 250 steel 50 gallon drums every week approximately from 1980 to 1994.

b. Identify the number of Containers that were the subject of each such transaction;

250 per week

c. Generically describe each Container that was the subject of each such transaction (example: closed-head steel drums, etc.);

Mostly open head 55 gallon steel drums

d. Identify the intended purpose of each such transaction;

To fill with or mix printing ink, liquid, 55 gallon volume, 450 pounds net weight.

e. State whether each Container that was the subject of the transaction contained any substance at the time of the transaction. As to each Container that contained any substance:

See MSDS, attached.

(1) Identify each such substance, including its specific chemical constituent, physical state, quantity by volume and weight, and other characteristics; and

(2) Provide all written analyses that may have been made for each such substance or which may be in the custody or control of the Company and all material safety data sheets, if any, relating to each such substance.

7. Provide copies of all documents relating in any way to each transaction, including copies of delivery receipts, invoices, or payment devices.

N/A

8. Identify all persons who might have knowledge of the transaction or who had any responsibility regarding the transaction.

John Donahue, present plant manager

9. If you contend that any such Container did not contain any substance at the time of the transaction, state whether such Container had previously been used by the Company to contain any substance, and if so:

a. Identify all substances previously contained within such Container, including its specific chemical constituent, physical state, and other characteristics; and

See MSDS, attached.

b. Provide as to such substances, all written analyses that may have been made for each such substance or which may be in the custody or control of the Company and all material safety data sheets, if any, relating to each such substance.

See MSDS, attached.

10. Describe in detail any treatment of any Container that may have been performed by or on behalf of the Company prior to the time that the Container was transferred from the Company, including any process or procedure by which the Container was emptied or cleaned.

Container was emptied and shipped to customer. There is economic incentive to empty it completely, since it was filled with product ordered by customers. No cleaning took place.

11. If you sent any Container by means of any third party transporter, identify each such transporter, including the name and address of such transporter, and identify in which of the transactions such transporter acted.

    Containers were picked up at Borden's Fair Lawn facility, cleaned and delivered to same.

12. Identify each person consulted in responding to these questions and correlate each person to the question on which he or she was consulted.

    N/A

13. Identify any other person (e.g., individual, company, partnership, etc.) having knowledge of facts relating to the questions which are the subject of this inquiry. For each such person that you identify, provide the name, address, and telephone number of that person, and the basis of your belief that he or she has such knowledge. For past and present employees, include their job title and a description of their responsibilities.

    N/A

14. Supply any additional information or documents that may be relevant or useful to identify other sources who disposed of or transported Containers to the Site.

    N/A

CERTIFICATION OF ANSWERS TO REQUEST FOR INFORMATION

State of New Jersey

County of Bergen

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document (response to EPA Request for Information) and all documents submitted herewith, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete, and that all documents submitted herewith are complete and authentic unless otherwise indicated. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

RICHARD PELILLO
NAME (print or type)

Regional Manufacturing Manager
TITLE (print or type)

Richard Pelillo
SIGNATURE

Sworn to me before this

day of 1/29 1998

Leslie E. Brooks
Notary Public

Borden Coatings and Graphics
630 Glendale-Milford Road
Cincinnati, OH 45215

January 29, 1998

BORDEN COATINGS & GRAPHICS
RICHARD PELLILO
DIV OF BORDEN INC
8-10 22ND STREET
FAIR LAWN, NJ 07410

Dear Customer:

Enclosed is the most recent Material Safety Data Sheet (MSDS) for the product which our records indicate you recently purchased, or for which you requested information.

G.S. DIARYLIDE YELLOW RS N/C

We have adopted the 16-Section uniform MSDS format approved by the American National Standards Institute (ANSI) as a consensus standard, ANSI Z400.1, and accepted in the United States and Canada. Following the ANSI Standard is intended to result in MSDSs that are easier to use and understand.

This MSDS is provided under Borden's policy of communicating to our customers, health and safety information pertinent to the safe handling and use of our products. This information, however, may not necessarily address all issues pertaining to your operation. We, therefore, recommend that you consult with experts of your choice to determine whether or not your safety programs and warnings are adequate.

Furthermore, the hazard information contained on these sheets must be communicated to your workers and other users. Please forward this information to the supervisor or manager responsible for the safe handling of this product and take such other steps as may be appropriate to insure that the information is provided to your employees and customers.

Pursuant to Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (Emergency Planning and Community Right-to-Know Act of 1986), We are informing you as required by Subpart C of 40 CFR Part 372 that this product may contain chemicals subject to the reporting requirements of Section 313. All chemicals in this product which are subject to Section 313 reporting requirements are clearly included in Section 15.1. Section 15.2 provides relevant information to comply with Canadian regulations. Additional state right-to-know information is included in Section 15.3 where applicable.

If you have any questions or require additional information, please contact me. Your interest in Borden products is appreciated.

Very truly yours,

Mr. Wally Whalen
Regulatory Compliance Manager
(513) 782-6200

MATERIAL SAFETY DATA SHEET

FOR INDUSTRIAL USE ONLY

1. Chemical Product and Company Identification

DESCRIPTION: **G.S. DIARYLIDE YELLOW RS N/C**
PRODUCT CODE: 6MYC11151.
PRODUCT TYPE: SOLVENT
APPLICATION: PRINTING INK

Manufacturer/Supplier Information

MSDS Prepared by:
Borden Coatings and Graphics
630 Glendale-Milford Road
Cincinnati, OH 45215

Emergency Phone Number
Poison Control Center
1-800-228-5635 ext 261

For additional health, safety or regulatory information, call 513-782-6200.

2. Composition, Information on Ingredients

The ingredients listed below have been associated with one or more immediate and/or delayed(*) health hazards. Risk of damage and effects depends upon duration and level of exposure. BEFORE USING, HANDLING, OR EXPOSURE TO THESE INGREDIENTS, READ AND UNDERSTAND THE MSDS.

		% by weight
64-17-5	***Ethanol**	30-50
67-63-0	***Isopropanol**	5-10
109-60-4	***Propyl Acetate**	5-10
141-78-6	***Ethyl Acetate**	10-30
9004-70-0	**Nitrocellulose**	5-10

3. Hazards Identification

3.1 Emergency Overview

Flash Point 26 F

FLAMMABLE LIQUID AND VAPOR
May be harmful if inhaled.
Can cause central nervous system depression.
Eye irritant.

HMIS Rating

HEALTH = 2 (moderate)
FLAMMABILITY = 3 (serious)
REACTIVITY = 0 (minimal)
CHRONIC = *

3.2 Potential Health Effects

Immediate Hazards

INGESTION: Not expected to be harmful under normal conditions of use.

INHALATION: May be harmful if inhaled. Liquid or vapor may cause irritation of nose, throat and lungs.
Can cause central nervous system depression.

SKIN: May cause irritation on prolonged or repeated contact.

EYES: Causes irritation.

Ethanol 64-17-5
Can cause central nervous system depression. Signs and symptoms may include headache, dizziness, nausea, vomiting and drowsiness.

Isopropanol 67-63-0
Can cause central nervous system depression. Signs and symptoms may include headache, dizziness, nausea, vomiting, unconsciousness and even asphyxiation.

Propyl Acetate 109-60-4
Can cause central nervous system depression. Signs and symptoms may include headache, dizziness, nausea, vomiting, unconsciousness and even asphyxiation.

Ethyl Acetate 141-78-6
Can cause central nervous system depression. Signs and symptoms may include headache, dizziness, nausea, vomiting, unconsciousness and even asphyxiation.

Delayed Hazards

Ethanol 64-17-5
Ingestion may cause liver damage.
-- See Footnote C.

Isopropanol 67-63-0
Suspect reproductive hazard. May cause reproductive disorders based on animal data.
May cause liver damage based on animal data.
May cause kidney damage based on animal data.

Delayed Hazards

-- See Footnote C.

Propyl Acetate 109-60-4

May cause lung damage based on animal data. Pre-existing respiratory disorders may be aggravated by exposure.
May cause liver damage based on animal data.
-- See Footnote C.

Ethyl Acetate 141-78-6

May cause lung damage based on animal data. Pre-existing respiratory disorders may be aggravated by exposure.
May cause liver damage based on animal data.
May cause kidney damage based on animal data.
-- See Footnote C.

Footnote C: As of the date of issuance of this document, this material has not been listed by NTP, classified by IARC nor regulated by OSHA as a carcinogen.

4. First Aid Measures

INGESTION: If accidently swallowed, dilute by drinking large quantities of water. Immediately contact poison control center or hospital emergency room for any other additional treatment directions.

INHALATION: If inhaled, remove to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. Call a physician.

SKIN: In case of irritation, flush with water.

EYES: Immediately flush eyes with plenty of water for at least 15 minutes. Eyelids should be held apart during irrigation to insure water contact with entire surface of eyes and lids. Call a physician.

5. Fire Fighting Measures

Flammable Limits %Vol. Air	LEL 2.2% UEL 11.0%
Flash Point	26 F

FLAMMABLE LIQUID AND VAPOR.

Keep liquid and vapor away from heat, sparks, flame and other ignition sources including, but not limited to, pilot lights, heaters, cigarettes, electric motors and static discharge. Vapor is heavier than air and may settle in low places or travel outward to a source of ignition and flashback.
In case of fire, use dry chemical, foam or CO_2. Water may be ineffective, but should be used to keep fire-exposed containers cool.

6. Accidental Release Measures

Eliminate all ignition sources. Large quantities: Enclose with diking material to prevent seepage into natural bodies of water, then consult Borden, Inc. Small quantities: Soak up with absorbent material and remove to a chemical disposal area.

7. Handling and Storage

7.1 Handling

Handle in accordance with good industrial hygiene and safety practices. These practices include avoiding unnecessary exposure and removal of the material from eyes, skin and clothing.
Wash thoroughly after handling.
INHALATION: Avoid breathing vapor. Use with adequate ventilation.
SKIN: Avoid prolonged or repeated contact with skin and clothing.
EYES: Avoid contact with eyes.

7.2 Storage

Keep container closed.
Store in a cool, dry place.
Keep away from heat, sparks, flame and other ignition sources.
Use with adequate ventilation.

8. Exposure Controls/Personal Protection

8.1 Exposure Controls

ENGINEERING CONTROLS: The following exposure control techniques may be used to effectively minimize employee exposure: local exhaust ventilation, enclosed system design, process isolation and remote control in combination with appropriate use of personal protective equipment and prudent work practices. These techniques may not necessarily address all issues pertaining to your operations. We, therefore, recommend that you consult with experts of your choice to determine whether or not your programs are adequate.
If airborne contaminants are generated when the material is heated or handled, sufficient ventilation in volume and air flow patterns should be provided to keep air contaminant concentration levels below acceptable criteria.

8.2 Personal Protection

Where air contaminants can exceed acceptable criteria, use NIOSH/MSHA approved respiratory protection equipment. Respirators should be selected based on the form and concentration of contaminants in air in accordance with OSHA laws and regulations or other applicable standards or guidelines, including ANSI standards regarding

8.2 Personal Protection

respiratory protection. Use goggles if contact is likely. Wear impervious gloves as required to prevent skin contact.

8.3 Exposure Guidelines

Ethanol 64-17-5
ACGIH TLV: 1000 ppm (1880 mg/m³) TWA
OSHA PEL: 1000 ppm (1900 mg/m³) TWA

Isopropanol 67-63-0
ACGIH TLV: 400 ppm (983 mg/m³) TWA; 500 ppm (1230 mg/m³) STEL
OSHA PEL: 400 ppm (980 mg/m³) TWA
REMANDED PEL: 400 ppm (980 mg/m³) TWA; 500 ppm (1225 mg/m³) STEL
OSHA 1989 PEL remanded, but in effect in some states

Propyl Acetate 109-60-4
ACGIH TLV: 200 ppm (835 mg/m³) TWA; 250 ppm (1040 mg/m³) STEL
OSHA PEL: 200 ppm (840 mg/m³) TWA
REMANDED PEL: 200 ppm (840 mg/m³) TWA; 250 ppm (1050 mg/m³) STEL
OSHA 1989 PEL remanded, but in effect in some states

Ethyl Acetate 141-78-6
ACGIH TLV: 400 ppm (1440 mg/m³) TWA
OSHA PEL: 400 ppm (1400 mg/m³) TWA

Nitrocellulose 9004-70-0
ACGIH TLV: NONE ESTABLISHED
OSHA PEL: NONE ESTABLISHED

9. Physical and Chemical Properties

Boiling Range - Degrees F	168 F
Specific Gravity	0.876
Vapor Pressure @ 20C	76.0 mm Hg
Flammable Limits %Vol. Air	LEL 2.2% UEL 11.0%
Appearance / Odor	Yellow liquid/Solvent
Solubility In Water	No
Vapor Density	3.00
Ev. Rate (butyl acetate = 1)	6.20
Flash Point	26 F

10. Stability and Reactivity

Normally stable as defined in NFPA 704-12(4-3.1).

Decomposition products may include:

Oxides of carbon and nitrogen.

Hazardous polymerization:

Will not occur.

11. Toxicological Information

See Section 3 Hazards Identification information.
Ethanol 64-17-5
LC50: rat=20000 ppm/10H (Sax)
LD50: orl-rat=7060 mg/kg (Sax)

Isopropanol 67-63-0
LC50: rat=16000 ppm/8H (Sax)
LD50: orl-rat=5.8 g/kg (Merck); skn-rbt=13 g/kg (Sax)

Propyl Acetate 109-60-4
LC50: Not available
LD50: orl-rat=9370 mg/kg (Merck)

Ethyl Acetate 141-78-6
LC50: Not available
LD50: orl-rat=11.3 ml/kg (Merck)

Nitrocellulose 9004-70-0
LC50: Not available
LD50: Not available

12. Ecological Information

Not determined.

13. Disposal Considerations

Recover free liquid. Absorb residue and dispose of according to local, state/provincial, and federal requirements.
Empty container: May contain explosive vapors. DO NOT cut, puncture or weld on or nearby.

14. Transport Information

14.1 U.S. Department of Transportation (DOT)

The data provided in this section is for information only and may not be specific to your package size. You will need to apply the appropriate regulations to properly classify your shipment for transportation.

Ink, Printers, Flammable,
Class 3 UN1210 Pk. Gr. II

14.2 Canadian Transportation of Dangerous Goods (TDG)

Not determined.

15. Regulatory Information (Selected Regulations)

15.1 U.S. Federal Regulations

OSHA Hazard Communication Standard 29CFR1910.1200

This material is a "health hazard" and/or a "physical hazard" as determined when reviewed according to the requirements of the Occupational Safety and Health Administration 29 CFR Part 1910.1200 "Hazard Communication" Standard.

SARA Title III: Section 311/312

Fire hazard
Immediate health hazard
Delayed health hazard

SARA Title III Section 313 and 40 CFR Part 372

This product contains the following toxic chemical(s) subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986, and Subpart C-Supplier Notification Requirement of 40 CFR Part 372.

None required per SARA TITLE III SECTION 313.

TSCA Section 8(b) Inventory

All reportable chemical substances are listed on the TSCA Inventory. We rely on certifications of compliance from our suppliers for chemical substances not manufactured by Borden.

15.2 Canadian Regulations

Workplace Hazardous Materials Information System (WHMIS)

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulation (CPR) and the MSDS contains all the information required by the CPR.

CLASS D, DIV 2B
CLASS B, DIV 2

Canadian Environmental Protection Act (CEPA)

This product contains one or more chemical substances not included on either the Domestic Substances List (DSL) or the Non-Domestic Substances List (NDSL).

National Pollutant Release Inventory (NPRI)

This product contains the following chemical(s) subject to the reporting requirements of the Canadian Environmental Protection Act (CEPA) subsection 16(1), National Pollutant Release Inventory.

Isopropyl Alcohol	67-63-0	6.55%

15.3 State Regulations

New Jersey Worker & Community RTK Act (NJSA 34:5A-1 et seq.)

The listing of a chemical does not necessarily indicate it is hazardous.

Ethanol	64-17-5
Propyl Acetate	109-60-4
Ethyl Acetate	141-78-6
Epoxidized Soybean Oil	8013-07-8
Nitrocellulose	9004-70-0

16. Other Information

User's Responsibility

The OSHA Hazard Communication Standard 29CFR 1910.1200 and the Workplace Hazardous Materials Information System (WHMIS) require that the information contained on these sheets be made available to your workers. Educate and train your workers regarding OSHA and WHMIS precautions. Instruct your workers to handle this product properly. Consult with appropriate experts to guard against hazards associated with use of this product and its ingredients.

Disclaimer

SELLER MAKES NO WARRANTY, EXPRESS OR IMPLIED, CONCERNING THE PRODUCT OR THE MERCHANTABILITY OR FITNESS THEREOF FOR ANY PURPOSE, except that the product shall conform to contracted specifications, and that the product does not infringe any valid United States or Canadian patent. No claim of any kind shall be greater in amount than the purchase price of the quantity of product in respect of which damages are claimed. In no event shall Seller be liable for incidental or consequential damages, whether Buyer's claim is based on contract, breach of warranty, negligence or otherwise.

2-5

DATE
LOG No.

