141855

FEDERAL ON-SCENE COORDINATOR'S AFTER ACTION REPORT

for

METROPOLITAN MIRROR & GLASS SITE
FRACKVILLE, SCHUYLKILL COUNTY, PA
2 June 1997 to 22 August 1997

UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION III
PHILADELPHIA, PENNSYLVANIA

Federal On-Scene Coordinator's After Action Report
Metropolitan Mirror & Glass Site

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REGION III **PROJECT # 423**
CERCLA REMOVAL ACTION **FACT SHEET**

SITE:	Metropolitan Mirror & Glass Site
SIZE:	12.5 acres
LOCATION:	1 Industrial Park Road Frackville, Pennsylvania 17931
APPROVAL DATE:	2 May 1997
PROJECT DATES:	2 June 1997 - 22 August 1997
DESCRIPTION:	The Metropolitan Mirror & Glass Site occupies 12.5 acres and is located in an industrial park in Schuylkill County, Pennsylvania. The Metropolitan Mirror & Glass facility manufactured mirrors from 1942 to 1982. The chemicals used in the manufacturing process included silver solutions, paint strippers, paint thinners, and solvents. After several extensive site investigations by both State and Federal Agencies, the site was recommended to the EPA Hazardous Waste Management Division, Removal Branch to address the on-site surface contamination.
NATIONAL PRIORITIES LIST (NPL) STATUS:	The site was listed on the NPL on 14 October 1992
HAZARDOUS MATERIALS:	Silver, lead.
QUANTITIES REMOVED:	1,883,900 gallons of pumped and treated surface water; 11,120.95 tons of contaminated bulked sludge and soil
OSC:	Douglas P. Fox
REMOVAL CONTRACTOR:	Earth Technology Remediation Services, Richmond, Virginia
DISPOSAL LOCATIONS:	Frackville Area Municipal Authority (FAMA) Pine Grove Landfill in Pine Grove, Pennsylvania
PROJECT CEILING:	$1,640,000
PROJECT COSTS:	$1,048,629
COMMENTS:	[OSC's comments]

Douglas P. Fox

Douglas P. Fox

FOREWORD

The On-Scene Coordinator (OSC), as mandated by the National Oil and Hazardous Substances Pollution Contingency Plan, 40 CFR Part 300 (NCP 1994), is required to provide a coordinated federal response capability at the scene of an unplanned or sudden release of oil or hazardous substance that poses a threat to the public welfare or the environment. In addition, the provisions of Section 104 of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), 1980, as amended by the Superfund Amendments and Reauthorization Act (SARA) of 1986, promote a coordinated federal, state, and local response to mitigate situations at hazardous waste sites that pose an imminent and substantial threat to public health and/or the environment.

Conditions at the Metropolitan Mirror & Glass Site presented an imminent and substantial risk of harm to human health and the environment due to the uncontrolled release of a hazardous substance to the environment, thereby providing a legal basis for federal response activities. The provisions of the NCP, Section 300.415, were implemented by the U.S. Environmental Protection Agency, Region III, Philadelphia, Pennsylvania.

The OSC would like to extend thanks to all of the agencies and individuals who provided valuable assistance and expertise to ensure the successful completion of this cleanup effort.

Douglas P. Fox

Douglas P. Fox
On-Scene Coordinator
U.S. EPA Region III
Philadelphia, Pennsylvania

Federal On-Scene Coordinator's After Action Report
Metropolitan Mirror & Glass Site

1.0 INTRODUCTION

1.1 Initial Situation

The Metropolitan Mirror & Glass (MM&G) Site occupies 12.5 acres and is located in an industrial park in Schuylkill County, Pennsylvania. The Metropolitan Mirror & Glass facility manufactured mirrors from 1942 to 1982. The chemicals used in the manufacturing process included silver solutions, paint strippers, paint thinners, and solvents. After several extensive site investigations by both State and Federal Agencies, the site was recommended to the EPA Hazardous Waste Management Division, Removal Branch, to address the on-site surface contamination.

1.2 Site Location

The Metropolitan Mirror & Glass Site is located at 1 Industrial Park Road and Altmont Boulevard in Frackville, Schuylkill County, Pennsylvania. The site coordinates are approximately 40 46 ' 29" north latitude and 76 13 ' 19" west longitude. The site is located at the entrance of the Frackville Industrial Park in a mixed commercial/residential area, approximately 250 feet west of Interstate 81 (I-81).

The lagoons were designed to receive wastewater from the mirror manufacturing process. Once the wastewater was received, the solids settled and the supernate was discharged into Stony Creek. The creek runs parallel to the site and is located just over the earthen berm, south of the two wastewater settling lagoons. The sludge was periodically dredged, but disposal records for the dredged materials could not be located. The lagoons are unlined and are predominately recharged by the shallow aquifer located beneath the site and by surface water runoff. The shallow aquifer is also a source of recharge for Stony Creek.

In April 1996, a wetlands delineation was conducted onsite to determine the extent of jurisdictional wetlands within the former MM&G property boundaries. Wetlands on the site consist of plaustrine scrub-shrub communities adjacent to the onsite drainage ditches, and forested and emergent wetland areas on the southern portion of the site. Site maps are provided in Appendix A of this report.

1.3 Efforts to Notify and Compel Potentially Responsible Parties to Respond

MM&G, the potentially responsible party (PRP), was identified for liability under CERCLA, but was unable to conduct the cleanup bankruptcy.

2.0 ROSTER OF AGENCIES, ORGANIZATIONS, AND INDIVIDUALS

2.1 Names and Addresses

AGENCY	CONTACT	BRIEF DESCRIPTION OF DUTIES
	FEDERAL	
United States Environmental Protection Agency Region III 841 Chestnut Building Philadelphia, PA 19107	Douglas P. Fox (OSC) 215-566-3268 Eugene Dennis (RPM) 215-566-3202 Joanne McDonald (FAS) 215-566-3251 Joan Johnson 215-566-2619	Coordinated cleanup activities. Coordinated the on-site remedial investigations. Tracked site costs and spending. Provided legal assistance.
	STATE/LOCAL	
PA Dept. of Environmental Protection (PADEP) Env. CleanUp Program Hazardous Site Cleanup Section Northeast Regional Office 2 Public Square Wilkes-Barre, PA 18711 717-826-5441	Len Zelinka 717-826-5441 Paul Fosko 717-874-3589	Provided site background information and served as the state liaison. The hazardous sites clean-up manager. Site liaison for the state.
Frackville Area Municipal Authority (FAMA) P.O. Box 471 41 North Lehigh Avenue Frackville, PA 17931 717-874-3589		Publicly-owned water treatment facility where site-associated treated water was discharged.
	CONTRACTORS/OTHERS	
Roy F. Weston, Inc Federal Programs Division Site Assessment Technical Assistance Team 5 Underwood Court Delran, NJ 08075 609-461-4003	Michelle H. Price Brian Reid Chris Matta Mrinal Biswas Wayne Randolph Donna Janda	Provided technical support and site monitoring for EPA.