CENTRAL STEEL DRUM
CUSTOM DRUM ACCEPTANCE LOG

CUSTOMER'S NAME JONES - BORDEN

TRUCK OWNER JONE
TRUCK LICENSE J 250

DRUM INVENTORY

CSD CODE	COMMENTS	TOTAL
17H SS		
17H RIEKE		
17H B/B		
18g ORIG		
20/18 ORIG		4
18g STC		33
20/18g STC		157
ORIG RIEKE		
CYL 20 OR 18g		
30 gal OH		
30 gal 17H		
30 gal BT		
18g BT CUTS	JONES	35
20/18g BT cuts		
BT #1		
4- HOOPER		
FIBRE		

Borden

HEAD INVENTORY

HEADS OVER	
HEADS SHORT	
RINGS OVER	
RINGS SHORT	
CL RINGS	
BUNGS SHORT	

REJECTS

~~LEACHERS~~ Leakers _____ TYPE _____ SCRAP 2

HEAVY _____ TYPE _____ STORED _____

1- BT HEAVY going Back f O's

ALL LEACHERS SENT TO INCINERATOR FOR PROCESSING

SIGNATURE _____ DATE _____ TOTAL No. _____

ALL REJECTS SENT TO STORAGE PAD AND LABELED

CENTRAL STEEL DRUM COMPANY

"Reconditioned and Relined Drums"

B1498

TELEPHONE
(201) 344-8500
NEW YORK PHONE
(212) 267-3248

NO 5324

704 DOREMUS AVENUE
NEWARK, N.J. 07105

CREDIT MEMO

DATE 1/9 19 90

RECEIVED FROM Borden Chem

Type	Drums	Price	Total
17H S.S.	24	7.10	170.40
17H BB/Rieke			
18 Orig.			
18 STC			
20/18 Orig.			
20/18 STC	13	2.00	26-
58 Gal. O. H.			
BB O. H./Rieke			
18 Cyl			
20/18 Cyl			
30 Gal. O. H.			
30 Gal. B. T.			
30 Gal. 17H	3	3.00	9-
18 BT Cuts			
20/18 BT Cuts	142	2.00	284-
18 PIZZA			
19 PIZZA			
Heads Over/Short			
Rings Over/Short			
Bungs Short			
Scrap	14	—	—
Returned			
Rejects			489.40
36490	196		

THIS SHIPPING ORDER MUST BE LEGIBLY FILLED IN, IN INK, IN INDELIBLE PENCIL, OR IN CARBON, AND RETAINED BY THE AGENT.

RECEIVED, subject to the classifications and tariffs in effect on the date of the issue of this Bill of Lading,

[illegible]

NO 09136490

FROM BORDEN CHEMICAL DIVISION OF BORDEN, INC.

GRAPHICS DIVISION
8-10 22nd STREET
FAIR LAWN, NEW JERSEY 07411

CONSIGNED TO: CENTRAL STEEL DRUM
[illegible]
[illegible]

INVOICE NO

CUSTOMER ORDER NO

ROUTE PICKUP

SHIP DATE

FREIGHT TYPE

ORIG CODE 191208

DEST CODE

ACCOUNT CODE [illegible]

CUSTOMER NUMBER

PIECES	H/M	Description of Articles, Special Marks & Exceptions	WEIGHT	PRODUCT CODE
		Ink, Flammable Liquid UN1210, Ink Material NMFC-101760 LTL-55 TL-35		
		Flammable Solids N.O.S., UN1325, Ink or Ink Material NMFC-101760 LTL-55 TL-35		
		Lacquer/Varnish, Flammable Liquid, UN1263, NMFC-101760 LTL-55 TL-35		
		Ink, Combustible Liquid, UN2867, NMFC-101760 LTL-55 TL-35		
		Lacquer/Varnish, Combustible Liquid, UN1866, NMFC-101760 LTL-55 TL-35		
		Resin Solution, Flammable Liquid, UN2868, NMFC-101760 LTL-55 TL-35		
		Resin Solution, Combustible Liquid, UN2868, NMFC-101760 LTL-55 TL-35		
		Ink or Ink Material NMFC-101760 LTL-55 TL-35		
		Lacquer/Varnish NMFC-101760 LTL-55 TL-35		
		Wallpaper, Pulp Coloring NMFC-193600 LTL-55 TL-35		
		Paints, Dry NMFC-149980 SUB-6 LTL-55 TL-35		
161X55 35X55	BT 17H	Drums, Empty		77

NOTE—Where the rate is dependent on value, shipper's are required to state specifically in writing the agreed or declared value of the property. The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding

per

Subject to Section 7 of conditions of applicable bill of lading, if this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statement.
The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges.

per [signature]
(Signature of Consignor)

FREIGHT CHARGES TO BE

☐ PREPAID ☐ COLLECT

The fibre boxes used for this shipment conform to the specifications set forth in the box maker's certificate thereof, and all other requirements of Rule 41 of the Consolidated Freight Classification, and Item 222 of the National Motor Freight Classification.

"If the shipment moves between two ports by a carrier by water, the law requires that the bill of lading shall state whether it is "carrier's or shipper's weight."

This is to certify that the above named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.

For C.O.D. SHIPMENTS ONLY
C.O.D. AMOUNT $ _____
COLLECTION FEE $ _____
TOTAL AMOUNT $ _____

All charges must be billed at one time and assigned one Pro number.

SPECIAL INSTRUCTIONS:

For payment of PREPAID charges mail freight bill along with B/L to:

BORDEN CHEMICAL
C/O CASS BANK AND TRUST CO.
BOX 17602
ST. LOUIS, MO 63178

SHIPPER'S CHECK LIST	
DOT LABELS APPLIED AND SECURE	DOT AUTHORIZED CONTAINERS
PROPER DOT NAME ON ALL PACKAGES	FOUR (4) PLACARDS PROVIDED
SUBSTANCE DATA SHEETS SENT WITH SHIPMENT YES ☐ NO ☐	

In case of O. S. & D. send on hand notice to:

GRAPHICS DIVISION
8-10 22nd STREET
FAIR LAWN, NEW JERSEY 07411

Box-76

BORDEN CHEMICAL DIVISION OF BORDEN, INC. Shipper, Per [signature] Carrier's Agent, Per [signature] 11/9/89

CARRIER COPY — No. 2
This Shipping Order

Permanent post office address of shipper, BORDEN CHEMICAL, GRAPHICS DIVISION
630 GLENDALE-MILFORD RD., P.O. BOX 15947, CINCINNATI, OH 45215

DATE 11/7/89 TRAILER TL7 CUSTOMER W. Jones TOTAL

17H SS			HEADS C
17H Rieke			
17H B/B			HEADS S
18g. Orig			
20/18g. Orig.			RINGS O
18g. STC	from Emden [illegible]		
20/18g. STC			RINGS SH
Orig. Rieke			
Cylinders			QL RINGS
30 gal. OH	W! Orig		BUNGS SHO
30 gal. 17H			
30 gal. BT			LEAKERS/R
18g.BT Cuts			TYPE: / LINED BL
20/18g. BT Cuts			
BT			SCRAP

WILLIAM J. JONES, INC.

DEALERS IN
Steel • Plastic • Fibre Containers
New • Reconditioned

230-38 LIBERTY STREET
CAMDEN, N.J. 08104
TELEPHONE: (609) 963-1199

INVOICE NO. 13134

DATE 11-7-89

DRIVER
C. O. D.
CHARGE
ORDER #

SOLD TO: Continue Steel Drum

SHIP TO: Ellum
Burden Oil Co

QUANTITY	DESCRIPTION	PRICE	EXTENSION
1	Truck Load Oil Drum		

PLEASE PAY FROM THIS INVOICE. NO OTHER WILL BE SENT.

Rec'd.
By

PACKING SLIP

CENTRAL STEEL DRUM COMPANY

EMPTY DRUM CERTIFICATION

I hereby certify that these drums are "empty" as that term is defined in the national Environmental Protection Agency regulations, 40 CFR 261.7*, and that they have been properly prepared for transportation under the regulations of the U.S. Department of Transportation, 49 CFR 173.29.**

Date: 1/12/90 B-86

Borden Chemical

*With regard to most regulated residues, EPA's 40 CFR 261.7 says: "A container . . . is empty if:

(i) All wastes have been removed that can be removed using the practices of community employed to remove materials from that type of container, e.g., pouring, pumping, and aspirating, and

(ii) No more than 2.5 centimeters (one inch) of residue remain on the bottom of the container . . . ."

EPA has explained this rule, saying that "one inch of waste material is an overriding constraint and may remain in an empty container only if it cannot be removed by normal means. The rationale for this provision is that there are certain tars and other extremely viscous materials that will remain in the container even after the container is emptied by normal means."

For residues of products specifically listed by name in 40 CFR 261.33(e), EPA says the container is empty only "if the container . . . has been triple-rinsed using a solvent capable of removing" the product, or has been cleaned by another method shown to achieve equivalent removal.

**DOT's 49 CFR 173.29 says that all openings on the empty container must be closed, and that all markings and labels must be in place as if the drum were full of its original contents. A DOT shipping paper is not required for transportation of a drum for reconditioning via contract or private motor carrier. DOT placarding is not required for vehicles carrying empty containers.

X [signature]

704 DOREMUS AVENUE
NEWARK, NEW JERSEY 07105

CENTRAL STEEL DRUM COMPANY

91498

"Reconditioned and Relined Drums"

TELEPHONE (201) 344-8500
NEW YORK PHONE (212) 267-3248

№ 5318

704 DOREMUS AVENUE
NEWARK, N.J. 07105

CREDIT MEMO DATE 1/12 1990

RECEIVED FROM Borden Chemical

Type	Drums	Price	Total
17H S.S.			
17H BB/Rieke			
18 Orig.			
18 STC			
20/18 Orig.			
20/18 STC	17	2.00	34-
58 Gal. O. H.			
BB O. H./Rieke			
18 Cyl			
20/18 Cyl			
30 Gal. O. H.	16	2.00	32-
30 Gal. B. T.			
30 Gal. 17H			
18 BT Cuts			
20/18 BT Cuts	31	2.00	62
18 PIZZA			
19 PIZZA			
Heads Over/Short			
Rings Over/Short			
Bungs Short			
Scrap	7		-
Returned			
Rejects			
	71		128-

09136492

EDED 3/2/90

THIS SHIPPING ORDER MUST BE LEGIBLY FILLED IN, IN INK, IN INDELIBLE PENCIL, OR IN CARBON, AND RETAINED BY THE AGENT.

RECEIVED, subject to the classifications and tariffs in effect on the date of the issue of this Bill of Lading,

[illegible]

09136492

SHIP DATE / FREIGHT TYPE

ORIG CODE 191208 DEST CODE

ACCOUNT CODE

CUSTOMER NUMBER

FROM BORDEN® BORDEN CHEMICAL DIVISION OF BORDEN, INC.
GRAPHICS DIVISION
8-10 22nd STREET
FAIR LAWN, NEW JERSEY 07411

INVOICE NO.

CONSIGNED TO: Central Heat Ltr.
764 Norman Ave.
Newark, N.J. 07105

CUSTOMER ORDER NO

ROUTE

PIECES	H/M	Description of Articles, Special Marks & Exceptions	WEIGHT	PRODUCT CODE
		Ink, Flammable Liquid UN1210, Ink Material NMFC-101760 LTL-55 TL-35		
		Flammable Solids N.O.S., UN1325, Ink or Ink Material NMFC-101760 LTL-55 TL-35		
		Lacquer/Varnish, Flammable Liquid, UN1263, NMFC-101760 LTL-55 TL-35		
		Ink, Combustible Liquid, UN2867, NMFC-101760 LTL-55 TL-35		
		Lacquer/Varnish, Combustible Liquid, UN1866, NMFC-101760 LTL-55 TL-35		
		Resin Solution, Flammable Liquid, UN2868, NMFC-101760 LTL-55 TL-35		
		Resin Solution, Combustible Liquid, UN2868, NMFC-101760 LTL-55 TL-35		
		Ink or Ink Material NMFC-101760 LTL-55 TL-35		
		Lacquer/Varnish NMFC-101760 LTL-55 TL-35		
		Wallpaper, Pulp Coloring NMFC-193600 LTL-55 TL-35		
		Paints, Dry NMFC-149980 SUB-6 LTL-55 TL-35		
		Drums, Empty 31 - C.H.		
71		24 - 55 O.H. 16 30 O.H.	Nol	

NOTE—Where the rate is dependent on value, shipper's are required to state specifically in writing the agreed or declared value of the property. The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding

per

Subject to Section 7 of conditions of applicable bill of lading, if this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statement.
The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges.

per [signature]
(Signature of Consignor)

FREIGHT CHARGES TO BE

☐PREPAID ☑COLLECT

The fibre boxes used for this shipment conform to the specifications set forth in the box maker's certificate thereof, and all other requirements of Rule 41 of the Consolidated Freight Classification, and Item 222 of the National Motor Freight Classification.

"If the shipment moves between two ports by a carrier by water, the law requires that the bill of lading shall state whether it is "carrier's or shipper's weight."

This is to certify that the above named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.

For C.O.D. SHIPMENTS ONLY
C.O.D. AMOUNT $ _____
COLLECTION FEE $ _____
TOTAL AMOUNT $ _____

All charges must be billed at one time and assigned one Pro number.

SPECIAL INSTRUCTIONS:

For payment of PREPAID charges mail freight bill along with B/L to:
BORDEN CHEMICAL
C/O CASS BANK AND TRUST CO.
BOX 17602
ST. LOUIS, MO 63178

SHIPPER'S CHECK LIST

DOT LABELS APPLIED AND SECURE	DOT AUTHORIZED CONTAINERS
PROPER DOT NAME ON ALL PACKAGES	FOUR (4) PLACARDS PROVIDED

SUBSTANCE DATA SHEETS SENT WITH SHIPMENT YES☐ NO☐

In case of O. S. & D. send on hand notice to:
GRAPHICS DIVISION
8-10 22nd STREET
FAIR LAWN, NEW JERSEY 07411

BORDEN® BORDEN CHEMICAL DIVISION OF BORDEN, INC. Shipper, Per [signature]

Carrier's Agent, Per [signature]

CARRIER COPY — No. 2
This Shipping Order

Permanent post office address of shipper, BORDEN CHEMICAL, GRAPHICS DIVISION
630 GLENDALE-MILFORD RD., P.O. BOX 15947, CINCINNATI, OH 45215

Graham & James LLP

A California Registered
Limited Liability Partnership
Including Professional
Corporations

Attorneys
650 Town Center Drive
Sixth Floor
Costa Mesa, CA
92626-1925
Tel (714) 751 8800
Fax (714) 751 8808

Direct tel
(714) 424 3019

Internet
dsweet@gj.com

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Sacramento
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Seattle
Washington, DC

Beijing
Tokyo

Düsseldorf
London
Milan

Deacons Graham & James
Bangkok
Hanoi
Ho Chi Minh City
Hong Kong
Jakarta
Taipei

Brisbane
Canberra
Melbourne
Perth
Sydney

Affiliated Offices
Brussels
Bucharest

Jeddah
Kuwait
Riyadh

January 20, 1998

VIA OVERNIGHT DELIVERY

Ms. Suzanne Becker
Removal Action Branch
Emergency and Remedial Response Division
U.S. Environmental Protection Agency, Region II
2890 Woodbridge Avenue
Edison, NJ 08837

Re: Request for Information
Central Steel Drum
42 U.S.C. 9604(e)(2)

Dear Ms. Becker:

This letter constitutes the response of Chiyoda America Inc. to the referenced Request for Information. Chiyoda America has performed a diligent search of its records to respond to your request, but makes no representation as to the completeness of this response. To the extent additional, responsive information becomes available, we endeavor to supply this information as promptly as possible.

Request is hereby made for copies of all information in the possession of USEPA Region II relating to the relationship between Chiyoda America and Central Steel Drum:

1. a. Chiyoda America Inc.

   b. Pennsylvania Corporation

   c. John S. Sato, President and Hiroshi Mizumoto, Vice President, Secretary and Treasurer, c/o Chiyoda America Inc., Thousand Oaks Corporate Center, Post Office Box 170, Morgantown, PA 19543

   d. Parent – Chiyoda Gravure Printing Co., Ltd. 1-5-14, Osaki, Shinagewa-ku, Tokyo, Japan

   e. Predecessors-in-interest: Chiyoda Gravure of America, Inc. (California corporation) merged into Advanced Printing

Technology, Inc. (Pennsylvania corporation) on 10/01/87. On 01/21/91 Advanced Printing Technology, Inc. changed its name to Chiyoda America Inc.

2. Facility opened in November, 1988 and is used for the printing of decorative paper for lamination. Rotogravure techniques are exclusively employed. Production levels in 1988-1994 were markedly lower than today's levels (two presses versus four).

3. Application of inks to paper substrates. Inks are thinned with printing ink solvents (e.g., toluene and tylene). MEK was and is used as the cleaning solvent. No changes 1988 - 1994.

4. a. Chiyoda America Inc. had two types of business transactions with Central Steel Drum ("CSD"). First, Chiyoda America purchased reconditioned steel containers, gaskets and lids from CSD. Some of these transactions reflect shipments from American Pail & Packaging Company, with payments made to CSD. Second, Chiyoda America sold a useful product, empty steel containers, in good, usable condition, to CSD for use and/or resale. Chiyoda America takes the position that it did not transact any business with CSD with the intent to dispose, treat or store hazardous substances and took no affirmative act to arrange for the disposal of hazardous substances.

   b. No. Chiyoda America purchased usable, reconditioned steel containers from CSD, and sold usable, legally empty steel containers to CSD.

   c. We are unable to locate any master contract or agreement between CSD and Chiyoda America, and do not believe that any such document exists. All transactions involving the sale of usable, legally empty steel containers by Chiyoda America to CSD are believed to be documented by invoices, credit memos and occasionally shipping documents. Copies of all such credit memos currently in the possession of Chiyoda America are attached. Chiyoda America has produced all of the documentation in its possession, but believes that there may have been other transactions for which the documentation is no longer available.

5. a. See Response to Request #2 above.

   b. Chiyoda America, 1000 Oaks Court, Morgantown, PA. PAD 987270170.

6. a. See documents attached hereto and summary Exhibit A.

   b. See documents attached hereto and summary Exhibit A.

   c. See documents attached hereto and summary Exhibit A.

   d. All transactions were intended to sell usable, legally empty steel containers to CSD for resale or reuse.

   e. Unknown. All containers were poured empty in conformance with federal law. Containers were emptied by draining all liquid contents. There is no way to recreate which drums held which materials.

7. Attached.

8. Ron Lewars, Chiyoda America; M.R. Dennison, Chiyoda America; J. Kennedy, Chiyoda America; Jim Doherty, Chiyoda America (deceased); Dan Smith (former employee) Chiyoda America; Eric Nagle (former employee) Chiyoda America; Neal Fisher and other personnel at CSD.

9. Yes.

10. The drums were emptied by physical pouring of liquid contents.

11. None known.

12. Ron Lewars (all questions); counsel (all questions); J. Kennedy and M.R. Dennison (questions 6 and 7).

13. Allen Fisher - CSD - current address unknown.

14. None known.

Please address all future correspondence to my attention.

Very truly yours,

GRAHAM & JAMES LLP

By
David Sweet

DS/dcm
Enclosures
Our File: 14170.29

EXHIBIT A

CHIYODA AMERICA, INC.
SUMMARY OF DRUM SHIPMENTS

CALENDAR YEAR	DATE OF SHIPMENT	QUANTITY SHIPPED	SIZE (GAL)	COMMENTS
1989	03/28/89	185	55	
		360	5	
		41	15	
	04/11/89	124	55	
		28	5	
	04/17/89	54	55	
		6	5	
	05/04/89	219	55	
		61	5	
	05/15/89	55	55	
	06/06/89	175	55	
	07/10/89	97	55	
	07/18/89	207	55	
		89	5	
	08/18/89	142	55	
	09/05/89	111	55	
		50	5	
	09/20/89	124	55	
		10	5	
	10/12/89	116	55	
		47	5	
	10/23/89	33	55	
	11/06/89	101	55	
		41	5	
	11/29/89	83	55	
		4	5	
1990	01/10/90	278	55	
		8	5	
	01/31/90	45	55	
		2	5	
	03/07/90	91	55	
	03/09/90	23	55	
		23	5	
	04/25/90	271	55	
		10	5	
	06/06/90	264	55	
	06/22/90	128	55	
		23	5	

1991	04/25/91	250	55
		2	5
	05/13/91	196	55
		5	5
	06/10/91	216	55
		10	5
1992			**NO RECORDS**
1993	01/27/93	16	55
		10	5
	02/09/93	23	55
	03/02/93	248	55
	03/03/93	16	55
	03/18/93	165	55
	04/02/93	18	55
	04/05/93	203	55
	04/12/93	4	55
	04/20/93	229	55
	04/26/93	18	55
	05/05/93	243	55
	05/10/93	12	55
	05/25/93	265	55
		2	5
	06/01/93	17	55
		2	5
	06/16/93	12	55
		3	5
	08/19/93	18	55
	09/13/93	275	55
	09/23/93	154	55
	10/15/93	202	55
	10/25/93	224	55
		3	5
	11/08/93	37	55
		3	5
	11/09/93	220	55
	11/23/93	15	55
	11/24/93	12	55
	12/17/93	24	55

Note: This table is created from the records retrieved from Chiyoda America and is intended solely as an aid to the reviewer. No representation of accuracy or completeness is made. The reviewer should review the accounting records provided herewith.

CERTIFICATION OF ANSWERS TO REQUEST FOR INFORMATION

State of Pennsylvania

County of Berks

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document (response to EPA Request for Information) and all documents submitted herewith, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete, and that all documents submitted herewith are complete and authentic unless otherwise indicated. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Hiroshi Mizumoto
NAME (print or type)

Vice President & General Manager
TITLE (print or type)

SIGNATURE

Sworn to me before this

day of 16th, 1998

Joanne E. Kennedy
Notary Public

Notarial Seal
Joanne E. Kennedy, Notary Public
Caernarvon Twp., Berks County
My Commission Expires June 28, 2001
Member, Pennsylvania Association of Notaries

James Maewsky
Manager, Administration - Legal,
Patent, Tax and Remediation Services
Telephone 914-785-2567
Fax 914-785-4831

Ciba

DRAFT

January 21, 1998

VIA FEDERAL EXPRESS

Suzanne Becker
Removal Action Branch
Emergency and Remedial Response Division
U.S. EPA, Region II
2890 Woodbridge Ave
Edison, NJ 08837

Re: **Central Steel Drum Superfund Site, Newark, Essex County, NJ**

Dear Ms. Becker:

This letter constitutes Ciba Specialty Chemicals Corporation's ("Ciba SC") response to the 104(e) Information Request we received dated November 26, 1997 regarding the captioned site. The original request was addressed to Ciba-Geigy Corporation ("Ciba-Geigy")/Pigments Division. Pursuant to an agreement with Novartis Corporation, the corporate successor of Ciba-Geigy, Ciba SC has assumed, and is responsible for managing this matter and is responding on behalf of Ciba-Geigy. In addition, Ciba SC would appreciate it if all future correspondence regarding this site be addressed to our corporate headquarters which is located at the address noted above.

After performing a diligent and thorough search of our records, Ciba SC has found information which documents that Ciba-Geigy had transacted business with Central Steel Drum (CSD). The Company's Toms River Facility purchased drums from CSD and its Newport Facility purchased drums from and disposed of drums using CSD. Ciba SC has not found any information that it or Ciba-Geigy contracted with CSD for the treatment, storage or disposal of hazardous substances or any

560 White Plains Road
Tarrytown, New York 10591
Tel. 914 785 2000

waste products other than used barrels. A more detailed description of these activities is provided in the attached response.

If EPA has any additional information regarding a nexus between CSD and Ciba SC we ask that it be provided. If you have any questions please contact Rachel Deming, Esq. at (914) 785-2094 or me at the above phone number.

Sincerely,

James Maewsky

cc: Michael van Itallie, Esq.
Office of Regional Counsel
U.S. EPA, Region II
290 Broadway, 17th Floor
New York, NY 10007

Rachel Deming, Esq.

Document #: 22667

Ciba Specialty Chemicals Corporation's
Response to EPA's 104(e) Information Request
Regarding the Central Steel Drum Superfund Site
Located in Newark, Essex County, New Jersey

1a. The correct legal name of the company is Ciba Specialty Chemicals Corporation. Pursuant to an agreement with Novartis Corporation, the corporate successor of Ciba-Geigy Corporation ("Ciba-Geigy") Ciba Specialty Chemicals Corporation has assumed, and is responsible for managing this matter and is responding to this request on behalf of Ciba-Geigy.

1b. Ciba Specialty Chemicals ("Ciba SC") was formed when Ciba-Geigy spun-off its U.S. industrial chemical businesses into a separate, wholly-owned subsidiary corporation on September 9, 1996. It is incorporated in the State of Delaware and the corporate headquarters are located in Tarrytown, New York. On March 13, 1997, Ciba Specialty Chemical Holding, Inc., Ciba SC's parent corporation, was spun-off to Novartis shareholders, thereby severing all current corporate affiliations between Ciba SC and Novartis.

1c. Stanley Sherman
President and Chief Executive Officer
560 White Plains Road
Tarrytown, NY 10591

Walter D. Hosp
Vice President and Chief Financial Officer
560 White Plains Road
Tarrytown, NY 10591

John J. McGraw
Vice President, General Counsel & Secretary
560 White Plains Road
Tarrytown, NY 10591

1d. Ciba Specialty Chemicals is a wholly-owned subsidiary of Ciba Specialty Chemicals Holding, Inc., a Swiss corporation.

1e. Please see the answer to 1a. and 1b.

1f. Upon information and belief, neither Ciba SC nor Ciba-Geigy transacted business with Central Steel Drum in the name of any entity other than those disclosed above.

2. During the time period 1980-1994, Ciba-Geigy was a diversified company dedicated to the discovery, development, manufacture and marketing of products , including

pharmaceuticals, agricultural and other special-purpose chemicals and vision-care products. It owned, leased and operated offices and research and manufacturing facilities in several states.

3. Ciba Geigy's operations were highly diversified as described in the answer to Question Two. A wide variety of chemical substances may have been used to clean equipment or machinery. As a result it would be extremely difficult, if not impossible, to compile a comprehensive list of these chemicals.

4a-c. A majority of the business transacted between Ciba-Geigy and Central Steel Drum (CSD) was done by Ciba-Geigy's Toms River Facility ("Toms River"). Toms River purchased thousands of drums from CSD over a period of several years. Ciba SC has discovered invoices that chronicle the transactions from 1973 to 1986. In addition, the Newport Facility ("Newport") purchased drums from CSD on one occasion in 1992 and utilized CSD for disposal of drums in 1992 and 1993. Ciba SC has not discovered any contacts or agreements between Ciba-Geigy and CSD other than invoices chronicling individual transactions.

5a-b. Toms River served as a manufacturing facility for the production of textile dyes and resins. The Plant operated as a production facility from 1952 until 1996. The name, address and RCRA ID# are as follows:

Ciba Specialty Chemicals Corporation
Route 37 West
Toms River, NJ 08753
RCRA ID# NJD001502517

Newport is part of the Pigments Division. It is dedicated to research & development and the manufacture of high-performance pigments. It was purchased by Ciba-Geigy in 1984 and it is presently owned and operated by Ciba Specialty Chemicals. The name, address and RCRA ID# are as follows:

Ciba Specialty Chemicals Corporation
205 South James Street
Newport, DE 19804
RCRA ID# DED980830400

6a-e. Toms River purchased drums from CSD from 1973 until 1986. Each transaction involved the purchase of approximately 225 steel drums. The records indicate that these drums did not contain any substance at the time of the transaction.

Newport purchased 213 steel 55 gallon drums in 1991, disposed of 3,538 steel 55 gallon drums in 1992 and disposed of 172 steel 55 gallon drums in 1993. The containers which were purchased did not contain any substances.

A majority of the drums which were disposed of at CSD were likely to have contained Quinacridone residue, a pigment intermediate, which is a solid nonhazardous substance. It is likely that some small amount of pigment residue remained in the drums after they were emptied and rinsed with water. Attached are the MSDSs for four grades of quinacridone which are representative of the types of pigments that were being used at Newport during the time it transacted business with CSD. Detailed written analyses have been completed on quinacridone but due to the large volume of those records, Ciba Specialty Chemicals has not included them with this response. If the Agency decides it needs to review this information we shall make it available.

It is possible that some of the drums sent from the Newport facility to CSD had contained materials other than quinacridone before they were emptied and sent for reprocessing. Ciba Specialty Chemicals has not found any definitive information to indicate the exact nature of these materials. Ciba SC will continue its investigation and will supplement its response if any additional information is discovered.

7. Ciba Specialty Chemicals has examined the records from Toms River. They consist of purchase orders and invoices. The records document the purchase of drums from CSD and there is no record that drums containing any substances were returned to CSD (other than extra barrel heads and bands). Due to the large volume of documents, Ciba Specialty Chemicals has not enclosed these records at this time but can make them available at the Agency's request.

With respect to the Newport facility Ciba Specialty Chemicals has enclosed the purchase orders which relate to the transactions with CSD.

8. Ciba Specialty Chemicals has relied on documentary evidence and consulted with various persons at Toms River and Newport whose responsibilities would make it likely that they may have access to relevant information necessary to the preparation of this response.

9. Please see the response to question 6.

10. The Newport containers were rinsed with water prior to sending them to CSD. Due to the fact that quinacridone is a hydrophobic material, some residue is likely to have remained in the drum as was described in the answer to Question 6.

11. Ciba Specialty Chemicals has not discovered any information regarding any third party transporters.

12. Ciba Specialty Chemicals consulted the environmental compliance managers of our facilities to obtain the information provided in this response. This response was compiled by Jennie Jaklitsch and James Maewsky.

13. Ciba Specialty Chemicals has no knowledge of any such persons.

14. Ciba Specialty Chemicals has no such additional information or documents.

Document #: 22610

```
DPA33107                REVIEW PURCHASE ORDER LINE ITEM                NPT058
                                                                       OPER
PURCHASE ORDER: R 035182    ITEM: 001       STATUS: CLOSED    VENDOR: 001502
  DATE OPEN: 06/13/91  DATE COMP: 00/00/00  CLOSED: 02/22/93  EXPDITE: 12/31/92
  DATE CANC: 00/00/00  DATE DUE:  12/31/92  EXPIRE: 12/31/92
  EMPL:        OSMER          APPR:        DEMING          CONFRMD:
REQUISITION: DH000            ACCOUNT: N15355             EQUIP ID:
STOCK ITEM:                   CHEMICAL: 06827              COMMDTY:
DESCRP: RECONDITIONED DRUMS (06827)
        TO COVER SUCH QUANTITIES AS CIBA-GEIGY'S
        NEWPORT PLANT ELECTS TO PURCHASE
        DURING THE PERIOD 9/1/91 - 12/31/92.
        SPECS. AS PREVIOUSLY SPECIFIED FOR
        ESTIMATED PARTIAL REQUIREMENT.                          MRO COST CTR
COST CENTER:  AA1000   MRO #:            PROJECT:                REFER: DH000
O/S ACCT:                     DELVR TO: A17              ASSET:
VIA: TT VENDOR TRK            TERMS: 04 NET 30           FOB: OP O/P PREPAID
ORDR QTY:       213.00 PRC        11.1000 AMT       2364.30  EST:          0.00
RECD QTY:       213.00 DAMG:         0.00 RET:         0.00 TAXABLE (Y/N)? Y
INV AMT:      2364.30  TAX:        0.00    FRGT:   1584.00    DSC:        0.00
SCRN ===>   UOM: EA  NO.RECEIPTS:     1   COMMENTS:      0   RELEASES:       1
PF1-PO INQRY; PF2-RESET; PF3-CHG ORD; PF4-RECV; PF5-BUYR NOTE; PF6-L.I MAINT
PF7-INVENTORY; PF8-L.I RECEIPT; PF9-PO INQ; PF12-OPEN PO   IMS:
```

```
DPA33107                    REVIEW PURCHASE ORDER                    NPT058
*                                                                    OPER
PURCHASE ORDER: R 035182   STATUS:     CLOSED     SPECIAL CATEGORY: CB
   DATE OPEN:   06/13/91   DATE COMP:  00/00/00   DATE EXPEDITE:    06/30/92
   DATE CLSD:   02/22/93   DATE CANC:  00/00/00
BUYER:  05 MG  GARDNER
VENDOR: 001502        CENTRAL STEEL DRUM CO
   VIA CODE: TT  VENDOR TRK                    TERMS CODE: 04  NET 30
   FOB CODE: OP  O/P PREPAID              PO SENT FAX:
AMOUNT  ORDER:      2364.30   ESTIMATE:          0.00   INVOICE:       2364.30
        FREIGHT:  1584.00     SALES TAX:     0.00       DISCOUNT:        0.00

VOUCHER:  1035182     INQUIRY:         DAMAGED RECEIPTS:

NUMBER  LINES:      1   LINES NOT OPEN:     1   CHANGE ORDERS:       3
        NOTES:      0   INSTRUCTIONS:       0   RELEASE ORDERS:      1
DROP SHIPMENT: NAME:
               ADDRESS 1:
               ADDRESS 2:
               CITY:                            STATE:     ZIP CODE:
SCREEN TYPE:                  LINE ITEM: 001
PF1-PO INQ; PF2-RESET; PF3-CHG ORD; PF4-RECV; PF5-BUYR NOTE; PF6-L.I. MAINT
PF7-INVEN PO; PF8-L.I RECPTS; PF9-OPEN PO; PF10-A/P MENU   IMS:
```

DPA33107 REVIEW RELEASE ORDERS NPT056
OPER

PURCHASE ORDER: R 035182 LINE ITEM: 001 RELEASE NO (OPTIONAL):

RELEASE	00001
STATUS	CLOSED
OPENED	01/24/92
CLOSED	01/24/92
COMPLETED	00/00/00
CANCELLED	00/00/00
DUE	01/22/92
TO BE SHIPPED	01/22/92
QUANTITY RELEASED	213
CONFIRMED TO	
QUANTITY RECEIVED	213
QUANTITY DAMAGED	
QUANTITY RETURNED	
UNIT PRICE	11.1000
E/M REFERENCE	DH045