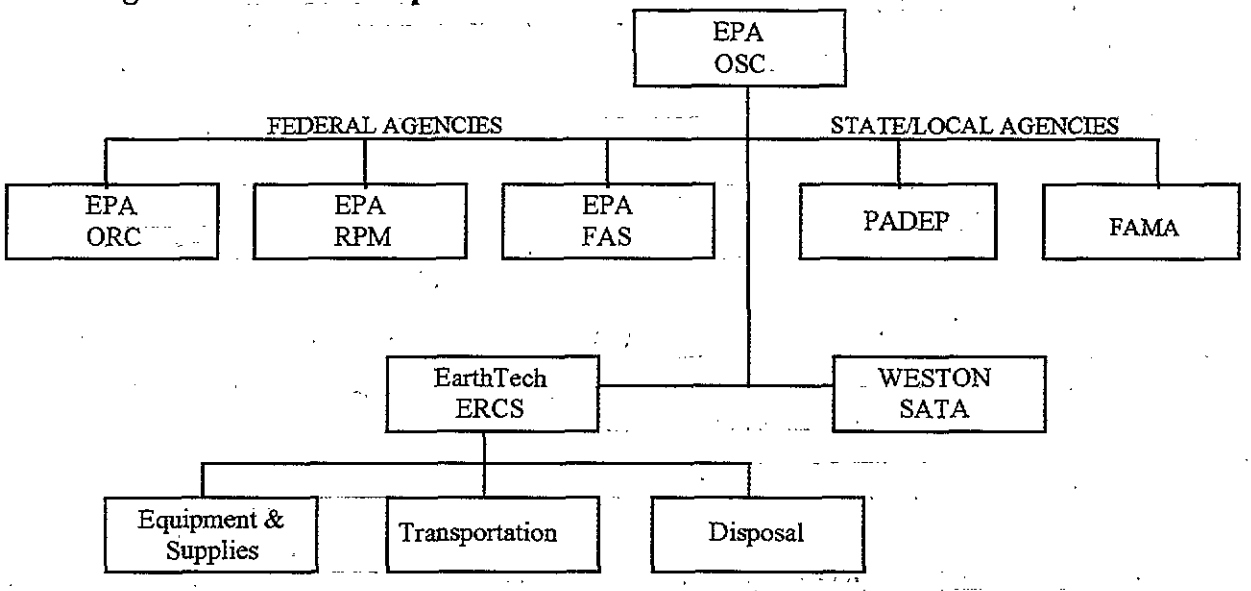
AGENCY	CONTACT	BRIEF DESCRIPTION OF DUTIES
Earthtech Remediation Services 2229 Tomlynn Street Richmond, VA 23230 804-358-5400	Dave Bartosik, (RM) Tom Charest (FCA) Don Mayer (Engineer)	Primary ERCS contractor for the site cleanup.
David W. Fannick Electrical Mechanical Sales & Services 4th & Frack Streets Frackville, PA 17931 717-874-2331	David Fannick	Installed the electrical hook ups on site.
22 WYOU 3 Public Square Wilkes-Barre, PA 18701 717-821-0025	David DeCosmo	Conducted media coverage of on-site operations.
Cressona Agway 2nd & Walnut Street Cressona, PA 17929 717-385-2160		Provided culvert piping.
AFTEK, Inc. 740 Driving Park Rochester, NY 14613 717-458-7550	Kathleen A. Russel	Provided the bag filters for the water treatment system.
All-Phase Electric Supply Co. Route 61 Pottsville, PA 17901 717-628-9415	Donald F. McGovern	Provided lighting equipment for evening operations.
LJT Trucking Co. New Egypt, NJ		The trucking company utilized by Ashworks.
Ashworks P.O. Box 10365 Wilmington, DE 19850 302-322-1281	Joe DellAvarsano	Provided fly ash for sludge bulking operations.
Baker Tanks 509 South 2nd Street Laramie, WY 82070 800-927-7595		Provided 6,500 gallon poly tank rental.
Carbonair Services 2731 Nevada Avenue North New Hope, MN 55427-2864 800-526-4999	Bob Bergsgaard	Provided 100 micron filters, bag filters, and 2000 lb carbon filter rental, disposal and regeneration.

AGENCY	CONTACT	BRIEF DESCRIPTION OF DUTIES
Carbtrol Corporation 51 Riverside Avenue Westport, CT 06880 203-226-5642	Mario Napolitano	Provided the 1000 lb carbon filter unit, disposal and regeneration.
Central Highway Oil Co., Inc. P.O. Box D Frackville, PA 17931 1-800-648-2818	Rick Examator	Provided off road diesel fuel and fuel delivery service.
Cloister P.O. Box 3229 Lancaster, PA 17604-3229 800-426-2665	Tom Rienhold	Provided water cooler and bottled water.
GE Capital Modular Space 50 Clinton Avenue Carlisle, PA 17013 800-523-7918	Kim Meade	Provided office trailer.
Godwin Pumps of America, Inc. Floodgate Road Bridgeport, NJ 08014 609-467-3636	Eric Brown	Provided water pumps.
Hertz Equipment Rental 4950 W. Tilghman Street Allentown, PA 18104 610-391-1890	Kenneth C. Haas	Provided the rental of heavy equipment.
IWT - Cargo Guard 211 Gates Road - Unit H Little Ferry, NJ 07643 201-229-0660	Pete Daly	Provided the sunshield tarp, certified bulk bags, high density/low density poly, adhesive tape, gabian baskets, and woven geotech material.
Lok-weld Co. Route 61 North P.O. Box 184 Pottsville, PA 17901 717-429-0893		Provided fencing equipment.
Machinery Services P.O. Box 228 Royersford, PA 19468 610-948-4630		Provided the bull dozer rental.

AGENCY	CONTACT	BRIEF DESCRIPTION OF DUTIES
Meckley's Limestone Products, Inc. RD #1 Box 950 Herndon, PA 17830 717-758-3011	Dennis Smeltz	Provided pulverized lime.
Miller Brother Construction 48 Zerbie Street Cressona, PA 17929 717-385-1662	William J. Miller	Delivered backfill materials.
Northeast Hydroseeding Co. Inc. RD #4 Box 389 Tamaqua, PA 18252 717-668-4960.	Wayne Postupack	Provided seed and mulch for the lagoon area.
Orwigsburg Rentals & Crane Service, Inc. P.O. Box 403 Route 61 Orwigsburg, PA 17961 717-366-1071		Provided the rental of the compressor, air hose, laser levels, target, generator, and chain saw.
Pine Grove Landfill, Inc. 132 Sweisford Lane Coventryville, PA 19465 610-469-0907	Timothy A. Kerchinski Paul A. Yelinek	Certified hazardous waste disposal landfill.
Plasterer EQ CO Inc. 2550 E. Cumberland Street Lebanon, PA 17042 717-273-2616	Tom Pedley	Rented heavy equipment.
Pottsville Environmental Laboratory 164 E. Bacon Street Palo Alto, PA 717-622-7315	Mike Fabian	Provided analytical services.
Quality Stone P.O. Box 226 Gilborton, PA 17934 717-276-6226		Provided riprap and stone for the site access road and the sludge drying/staging pits.
St. Jude Polymer Corporation 1 Industrial Park Road Frackville, PA 17931	Frank Petroponis	Provided the use of their domestic water.

AGENCY	CONTACT	BRIEF DESCRIPTION OF DUTIES
Scranton Materials Craftsman 717-455-6540		Provided the type M PennDOT inlet tops with removable grates as well as the inlet catch basins.
Small Mountain Quarry P.O. Box 1183 Wilkes-Barre, PA 18703-1183 717-455-3961		Provided the screened topsoil.
Valley Seeding Company Rural Route 42 Box 256 Sugarioaf, PA 18249	Mary Burke	Provided the mulching materials.
Waste Concepts, Inc.	Mike Rosco	Provided fly ash, lime dust and cement kiln dust for drying and bulking operations.
Carmuese Chimie Minerale P.O. Box 160 Annville, PA 17003 717-867-4441	Tammy DePue	Transported the bulking material to site.
Millard Lime & Stone Company Annville, PA 17003		Provided stone for on-site activities.
Whiterock Quarry Lehigh Cement York, PA 410-321-1756	Dick Rigstock	Provided bulking materials for the sludge drying operations.
KBS, Inc. P.O. Box 27 Thomasville, PA 17364		Transported bulking material to site.

2.2 Organization of the Response



3.0 NARRATIVE OF EVENTS

The following is an overall narrative of removal activities completed at the Metropolitan Mirror & Glass Site. A detailed discussion of events, as they developed, can be found in Section 6.0, Chronology of Events.

A site scoping meeting was held onsite on 14 May 1997. The RPM, SATA, ERCS and a PADEP representative were present to discuss the site work plan and removal activities. The PADEP representative conducted a site tour and provided site background information. Also on this date, RPM Dennis met with the St. Jude Polymer Corporation Vice President, Mr. Frank Petroponis, to brief him on the removal start date and to request permission to access the two wastewater settling lagoons.

ERCS mobilized to the site on 28 May 1997 for site setup. SATA mobilized to the site on 2 June 1997. The local news station WYOU Channel 22 was also on site on this date to document some of the removal activities. The command post also arrived on site on this date.

On 3 June 1997, OSC Fox and RPM Dennis mobilized to the site for a site operations meeting with SATA and ERCS. The ERCS RM met with a representative from the Frackville Area Municipal Authority (FAMA) to discuss a petition to discharge surface water and groundwater to the local publicly owned water treatment works (POTW) through a sewer tap. FAMA approved the sewer tap but requested periodic sampling of the discharge water and that the water be run through a treatment system prior to discharge.

ERCS began grading and excavating the sludge drying/staging area on 10 June 1997 and excavation of the lead-contaminated soil in the north corner of the manufacturing building was completed. A waste profile was also completed by mixing the contaminated sludge and soil for analysis which will determine the treatment and disposal method for the waste.

On 13 June 1997, the ERCS crew began excavating the earthen berm between lagoons #1 and #2. The excavated material was mixed with the lagoon sludge during excavation.

On 16 June 1997, ERCS backfilled the north corner of the manufacturing building with local certified clean fill after analytical results did not detect any lead levels above those levels established in the action memorandum. FAMA completed the sewer connection and ERCS submitted the analytical results for the lagoon surface water samples. Based on the analytical results, FAMA approved discharge to the local POTW and established discharge rates.

On 18 June 1997, ERCS completed constructing the sludge staging/drying pits and on 27 June 1997, ERCS began 24-hour groundwater pumping operations and sludge excavation. SATA conducted periodic air monitoring to ensure that VOCs were not being released during the sludge excavation process.

The OSC and ERCS determined that fly ash, a by-product of coal incineration, would be used to dry up the liquid bond in the sludge. On 6 July 1997, ERCS began using a mixture of specific operation by-products for bulking operations. Those by-products included fly ash, cement kiln dust and lime kiln dust. With the additional use of lime kiln dust, the ERCS crew upgraded their level of personal protection to level C due to the high pH of the materials.

Pine Grove Landfill, in Pine Grove PA was selected as the disposal facility for the bulked sludge. SATA began monitoring the groundwater levels in two on-site monitoring wells down gradient from the lagoons to determine if groundwater pumping operations were successful in lowering the groundwater levels.

On 10 July 1997, after meeting with the OSC, SATA and ERCS, FAMA representatives increased the rate for the discharge of treated water to the POTW because of the large volume of water that was being received and the increased operating expenses of the POTW.

On 21 and 22 July 1997, excavation to bedrock in the lagoons was completed. ERCS continued mixing operations in the sludge drying/staging pits and began stockpiling soil for restoration activities.

ERCS began clearing vegetation and removing soil along the earthen berm, on the south side of the lagoon, to install two overflow systems. The overflow systems will allow surface water in the lagoon to drain into Stony Creek.

On 31 July 1997, ERCS began transportation and disposal (T&D) operations of the contaminated sludge and lagoon restoration activities. Twenty-four hour groundwater and surface water pumping operations were downgraded to periodic pumping until restoration was complete. To reduce the cost of restoration, the two lagoons were merged into one lagoon because the volume of soil required to reconstruct the middle earthen berm was too large and costly.

On 4 August 1997, ERCS received two prefabricated concrete catch basins on 4 August 1997, that were connected to overflow pipes, to allow overflow water to drain into Stony Creek.

Pumping operations also ceased on this date. A total of 1,883,900 gallons of treated water were discharged into the local POTW to date. All of the equipment used to pump the groundwater and surface water and the equipment used in the pump and treat system was dismantled and decontaminated.

As ERCS continued loading contaminated soil for T&D, they dismantled the sludge drying/staging pits. The area beneath the sludge pits was also excavated to remove any contaminated soil. ERCS raked the banks of the lagoon in preparation for hydro-seeding on 9 August 1997.

On 12 August 1997, T&D of the bulked sludge was completed. A total of 11,120.95 tons of contaminated bulk sludge was transported to the Pine Grove Landfill for disposal. Restoration activities continued and a pipe was installed in the northwest corner of the lagoon to allow surface water to drain into the lagoon.

All site-related equipment was decontaminated and demobilized by 21 August 1997. All site personnel demobilized from site on 21 August 1997. The ERCS foreman mobilized to the site on 25 August 1997, to observe hydro-seeding activities for the completion of on-site restoration.

4.0 RESOURCES COMMITTED

4.1 Initial Funding Request

The action memorandum was signed on 2 May 1997 with a ceiling of $1,640,000. The scope of work included obtaining site access, sampling and hazardous waste characterization, pump and treatment of the surface water and groundwater, solidification of the sludge, contaminated sludge and soil transportation and disposal and site restoration. A copy of the funding request is provided in Appendix B.

4.2 Estimated Total Cost Summary

Extramural

ERCS	$ 981,761
SATA	$ 29,488
Extramural Subtotal	$1,011,249

Intramural

EPA (Direct)	$ 13,315
EPA (Indirect)	$ 24,065
Intramural Subtotal	$ 37,380
Total Project Costs (estimated)	$1,048,629
Project Ceiling	$1,640,000
Percent of Project Ceiling Expended	64%

5.0 EFFECTIVENESS OF THE REMOVAL

5.1 Activities of the Various Agencies

5.1.1 Federal Agencies

The management of this project was directed by the U.S. EPA Region III Superfund Removal Branch. Douglas Fox served as the Federal On-Scene Coordinator (OSC) of the project and directed all removal actions. OSC Fox directed the daily activities of ERCS and SATA personnel. In addition, the OSC closely coordinated with other EPA personnel, local officials, and local residents.

The Remedial Project Manager (RPM) Eugene Dennis, oversaw the remedial investigations on site. He was an initial liaison with the current site owner and the state representative. RPM Dennis provided site background and historical information during site operations.

FAS Joanne McDonald assisted the OSC with cost tracking, contractor issues, and various administrative duties.

Joan Johnson of EPA Region III's Office of Regional Counsel (ORC), handled site-related legal affairs and advised the OSC of such matters as necessary.

5.1.2 State and Local Agencies

Len Zelinka and Paul Fosko, representatives of the Pennsylvania Department of Environmental Protection (PADEP) conducted several site visits and served as a source for historical site background and local contacts.

The Frackville Area Municipal Authority treated the site water that was discharge into the sewer tap to their publicly owned water treatment (POTW) facility. Discharge rates were established for the necessary chemical treatment.

5.1.3 Contractors

The Roy F. Weston, Inc. Federal Programs Division provided members of the Site Assessment Technical Assistance (SATA) team to provide support to the OSC during removal activities. Their responsibilities included multimedia sampling, air monitoring, site safety, photographic and written documentation, cost tracking and drafting of documents.

Earth Tech Remediation Services served as the cleanup contractor under the U. S. EPA Region III Emergency Response Cleanup Services (ERCS) contract. Their responsibilities included pumping and treatment of the surface water and groundwater, solidification of the contaminated sludge, excavation of the contaminated sludge and soil, procurement of transportation and disposal (T&D) of the contaminated materials and site restoration.

5.2 Analytical Synopsis

Contaminated soil and sediment were identifiedd during the site remedial investigation process. Confirmation samples were collected when excavation was completed in the designated areas to determine if the removal activity was successful in reducing or eliminating contamination of that media. The results of the confirmation samples can be found in Table 1 below. Complete copies of the analytical packages are kept in the site file.

Table 1
Analytical Results for Post Excavation Sampling

Sample Identification	Matrix	Location	Lead Results in Parts Per Million (PPM)	Silver Results in Parts Per Million (PPM)
CSS-18	Soil	North Corner of the Manufacturing building	110	NSF
RA-1	Soil	Lagoon #1 NE Corner	NSF	0.42
RA-2	Soil	Lagoon #1 Middle	NSF	0.45
RA-3	Soil	Lagoon #1 SW Corner	NSF	0.44
RA-4	Soil	Lagoon #2 NW Corner	NSF	1.60
RA-5	Soil	Lagoon #2 Middle	NSF	0.43
RA-6	Soil	Lagoon #2 SE Corner	NSF	3.30
RA-7	Soil	Lagoon #2 Soil on Bank	NSF	49.50
RA-8	Soil	Lagoon #2 SE Corner	NSF	2.10
RA-9	Water	Blank	ND	ND
A-1	Soil	Excavated Area	NSF	0.72
A-2	Soil	Excavated Area	NSF	0.86
A-4	Soil	Excavated Area	NSF	42.6

NSF - Not Sampled For
ND - Not detected

5.3 Disposal Methods and Quantities Removed

Table 2 provides the detailed manifest information of materials that were transported and disposed from the Metropolitan Mirror & Glass Site. Actual manifests are stored in the site file which is maintained in the EPA Region III Central File Room, in Philadelphia, Pennsylvania.

Table 2
Disposal Methods and Quantities Removed

Number of Trucks	Site Manifest DOC #	Ticket Number	Shipping Date	Transporter	Quantity of Waste (Tons)
1.	PGL0201	166196	7/23/97	Jesse Baro	22.43