REL ORD MAINT PF3 IMS:
NO MORE RELEASE ORDERS FOR THIS LINE ITEM

```
DPA33107                REVIEW PURCHASE ORDER LINE ITEM                NPT058
                                                                       OPER
PURCHASE ORDER: X 047586    ITEM: 001       STATUS: CLOSED    VENDOR: 001502
  DATE OPEN: 11/30/92  DATE COMP: 00/00/00  CLOSED: 03/11/93  EXPDITE: 00/00/00
  DATE CANC: 00/00/00  DATE DUE:  12/31/92  EXPIRE: 00/00/00
  EMPL:        PANELLA         APPR:        LARKIN          CONFRMD: MAIL
REQUISITION: JOEP11/30/92      ACCOUNT: 2897                EQUIP ID:
STOCK ITEM:                    CHEMICAL:                    COMMDTY: 013000
DESCRP: DISPOSAL OF SCRAP DRUMS BY CENTRAL STEEL
         AT $3.00/DRUM ON AN AS NEEDED BASIS.
        THRU 12/31/92


                                                            MRO COST CTR
COST CENTER:  RX3101   MRO #:            PROJECT:             REFER:
O/S ACCT:                      DELVR TO: N/A            ASSET:
VIA: TT VENDOR TRK             TERMS: 04 NET 30         FOB: OP O/P PREPAID
ORDR QTY:      8961.00 PRC         1.0000 AMT       8961.00  EST:     10000.00
RECD QTY:         0.00 DAMG:         0.00 RET:         0.00 TAXABLE (Y/N)? Y
INV AMT:     10614.00  TAX:       0.00    FRGT:      0.00    DSC:       0.00
SCRN ===>   UOM: DL  NO.RECEIPTS:     0   COMMENTS:      0   RELEASES:      0
PF1-PO INQRY; PF2-RESET; PF3-CHG ORD; PF4-RECV; PF5-BUYR NOTE; PF6-L.I MAINT
PF7-INVENTORY; PF8-L.I RECEIPT; PF9-PO INQ; PF12-OPEN PO   IMS:
```

```
DPA33107                    REVIEW PURCHASE ORDER                    NPT058
*                                                                    OPER
PURCHASE ORDER: X 047586   STATUS:     CLOSED    SPECIAL CATEGORY: SR
   DATE OPEN:   11/30/92   DATE COMP:  00/00/00  DATE EXPEDITE:    00/00/00
   DATE CLSD:   03/11/93   DATE CANC:  00/00/00
BUYER:  07 NW  WILKINSON
VENDOR: 001502        CENTRAL STEEL DRUM CO
   VIA CODE: TT  VENDOR TRK                    TERMS CODE: 04  NET 30
   FOB CODE: OP  O/P PREPAID              PO SENT FAX:
AMOUNT  ORDER:      8961.00   ESTIMATE:      10000.00   INVOICE:      10614.00
        FREIGHT:     0.00     SALES TAX:     0.00       DISCOUNT:       0.00

VOUCHER:  1047586     INQUIRY:  00000  DAMAGED RECEIPTS:

NUMBER  LINES:      1   LINES NOT OPEN:     1   CHANGE ORDERS:       3
        NOTES:      0   INSTRUCTIONS:       0   RELEASE ORDERS:      0
DROP SHIPMENT: NAME:
               ADDRESS 1:
               ADDRESS 2:
               CITY:                                STATE:     ZIP CODE:
SCREEN TYPE:                   LINE ITEM: 001
PF1-PO INQ; PF2-RESET; PF3-CHG ORD; PF4-RECV; PF5-BUYR NOTE; PF6-L.I. MAINT
PF7-INVEN PO; PF8-L.I RECPTS; PF9-OPEN PO; PF10-A/P MENU   IMS:
```

```
DPA33107                REVIEW PURCHASE ORDER LINE ITEM                NPT058
                                                                       OPER
PURCHASE ORDER: X 049800    ITEM: 001       STATUS: CLOSED    VENDOR: 001502
  DATE OPEN: 02/12/93  DATE COMP: 00/00/00  CLOSED: 02/23/94  EXPDITE: 00/00/00
  DATE CANC: 00/00/00  DATE DUE:  12/31/93  EXPIRE: 12/31/93
  EMPL:        LARKIN          APPR:        LARKIN          CONFRMD: MAIL
REQUISITION: DRUMS             ACCOUNT: 2897               EQUIP ID:
STOCK ITEM:                    CHEMICAL:                    COMMDTY: 013000
DESCRP: DISPOSAL OF SCRAP DRUMS BY CENTRAL STEEL
        AT $3.00/DRUM ON AN AS NEEDED BASIS.
       THRU 12/31/93


                                                            MRO COST CTR
COST CENTER:  RX3101   MRO #:            PROJECT:             REFER:
O/S ACCT:                     DELVR TO: N/A             ASSET:
VIA: TT VENDOR TRK            TERMS: 04 NET 30          FOB: OP O/P PREPAID
ORDR QTY:     10000.00 PRC         1.0000 AMT      10000.00  EST:         0.00
RECD QTY:         0.00 DAMG:         0.00 RET:         0.00 TAXABLE (Y/N)?
INV AMT:        516.00  TAX:       0.00    FRGT:      0.00    DSC:       0.00
SCRN ===>   UOM: DL  NO.RECEIPTS:     0   COMMENTS:      0   RELEASES:      0
PF1-PO INQRY; PF2-RESET; PF3-CHG ORD; PF4-RECV; PF5-BUYR NOTE; PF6-L.I MAINT
PF7-INVENTORY; PF8-L.I RECEIPT; PF9-PO INQ; PF12-OPEN PO   IMS:
```

```
DPA33107                    REVIEW PURCHASE ORDER                    NPT058
*                                                                    OPER
PURCHASE ORDER: X 049800   STATUS:     CLOSED    SPECIAL CATEGORY: SR
   DATE OPEN:   02/12/93   DATE COMP:  00/00/00  DATE EXPEDITE:    00/00/00
   DATE CLSD:   02/23/94   DATE CANC:  00/00/00
BUYER:  03 WP  PIERCE
VENDOR: 001502        CENTRAL STEEL DRUM CO
   VIA CODE: TT  VENDOR TRK                    TERMS CODE: 04  NET 30
   FOB CODE: OP  O/P PREPAID              PO SENT FAX:
AMOUNT  ORDER:     10000.00   ESTIMATE:          0.00   INVOICE:        516.00
        FREIGHT:     0.00     SALES TAX:     0.00       DISCOUNT:       0.00

VOUCHER:  1049800     INQUIRY:  00000  DAMAGED RECEIPTS:

NUMBER  LINES:      1   LINES NOT OPEN:     1   CHANGE ORDERS:       0
        NOTES:      0   INSTRUCTIONS:       0   RELEASE ORDERS:      0
DROP SHIPMENT: NAME:
               ADDRESS 1:
               ADDRESS 2:
               CITY:                                STATE:     ZIP CODE:
SCREEN TYPE:                   LINE ITEM: 001
PF1-PO INQ; PF2-RESET; PF3-CHG ORD; PF4-RECV; PF5-BUYR NOTE; PF6-L.I. MAINT
PF7-INVEN PO; PF8-L.I RECPTS; PF9-OPEN PO; PF10-A/P MENU   IMS:
```

MATERIAL SAFETY DATA SHEET

CIBA-GEIGY CORPORATION
PIGMENTS DIVISION
315 WATER STREET
NEWPORT, DE 19804
(800) 355-CIBA, OR -2422 OR
DIRECT:(302) 633-2060, OR -2061

EMERGENCY PHONE NUMBER:

(800) 888-8372

SECTION I-IDENTITY INFORMATION

IDENTITY (TRADENAME): N-7415

FAMILY/CHEMICAL NAME:
Quinacridone
PRODUCT TYPE:
Isolated Intermediate (Dispersion Milled)
HAZARD STATEMENT :

```
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
*      THIS MATERIAL SAFETY DATA SHEET (MSDS) HAS BEEN      *
*  PREPARED IN COMPLIANCE WITH THE FEDERAL OSHA HAZARD      *
*  COMMUNICATION STANDARD  29 CFR 1910.1200.                *
*      THIS PRODUCT IS CONSIDERED TO BE A HAZARDOUS         *
*  CHEMICAL UNDER THAT STANDARD.                            *
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
```

SECTION II-HAZARDOUS INGREDIENTS

SPECIFIC CHEMICAL NAME:
Aluminum Sulfate
CAS #: 10043-01-3
Common Name: Alum
Exposure Limits:
OSHA PEL: 2 mg/m3 air (As Al salt) 8 hr.- TWA
ACGIH TLV: 2 mg/m3 air (As Al salt) 8 hr.- TWA
Carcinogenicity:
This chemical is not listed as a carcinogen by NTP, IARC, or OSHA.

Pentanedioic Acid, dimethyl ester
CAS #: 1119-40-0
Common Name: Dimethyl Glutarate
Exposure Limits: none established
Eye and Skin irritant
Carcinogenicity:
This chemical is not listed as a carcinogen by NTP, IARC, or OSHA.

SECTION III-PHYSICAL DATA

APPEARANCE AND ODOR:

RED-BROWN POWDER, FAINT SWEET ODOR
MELTING POINT:
NOT AVAILABLE.
DECOMPOSITION TEMPERATURE:
NOT KNOWN.
SOLUBILITY IN WATER:
Aluminum Sulfate fraction soluble (approx. 77%)
SPECIFIC GRAVITY:
NOT KNOWN.

SECTION IV-FIRE AND EXPLOSION HAZARD DATA

FLASH POINT:
NOT APPLICABLE.
EXTINGUISHING MEDIA:
CARBON DIOXIDE, DRY CHEMICAL, FOAM, WATER MIST.
FIRE FIGHTING PROCEDURES-SPECIAL:
USE SELF-CONTAINED BREATHING APPARATUS.
UNUSUAL FIRE AND EXPLOSION HAZARDS:
BURNS WITH A SMOLDERING FIRE IF IGNITED. NOT EASILY IGNITED. DECOMPOSITION AND COMBUSTION PRODUCTS MAY BE TOXIC. DUST CLOUDS FROM PIGMENT POWDER CAN CREATE A DUST EXPLOSION HAZARD.

SECTION V-REACTIVITY DATA

STABILITY:
STABLE.
CONDITIONS TO AVOID:
NONE KNOWN.
INCOMPATIBILITY:
DBE-5 is incompatible with strong oxidants, acids, and alkalies
HAZARDOUS DECOMPOSITION PRODUCTS:
BURNING MAY PRODUCE CARBON MONOXIDE, CARBON DIOXIDE, NITROGEN OXIDES, SULFUR OXIDES AND OTHER TOXIC SUBSTANCES.
HAZARDOUS POLYMERIZATION:
WILL NOT OCCUR.

SECTION VI-HEALTH HAZARD DATA

TOXICOLOGY INFORMATION:
The summary below is based on toxicity testing of DBE, a mixture of dimethyl glutarate (66%), dimethyl adipate (17%), and dimethyl succinate (17%). Toxicity of dimethyl glutarate DBE-5 should be similar.

Animal Data

Inhalation LC50 (rats): greater than 10.7 mg/l in rats
Skin absorption LD50 (rabbits): greater than 2,250 mg/kg
Oral LD50 (rats): 8,191 mg/kg

DBE is an eye irritant in animal test. DBE has been found to be a mild to severe skin irritant in rabbits. Dermal sensitization studies of DBE in guinea pigs indicated that DBE is not a skin sensitizer. DBE demonstrated no mutagenic activity when tested in bacterial cell cultures, but it was positive in one study with cultured mamalian cells. DBE

demonstrated no reporductive toxicity and was not uniquely toxic to the fetus in a developmental study. DBE produced mild nasal lesions in rats.

Human Health Effects:

Anticipated human health effects of overexposure include eye and skin irritation. Inhalation may cause irritation of the upper respiratory passages. Overexposure may cause blurring of vision.

(DBE MSDS 17-May-90, E.I du Pont de Nemours & Co.)

PRIMARY ROUTES OF EXPOSURE:
Eye, Skin, and Inhalation

EMERGENCY AND FIRST AID PROCEDURES-EYES:
FOR EYE CONTACT, IMMEDIATELY FLUSH EYES FOR AT LEAST 15 MINUTES WITH RUNNING WATER. HOLD EYELIDS APART TO ENSURE RINSING OF THE ENTIRE EYE SURFACE AND LIDS WITH WATER. GET IMMEDIATE MEDICAL ATTENTION.

EMERGENCY AND FIRST AID PROCEDURES-SKIN:
FOR SKIN CONTACT, WIPE AWAY EXCESS MATERIAL WITH DRY TOWEL. THEN WASH AFFECTED AREAS WITH PLENTY OF WATER, AND SOAP IF AVAILABLE, FOR SEVERAL MINUTES. GET MEDICAL ATTENTION IF IRRITATION OCCURS.

EMERGENCY AND FIRST AID PROCEDURES-INGESTION:
IF SWALLOWED, GIVE AT LEAST 3-4 GLASSES OF WATER BUT DO NOT INDUCE VOMITING. IF VOMITING OCCURS, GIVE WATER AGAIN. DO NOT GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS OR CONVULSING PERSON. GET MEDICAL ATTENTION. HAVE PHYSICIAN DETERMINE WHETHER VOMITING OR STOMACH EVACUATION IS NECESSARY.

EMERGENCY AND FIRST AID PROCEDURES-INHALATION:
IF INHALED, REMOVE FROM AREA TO FRESH AIR. IF NOT BREATHING, GIVE ARTIFICIAL RESPIRATION. GET IMMEDIATE MEDICAL ATTENTION. IF BREATHING IS DIFFICULT, TRANSPORT TO MEDICAL CARE AND, IF AVAILABLE, GIVE SUPPLEMENTAL OXYGEN.

SECTION VII-SPILL OR LEAK PROCEDURES

SPILL PROCEDURES:
PREWET MATERIAL WITH WATER TO AVOID DUST FORMATION. SWEEP AND PLACE INTO CLOSABLE CONTAINER FOR DISPOSAL. WEAR PROTECTIVE EQUIPMENT SPECIFIED BELOW.

WASTE DISPOSAL METHODS:
Contact the Environmental department for information on the proper disposal of this material.

SECTION VIII-SPECIAL PROTECTION INFORMATION

VENTILATION:
LOCAL EXHAUST IS RECOMMENDED. APPROPRIATE PRECAUTIONS TO AVOID DUST EXPLOSIONS SHOULD BE TAKEN INCLUDING A PROPERLY GROUNDED DUST COLLECTION SYSTEM.

PROTECTIVE GLOVES:
WEAR IMPERVIOUS GLOVES.

EYE PROTECTION:
WEAR SAFETY GLASSES OR GOGGLES.

RESPIRATORY PROTECTION:
USE NIOSH APPROVED RESPIRATOR OR DUST MASK.

N-7415

OTHER PROTECTIVE EQUIPMENT:
TAKE NECESSARY STEPS TO AVOID THE CONTAMINATION OF FOOTWEAR WORN AWAY FROM THE WORK PLACE.

SECTION IX-SPECIAL PRECAUTIONS

HANDLING, SHIPPING AND STORING PRECAUTIONS:
Warning ! EYE AND SKIN IRRITANT
MAY CAUSE RESPIRATORY IRRITATION

Avoid contact with eyes, skin, and clothing. Use only with adequate ventilation. Avoid breathing dust, mist, or vapors. In dusty conditions, use a respirator certified by NIOSH. Keep container tightly closed when not in use and during transport. Wash hands and face thoroughly after handling and before eating, drinking or using tobacco products.

For Industrial Use Only !

SECTION X-REGULATORY INFORMATION

SARA/TITLE III - TOXIC CHEMICALS LIST:
THIS PRODUCT DOES NOT CONTAIN A TOXIC CHEMICAL FOR ROUTINE ANNUAL 'TOXIC CHEMICAL RELEASE REPORTING' UNDER SEC. 313 (40 CFR 372).
TSCA INVENTORY STATUS:
ALL CHEMICAL COMPONENTS ARE LISTED ON THE TSCA INVENTORY.
PENNSYLVANIA RIGHT-TO-KNOW ACT:
The following is required compositional information:

CHEMICAL NAME : Sulfuric acid, aluminum salt (3:2)
CAS NUMBER : 10043-01-3
COMMON NAME : Alum
COMMENTS : Environmental Hazard

* * *

CHEMICAL NAME : Quino[2,3-b]acridine,7,14-dione,5,12-dihydro-
CAS NUMBER : 1047-16-1
COMMON NAME : Quinacridone
COMMENTS : Not on Pennsylvania Hazardous Substance List

* * *

CHEMICAL NAME : Pentanedioic acid, dimethyl ester
CAS NUMBER : 1119-40-0
COMMON NAME : Dimethyl glutarate (DBE-5)
COMMENTS : Not on Pennsylvania Hazardous Substance List.

* * *

CHEMICAL NAME : 2-Propenoic acid, 2-methyl-2-propenoate pentandioic acid, dimethyl ester
CAS NUMBER : 9011-53-4
TRADE NAME : Elvacite 2046
COMMENTS : Not on Pennsylvania Hazardous Substance List.

* * *

N-7415

ISSUE DATE: 10/31/94 REVISION: 04 EMV 11-3-94
FOR FURTHER HEALTH/SAFETY INFORMATION, CONTACT : DR. EVA M. VARY
FOR TECHNICAL INFORMATION CONTACT YOUR TECHNICAL SALES REPRESENTATIVE.