Number of Trucks	Site Manifest DOC #	Ticket Number	Shipping Date	Transporter	Quantity of Waste (Tons)
2.	PGL0202	166203	7/23/97	Ernst & Sons	25.35
3.	PGL0203	166225	7/23/97	Ernst & Sons	22.93
4.	PGL0204	166217	7/23/97	Jesse Baro	24.89
5.	PGL0205	166233	7/23/97	Ernst & Sons	25.09
6.	PGL0206	166235	7/23/97	Ernst & Sons	22.99
7.	PGL0207	166240	7/23/97	Jesse Baro	23.27
8.	PGL0208	166255	7/24/97	Ernst & Sons	21.12
9.	PGL0209	166254	7/24/97	Jesse Baro	20.89
10.	PGL0210	166256	7/24/97	Ernst & Sons	25.86
11.	PGL0211	166257	7/24/97	Ernst & Sons	25.06
12.	PGL0212	166258	7/24/97	Ernst & Sons	22.48
13.	PGL0213	166260	7/24/97	Ernst & Sons	22.48
14.	PGL0214	166263	7/24/97	Ernst & Sons	25.61
15.	PGL0215	166267	7/24/97	Ernst & Sons	24.94
16.	PGL0216	166280	7/24/97	Ernst & Sons	29.91
17.	PGL0217	166278	7/24/97	Jesse Baro	22.03
18.	PGL0218	166281	7/24/97	Ernst & Sons	24.88
19.	PGL0219	166285	7/24/97	Ernst & Sons	29.01
20.	PGL0220	166284	7/24/97	Ernst & Sons	24.97
21.	PGL0221	Void	---------	----------	-------
22.	PGL0222	166286	7/24/97	Ernst & Sons	31.09
23.	PGL0223	166288	7/24/97	Ernst & Sons	22.93
24.	PGL0224	166290	7/24/07	Ernst & Sons	25.24
25.	PGL0225	166293	7/24/97	Ernst & Sons	25.09
26.	PGL0226	166296	7/24/97	Ernst & Sons	19.65
27.	PGL0227	166300	7/24/97	Jesse Baro	24.23
28.	PGL0228	166303	7/24/97	Ernst & Sons	19.33
29.	PGL0229	166308	7/24/97	Ernst & Sons	21.80
30.	PGL0230	166307	7/24/97	Ernst & Sons	17.52
31.	PGL0231	166310	7/24/97	Ernst & Sons	20.67
32.	PGL0232	166313	7/24/97	Ernst & Sons	20.27
33.	PGL0233	166314	7/24/97	Ernst & Sons	22.17
34.	PGL0234	166319	7/24/97	Jesse Baro	18.44
35.	PGL0235	166320	7/24/97	Ernst & Sons	21.54
36.	PGL0236	166321	7/24/97	Ernst & Sons	22.19
37.	PGL0237	166331	7/24/97	Jesse Baro	22.97
38.	PGL0238	166332	7/24/97	Ernst & Sons	22.11
39.	PGL0239	166339	7/24/97	Jesse Baro	23.94
40.	PGL0240	166354	7/25/97	Jesse Baro	26.04
41.	PGL0241	166357	7/25/97	Ernst & Sons	26.77
42.	PGL0242	166358	7/25/97	Ernst & Sons	28.06

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Number of Trucks	Site Manifest DOC #	Ticket Number	Shipping Date	Transporter	Quantity of Waste (Tons)
43.	PGL0243	166360	7/25/97	Ernst & Sons	28.28
44.	PGL0244	VOID	---------	----------	--------
45.	PGL0245	166361	7/25/97	Ernst & Sons	24.47
46.	PGL0246	166364	7/25/97	Ernst & Sons	27.02
47.	PGL0247	166363	7/25/97	Ernst & Sons	29.13
48.	PGL0248	166366	7/25/97	Ernst & Sons	27.94
49.	PGL0249	166368	7/25/97	Ernst & Sons	29.13
50.	PGL0250	166374	7/25/97	Ernst & Sons	27.07
51.	PGL0251	166376	7/25/97	Ernst & Sons	26.76
52.	PGL0252	166375	7/25/97	Jesse Baro	22.52
53.	PGL0253	166378	7/25/97	Ernst & Sons	26.46
54.	PGL0254	166380	7/25/97	Ernst & Sons	27.13
55.	PGL0255	166386	7/25/97	Ernst & Sons	26.13
56.	PGL0256	166387	7/25/97	Ernst & Sons	27.51
57.	PGL0257	166389	7/25/97	Ernst & Sons	23.00
58.	PGL0258	166395	7/25/97	Ernst & Sons	23.18
59.	PGL0259	166396	7/25/97	Ernst & Sons	25.60
60.	PGL0260	166396	7/25/97	Ernst & Sons	21.83
61.	PGL0261	166400	7/25/97	Jesse Baro	21.33
62.	PGL0262	166404	7/25/97	Ernst & Sons	22.16
63.	PGL0263	166405	7/25/97	Ernst & Sons	18.24
64.	PGL0264	166406	7/25/97	Ernst & Sons	23.72
65.	PGL0265	166412	7/25/97	Jesse Baro	21.26
66.	PGL0266	166427	7/25/97	Ernst & Sons	22.74
67.	PGL0267	166428	7/25/97	Jesse Baro	23.65
68.	PGL0268	166440	7/25/97	Jesse Baro	24.29
69.	PGL0269	166451	7/25/97	Jesse Baro	24.96
70.	PGL0270	166458	7/25/97	Jesse Baro	24.73
71.	PGL0271	166542	7/28/97	Ernst & Sons	19.61
72.	PGL0272	166544	7/28/97	Ernst & Sons	23.63
73.	PGL0273	166546	7/28/97	Jesse Baro	22.77
74.	PGL0274	166549	7/28/97	Ernst & Sons	25.58
75.	PGL0275	166551	7/28/97	Ernst & Sons	27.95
76.	PGL0276	166552	7/28/97	Ernst & Sons	24.70
77.	PGL0277	166553	7/28/97	Ernst & Sons	23.37
78.	PGL0278	166554	7/28/97	Ernst & Sons	20.63
79.	PGL0279	166555	7/28/97	Ernst & Sons	24.48
80.	PGL0280	166558	7/28/97	Ernst & Sons	26.20*
81.	PGL0281	166561	7/28/97	Ernst & Sons	25.38
82.	PGL0282	166560	7/28/97	Ernst & Sons	24.29
83.	PGL0283	166562	7/28/97	Jesse Baro	22.88

Number of Trucks	Site Manifest DOC #	Ticket Number	Shipping Date	Transporter	Quantity of Waste (Tons)
84.	PGL0284	166564	7/28/97	Ernst & Sons	23.72
85.	PGL0285	166574	7/28/97	Ernst & Sons	17.75
86.	PGL0286	166571	7/28/97	Ernst & Sons	21.09
87.	PGL0287	166576	7/28/97	Ernst & Sons	23.10
88.	PGL0288	166578	7/28/97	Ernst & Sons	30.98
89.	PGL0289	166580	7/28/97	Jesse Baro	25.15
90.	PGL0290	166582	7/28/97	Ernst & Sons	24.22
91.	PGL0291	166584	7/28/97	Ernst & Sons	23.40
92.	PGL0292	166591	7/28/97	Ernst & Sons	21.71
93.	PGL0293	166593	7/28/97	Ernst & Sons	21.08
94.	PGL0294	166596	7/28/97	Jesse Baro	23.19
95.	PGL0295	166600	7/28/97	Ernst & Sons	22.86
96.	PGL0296	166602	7/28/97	Ernst & Sons	20.42
97.	PGL0297	166603	7/28/97	Jesse Baro	22.49
98.	PGL0298	166605	7/28/97	Ernst & Sons	23.42
99.	PGL0299	166615	7/28/97	Jesse Baro	24.17
100.	PGL0300	166618	7/28/97	Ernst & Sons	22.03
101.	PGL0301	166619	7/28/97	Ernst & Sons	22.09
102.	PGL0302	166628	7/28/97	Jesse Baro	24.51
103.	PGL0303	166637	7/29/97	Jesse Baro	22.90
104.	PGL0304	166640	7/29/97	Ernst & Sons	20.34
105.	PGL0305	166643	7/29/97	Ernst & Sons	21.45
106.	PGL0306	166644	7/29/97	Ernst & Sons	22.71
107.	PGL0307	166648	7/29/97	Ernst & Sons	22.77
108.	PGL0308	166652	7/29/97	Ernst & Sons	21.95
109.	PGL0309	166658	7/29/97	Ernst & Sons	23.39
110.	PGL0310	166659	7/29/97	Jesse Baro	22.73
111.	PGL0311	166662	7/29/97	Ernst & Sons	22.71
112.	PGL0312	166664	7/29/97	Ernst & Sons	22.20
113.	PGL0313	166666	7/29/97	Ernst & Sons	23.52
114.	PGL0314	166670	7/29/97	Ernst & Sons	23.88
115.	PGL0315	166674	7/29/97	Ernst & Sons	24.70
116.	PGL0316	166676	7/29/97	Ernst & Sons	23.62
117.	PGL0317	166677	7/29/97	Ernst & Sons	24.03
118.	PGL0318	166680	7/29/97	Jesse Baro	24.19
119.	PGL0319	166681	7/29/97	Ernst & Sons	22.93
120.	PGL0320	166685	7/29/97	Ernst & Sons	23.33
121.	PGL0321	166682	7/29/97	Ernst & Sons	22.07
122.	PGL0322	166686	7/29/97	Ernst & Sons	21.24
123.	PGL0323	166696	7/29/97	Ernst & Sons	25.42
124.	PGL0324	166698	7/29/97	Ernst & Sons	22.45

Number of Trucks	Site Manifest DOC #	Ticket Number	Shipping Date	Transporter	Quantity of Waste (Tons)
125.	PGL0325	166699	7/29/97	Jesse Baro	23.45
126.	PGL0326	166710	7/29/97	Ernst & Sons	22.07
127.	PGL0327	166718	7/29/97	Jesse Baro	23.26
128.	PGL0328	166720	7/29/97	Ernst & Sons	22.70
129.	PGL0329	166723	7/29/97	Ernst & Sons	25.89
130.	PGL0330	166731	7/29/97	Jesse Baro	23.70
131.	PGL0331	166735	7/29/97	Ernst & Sons	22.53
132.	PGL0332	166737	7/29/97	Ernst & Sons	20.82
133.	PGL0333	166742	7/29/97	Jesse Baro	23.97
134.	PGL0334	166745	7/29/97	Jesse Baro	24.26
135.	PGL0335	166762	7/30/97	Ernst & Sons	22.03
136.	PGL0336	166764	7/30/97	Jesse Baro	24.50
137.	PGL0337	166768	7/30/97	Ernst & Sons	20.59
138.	PGL0338	166766	7/30/97	Ernst & Sons	22.33
139.	PGL0339	166769	7/30/97	Ernst & Sons	22.04
140.	PGL0340	166770	7/30/97	Ernst & Sons	21.57
141.	PGL0341	166772	7/30/97	Ernst & Sons	22.21
142.	PGL0342	166776	7/30/97	Ernst & Sons	23.76
143.	PGL0343	166775	7/30/97	Jesse Baro	23.66
144.	PGL0344	166781	7/30/97	Ernst & Sons	22.97
145.	PGL0345	166782	7/30/97	Ernst & Sons	25.98
146.	PGL0346	166784	7/30/97	Ernst & Sons	25.06
147.	PGL0347	166787	7/30/97	Ernst & Sons	24.75
148.	PGL0348	166788	7/30/97	Ernst & Sons	24.43
149.	PGL0349	166791	7/30/97	Ernst & Sons	22.83
150.	PGL0350	166792	7/30/97	Ernst & Sons	23.57
151.	PGL0351	166793	7/30/97	Ernst & Sons	23.10
152.	PGL0352	166798	7/30/97	Ernst & Sons	25.50
153.	PGL0353	166796	7/30/97	Jesse Baro	23.24
154.	PGL0354	166799	7/30/97	Ernst & Sons	25.99
155.	PGL0355	166801	7/30/97	Ernst & Sons	25.16
156.	PGL0356	166801	7/30/97	Ernst & Sons	25.17
157.	PGL0357	166803	7/30/97	Ernst & Sons	23.38
158.	PGL0358	166804	7/30/97	Ernst & Sons	24.88
159.	PGL0359	166811	7/30/97	Ernst & Sons	23.56
160.	PGL0360	166809	7/30/97	Jesse Baro	23.16
161.	PGL0361	166812	7/30/97	Ernst & Sons	25.31
162.	PGL0362	166817	7/30/97	Ernst & Sons	21.94
163.	PGL0363	166821	7/30/97	Ernst & Sons	22.97
164.	PGL0364	166822	7/30/97	Ernst & Sons	22.58
165.	PGL0365	166825	7/30/97	Ernst & Sons	22.38

Number of Trucks	Site Manifest DOC #	Ticket Number	Shipping Date	Transporter	Quantity of Waste (Tons)
166.	PGL0366	166826	7/30/97	Jesse Baro	22.45
167.	PGL0367	166827	7/30/97	Ernst & Sons	23.99
168.	PGL0368	166833	7/30/97	Ernst & Sons	24.64
169.	PGL0369	166839	7/30/97	Ernst & Sons	25.32
170.	PGL0370	166842	7/30/97	Ernst & Sons	22.34
171.	PGL0371	166843	7/30/97	Jesse Baro	24.00
172.	PGL0372	166844	7/30/97	Ernst & Sons	23.03
173.	PGL0373	166855	7/30/97	Jesse Baro	24.00
174.	PGL0374	166869	7/30/97	Jesse Baro	23.24
175.	PGL0375	166884	7/31/97	Ernst & Sons	21.53
176.	PGL0376	166888	7/31/97	Ernst & Sons	22.98
177.	PGL0377	166885	7/31/97	Jesse Baro	22.08
178.	PGL0378	166883	7/31/97	Ernst & Sons	23.00
179.	PGL0379	166894	7/31/97	Ernst & Sons	24.01
180.	PGL0380	166898	7/31/97	Ernst & Sons	22.48
181.	PGL0381	166900	7/31/97	Ernst & Sons	22.46
182.	PGL0382	166904	7/31/97	Ernst & Sons	24.05
183.	PGL0383	166905	7/31/97	Ernst & Sons	23.64
184.	PGL0384	166906	7/31/97	Jesse Baro	22.31
185.	PGL0385	166908	7/31/97	Ernst & Sons	24.84
186.	PGL0386	166909	7/31/97	Ernst & Sons	23.34
187.	PGL0387	166914	7/31/97	Ernst & Sons	25.32
188.	PGL0388	166918	7/31/97	Ernst & Sons	24.51
189.	PGL0389	166921	7/31/97	Ernst & Sons	23.60
190.	PGL0390	166922	7/31/97	Ernst & Sons	24.37
191.	PGL0391	166924	7/31/97	Ernst & Sons	23.68
192.	PGL0392	166925	7/31/97	Ernst & Sons	22.18
193.	PGL0393	166926	7/31/97	Jesse Baro	23.19
194.	PGL0394	166929	7/31/97	Ernst & Sons	25.72
195.	PGL0395	166932	7/31/97	Ernst & Sons	23.67
196.	PGL0396	166935	7/31/97	Ernst & Sons	26.21
197.	PGL0397	166937	7/31/97	Ernst & Sons	23.78
198.	PGL0398	166939	7/31/97	Ernst & Sons	24.89
199.	PGL0399	166942	7/31/97	Ernst & Sons	25.07
200.	PGL0400	166947	7/31/97	Ernst & Sons	25.13
201.	PGL0401	166945	7/31/97	Jesse Baro	22.62
202.	PGL0402	166949	7/31/97	Ernst & Sons	24.65
203.	PGL0403	166959	7/31/97	Ernst & Sons	23.18
204.	PGL0404	166962	7/31/97	Jesse Baro	22.39
205.	PGL0405	166968	7/31/97	Ernst & Sons	20.89
206.	PGL0406	166970	7/31/97	Ernst & Sons	19.62

Number of Trucks	Site Manifest DOC #	Ticket Number	Shipping Date	Transporter	Quantity of Waste (Tons)
207.	PGL0407	166972	7/31/97	Ernst & Sons	21.28
208.	PGL0408	166976	7/31/97	Jesse Baro	22.39
209.	PGL0409	166988	7/31/97	Ernst & Sons	20.27
210.	PGL0410	166990	7/31/97	Jesse Baro	24.51
211.	PGL0411	166999	7/31/97	Ernst & Sons	23.26
212.	PGL0412	167000	7/31/97	Jesse Baro	24.22
213.	PGL0413	167012	8/01/97	Jesse Baro	24.18
214.	PGL0414	167014	8/01/97	Ernst & Sons	23.04
215.	PGL0415	167015	8/01/97	Ernst & Sons	22.95
216.	PGL0416	167018	8/01/97	Ernst & Sons	21.07
217.	PGL0417	167020	8/01/97	Ernst & Sons	21.29
218.	PGL0418	167024	8/01/97	Ernst & Sons	22.07
219.	PGL0419	167031	8/01/97	Ernst & Sons	22.58
220.	PGL0420	167032	8/01/97	Ernst & Sons	24.28
221.	PGL0421	167033	8/01/97	Jesse Baro	25.18
222.	PGL0422	167035	8/01/97	Ernst & Sons	22.96
223.	PGL0423	167036	8/01/97	Ernst & Sons	24.32
224.	PGL0424	167038	8/01/97	Ernst & Sons	24.02
225.	PGL0425	167043	8/01/97	Ernst & Sons	26.26
226.	PGL0426	167042	8/01/97	Ernst & Sons	24.43
227.	PGL0427	167049	8/01/97	Ernst & Sons	25.21
228.	PGL0428	167048	8/01/97	Jesse Baro	22.71
229.	PGL0429	167053	8/01/97	Ernst & Sons	23.51
230.	PGL0430	167054	8/01/97	Ernst & Sons	21.82
231.	PGL0431	167055	8/01/97	Ernst & Sons	22.28
232.	PGL0432	167057	8/01/97	Ernst & Sons	26.12
233.	PGL0433	167059	8/01/97	Ernst & Sons	22.79
234.	PGL0434	167062	8/01/97	Ernst & Sons	24.24
235.	PGL0435	167063	8/01/97	Ernst & Sons	25.23
236.	PGL0436	167066	8/01/97	Ernst & Sons	22.85
237.	PGL0437	167070	8/01/97	Ernst & Sons	23.46
238.	PGL0438	167071	8/01/97	Jesse Baro	23.03
239.	PGL0439	167075	8/01/97	Ernst & Sons	21.81
240.	PGL0440	167078	8/01/97	Ernst & Sons	22.05
241.	PGL0441	167081	8/01/97	Ernst & Sons	23.14
242.	PGL0442	167084	8/01/97	Ernst & Sons	20.64
243.	PGL0443	167090	8/01/97	Ernst & Sons	22.57
244.	PGL0444	167091	8/01/97	Ernst & Sons	20.39
245.	PGL0445	167092	8/01/97	Jesse Baro	22.36
246.	PGL0446	167100	8/01/97	Ernst & Sons	23.05
247.	PGL0447	167207	8/04/97	Ernst & Sons	25.24