THE INFORMATION AND RECOMMENDATIONS CONTAINED HEREIN ARE BASED UPON DATA BELIEVED TO BE CORRECT. HOWEVER, NO GUARANTEE OR WARRANTY OF ANY KIND EXPRESSED OR IMPLIED IS MADE WITH RESPECT TO THE INFORMATION CONTAINED HEREIN.

MATERIAL SAFETY DATA SHEET

CIBA-GEIGY CORPORATION
PIGMENTS DIVISION
315 WATER STREET
NEWPORT, DE 19804
(800) 355-CIBA, OR -2422 OR
DIRECT:(302) 633-2060, OR -2061

EMERGENCY PHONE NUMBER:

(800) 888-8372

SECTION I-IDENTITY INFORMATION

IDENTITY (TRADENAME): N-7448

FAMILY/CHEMICAL NAME:
Quinacridone
PRODUCT TYPE:
Isolated Intermediate (Dispersion Milled)
HAZARD STATEMENT :

```
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
*      THIS MATERIAL SAFETY DATA SHEET (MSDS) HAS BEEN      *
*  PREPARED IN COMPLIANCE WITH THE FEDERAL OSHA HAZARD      *
*  COMMUNICATION STANDARD  29 CFR 1910.1200.                *
*      THIS PRODUCT IS CONSIDERED TO BE A HAZARDOUS         *
*  CHEMICAL UNDER THAT STANDARD.                            *
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
```

SECTION II-HAZARDOUS INGREDIENTS

SPECIFIC CHEMICAL NAME:
Aluminum Sulfate
CAS #: 10043-01-3
Common Name: Alum
Exposure Limits:
OSHA PEL: 2 mg/m3 air (As Al salt) 8 hr.- TWA
ACGIH TLV: 2 mg/m3 air (As Al salt) 8 hr.- TWA
Carcinogenicity:
This chemical is not listed as a carcinogen by NTP, IARC, or OSHA.

Pentanedioic Acid, dimethyl ester
CAS #: 1119-40-0
Common Name: Dimethyl Glutarate
Exposure Limits: none established
Eye and Skin irritant
Carcinogenicity:
This chemical is not listed as a carcinogen by NTP, IARC, or OSHA.

SECTION III-PHYSICAL DATA

APPEARANCE AND ODOR:

RED-BROWN POWDER, FAINT SWEET ODOR
MELTING POINT:
NOT AVAILABLE.
DECOMPOSITION TEMPERATURE:
NOT KNOWN.
SOLUBILITY IN WATER:
Aluminum Sulfate fraction soluble (approx. 78%)
SPECIFIC GRAVITY:
NOT KNOWN.

SECTION IV-FIRE AND EXPLOSION HAZARD DATA

FLASH POINT:
NOT APPLICABLE.
EXTINGUISHING MEDIA:
CARBON DIOXIDE, DRY CHEMICAL, FOAM, WATER MIST.
FIRE FIGHTING PROCEDURES-SPECIAL:
USE SELF-CONTAINED BREATHING APPARATUS.
UNUSUAL FIRE AND EXPLOSION HAZARDS:
BURNS WITH A SMOLDERING FIRE IF IGNITED. NOT EASILY IGNITED. DECOMPOSITION AND COMBUSTION PRODUCTS MAY BE TOXIC. DUST CLOUDS FROM PIGMENT POWDER CAN CREATE A DUST EXPLOSION HAZARD.

SECTION V-REACTIVITY DATA

STABILITY:
STABLE.
CONDITIONS TO AVOID:
NONE KNOWN.
INCOMPATIBILITY:
DBE-5 is incompatible with strong oxidants, acids, and alkalies
HAZARDOUS DECOMPOSITION PRODUCTS:
BURNING MAY PRODUCE CARBON MONOXIDE, CARBON DIOXIDE, NITROGEN OXIDES, SULFUR OXIDES AND OTHER TOXIC SUBSTANCES.
HAZARDOUS POLYMERIZATION:
WILL NOT OCCUR.

SECTION VI-HEALTH HAZARD DATA

TOXICOLOGY INFORMATION:
The summary below is based on toxicity testing of DBE, a mixture of dimethyl glutarate (66%), dimethyl adipate (17%), and dimethyl succinate (17%). Toxicity of dimethyl glutarate DBE-5 should be similar.

Animal Data

Inhalation LC50 (rats): greater than 10.7 mg/l in rats
Skin absorption LD50 (rabbits): greater than 2,250 mg/kg
Oral LD50 (rats): 8,191 mg/kg

DBE is an eye irritant in animal test. DBE has been found to be a mild to severe skin irritant in rabbits. Dermal sensitization studies of DBE in guinea pigs indicated that DBE is not a skin sensitizer. DBE demonstrated no mutagenic activity when tested in bacterial cell cultures, but it was positive in one study with cultured mamalian cells. DBE

demonstrated no reporductive toxicity and was not uniquely toxic to the fetus in a developmental study. DBE produced mild nasal lesions in rats.

Human Health Effects:

Anticipated human health effects of overexposure include eye and skin irritation. Inhalation may cause irritation of the upper respiratory passages. Overexposure may cause blurring of vision.

(DBE MSDS 17-May-90, E.I du Pont de Nemours & Co.)

PRIMARY ROUTES OF EXPOSURE:
Eye, Skin, and Inhalation

EMERGENCY AND FIRST AID PROCEDURES-EYES:
FOR EYE CONTACT, IMMEDIATELY FLUSH EYES FOR AT LEAST 15 MINUTES WITH RUNNING WATER. HOLD EYELIDS APART TO ENSURE RINSING OF THE ENTIRE EYE SURFACE AND LIDS WITH WATER. GET IMMEDIATE MEDICAL ATTENTION.

EMERGENCY AND FIRST AID PROCEDURES-SKIN:
FOR SKIN CONTACT, WIPE AWAY EXCESS MATERIAL WITH DRY TOWEL. THEN WASH AFFECTED AREAS WITH PLENTY OF WATER, AND SOAP IF AVAILABLE, FOR SEVERAL MINUTES. GET MEDICAL ATTENTION IF IRRITATION OCCURS.

EMERGENCY AND FIRST AID PROCEDURES-INGESTION:
IF SWALLOWED, GIVE AT LEAST 3-4 GLASSES OF WATER BUT DO NOT INDUCE VOMITING. IF VOMITING OCCURS, GIVE WATER AGAIN. DO NOT GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS OR CONVULSING PERSON. GET MEDICAL ATTENTION. HAVE PHYSICIAN DETERMINE WHETHER VOMITING OR STOMACH EVACUATION IS NECESSARY.

EMERGENCY AND FIRST AID PROCEDURES-INHALATION:
IF INHALED, REMOVE FROM AREA TO FRESH AIR. IF NOT BREATHING, GIVE ARTIFICIAL RESPIRATION. GET IMMEDIATE MEDICAL ATTENTION. IF BREATHING IS DIFFICULT, TRANSPORT TO MEDICAL CARE AND, IF AVAILABLE, GIVE SUPPLEMENTAL OXYGEN.

SECTION VII-SPILL OR LEAK PROCEDURES

SPILL PROCEDURES:
PREWET MATERIAL WITH WATER TO AVOID DUST FORMATION. SWEEP AND PLACE INTO CLOSABLE CONTAINER FOR DISPOSAL. WEAR PROTECTIVE EQUIPMENT SPECIFIED BELOW.

WASTE DISPOSAL METHODS:
Contact the Environmental department for information on the proper disposal of this material.

SECTION VIII-SPECIAL PROTECTION INFORMATION

VENTILATION:
LOCAL EXHAUST IS RECOMMENDED. APPROPRIATE PRECAUTIONS TO AVOID DUST EXPLOSIONS SHOULD BE TAKEN INCLUDING A PROPERLY GROUNDED DUST COLLECTION SYSTEM.

PROTECTIVE GLOVES:
WEAR IMPERVIOUS GLOVES.

EYE PROTECTION:
WEAR SAFETY GLASSES OR GOGGLES.

RESPIRATORY PROTECTION:
USE NIOSH APPROVED RESPIRATOR OR DUST MASK.

OTHER PROTECTIVE EQUIPMENT:
TAKE NECESSARY STEPS TO AVOID THE CONTAMINATION OF FOOTWEAR WORN AWAY FROM THE WORK PLACE.

SECTION IX-SPECIAL PRECAUTIONS

HANDLING, SHIPPING AND STORING PRECAUTIONS:
Warning ! EYE AND SKIN IRRITANT
MAY CAUSE RESPIRATORY IRRITATION

Avoid contact with eyes, skin, and clothing. Use only with adequate ventilation. Avoid breathing dust, mist, or vapors. In dusty conditions, use a respirator certified by NIOSH. Keep container tightly closed when not in use and during transport. Wash hands and face thoroughly after handling and before eating, drinking or using tobacco products.

For Industrial Use Only !

SECTION X-REGULATORY INFORMATION

SARA/TITLE III - TOXIC CHEMICALS LIST:
THIS PRODUCT DOES NOT CONTAIN A TOXIC CHEMICAL FOR ROUTINE ANNUAL 'TOXIC CHEMICAL RELEASE REPORTING' UNDER SEC. 313 (40 CFR 372).
TSCA INVENTORY STATUS:
ALL CHEMICAL COMPONENTS ARE LISTED ON THE TSCA INVENTORY.
PENNSYLVANIA RIGHT-TO-KNOW ACT:
The following is required compositional information:

CHEMICAL NAME : Sulfuric acid, aluminum salt (3:2)
CAS NUMBER : 10043-01-3
COMMON NAME : Alum
COMMENTS : Environmental Hazard

* * *

CHEMICAL NAME : Quino[2,3-b]acridine,7,14-dione,2,9-dichloro-= 5,12-dihydro-
CAS NUMBER : 3089-17-6
COMMON NAME : 2,9-dichloroquinacridone
COMMENTS : Not on Pennsylvania Hazardous Substance List

* * *

CHEMICAL NAME : Pentanedioic acid, dimethyl ester
CAS NUMBER : 1119-40-0
COMMON NAME : Dimethyl glutarate (DBE-5)
COMMENTS : Not on Pennsylvania Hazardous Substance List.

* * *

CHEMICAL NAME : Quino[2,3-b]acridine,7,14-dione,5,12-dihydro-
CAS NUMBER : 1047-16-1
COMMON NAME : Quinacridone
COMMENTS : Not on Pennsylvania Hazardous Substance List.

* * *

N-7448

ISSUE DATE: 10/31/94 REVISION: 04 EMV 11-4-94
FOR FURTHER HEALTH/SAFETY INFORMATION, CONTACT : DR. EVA M. VARY
FOR TECHNICAL INFORMATION CONTACT YOUR TECHNICAL SALES REPRESENTATIVE.

THE INFORMATION AND RECOMMENDATIONS CONTAINED HEREIN ARE BASED UPON DATA BELIEVED TO BE CORRECT. HOWEVER, NO GUARANTEE OR WARRANTY OF ANY KIND EXPRESSED OR IMPLIED IS MADE WITH RESPECT TO THE INFORMATION CONTAINED HEREIN.

MATERIAL SAFETY DATA SHEET

CIBA-GEIGY CORPORATION
PIGMENTS DIVISION
315 WATER STREET
NEWPORT, DE 19804
(800) 355-CIBA, OR -2422 OR
DIRECT:(302) 633-2060, OR -2061

EMERGENCY PHONE NUMBER:

(800) 888-8372

SECTION I-IDENTITY INFORMATION

IDENTITY (TRADENAME): N-7340

FAMILY/CHEMICAL NAME:
QUINACRIDONE
C.I. PIGMENT RED 202
PRODUCT TYPE:
PREMILL POWDER
HAZARD STATEMENT :

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* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
*      THIS MATERIAL SAFETY DATA SHEET (MSDS) HAS BEEN        *
*  PREPARED IN COMPLIANCE WITH THE FEDERAL OSHA HAZARD        *
*  COMMUNICATION STANDARD 29 CFR 1910.1200.                   *
*      THIS PRODUCT IS NOT CONSIDERED TO BE A HAZARDOUS       *
*  CHEMICAL UNDER THAT STANDARD.                              *
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
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SECTION II-HAZARDOUS INGREDIENTS

NONE KNOWN.

SECTION III-PHYSICAL DATA

APPEARANCE AND ODOR:
MAGNETA POWDER, ODORLESS
MELTING POINT:
NOT AVAILABLE.
DECOMPOSITION TEMPERATURE:
NOT KNOWN.
SOLUBILITY IN WATER:
Sodium sulfate fraction soluble (approx. 9%)
PH:
Not available
SPECIFIC GRAVITY:
1.5 g/cm3 (H_2O =1)

SECTION IV-FIRE AND EXPLOSION HAZARD DATA

EXTINGUISHING MEDIA:
CARBON DIOXIDE ON PIGMENT;WATER ON FIRE IN SURROUNDING AREA.

FIRE FIGHTING PROCEDURES-SPECIAL:
USE SELF-CONTAINED BREATHING APPARATUS.
UNUSUAL FIRE AND EXPLOSION HAZARDS:
BURNS WITH A SMOLDERING FIRE IF IGNITED. NOT EASILY IGNITED. DECOMPOSITION AND COMBUSTION PRODUCTS MAY BE TOXIC. DUST CLOUDS FROM PIGMENT POWDER CAN CREATE A DUST EXPLOSION HAZARD.

SECTION V-REACTIVITY DATA

STABILITY:
STABLE.
INCOMPATIBILITY:
NONE KNOWN.
HAZARDOUS POLYMERIZATION:
WILL NOT OCCUR.

SECTION VI-HEALTH HAZARD DATA

PRIMARY ROUTES OF EXPOSURE:
DERMAL, INHALATION.
OVEREXPOSURE EFFECTS:
NOT KNOWN.
EMERGENCY AND FIRST AID PROCEDURES-EYES:
FOR EYE CONTACT, FLUSH EYES WITH PLENTY OF WATER FOR SEVERAL MINUTES. GET MEDICAL ATTENTION IF IRRITATION OCCURS.
EMERGENCY AND FIRST AID PROCEDURES-SKIN:
FOR SKIN CONTACT, WASH AFFECTED AREAS WITH PLENTY OF WATER, AND SOAP, IF AVAILABLE, FOR SEVERAL MINUTES. GET MEDICAL ATTENTION IF IRRITATION OCCURS.
EMERGENCY AND FIRST AID PROCEDURES-INGESTION:
IF SWALLOWED, GIVE AT LEAST 3-4 GLASSES OF WATER BUT DO NOT INDUCE VOMITING. DO NOT GIVE ANYTHING BY MOUTH TO AN UN-CONSCIOUS OR CONVULSING PERSON.
EMERGENCY AND FIRST AID PROCEDURES-INHALATION:
IF INHALED, REMOVE FROM AREA TO FRESH AIR. GET MEDICAL ATTENTION IF RESPIRATORY IRRITATION DEVELOPS OR IF BREATHING BECOMES DIFFICULT.

SECTION VII-SPILL OR LEAK PROCEDURES

SPILL PROCEDURES:
SWEEP OR VACUUM AND PLACE INTO CLOSABLE CONTAINER FOR DISPOSAL. WEAR PROTECTIVE EQUIPMENT SPECIFIED BELOW.
WASTE DISPOSAL METHODS:
Contact the Environmental department for information on proper disposal of this material.

SECTION VIII-SPECIAL PROTECTION INFORMATION

VENTILATION:
LOCAL EXHAUST IS RECOMMENDED. APPROPRIATE PRECAUTIONS TO AVOID DUST EXPLOSIONS SHOULD BE TAKEN INCLUDING A PROPERLY GROUNDED DUST COLLECTION SYSTEM.
PROTECTIVE GLOVES:
PROTECTIVE GLOVES AS A STANDARD INDUSTRIAL HANDLING PROCEDURE.
EYE PROTECTION:

WEAR SAFETY GLASSES OR GOGGLES TO PROTECT AGAINST DUST PARTICLES.

RESPIRATORY PROTECTION:
USE NIOSH APPROVED RESPIRATOR OR DUST MASK.

SECTION IX-SPECIAL PRECAUTIONS

HANDLING, SHIPPING AND STORING PRECAUTIONS:
IN ACCORDANCE WITH GOOD INDUSTRIAL PRACTICE, HANDLE WITH CARE AND AVOID PERSONAL CONTACT. USE WITH ADEQUATE VENTILATION. IN DUSTY CONDITIONS, USE DUST RESPIRATOR CERTIFIED BY NIOSH. WASH HANDS AND FACE THOROUGHLY BEFORE EATING, DRINKING, OR SMOKING. FOR INDUSTRIAL USE ONLY.

SECTION X-REGULATORY INFORMATION

DOT CLASS:
NOT REGULATED AS A HAZARDOUS MATERIAL BY THE U.S. DEPT. OF TRANSPORTATION (DOT) 49 CFR 172.101 HAZARDOUS MATERIALS TABLE.

SARA/TITLE III - TOXIC CHEMICALS LIST:
THIS PRODUCT DOES NOT CONTAIN A TOXIC CHEMICAL FOR ROUTINE ANNUAL 'TOXIC CHEMICAL RELEASE REPORTING' UNDER SEC. 313 (40 CFR 372).

TSCA INVENTORY STATUS:
ALL CHEMICAL COMPONENTS ARE LISTED ON THE TSCA INVENTORY.