Number of Trucks	Site Manifest DOC #	Ticket Number	Shipping Date	Transporter	Quantity of Waste (Tons)
248.	PGL0448	167208	8/04/97	Jesse Baro	25.47
249.	PGL0449	167210	8/04/97	Ernst & Sons	26.14
250.	PGL0450	167211	8/04/97	Ernst & Sons	26.90
251.	PGL0451	167212	8/04/97	Ernst & Sons	26.11
252.	PGL0452	167214	8/04/97	Ernst & Sons	25.43
253.	PGL0453	167216	8/04/97	Ernst & Sons	26.43
254.	PGL0454	167223	8/04/97	Ernst & Sons	22.29
255.	PGL0455	167226	8/04/97	Ernst & Sons	23.75
256.	PGL0456	167225	8/04/97	Jesse Baro	22.51
257.	PGL0457	167227	8/04/97	Ernst & Sons	23.91
258.	PGL0458	167230	8/04/97	Ernst & Sons	23.47
259.	PGL0459	167232	8/04/97	Ernst & Sons	25.27
260.	PGL0460	167233	8/04/97	Ernst & Sons	24.30
261.	PGL0461	167235	8/04/97	Ernst & Sons	24.30
262.	PGL0462	167238	8/04/97	Ernst & Sons	25.62
263.	PGL0463	167240	8/04/97	Ernst & Sons	22.99
264.	PGL0464	167242	8/04/97	Ernst & Sons	22.69
265.	PGL0465	167241	8/04/97	Jesse Baro	22.46
266.	PGL0466	167244	8/04/97	Ernst & Sons	24.68
267.	PGL0467	167251	8/04/97	Ernst & Sons	22.85
268.	PGL0468	167252	8/04/97	Ernst & Sons	23.16
269.	PGL0469	167255	8/04/97	Ernst & Sons	25.02
270.	PGL0470	167256	8/04/97	Ernst & Sons	23.74
271.	PGL0471	167257	8/04/97	Jesse Baro	23.32
272.	PGL0472	167295	8/04/97	Ernst & Sons	25.23
273.	PGL0473	167271	8/04/97	Ernst & Sons	23.20
274.	PGL0474	167272	8/04/97	Jesse Baro	22.86
275.	PGL0475	167275	8/04/97	Ernst & Sons	22.63
276.	PGL0476	167284	8/04/97	Ernst & Sons	24.84
277.	PGL0477	167289	8/04/97	Ernst & Sons	22.63
278.	PGL0478	167285	8/04/97	Jesse Baro	24.47
279.	PGL0479	167288	8/04/97	Ernst & Sons	23.38
280.	PGL0480	167293	8/04/97	Ernst & Sons	23.65
281.	PGL0481	167297	8/04/97	Ernst & Sons	24.45
282.	PGL0482	167309	8/04/97	Jesse Baro	20.97
283.	PGL0483	167317	8/04/97	Ernst & Sons	24.90
284.	PGL0484	167318	8/04/97	Ernst & Sons	22.36
285.	PGL0485	167321	8/04/97	Ernst & Sons	24.44
286.	PGL0486	167324	8/04/97	Jesse Baro	23.69
287.	PGL0487	167329	8/04/97	Ernst & Sons	23.10
288.	PGL0488	167339	8/05/97	Ernst & Sons	21.51

Number of Trucks	Site Manifest DOC #	Ticket Number	Shipping Date	Transporter	Quantity of Waste (Tons)
289.	PGL0489	167336	8/05/97	Jesse Baro	22.94
290.	PGL0490	167340	8/05/97	Ernst & Sons	22.03
291.	PGL0491	167341	8/05/97	Ernst & Sons	20.07
292.	PGL0492	167342	8/05/97	Ernst & Sons	21.47
293.	PGL0493	167343	8/05/97	Ernst & Sons	25.29
294.	PGL0494	167344	8/05/97	Ernst & Sons	23.31
295.	PGL0495	167345	8/05/97	Ernst & Sons	23.43
296.	PGL0496	167348	8/05/97	Ernst & Sons	23.71
297.	PGL0497	167357	8/05/97	Jesse Baro	22.55
298	PGL0498	167358	8/05/97	Ernst & Sons	21.65
299.	PGL0499	167361	8/05/97	Ernst & Sons	21.47
300.	PGL0500	167364	8/05/97	Ernst & Sons	23.65
301.	PGL0501	167363	8/05/97	Ernst & Sons	21.49
302.	PGL0502	167366	8/05/97	Ernst & Sons	22.80
303.	PGL0503	167367	8/05/97	Ernst & Sons	21.38
304.	PGL0504	167369	8/05/97	Ernst & Sons	20.53
305.	PGL0505	167372	8/05/97	Ernst & Sons	21.77
306.	PGL0506	167374	8/05/97	Ernst & Sons	22.65
307.	PGL0507	167376	8/05/97	Jesse Baro	21.41
308.	PGL0508	167379	8/05/97	Ernst & Sons	23.03
309.	PGL0509	167381	8/05/97	Ernst & Sons	22.19
310	PGL0510	167383	8/05/97	Ernst & Sons	23.36
311.	PGL0511	167385	8/05/97	Ernst & Sons	24.95
312	PGL0512	167388	8/05/97	Ernst & Sons	23.92
313.	PGL0513	167391	8/05/97	Ernst & Sons	25.08
314.	PGL0514	167395	8/05/97	Ernst & Sons	24.95
315.	PGL0515	167396	8/05/97	Jesse Baro	24.31
316.	PGL0516	167402	8/05/97	Ernst & Sons	23.76
317.	PGL0517	167409	8/05/97	Ernst & Sons	22.74
318.	PGL0518	167410	8/05/97	Ernst & Sons	22.49
319	PGL0519	167407	8/05/97	Jesse Baro	22.76
320.	PGL0520	167421	8/05/97	Ernst & Sons	23.11
321.	PGL0521	167424	8/05/97	Ernst & Sons	23.81
322.	PGL0522	167426	8/05/97	Jesse Baro	23.81
323.	PGL0523	167429	8/05/97	Ernst & Sons	23.75
324.	PGL0524	167434	8/05/97	Jesse Baro	24.43
325.	PGL0525	167443	8/05/97	Ernst & Sons	24.92
326.	PGL0526	167445	8/05/97	Ernst & Sons	24.50
327.	PGL0527	167451	8/05/97	Jesse Baro	24.80
328.	PGL0577	167469	8/06/97	Ernst &Sons	21.72
329.	PGL0578	167468	8/06/97	Jesse Baro	23.68

Number of Trucks	Site Manifest DOC #	Ticket Number	Shipping Date	Transporter	Quantity of Waste (Tons)
330.	PGL0579	167470	8/06/97	Ernst & Sons	24.23
331.	PGL0580	167473	8/06/97	Ernst & Sons	25.34
332.	PGL0581	167475	8/06/97	Ernst & Sons	25.05
333.	PGL0582	167476	8/06/97	Ernst & Sons	25.95
334.	PGL0583	167477	8/06/97	Ernst & Sons	24.32
335.	PGL0584	167480	8/06/97	Ernst & Sons	24.79
336.	PGL0585	167481	8/06/97	Ernst & Sons	23.75
337.	PGL0586	167486	8/06/97	Ernst & Sons	22.14
338.	PGL0587	167489	8/06/97	Jesse Baro	22.47
339.	PGL0588	167492	8/06/97	Ernst & Sons	22.13
340.	PGL0589	167494	8/06/97	Ernst & Sons	22.28
341.	PGL0590	167495	8/06/97	Ernst & Sons	22.54
342.	PGL0591	167497	8/06/97	Ernst & Sons	20.86
343.	PGL0592	167499	8/06/97	Ernst & Sons	21.08
344.	PGL0593	167501	8/06/97	Ernst & Sons	21.17
345.	PGL0594	167503	8/06/97	Ernst & Sons	20.21
346.	PGL0595	167504	8/06/97	Jesse Baro	21.15
347.	PGL0596	167506	8/06/97	Ernst & Sons	21.66
348	PGL0597	167510	8/06/97	Ernst & Sons	24.40
349.	PGL0598	167515	8/06/97	Ernst & Sons	22.41
350.	PGL0599	167516	8/06/97	Ernst & Sons	21.72
351.	PGL0600	167521	8/06/97	Ernst & Sons	22.20
352.	PGL4102	167519	8/06/97	Jesse Baro	23.47
353.	PGL4103	167523	8/06/97	Ernst & Sons	20.99
354.	PGL4104	167523	8/06/97	Ernst & Sons	24.86
355.	PGL4105	167357	8/06/97	Jesse Baro	23.13
356.	PGL4106	167544	8/06/97	Ernst & Sons	23.07
357.	PGL4107	167547	8/06/97	Jesse Baro	24.91
358.	PGL4108	167555	8/06/97	Ernst & Sons	21.66
359.	PGL4109	167580	8/06/97	Ernst & Sons	20.63
360.	PGL4110	167579	8/06/97	Jesse Baro	23.51
361.	PGL4113	167597	8/06/97	Jesse Baro	21.92
362.	PGL4111	167609	8/07/97	Jesse Baro	23.31
363.	PGL4112	167610	8/07/97	Ernst & Sons	22.34
364.	PGL4114	167612	8/07/97	Ernst & Sons	22.92
365.	PGL4115	167614	8/07/97	Ernst & Sons	19.32
366.	PGL4116	167615	8/07/97	Ernst & Sons	20.86
367.	PGL4117	167623	8/07/97	Ernst & Sons	21.66
368	PGL4118	167630	8/07/97	Ernst & Sons	22.95
369.	PGL4119	167629	8/07/97	Jesse Baro	22.88
370.	PGL4120	167632	8/07/97	Ernst & Sons	22.56

Number of Trucks	Site Manifest DOC #	Ticket Number	Shipping Date	Transporter	Quantity of Waste (Tons)
371.	PGL4121	167633	8/07/97	Ernst & Sons	21.39
372.	PGL4122	167634	8/07/97	Ernst & Sons	22.28
373.	PGL4123	167635	8/07/97	Ernst & Sons	22.55
374.	PGL4124	167639	8/07/97	Ernst & Sons	24.82
375.	PGL4125	167643	8/07/97	Ernst & Sons	24.49
376.	PGL4126	167644	8/07/97	Ernst & Sons	24.67
377.	PGL4127	167648	8/07/97	Ernst & Sons	24.27
378.	PGL0528	167647	8/07/97	Jesse Baro	24.84
379.	PGL0529	167650	8/07/97	Ernst & Sons	23.34
380.	PGL0530	167652	8/07/97	Ernst & Sons	22.59
381.	PGL0531	167653	8/07/97	Ernst & Sons	25.40
382.	PGL0532	167655	8/07/97	Ernst & Sons	22.82
383.	PGL0533	167661	8/07/97	Ernst & Sons	23.67
384.	PGL0534	167663	8/07/97	Ernst & Sons	23.65
385.	PGL0535	167669	8/07/97	Ernst & Sons	22.26
386.	PGL0536	167671	8/07/97	Ernst & Sons	21.99
387.	PGL0537	167672	8/07/97	Jesse Baro	23.19
388.	PGL0538	167673	8/07/97	Ernst & Sons	20.15
389.	PGL0539	167680	8/07/97	Ernst & Sons	20.77
390.	PGL0540	167683	8/07/97	Ernst & Sons	20.61
391.	PGL0541	167688	8/07/97	Ernst & Sons	21.28
392.	PGL0542	167695	8/07/97	Jesse Baro	22.01
393.	PGL0543	167698	8/07/97	Ernst & Sons	23.38
394.	PGL0544	167702	8/07/97	Ernst & Sons	20.15
395.	PGL0545	167703	8/07/97	Ernst & Sons	21.85
396.	PGL0546	167704	8/07/97	Ernst & Sons	22.25
397.	PGL0547	167706	8/07/97	Jesse Baro	21.13
398.	PGL0548	167715	8/07/97	Jesse Baro	25.77
399.	PGL0549	167720	8/07/97	Ernst & Sons	26.41
400.	PGL0550	167726	8/07/97	Jesse Baro	23.03
401.	PGL4128	167738	8/08/97	Ernst & Sons	25.65
402.	PGL4129	167741	8/08/97	Ernst & Sons	24.57
403.	PGL4130	167742	8/08/97	Ernst & Sons	26.26
404.	PGL0551	167734	8/08/97	Jesse Baro	24.51
405	PGL0552	167743	8/08/97	Ernst & Sons	24.93
406.	PGL0553	167746	8/08/97	Ernst & Sons	25.56
407.	PGL0554	167748	8/08/97	Ernst & Sons	27.63
408.	PGL0555	167750	8/08/97	Ernst & Sons	24.77
409.	PGL0556	167751	8/08/97	Ernst & Sons	27.00
410.	PGL0557	167756	8/08/97	Ernst & Sons	26.31
411.	PGL0558	167764	8/08/97	Ernst & Sons	28.42

Number of Trucks	Site Manifest DOC #	Ticket Number	Shipping Date	Transporter	Quantity of Waste (Tons)
412.	PGL0559	167765	8/08/97	Ernst & Sons	26.99
413.	PGL0560	167763	8/08/97	Jesse Baro	21.94
414.	PGL0561	167769	8/08/97	Ernst & Sons	23.93
415.	PGL0562	167770	8/08/97	Ernst & Sons	23.93
416.	PGL0563	167773	8/08/97	Ernst & Sons	22.71
417.	PGL0564	167776	8/08/97	Ernst & Sons	23.07
418.	PGL0565	167775	8/08/97	Ernst & Sons	23.16
419.	PGL0566	167777	8/08/97	Ernst & Sons	23.47
420.	PGL0567	167779	8/08/97	Ernst & Sons	21.55
421.	PGL0568	167778	8/08/97	Ernst & Sons	22.21
422.	PGL0569	167783	8/08/97	Ernst & Sons	22.11
423.	PGL0570	167784	8/08/97	Ernst & Sons	22.12
424.	PGL0571	167789	8/08/97	Ernst & Sons	22.77
425.	PGL0572	167788	8/08/97	Jesse Baro	22.45
426.	PGL0573	167791	8/08/97	Ernst & Sons	21.89
427.	PGL0574	167792	8/08/97	Ernst & Sons	22.59
428.	PGL0575	167801	8/08/97	Ernst & Sons	22.93
429.	PGL0576	167803	8/08/97	Ernst & Sons	21.71
430.	PGL4101	167804	8/08/97	Jesse Baro	21.90
431.	PGL4131	167808	8/08/97	Ernst & Sons	22.23
432.	PGL4132	167821	8/08/97	Jesse Baro	21.55
433.	PGL4133	167824	8/08/97	Ernst & Sons	22.50
434.	PGL4134	167835	8/08/97	Ernst & Sons	23.15
435.	PGL4135	167834	8/08/97	Ernst & Sons	22.31
436.	PGL4136	167839	8/08/97	Jesse Baro	22.58
437.	PGL4137	167852	8/08/97	Jesse Baro	22.79
438.	PGL4138	167859	8/09/97	Jesse Baro	21.37
439.	PGL4139	167860	8/09/97	Ernst & Sons	21.02
440.	PGL4140	167868	8/09/97	Ernst & Sons	22.91
441.	PGL4141	167864	8/09/97	Ernst & Sons	21.84
442.	PGL4142	167869	8/09/97	Ernst & Sons	22.66
443.	PGL4143	167872	8/09/97	Ernst & Sons	21.63
444.	PGL4144	167884	8/09/97	Jesse Baro	22.33
445.	PGL4145	167889	8/09/97	Ernst & Sons	22.52
446.	PGL4146	167890	8/09/97	Ernst & Sons	22.70
447.	PGL4147	167891	8/09/97	Ernst & Sons	22.01
448.	PGL4148	167901	8/09/97	Ernst & Sons	21.78
449.	PGL4149	167902	8/09/97	Ernst & Sons	22.13
450	PGL4150	167906	8/09/97	Jesse Baro	22.50
451.	PGL4151	167909	8/09/97	Ernst & Sons	22.22
452.	PGL4152	167911	8/09/97	Ernst & Sons	21.68

Number of Trucks	Site Manifest DOC #	Ticket Number	Shipping Date	Transporter	Quantity of Waste (Tons)
453.	PGL4153	167915	8/09/97	Ernst & Sons	21.61
454.	PGL4154	167914	8/09/97	Ernst & Sons	21.14
455.	PGL4155	167926	8/09/97	Ernst & Sons	22.62
456.	PGL4156	167927	8/09/97	Ernst & Sons	20.96
457.	PGL4157	167927	8/09/97	Jesse Baro	22.96
458.	PGL4158	167932	8/09/97	Ernst & Sons	27.90
459.	PGL4159	167937	8/11/97	Jesse Baro	22.03
460.	PGL4160	167938	8/11/97	Ernst & Sons	21.27
461.	PGL4161	167951	8/11/97	Jesse Baro	20.83
462.	PGL4162	167953	8/11/97	Ernst & Sons	22.84
463.	PGL4163	167959	8/11/97	Ernst & Sons	19.30
464.	PGL4164	167961	8/11/97	Ernst & Sons	20.92
465.	PGL4165	167962	8/11/97	Ernst & Sons	20.60
466.	PGL4166	167963	8/11/97	Jesse Baro	21.80
467.	PGL4167	167965	8/11/97	Ernst & Sons	20.52
468.	PGL4168	167973	8/11/97	Ernst & Sons	19.97
469.	PGL4169	167977	8/11/97	Ernst & Sons	24.95
470.	PGL4170	167980	8/11/97	Jesse Baro	22.97
471.	PGL4171	167981	8/11/97	Ernst & Sons	24.14
472.	PGL4172	167983	8/11/97	Ernst & Sons	22.71
473.	PGL4173	167989	8/11/97	Ernst & Sons	22.70
474.	PGL4174	167994	8/11/97	Ernst & Sons	22.68
475.	PGL4175	167999	8/11/97	Jesse Baro	21.50
476.	PGL4176	168004	8/11/97	Ernst & Sons	21.54
477.	PGL4177	168015	8/11/97	Jesse Baro	22.98
27.09	PGL4178	168025	8/11/97	Jesse Baro	
479	PGL4179	-------	8/11/97	Jesse Baro	22(est.)