PENNSYLVANIA RIGHT-TO-KNOW ACT:
THE FOLLOWING IS REQUIRED COMPOSITION INFORMATION.

CHEMICAL NAME : QUINO[2,3-b]ACRIDINE-7,14-DIONE,5,12-DIHYDRO-
CAS NUMBER : 1047-16-1
COMMON NAME : QUINACRIDONE
COMMENTS : NOT ON PENNSYLVANIA HAZARDOUS SUBSTANCE LIST.

* * *

CHEMICAL NAME : SULFURIC ACID DISODIUM SALT
CAS NUMBER : 7757-82-6
COMMON NAME : ANHYDROUS SODIUM SULFATE
COMMENTS : NOT ON PENNSYLVANIA HAZARDOUS SUBSTANCE LIST.

* * *

CHEMICAL NAME : QUINO[2,3-b]ACRIDINE-7,14-DIONE,2,9-DICHLORO-5,12-DIHYDRO-
CAS NUMBER : 3089-17-6
COMMON NAME : 2,9-DICHLOROQUINACRIDONE
COMMENTS : NOT ON PENNSYLVANIA HAZARDOUS SUBSTANCE LIST.

* * *

ISSUE DATE: 10/17/94 REVISION: 03 EMV 10/18/94
FOR FURTHER HEALTH/SAFETY INFORMATION, CONTACT : DR. EVA M. VARY
FOR TECHNICAL INFORMATION CONTACT YOUR TECHNICAL SALES REPRESENTATIVE.

THE INFORMATION AND RECOMMENDATIONS CONTAINED HEREIN ARE BASED UPON DATA BELIEVED TO BE CORRECT. HOWEVER, NO GUARANTEE OR WARRANTY OF ANY KIND EXPRESSED OR IMPLIED IS MADE WITH RESPECT TO THE INFORMATION CONTAINED HEREIN.

MATERIAL SAFETY DATA SHEET

CIBA-GEIGY CORPORATION
PIGMENTS DIVISION
315 WATER STREET
NEWPORT, DE 19804
(800) 355-CIBA, OR -2422 OR
DIRECT:(302) 633-2060, OR -2061

EMERGENCY PHONE NUMBER:

(800) 888-8372

SECTION I-IDENTITY INFORMATION

IDENTITY (TRADENAME): N-7402

FAMILY/CHEMICAL NAME:
Quinacridone
PRODUCT TYPE:
Isolated Intermediate (Dispersion Milled)
HAZARD STATEMENT :

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* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
*      THIS MATERIAL SAFETY DATA SHEET (MSDS) HAS BEEN      *
*  PREPARED IN COMPLIANCE WITH THE FEDERAL OSHA HAZARD      *
*  COMMUNICATION STANDARD  29 CFR 1910.1200.                *
*      THIS PRODUCT IS CONSIDERED TO BE A HAZARDOUS         *
*  CHEMICAL UNDER THAT STANDARD.                            *
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
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SECTION II-HAZARDOUS INGREDIENTS

SPECIFIC CHEMICAL NAME:
Aluminum Sulfate
CAS #: 10043-01-3
Common Name: Alum
Exposure Limits:
OSHA PEL: 2 mg/m3 air (As Al salt) 8 hr.- TWA
ACGIH TLV: 2 mg/m3 air (As Al salt) 8 hr.- TWA
Carcinogenicity:
This chemical is not listed as a carcinogen by NTP, IARC, or OSHA.

SECTION III-PHYSICAL DATA

APPEARANCE AND ODOR:
RED-BROWN POWDER, FAINT SWEET ODOR
MELTING POINT:
NOT AVAILABLE.
DECOMPOSITION TEMPERATURE:
NOT KNOWN.
SOLUBILITY IN WATER:
Aluminum Sulfate fraction soluble (approx. 79%)
SPECIFIC GRAVITY:
NOT KNOWN.

SECTION IV-FIRE AND EXPLOSION HAZARD DATA

FLASH POINT:
NOT APPLICABLE.
EXTINGUISHING MEDIA:
CARBON DIOXIDE, DRY CHEMICAL, FOAM, WATER MIST.
FIRE FIGHTING PROCEDURES-SPECIAL:
USE SELF-CONTAINED BREATHING APPARATUS.
UNUSUAL FIRE AND EXPLOSION HAZARDS:
BURNS WITH A SMOLDERING FIRE IF IGNITED. NOT EASILY IGNITED. DECOMPOSITION AND COMBUSTION PRODUCTS MAY BE TOXIC. DUST CLOUDS FROM PIGMENT POWDER CAN CREATE A DUST EXPLOSION HAZARD.

SECTION V-REACTIVITY DATA

STABILITY:
STABLE.
CONDITIONS TO AVOID:
NONE KNOWN.
INCOMPATIBILITY:
NONE KNOWN.
HAZARDOUS DECOMPOSITION PRODUCTS:
BURNING MAY PRODUCE CARBON MONOXIDE, CARBON DIOXIDE, NITROGEN OXIDES, SULFUR OXIDES AND OTHER TOXIC SUBSTANCES.
HAZARDOUS POLYMERIZATION:
WILL NOT OCCUR.

SECTION VI-HEALTH HAZARD DATA

PRIMARY ROUTES OF EXPOSURE:
DERMAL, INHALATION.
SKIN IRRITATION:
SEE OVEREXPOSURE EFFECTS.
EYE IRRITATION:
SEE OVEREXPOSURE EFFECTS.
OVEREXPOSURE EFFECTS:
CONTAINS ALUMINUM SULFATE WHICH MAY CAUSE SKIN, EYE AND RESPIRATORY IRRITATION.
MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:
SEE OVEREXPOSURE EFFECTS.
EMERGENCY AND FIRST AID PROCEDURES-EYES:
FOR EYE CONTACT, FLUSH EYES WITH PLENTY OF WATER FOR SEVERAL MINUTES. GET MEDICAL ATTENTION IF IRRITATION OCCURS.
EMERGENCY AND FIRST AID PROCEDURES-SKIN:
FOR SKIN CONTACT, WASH AFFECTED AREAS WITH PLENTY OF WATER, AND SOAP, IF AVAILABLE, FOR SEVERAL MINUTES. GET MEDICAL ATTENTION IF IRRITATION OCCURS.
EMERGENCY AND FIRST AID PROCEDURES-INGESTION:
IF SWALLOWED, GIVE AT LEAST 3-4 GLASSES OF WATER BUT DO NOT INDUCE VOMITING. DO NOT GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS OR CONVULSING PERSON.
EMERGENCY AND FIRST AID PROCEDURES-INHALATION:
IF INHALED, REMOVE FROM AREA TO FRESH AIR. GET MEDICAL ATTENTION IF RESPIRATORY IRRITATION DEVELOPS OR IF BREATHING BECOMES DIFFICULT.

SECTION VII-SPILL OR LEAK PROCEDURES

SPILL PROCEDURES:
PREWET MATERIAL WITH WATER TO AVOID DUST FORMATION. SWEEP AND PLACE INTO CLOSABLE CONTAINER FOR DISPOSAL. WEAR PROTECTIVE EQUIPMENT SPECIFIED BELOW.

WASTE DISPOSAL METHODS:
Contact the Environmental department for information on the proper disposal of this material.

SECTION VIII-SPECIAL PROTECTION INFORMATION

VENTILATION:
LOCAL EXHAUST IS RECOMMENDED. APPROPRIATE PRECAUTIONS TO AVOID DUST EXPLOSIONS SHOULD BE TAKEN INCLUDING A PROPERLY GROUNDED DUST COLLECTION SYSTEM.

PROTECTIVE GLOVES:
WEAR IMPERVIOUS GLOVES.

EYE PROTECTION:
WEAR SAFETY GLASSES OR GOGGLES.

RESPIRATORY PROTECTION:
USE NIOSH APPROVED RESPIRATOR OR DUST MASK.

OTHER PROTECTIVE EQUIPMENT:
TAKE NECESSARY STEPS TO AVOID THE CONTAMINATION OF FOOTWEAR WORN AWAY FROM THE WORK PLACE.

SECTION IX-SPECIAL PRECAUTIONS

HANDLING, SHIPPING AND STORING PRECAUTIONS:
CAUTION : MAY CAUSE SKIN, EYE AND RESPIRATORY IRRITATION

Avoid contact with skin, eyes, and clothing. Use only with adequate ventilation. Avoid breathing dust, mist, or vapors. In dusty conditions, use a respirator certified by NIOSH. Keep container tightly closed when not in use and during transport. Wash hands and face thoroughly after handling and before eating, drinking or using tobacco products.

For Industrial Use Only !

SECTION X-REGULATORY INFORMATION

SARA/TITLE III - TOXIC CHEMICALS LIST:
THIS PRODUCT DOES NOT CONTAIN A TOXIC CHEMICAL FOR ROUTINE ANNUAL 'TOXIC CHEMICAL RELEASE REPORTING' UNDER SEC. 313 (40 CFR 372).

TSCA INVENTORY STATUS:
ALL CHEMICAL COMPONENTS ARE LISTED ON THE TSCA INVENTORY.

PENNSYLVANIA RIGHT-TO-KNOW ACT:
THE FOLLOWING IS REQUIRED COMPOSITION INFORMATION.

CHEMICAL NAME : SULFURIC ACID, ALUMINUM SALT (3:2)
CAS NUMBER : 10043-01-3
COMMON NAME : ALUMINUM SULFATE
COMMENTS : ENVIRONMENTAL HAZARD.

* * *

CHEMICAL NAME : QUINO[2,3-b]ACRIDINE-7,14-DIONE, 5,12-DIHYDRO-

CAS NUMBER : 1047-16-1
COMMON NAME : QUINACRIDONE
COMMENTS : NOT ON PENNSYLVANIA HAZARDOUS SUBSTANCE LIST.

* * *

ISSUE DATE: 10/19/94 REVISION: 03 EMV 10-20-94
FOR FURTHER HEALTH/SAFETY INFORMATION, CONTACT : DR. EVA M. VARY
FOR TECHNICAL INFORMATION CONTACT YOUR TECHNICAL SALES REPRESENTATIVE.

THE INFORMATION AND RECOMMENDATIONS CONTAINED HEREIN ARE BASED UPON DATA BELIEVED TO BE CORRECT. HOWEVER, NO GUARANTEE OR WARRANTY OF ANY KIND EXPRESSED OR IMPLIED IS MADE WITH RESPECT TO THE INFORMATION CONTAINED HEREIN.

Ciba Specialty Chemicals Corporation
North America

James Maewsky
Manager, Administration - Legal,
Patent, Tax and Remediation Services
Telephone 914-785-2567
Fax 914-785-4831

Ciba

March 11, 1998

Suzanne Becker
Removal Action Branch
Emergency and Remedial Response Division
U.S. EPA, Region II
2890 Woodbridge Ave
Edison, NJ 08837

**Re: Central Steel Drum Superfund Site,
Newark, Essex County, NJ**

Dear Ms. Becker:

On January 21, 1998 Ciba Specialty Chemicals Corporation ("Ciba SC") responded to the 104(e) Information Request that we received dated November 26, 1997 regarding the captioned site. Ciba SC has subsequently located additional information relating to Central Steel Drum (CSD) and this letter serves to supplement our response.

Ciba SC had previously noted in our January letter that our Newport Facility ("Newport") had purchased drums from CSD on one occasion in 1992. Ciba SC has located the attached Raw Material Order/Receipt Forms which document that Newport actually purchased several thousand 55 gallon steel drums between 1989 and 1991. In addition these forms also indicate that Newport purchased drum rings and lids on three occasions in 1992.

In our initial response Ciba SC provided the Agency with two purchase orders, No. X 047586 and No. X 049800, which documented that Newport utilized CSD for the disposal of drums. Ciba SC has found five invoices which correspond to

560 White Plains Road
Tarrytown, New York 10591

Tel. 914 785 2000

Purchase Order No. X 047586 and one invoice which corresponds to Purchase Order X 049800. These invoices are enclosed for your reference.

If you have any questions please contact Rachel Deming, Esq. at (914) 785-2094 or me at the above phone number.

Sincerely,

James Maewsky

cc: Michael van Itallie, Esq.
Office of Regional Counsel
U.S. EPA, Region II
290 Broadway, 17th Floor
New York, NY 10007

Rachel Deming, Esq.

Document #: 23188

RAW MATERIAL ORDER/RECEIPT FORM

MATERIAL Rings + Drum Lios - Metal VENDOR Central Steel #001502 PH: (201) 344-8500 RAMAC # N/A

CONTACT: John Gibson / Mort / Brenda / Neil Fisher

BLANKET P.O.# N/A "Spot" X ORDERS

DATE ORDERED	~~(REF. #)~~ ORDER NUMBER	QUANTITY ORDERED	RECEIPT NUMBER	DATE DUE	DATE REC'D	QUANTITY RECEIVED GROSS / NET	CONVERSION WEIGHT (TOLUENE/ SITOL ONLY)	RELEASE #	PRICE	NOTES
1/10/92	X0 39252	500		ASAP						Rings $2.00 EA
1/22/92	X0 39914	100		ASAP						Rings
2/19/92	X040225	500		ASAP						Lios $4.50 EA

RAW MATERIAL ORDER/RECEIPT FORM

MATERIAL Reconditioned Drums VENDOR Central Steel PH: (201) 344-8580 RAMAC # 06827

CONTACT: Barbara / Norman

Chrg N15355

DATE ORDERED	(REF.#) ORDER NUMBER	QUANTITY ORDERED	RECEIPT NUMBER	DATE DUE	DATE REC'D	QUANTITY RECEIVED GROSS / NET	CONVERSION WEIGHT (TOLUENE/ SITOL ONLY)	BLANKET P.O.# R026922 - EXP 6/30/91 RELEASE #	PRICE	NOTES
9/24/90	DH019	270	8620	9/28/90	9/27/90	235		00019		
9/24/90	DH020	270	8621	10/2/90	10/2/90	211		00020		
10/1/90	DH021	270	8644	10/4/90	10/4/90	228		00021		Trailer 68
10/1/90	DH022	270	8645	10/5/90	10/5/90	238		00022		
10/1/90	DH023	270	8646	10/9/90	10/9/90	232		00023		Trailer 35
10/8/90	DH024	270	8677	10/11/90	10/11/90	233		00024		Trailer 31
10/8/90	DH025	270	8678	10/12/90	10/12/90	239		00025		Trailer 14
10/15/90	DH026	270	8717	10/19/90	10/18/90	254		00026		Trailer 65
10/22/90	DH027	270	8747	10/24/90	10/24/90	248		00027		Trailer 31
10/22/90	DH028	270	8748	10/26/90	10/26/90	244		00028		Trailer 21
11/20/90	DH029	270	8863	11/26/90	11/26/90	176		00029		
11/26/90	DH030	270	8884	11/30/90	11/30/90	246		00030		
12/31/90	DH031	270	9047	1/4/91	1/4/91	230		00031		
1/2/91	DH032	270	9053	1/7/91	1/7/91	222		00032		
1/15/91	DH033	270	9103	1/17/91	1/17/91	239		00033		
1/15/91	DH034	270	9104	1/22/91	1/22/91	244		00034		
1/25/91	DH035	270	9145	1/28/91	1/28/91	245		00035		
1/28/91	DH036	270	9154	1/31/91	1/31/91	236		00036		
2/4/91	DH037	270	9181	2/6/91	2/6/91	242 ~~270~~		00037		
2/6/91	DH038	270	9188	2/8/91	2/8/91	242		00038		
2/11/91	DH039	270	9206	2/13/91	2/13/91	232		00039		
3/7/91	DH040	270	9301	3/8/91	3/7/91	226		00040		
3/7/91	DH041	270	9302	3/11/91	3/11/91	227		00041		

RAW MATERIAL ORDER/RECEIPT FORM

MATERIAL Reconditioned Drums VENDOR Central Steel PH: (201) 344-8500 RAMAC # 06827

CONTACT: Dave Baum | Fran Miller / John Gibson

BLANKET → Barbara ←

P.O.# ~~R017248~~ R026922 7/1/90

DATE ORDERED	(REF.#) ORDER NUMBER	QUANTITY ORDERED	RECEIPT NUMBER	DATE DUE	DATE REC'D	QUANTITY RECEIVED GROSS	QUANTITY RECEIVED NET	CONVERSION WEIGHT (TOLUENE/ SITOL ONLY)	BLANKET P.O.# RELEASE #	PRICE	NOTES
6/28/89	DH001	270	6817	*6/30/89 ~~7/3/89~~	6/30/89		232		00001		* chg per vendor
6/28/89	DH002	270	6818	7/7/89	7/7/89		157		00002		
7/11/89	DH003	270	6854	7/13/89	7/13/89		179		00003		
7/13/89	DH004	270	6864	7/18/89	7/19/89		176		00004		
7/18/89	DH005	270	6882	7/21/89	7/21/89		162		00005		
7/18/89	DH006	270	6883	7/27/89 ~~7/24/89~~	*7/28/89		189		00006		* Date chg per vendor
7/13/90	DH001	270	8437	7/18/90	7/19/90		220		00001		
7/13/90	DH002	270	8438	7/23/90	7/23/90		202		00002		
7/24/90	DH003	270	8274	7/27/90	7/27/90		222		00003		
7/24/90	DH004	270	8275	7/31/90	7/31/90		217 ~~210~~		00004		
7/24/90	DH005	270	8276	8/3/90	8/3/90		233		00005		
7/27/90	DH006	270	8302	8/7/90	8/7/90		180		00006		
7/27/90	DH007	270	8303	8/10/90	8/10/90		238		00007		
8/13/90	DH008	270	8358	8/15/90	8/15/90		212		00008		
8/13/90	DH009	270	8359	8/17/90	8/17/90		230		00009		
8/13/90	DH010	270	8360	8/21/90	8/22/90		231		00010		
8/23/90	DH011	270	8406	8/28/90	8/28/90		220		00011		
8/23/90	DH012	270	8407	9/7/90* ~~8/31/90~~	9/7/90		232		00012		*Date chg. per M. Marshall
9/5/90	DH013	270	8536	9/11/90	9/11/90		252		00016		
9/5/90	DH014	270	8537	9/14/90	9/14/90		232		00013		
9/10/90	DH015	270	8558	9/17/90	9/17/90		210		00014		
9/19/90	DH016	270	8601	9/21/90	9/21/90		254		00015		
9/19/90	DH017	270	8602	9/25/90	9/25/90		230		00017		
9/24/90	DH018	270	8619	9/27/90	9/27/90		225		00018		

EGELY & SON, INC.
P.O. BOX 819
ORTSTOWN, PA 19464-0819

-01

9804

DATE
12/21/92

FREIGHT CODES
P - Prepaid
Prepaid
B - Prepaid
Bill
D - Direct
T - Direct by
Customer
S - CPU

8	1

2.03	73.06

CIBA-GEIGY Corporation
Newport, Delaware

VENDOR: 001502

Remittance Advice

023928

DATE 00E39E8

INVOICE NUMBER	INV. DATE	P.O. NBR	GROSS AMOUNT	DSC AMT	NET AMOUNT
71047	11/30/92	X 047586	594.00	0.00	594.00

Detach here before depositing check

CIBA-GEIGY CIBA-GEIGY Corporation
Newport, Delaware

023928

Mo.	Day	Year
01	06	93

Void 90 days after

PIVE HUNDRED NINETY-FOUR DOLLARS AND
00 CENTS

Pay | Amount | ********594 | 00

Pay to the order of

CENTRAL STEEL [illegible] CO
704 DOREMUS AVE
NEWARK, NJ. 07108

CIBA-GEIGY Corporation

NON-NEGOTIABLE

The Chase Manhattan Bank, N.A.
Syracuse, New York

⑈023928⑈ ⑆021309379⑆ 601-2-32481⑈

RECONDITIONED AND RELINED DRUMS

SD CENTRAL STEEL DRUM CO.

INVOICE 74047

1120
CIBA-GEIGY CORPORATION
SOLD TO: JAMES & WATER STREETS

NEWPORT, DE 19804

J. Larkin 12/16/92
SHIPPED TO: CIBA-GEIGY, CORPORATION
JAMES & WATER STREETS
NEWPORT, DE 19804

PLEASE PAY FROM THIS INVOICE. NO MONTHLY STATEMENT WILL BE SENT.

X-042586

ORDERED BY 00024-92

REQUISITION NO.	DATE ORDERED		APPROVED BY	DRIVER		
198	198	TRUCKING			3.00	$594.00

RECEIVED DEC 1 1992

VENDOR # 001602 REMIT #
PAYMENT DUE DATE 12/00 ACCT AND COST CENTER
ENTERED BY EB DATE
APPROVED FOR PAYMENT

SALES TAX: $.00

$594.00

SALE	INVENTORY	COLOR OF BODY	COLOR OF HEAD

OK For Pymt

Date 12/27/92

RECEIVED BY

Approved

CUSTOMER INVOICE

MAXIMUM LIABILITY FOR ANY CAUSE WHATSOEVER IS LIMITED TO REPLACEMENT OF CONTAINERS ONLY.

ALL CLAIMS FOR DEFECTS MUST BE REPORTED WITHIN FIFTEEN DAYS FROM RECEIPT OF SHIPMENT.

02-11-1993 12:10PM FROM CC 1562 TO 13029929402 P.02

CENTRAL STEEL DRUM CO.

INVOICE NO. 71288

INVOICE # 001120

Jim Larkin 2/5

1120
CIBA GEIGY CORPORATION
JAMES & WATER STREETS
NEWPORT, DE 19804

X 047586

SHIPPED TO: CIBA GEIGY CORPORATION
JAMES & WATER STREETS
NEWPORT, DE 19804

PLEASE PAY FROM THIS INVOICE. NO MONTHLY STATEMENT WILL BE SENT.

188	188	TRUCKING										[illegible]	$564.00

SALES TAX

$564.00

MAXIMUM LIABILITY FOR ANY CAUSE WHATSOEVER IS LIMITED TO REPLACEMENT OF CONTAINERS ONLY.

ALL CLAIMS FOR DEFECTS MUST BE REPORTED WITHIN FIFTEEN DAYS FROM RECEIPT OF SHIPMENT.

RECEIVED BY

SIGNED AND RETURNED COPY

VENDOR # CC 1562 | REMIT #
PAYMENT | ACCT AND

025701

0025701

ART NET AMOUNT

0.00 $84.00

0.00 $37.00

025701

Amount

Pay ******1,101 00

GEIGY Corporation

ON-NEGOTIABLE

D1120

SOLD CIBA-GEIGY CORPAORATION
JAMES & WATER STREETS
NEWPORT, DE 19804

X 047586

SHIPPED TO: CIBA-GEIGY CORPAORATION
JAMES & WATER STREETS
NEWPORT, DE 19804

PLEASE PAY FROM THIS INVOICE. NO MONTHLY STATEMENT WILL BE SENT.

RECEIVED

TRUCKING		$3.00	$408.00
TRUCKING		3.00	$129.00

VENDOR # 001502
PAYMENT
DUE DATE 5/2
ACCT
COST
ENTERED BY
APPROVED FOR PAYMENT

SALES TAX $.00

$537.00

MAXIMUM LIABILITY FOR ANY CAUSE WHATSOEVER IS LIMITED
REPLACEMENT OF CONTAINERS ONLY

ALL CLAIMS FOR DEFECTS MUST BE REPORTED WITHIN

CK PAYABLE TO
REMIT TO

Y & SON INC.

ER

ATE

FREIGHT CODES

23/93

AGE NO

1

AMOUNT

24.30

CIBA GEIGY Corporation
Newport, Delaware

VENDOR 001502

INVOICE NUMBER	INV. DATE	P.O. NER	GROSS AMOUNT	DEC AMT	NET AMOUNT
[illegible]	12/23/92	X 047586	564.00	0.00	564.00
0015[illegible]	02/05/93	X 047586	537.00	0.00	537.00

Remittance Advice

025701

0060 0025701

Detach here before depositing check

CIBA-GEIGY CIBA GEIGY Corporation
Newport, Delaware

025701

M.	Da	Year
03	07	93

Void 90 days after

ONE THOUSAND ONE HUNDRED ONE DOLLARS AND 00 CENTS

Pay to the order of

CENTRAL STEEL DRUM CO
704 POPEMUS AVE
NEWARK, NJ 07105

Amount

Pay *****1,101.00

CIBA GEIGY Corporation

NON-NEGOTIABLE

The Chase Manhattan Bank, N.A.
Syracuse, New York

⑈025701⑈ ⑆021309379⑆ 601-2-32481⑈

RECONDITIONED AND REFINED DRUMS

CENTRAL STEEL DRUM CO.

704 DOREMUS AVE. • NEWARK, NEW JERSEY 07105/(201) 344-8500/NEW YORK (212) 267-3248
FAX NO. (201) 344-8181

INVOICE NO. 70987

INVOICE # 001160

J. LACKIN 1/10/93

SOLD TO: 1120
CIBA-GEIGY CORPORATION
JAMES & WATER STREETS
NEWPORT, DE 19804

SHIPPED TO: CIBA-GEIGY CORPORATION
JAMES & WATER STREETS
NEWPORT, DE 19804

PLEASE PAY FROM THIS INVOICE. NO MONTHLY STATEMENT WILL BE SENT.

ORDERED BY: X-047586

SHIPPED BY: HOUSE

REQUISITION NO.	DATE ORDERED	CUSTOMER ORDER	APPROX. DATE PROMISED	DRIVER	TRAILER	DATE
PU	11/[illegible]/92	153269	PU TR#	119		2/29/92

159	159	TRUCKING	3.00	$477.00
25	25	TRUCKING	3.00	$75.00

RECEIVED JAN 8 1993 EMIT

VENDOR # 201002
PAYMENT DUE DATE 1/24
ACCT AND COST CENTER
ENTERED BY
DATE
FOR

OK For Pymt
Date 1/10/93
Approved

SALES TAX: $.00

TOTAL $552.00

SALE	INVENTORY	COLOR OF BODY	COLOR OF HEAD

MAXIMUM LIABILITY FOR ANY CAUSE WHATSOEVER IS LIMITED TO REPLACEMENT OF CONTAINERS ONLY.

ALL CLAIMS FOR DEFECTS MUST BE REPORTED WITHIN FIFTEEN DAYS FROM RECEIPT OF SHIPMENT.

RECEIVED BY

CUSTOMER INVOICE

70987

77.00
75.00

$.00

552.00

LIMITED TO

IN FIFTEEN

ATION

DE 1

ENDOR

CIBA-GEIGY Corporation
Newport, Delaware

VENDOR: 001502

Remittance Advice

024525

INVOICE NUMBER	INV. DATE	P.O. NBR	GROSS AMOUNT	0075 DSC AMT	0024525 NET AMOUNT
70987	12/29/92	X 047586	552.00	0.00	552.00

CIBA-GEIGY

CIBA-GEIGY Corp
Newport, Delaware

024525

Date	Day	Year
01	26	93

FIVE HUNDRED FIFTY TWO DOLLARS AND
00 CENTS

Pay to the order of

CENTRAL STEEL DRUM CO
704 DOREMUS AVE
NEWARK, NJ 07105

CIBA-GEIGY Corporation

The Chase Manhattan Bank, N.A.
Syracuse, New York

NON-NEGOTIABLE

CIBA-GEIGY Corporation
Newport, Delaware

VENDOR: 00150E

Remittance Advice

027758

INVOICE NUMBER	INV.DATE	P.O. NBR	GROSS AMOUNT	DSC AMT	NET AMOUNT
81149	03/11/93	X 947800	516.00	0.00	516.00

CIBA-GEIGY

027758

FIVE HUNDRED SIXTEEN DOLLARS AND
[illegible]

Pay 0000000516 00

CENTRAL STEEL [illegible]
[illegible]
NEWARK [illegible]

NON-NEGOTIABLE

The Chase Manhattan Bank, N.A.
Syracuse, New York

[illegible]

027758
BOBY 98ETTSB
AMT NET AMOUNT
0.00 $16.00

027758

Pay ********516 30

TY Corporation

NEGOTIABLE

SD

81169
INVOICE #
00186

D1120
CIBA-GEIGY CORPAORATION
JAMES & WATER STREETS
NEWPORT, DE 19804

SHIPPED TO: CIBA-GEIGY CORPAORATION
JAMES & WATER STREETS
NEWPORT, DE 19804

PLEASE PAY FROM THIS INVOICE. NO MONTHLY STATEMENT WILL BE SENT.

172	172	TRUCKING										3.00	$516.00

VENDOR # 007302
PAYMENT
DUE DATE
ACCT AND COST CENT
ENTERED BY
DATE
APPROVED FOR PAYMENT

SALES TAX:
$.00

$516.00

MAXIMUM LIABILITY FOR ANY CAUSE WHATSOEVER IS LIMITED TO REPLACEMENT OF CONTAINERS ONLY

ALL CLAIMS FOR DEFECTS MUST BE REPORTED WITHIN FIFTEEN DAYS FROM RECEIPT OF SHIPMENT

RECEIVED BY

CUSTOMER INVOICE

RECONDITIONED AND RELEASED ONLY

CENTRAL STEEL DRUM CO.

704 DOREMUS AVE • NEWARK, NEW JERSEY 07105/(201) 344-8800/NEW YORK (212) 267-3248
FAX NO. (201) 344-8181

INVOICE NO. 11238

INVOICE # 001074

J. Carbin 12/30/92

SOLD TO: 1120
CIBA-GEIGY CORPORATION
JAMES & WATER STREETS

NEWPORT, DE 19804

SHIPPED TO: CIBA-GEIGY CORPORATION

JAMES & WATER STREETS
NEWPORT, DE 19804

PLEASE PAY FROM THIS INVOICE. NO MONTHLY STATEMENT WILL BE SENT.

REQUISITION NO.	DATE ORDERED	CUSTOMER ORDER	APPROVED/RECEIVED	DRIVER	TRAILER	DATE

188	188	TRUCKING									3.00	$564.00

RECEIVED DEC 2 8 1992

R # 001502 REMIT #

OK For Pymt

Date 1/4/93

Approved

AYMENT
JE DATE 12/31 ACCT AND COST CENTER

NTERED BY EB DATE

PPROVED FOR
AYMENT

SALES TAX: $.00

$564.00

SALE	INVENTORY	COLOR OF BODY	COLOR OF HEAD

MAXIMUM LIABILITY FOR ANY CAUSE WHATSOEVER IS LIMITED TO REPLACEMENT OF CONTAINERS ONLY

ALL CLAIMS FOR DEFECTS MUST BE REPORTED WITHIN FIFTEEN DAYS FROM RECEIPT OF SHIPMENT

RECEIVED BY

CUSTOMER INVOICE

001074

$564.00

TAX: $.00

OVER IS LIMITED TO

ED WITHIN FIFTEEN

CIBA-GEIGY Corporation
Newport, Delaware

VENDOR: 001500

Remittance Advice

024125

0073 0024125

INVOICE NUMBER	INV. DATE	P.O. NBR	GROSS AMOUNT	DSC AMT	NET AMOUNT
71236	12/01/92	X 047586	564.00	0.00	564.00

CIBA-GEIGY CIBA-GEIGY Corporation Newport, Delaware

024125

Mo.	Day	Year
01	12	93

FIVE HUNDRED SIXTY-FOUR DOLLARS AND 00 CENTS

Amount

Pay ********564 00

Pay to the order of

CENTRAL STEEL DRUM CO
704 DOREMUS AVE
NEWARK, NJ. 07105

CIBA-GEIGY Corporation

The Chase Manhattan Bank, N.A.
Syracuse, New York

NON-NEGOTIABLE

⑈024125⑈ ⑆021309379⑆ 601-2-32481⑈

RP.

TOTAL

000.00

400.00

400.00

Ciba Specialty Chemicals Corporation
North America

James Maewsky
Manager, Administration - Legal,
Patent, Tax and Remediation Services
Telephone 914-785-2567
Fax 914-785-4831

Ciba

March 11, 1998

Suzanne Becker
Removal Action Branch
Emergency and Remedial Response Division
U.S. EPA, Region II
2890 Woodbridge Ave
Edison, NJ 08837

MAR 17 1998

Re: **Central Steel Drum Superfund Site,**
Newark, Essex County, NJ

Dear Ms. Becker:

On January 21, 1998 Ciba Specialty Chemicals Corporation ("Ciba SC") responded to the 104(e) Information Request that we received dated November 26, 1997 regarding the captioned site. Ciba SC has subsequently located additional information relating to Central Steel Drum (CSD) and this letter serves to supplement our response.

Ciba SC had previously noted in our January letter that our Newport Facility ("Newport") had purchased drums from CSD on one occasion in 1992. Ciba SC has located the attached Raw Material Order/Receipt Forms which document that Newport actually purchased several thousand 55 gallon steel drums between 1989 and 1991. In addition these forms also indicate that Newport purchased drum rings and lids on three occasions in 1992.

In our initial response Ciba SC provided the Agency with two purchase orders, No. X 047586 and No. X 049800, which documented that Newport utilized CSD for the disposal of drums. Ciba SC has found five invoices which correspond to

Purchase Order No. X 047586 and one invoice which corresponds to Purchase Order X 049800. These invoices are enclosed for your reference.

If you have any questions please contact Rachel Deming, Esq. at (914) 785-2094 or me at the above phone number.

Sincerely,

James Maewsky

cc: Michael van Itallie, Esq.
Office of Regional Counsel
U.S. EPA, Region II
290 Broadway, 17th Floor
New York, NY 10007

Rachel Deming, Esq.

Document #: 23188

RAW MATERIAL ORDER/RECEIPT FORM

MATERIAL Rings + Drum Lids - Metal VENDOR Central Steel #001502 PH: (201) 344-8500 RAMAC # N/A

CONTACT: John Gibson / Mort / Brenda / Neil Fisher

DATE ORDERED	~~(REF. #)~~ ORDER NUMBER	QUANTITY ORDERED	RECEIPT NUMBER	DATE DUE	DATE REC'D	QUANTITY RECEIVED GROSS	QUANTITY RECEIVED NET	CONVERSION WEIGHT (TOLUENE/ SITOL ONLY)	BLANKET P.O.# N/A RELEASE #	PRICE	NOTES
1/10/92	X039252	500		ASAP							Rings $2.00 EA
1/22/92	X039914	100		ASAP							Rings
2/19/92	X040225	500		ASAP							Lids $4.50 EA

RAW MATERIAL ORDER/RECEIPT FORM

MATERIAL Reconditioned Drums VENDOR Central Steel PH: (201) 344-8500 RAMAC # 06827
CONTACT: Barbara / Norman

Chg N15355

DATE ORDERED	(REF.#) ORDER NUMBER	QUANTITY ORDERED	RECEIPT NUMBER	DATE DUE	DATE REC'D	QUANTITY RECEIVED GROSS / NET	CONVERSION WEIGHT (TOLUENE/ SITOL ONLY)	BLANKET P.O.# K026922 - Exp 6/30/91 RELEASE #	PRICE	NOTES
9/24/90	DH019	270	8620	9/28/90	9/27/90	235		00019		
9/24/90	DH020	270	8621	10/2/90	10/2/90	211		00020		
10/1/90	DH021	270	8644	10/4/90	10/4/90	228		00021		Trailer 68
10/1/90	DH022	270	8645	10/5/90	10/5/90	238		00022		
10/1/90	DH023	270	8646	10/9/90	10/9/90	232		00023		Trailer 35
10/8/90	DH024	270	8677	10/11/90	10/11/90	233		00024		Trailer 31
10/8/90	DH025	270	8678	10/12/90	10/12/90	239		00025		Trailer 14
10/15/90	DH026	270	8717	10/19/90	10/18/90	254		00026		Trailer 65
10/22/90	DH027	270	8747	10/24/90	10/24/90	248		00027		Trailer 31
10/22/90	DH028	270	8748	10/26/90	10/26/90	244		00028		Trailer 21
11/20/90	DH029	270	8863	11/26/90	11/26/90	176		00029		
11/20/90	DH030	270	8884	11/30/90	11/30/90	246		00030		
12/31/90	DH031	270	9047	1/4/91	1/4/91	230		00031		
1/2/91	DH032	270	9053	1/7/91	1/7/91	222		00032		
1/15/91	DH033	270	9103	1/17/91	1/17/91	239		00033		
1/15/91	DH034	270	9104	1/22/91	1/22/91	244		00034		
1/25/91	DH035	270	9145	1/28/91	1/28/91	245		00035		
1/28/91	DH036	270	9154	1/31/91	1/31/91	236		00036		
2/4/91	DH037	270	9181	2/6/91	2/6/91	242 ~~270~~		00037		
2/6/91	DH038	270	9188	2/8/91	2/8/91	242		00038		
2/11/91	DH039	270	9206	2/12/91	2/13/91	232		00039		
3/7/91	DH040	270	9301	3/8/91	3/7/91	226		00040		
3/7/91	DH041	270	9302	3/11/91	3/11/91	227		00041		

RAW MATERIAL ORDER/RECEIPT FORM

MATERIAL Reconditioned Drums VENDOR Central Steel PH: (201) 344-8500 RAMAC # 06827

CONTACT: Dave Baum | Fran Miller / John Gibson → Barbara ←

DATE ORDERED	(REF.#) ORDER NUMBER	QUANTITY ORDERED	RECEIPT NUMBER	DATE DUE	DATE REC'D	QUANTITY RECEIVED GROSS / NET	CONVERSION WEIGHT (TOLUENE/ SITOL ONLY)	BLANKET P.O.# ~~R017248~~ R026922 7/1/90 RELEASE #	PRICE	NOTES
6/28/89	DH001	270	6817	* 6/30/89 ~~7/3/89~~	6/30/89	232		00001		* chg per vendor
6/28/89	DH002	270	6818	7/7/89	7/7/89	157		00002		
7/11/89	DH003	270	6854	7/13/89	7/13/89	179		00003		
7/13/89	DH004	270	6864	7/18/89	7/19/89	176		00004		
7/18/89	DH005	270	6882	7/21/89	7/21/89	162		00005		
7/18/89	DH006	270	6883	7/27/89 ~~7/24/89~~	* 7/28/89	189		00006		* Date chg per vendor
7/13/90	DH001	270	8437	7/18/90	7/19/90	220		00001		
7/13/90	DH002	270	8438	7/23/90	7/23/90	202		00002		
7/24/90	DH003	270	8274	7/27/90	7/27/90	222		00003		
7/24/90	DH004	270	8275	7/31/90	7/31/90	217 ~~210~~		00004		
7/24/90	DH005	270	8276	8/3/90	8/3/90	233		00005		
7/27/90	DH006	270	8302	8/7/90	8/7/90	180		00006		
7/27/90	DH007	270	8303	8/10/90	8/10/90	238		00007		
8/13/90	DH008	270	8358	8/15/90	8/15/90	212		00008		
8/13/90	DH009	270	8359	8/17/90	8/17/90	230		00009		
8/13/90	DH010	270	8360	8/21/90	8/22/90	231		00010		
8/23/90	DH011	270	8406	8/28/90	8/28/90	220		00011		
8/23/90	DH012	270	8407	9/7/90 ~~8/31/90~~	9/7/90	232		00012		* Date chg. per M. Marshall
9/5/90	DH013	270	8536	9/11/90	9/11/90	252		00016		
9/5/90	DH014	270	8537	9/14/90	9/14/90	232		00013		
9/10/90	DH015	270	8558	9/17/90	9/17/90	210		00014		
9/19/90	DH016	270	8601	9/21/90	9/21/90	254		00015		
9/19/90	DH017	270	8602	9/25/90	9/25/90	230		00017		
9/24/90	DH018	270	8619	9/27/90	9/27/90	225		00018		

EGELY & SON, INC.
P.O. BOX 818
NYSTOWN, PA 18464-0818

-01

9804

DATE	PREPAID CODES
12/21/92	
B	1

2.03 73.05

CIBA-GEIGY Corporation
Newport, Delaware

VENDOR: 001502

Remittance Advice

023928

INVOICE NUMBER	INV. DATE	P.O. NBR	GROSS AMOUNT	DSC AMT	NET AMOUNT
71047	11/30/92	X 047586	594.00	0.00	594.00

CIBA-GEIGY CIBA-GEIGY Corporation Newport, Delaware

023928

Mo.	Day	Year
01	06	93

Void 90 days after

PIVE HUNDRED NINETY-FOUR DOLLARS AND 00 CENTS

Pay

Amount ********594 00

Pay to the order of

CENTRAL STEEL DRUM CO
704 DOREMUS AVE
NEWARK, NJ. 07105

CIBA-GEIGY Corporation

NON-NEGOTIABLE

The Chase Manhattan Bank, N.A.
Syracuse, New York

⑈023928⑈ ⑆021309379⑆ 601-2-32481⑈

RECONDITIONED AND RELINED DRUMS

SD CENTRAL STEEL DRUM CO.

1120
CIBA-GEIGY CORPORATION
SOLD TO: JAMES & WATER STREETS

NEWPORT, DE 19804

J. Larkin 12/16/92

SHIPPED TO: CIBA-GEIGY, CORPORATION
JAMES & WATER STREETS
NEWPORT, DE 19804

PLEASE PAY FROM THIS INVOICE. NO MONTHLY STATEMENT WILL BE SENT.

00024-92

198	198	TRUCKING										3.00	$594.00

RECEIVED DEC 1 1992

VENDOR # 001602 REMIT #
PAYMENT DUE DATE 12/80 ACCT AND COST CENTER
ENTERED BY EB DATE
APPROVED FOR PAYMENT

SALES TAX: $.00

$594.00

SALE	INVENTORY	COLOR OF BODY	COLOR OF HEAD

OK For Pymt

Date 12/29/92

RECEIVED BY

Approved

CUSTOMER INVOICE

MAXIMUM LIABILITY FOR ANY CAUSE WHATSOEVER IS LIMITED TO REPLACEMENT OF CONTAINERS ONLY.

ALL CLAIMS FOR DEFECTS MUST BE REPORTED WITHIN FIFTEEN DAYS FROM RECEIPT OF SHIPMENT.

CIBA-GEIGY Corporation
Newport, Delaware

VENDOR: 001501

Remittance Advice

024125

INVOICE NUMBER	INV.DATE	P.O. NBR	GROSS AMOUNT	0073 DSC AMT	0024125 NET AMOUNT
71230	12/01/92	X 047506	564.00	0.00	564.00

CIBA-GEIGY

CIBA-GEIGY Corporation
Newport, Delaware

024125

Mo.	Day	Year
01	12	93

FIVE HUNDRED SIXTY-FOUR DOLLARS AND
00 CENTS

Pay

Amount
*******564 00

Pay to the order of

CENTRAL STEEL DRUM CO
704 DOREMUS AVE
NEWARK, NJ. 07105

CIBA-GEIGY Corporation

The Chase Manhattan Bank, N.A.
Syracuse, New York

NON-NEGOTIABLE

⑈024125⑈ ⑆021309379⑆ 601-2-32481⑈

RP.

TOTAL

000.00

400.00

400.00

RECONDITIONED AND RECOVERED DRUMS

SD CENTRAL STEEL DRUM CO.

704 DOREMUS AVE • NEWARK, NEW JERSEY 07105/(201) 344-8800/NEW YORK (212) 267-3246
FAX NO. (201) 344-8181

INVOICE NO. 71238

INVOICE # 001074

J. Corbin 12/30/92

SOLD TO: 1120
CIBA-GEIGY CORPORATION
JAMES & WATER STREETS

NEWPORT, DE 19804

SHIPPED TO: CIBA-GEIGY CORPORATION

JAMES & WATER STREETS
NEWPORT, DE 19804

PLEASE PAY FROM THIS INVOICE. NO MONTHLY STATEMENT WILL BE SENT.

PRODUCTION NO.	DATE ORDERED	CUSTOMER ORDER	APPROVED BY	DRIVER	TRAILER	DATE

188	188	TRUCKING										3.00	$564.00

RECEIVED
DEC 2 8 1992

OK For Pymt
Date 1/1/93
Approved

R # 001502 REMIT #
AYMENT
JE DATE 12/31 ACCT AND COST CENTER
NTERED BY SB DATE
PPROVED FOR
AYMENT

SALES TAX: $.00

$564.00

SALE	INVENTORY	COLOR OF BODY	COLOR OF HEAD

MAXIMUM LIABILITY FOR ANY CAUSE WHATSOEVER IS LIMITED TO REPLACEMENT OF CONTAINERS ONLY

ALL CLAIMS FOR DEFECTS MUST BE REPORTED WITHIN FIFTEEN DAYS FROM RECEIPT OF SHIPMENT

RECEIVED BY

CUSTOMER INVOICE

001074

$564.00

TAX: $.00

OEVER IS LIMITED TO

TED WITHIN FIFTEEN

AIION

DE 1

ENDOR

CIBA-GEIGY Corporation
Newport, Delaware

VENDOR: 001502

Remittance Advice

024525

0075 0024525

INVOICE NUMBER	INV. DATE	P.O. NBR	GROSS AMOUNT	DSC AMT	NET AMOUNT
70987	12/29/92	X 047586	552.00	0.00	552.00

CIBA-GEIGY

CIBA-GEIGY Corp.
Newport, Delaware

024525

Date	Day	Year
01	26	93

FIVE HUNDRED FIFTY TWO DOLLARS AND
00 CENTS

Amount Pay 552 00

Void to date after

Pay to the order of

CENTRAL STEEL DRUM CO
704 COREMUS AVE
NEWARK, NJ 07108

CIBA-GEIGY Corporation

The Chase Manhattan Bank, N.A.
Syracuse, New York

NON-NEGOTIABLE

RECONDITIONED AND RELINED DRUMS

LSD CENTRAL STEEL DRUM CO.

704 DOREMUS AVE. • NEWARK, NEW JERSEY 07105/(201) 344-8600/NEW YORK (212) 267-3246
FAX NO. (201) 344-8181

INVOICE NO. 70987

INVOICE # 001160

J. LACKIN 1/10/93

1120

SOLD TO: CIBA-GEIGY CORPORATION
JAMES & WATER STREETS
NEWPORT, DE 19804

SHIPPED TO: CIBA-GEIGY CORPORATION
JAMES & WATER STREETS
NEWPORT, DE 19804

004502

PLEASE PAY FROM THIS INVOICE. NO MONTHLY STATEMENT WILL BE SENT.

ORDERED BY: SX-047586

SHIPPED BY: HOUSE

REQUISITION NO.		DATE OF SALE	CUSTOMER ORDER	APPROX. DATE PROMISED	DRAWN		
	PU	11/7/92	1538691	PU TR	119		2/29/92

159	159	TRUCKING		3.00	$477.00
25	25	TRUCKING		3.00	$75.00

RECEIVED JAN - 8 1993

VENDOR # 100002
PAYMENT DUE DATE 1/26
ACCT AND CUST CENTER
ENTERED BY
DATE
FOR

OK For Pymt
Date 1/10/93
Approved

SALES TAX: $.00

$552.00

SALE	INVENTORY	COLOR OF BODY	COLOR OF HEAD

MAXIMUM LIABILITY FOR ANY CAUSE WHATSOEVER IS LIMITED TO REPLACEMENT OF CONTAINERS ONLY.

ALL CLAIMS FOR DEFECTS MUST BE REPORTED WITHIN FIFTEEN DAYS FROM RECEIPT OF SHIPMENT.

RECEIVED BY

CUSTOMER INVOICE

CIBA GEIGY Corporation
Newport, Delaware

VENDOR: 001508

INVOICE NUMBER	INV. DATE	P.O. NER	GROSS AMOUNT	DEC AMT	NET AMOUNT
[illegible]	12/23/92	X 047586	564.00	0.00	564.00
001525	02/05/93	X 047586	537.00	0.00	537.00

Remittance Advice

025701

0060 0025701

Detach here before depositing check

CIBA-GEIGY

CIBA GEIGY Corporation
Newport, Delaware

025701

Mo.	Da.	Year
03	02	93

Void 90 days after

ONE THOUSAND ONE HUNDRED ONE DOLLARS AND 00 CENTS

Pay to the order of

CENTRAL STEEL DRUM CO
704 BOREMUS AVE
NEWARK, NJ 07105

Amount: Pay ******1,101 00

CIBA GEIGY Corporation

NON-NEGOTIABLE

The Chase Manhattan Bank, N.A.
Syracuse, New York

⑈025701⑈ ⑆021309379⑆ 601⑉2⑉32481⑈

P1

ON PAY SUBLE TO
REMIT TO
Y & SON INC.

ER

ATE
23/93
AGE NO.
1

FREIGHT CODES

AMOUNT

24.30

025701

0000 0025701

[redacted] AMT NET AMOUNT

0.00 $54.00

0.00 $37.00

025701

Amount

000001,101 00

[redacted] GEIGY Corporation

[redacted]ON-NEGOTIABLE

SD

D1120

SOLD CIBA-GEIGY CORPAORATION
JAMES & WATER STREETS
NEWPORT, DE 19804

X 047586

SHIPPED TO CIBA-GEIGY CORPAORATION
JAMES & WATER STREETS
NEWPORT, DE 19804

PLEASE PAY FROM THIS INVOICE. NO MONTHLY STATEMENT WILL BE SENT.

RECEIVED

[illegible]	TRUCKING	$3.00	$408.00
[illegible]	TRUCKING	3.00	$129.00

VENDOR # 001502
PAYMENT
DUE DATE 9/2
ACCT
COST
ENTERED BY
APPROVED FOR PAYMENT

SD

SALES TAX $100

$857

MAXIMUM LIABILITY FOR ANY CAUSE WHATSOEVER IS LIMITED REPLACEMENT OF CONTAINERS ONLY

ALL CLAIMS FOR DEFECTS MUST BE REPORTED WITHIN

02-11-1993 12:10PM FROM CC 1522 TO 13029929402 P.02

CENTRAL STEEL DRUM CO.

INVOICE NO. 71288

INVOICE # 001120

Jim Lackin 2/5

1120
CIBA GEIGY CORPORATION
JAMES & WATER STREETS
NEWPORT, DE 19804

SHIPPED TO: CIBA GEIGY CORPORATION
JAMES & WATER STREETS
NEWPORT, DE 19804

X 047586

PLEASE PAY FROM THIS INVOICE. NO MONTHLY STATEMENT WILL BE SENT.

188	188	TRUCKING										3.00	$564.00

SALES TAX

$564.00

MAXIMUM LIABILITY FOR ANY CAUSE WHATSOEVER IS LIMITED TO REPLACEMENT OF CONTAINERS ONLY.

ALL CLAIMS FOR DEFECTS MUST BE REPORTED WITHIN FIFTEEN DAYS FROM RECEIPT OF SHIPMENT.

RECEIVED BY

SIGNED AND RETURNED COPY

VENDOR # CC 1522 | REMIT #
PAYMENT 2/1 | ACCT AND

CIBA-GEIGY Corporation
Newport, Delaware

VENDOR: [illegible]

Remittance Advice

027758

[illegible]

INVOICE NUMBER	INV.DATE	P.O. NBR	GROSS AMOUNT	DBC AMT	NET AMOUNT
81169	03/11/[illegible]	X [illegible]	516.00	0.00	516.00

Detach here before depositing check

CIBA-GEIGY

027758

[illegible] 03 [illegible] 93

FIVE HUNDRED [illegible] DOLLARS AND [illegible]

Pay [illegible]516 00

Fixed by date after

Pay to the order of [illegible]

CENTRAL STEEL [illegible]
[illegible]
[illegible]

NON-NEGOTIABLE

The Chase Manhattan Bank, N.A.
Syracuse, New York

[illegible]