6.0 CHRONOLOGY OF EVENTS

14 May 1997

The RPM, SATA, ERCS and a PADEP representative arrived on site to discuss the proposed removal activities. The PADEP representative conducted a site tour and provided site background information. ERCS collected nine water samples and nine sludge samples from the wastewater settling lagoons for TCLP analysis. SATA collected one background sample for full scan laboratory analysis. RPM Dennis met with the Vice President of the St. Jude Polymer Corporation, Mr. Frank Petroponis, to discuss the removal start date and to request permission to access the two wastewater settling lagoons.

28 May 1997

ERCS mobilized to site for the initial site setup. They began clearing vegetation, constructed an access road to the lagoons and installed drainage devices for surface water runoff.

2 - 6 June 1997

SATA mobilized to the site. The command post arrived on site and a local news station, WYOU Channel 22, was on site to film site activities. The OSC and RPM mobilized to site for a site operations meeting with SATA and ERCS. Topics of discussion included the site work plan and treatment and disposal options. The ERCS RM met with a representative from the Frackville Area Municipal Authority (FAMA) to discuss ERCS' request to tap a nearby sewer line to discharge pumped surface water and groundwater to the local POTW. Surface water and groundwater pumping was necessary to keep the lagoons dry to allow excavation of the contaminated sludge. FAMA approved the water tap but requested that the water be run through a treatment system consisting of a carbon filter and a bag filter, prior to discharge to the POTW. As per FAMA's request, ERCS collected a sample of the lagoon surface water and analyzed it for nitrite, nitrate, ammonium, phosphorus, and chemical oxygen demand (COD), the primary contaminants of concern which FAMA based their discharge rate charge for treatment.

9 - 13 June 1997

ERCS began excavation in the area where dredged sludge from the lagoons was believed to have been stored. This area was excavated in preparation for the construction of the sludge drying/staging pits. The ERCS RM met with Mr. Petroponis to discuss site activities. ERCS excavated the lead-contaminated soil in the area at the north corner of the manufacturing building to a depth of two feet. SATA collected a confirmation sample in this area to determine if the excavation had reduced the lead to an acceptable level. A 6,500-gallon Baker tank was mobilized to site. The tank was used to stage treated water prior to discharge to the POTW. ERCS compiled a waste profile of the contaminated soil and sludge on site. The profile was sent to a laboratory and the analytical results, once received, would determine the method of treatment and disposal. ERCS began excavating the earthen berm between lagoons #1 and #2. The excavated material was staged on site.

16 - 20 June 1997

Analytical results for the confirmation sample indicated that the excavation successfully reduced the amount of lead contamination in that area and it was cleared for backfill with local certified clean fill. SATA collected two background samples on site and shipped them for CLP method analysis. FAMA completed the sewer connection. ERCS received analytical results for the lagoon surface water sample collected at FAMA's request. Based on the analytical results, FAMA approved the discharge of the water into the local POTW and also set the charge for the discharge rate. ERCS then periodically sampled the treated water to ensure that the treatment system was operating properly and that additional contaminants were not being introduced into the POTW. ERCS completed the construction of the sludge staging/drying pits and began

pumping surface water from the lagoons this week. The sludge pits were constructed by sloping and excavating the area above lagoons #1 and #2 to allow any free liquid to drain, by gravity, back into the lagoon in preparation for disposal. Gabian baskets were filled with large stones and used as a support barrier around both of the sludge pits. The bases of the sludge pits were lined with woven geotech material to ensure that the soil under the sludge pits would not be further contaminated. ERCS installed groundwater and surface water pumps to pump groundwater and surface water. One pump was staged south of lagoon #1, and one was placed on the earthen berm between lagoon #1 and #2. A third pump was also installed in lagoons #1 to pump surface water from lagoon #1 into lagoon #2. ERCS also began grading access ramps into the lagoon.

23 - 27 June 1997

ERCS began 24-hour groundwater pumping operations and sludge excavation during this week. Excavated sludge was placed into the sludge pits and mixed with the excavated soil from the north corner of the manufacturing building and the earthen berm. SATA conducted periodic air monitoring to determine if any VOCs were released during the sludge excavation process. No abnormal levels were detected. The OSC and ERCS determined that fly ash, a by-product of coal incineration, would be used to dry up the liquid in the sludge. A local fly ash distributor was interested in selling their fly ash for the MM&G removal operation however, they requested indemnification from EPA in order to sell their commodity for the site operations; EPA could not offer indemnity to the ERCS sub-contractor and another contractor was selected.

28 June - 4 July 1997

The ERCS crew continued to bulk the sludge in the lagoon to expedite the drying process for treatment and disposal. ERCS began using a mixture of fly ash, cement kiln dust and lime kiln dust. With the additional use of lime kiln dust, the ERCS crew upgraded their level of protection to level C because of the high pH of the materials.

5 - 11 July 1997

Pine Grove Landfill, in Pine Grove, Pennsylvania was selected for the disposal of the bulked sludge. ERCS collected a sample of the lagoon sludge and sent it to a laboratory to be analyzed for ammonium nitrate content. The sample was collected at the request of the landfill in order to comply with state operating regulations. The ERCS crew continued 24-hour pumping operations of the lagoon surface water and groundwater. SATA began monitoring the groundwater levels in two of the on-site monitoring wells down gradient from the lagoons. The OSC, SATA and ERCS met with representatives of FAMA to discuss the rate for discharge of the treated water into the POTW. FAMA increased the discharged rate because of the high volume of water that EPA was discharging to the sewer system. ERCS continued to sample and have the treated water analyzed to be sure that levels for the contaminants of concern did not exceed the levels established by FAMA.

12 -18 July 1997

ERCS continued bulking, mixing and excavating sludge from the two wastewater settling lagoons and 24-hour pumping operations. One ERCS crew member was rotated to work night shift to monitor pumping operations. ERCS also repositioned two of the pumps, placing one in lagoon #2 and the other on the earthen berm.

19 - 25 July 1997

Excavation to bedrock was completed in lagoons #1 and #2 this week. SATA collected a total of seven samples from the base of the lagoons. The samples were sent to the laboratory for analysis. ERCS continued mixing operations in the sludge pits, pump and treatment of the surface water and groundwater, and began stockpiling soil to begin restoration activities.

26 July - 1 August 1997

ERCS began clearing vegetation and removing soil along the earthen berm to install two overflow drainage pipes. SATA received verbal results for the seven soil samples collected in the lagoons. Analytical results indicated that removal activities were successful in reducing the level of soil contamination in the lagoons. ERCS began transportation and disposal (T&D) operations. The bulked waste was transported to the Pine Grove Landfill in Pine Grove, PA. ERCS stopped 24-hour pumping of the surface water and groundwater. However, the pumps were run periodically throughout the work day to keep groundwater from percolating into the lagoons until restoration was completed. ERCS continued to sample the treated discharge water. The analytical results did not indicate any high or elevated levels of FAMA's contaminants of concern. ERCS began restoration activities on site by constructing an access road into the lagoon to allow trucks to unload backfill. The banks of the lagoon were sloped to the original grade and the base of the lagoon was graded using a laser level. The earthen berm that divided the two lagoons was not reconstructed because it would require too large a quantity of soil. Therefore, the two lagoons were merged into one.

4 - 8 August 1997

ERCS continued T&D of the bulked sludge and restoration of the lagoon. Restoration activities included placing a bulk layer of shale into the lagoon and a final vegetative layer of screened topsoil. All of the soil for restoration was acquired from a local vender. ERCS received two prefabricated concrete catch basins. The catch basins were installed in the lagoon below the earthen berm that separated the lagoon and Stony Creek, and overflow pipes were connected to allow water to drain into Stony Creek. ERCS dismantled and decontaminated the pump and treatment system and equipment this week. A total of 1,883,900 gallons of treated lagoon surface water and groundwater was discharged into the local POTW. ERCS began dismantling the two sludge pits and excavating the area beneath them to approximately four to six feet below the original grade. SATA collected three post excavation samples from this area and sent them to a laboratory for analysis. ERCS began raking the area around the lagoon in preparation for the banks of the lagoon to be hydroseeded.

9 - 15 August 1997

Transport and disposal of the bulked sludge was completed this week. A total of 11,120.95 tons of contaminated bulk sludge were transported to the Pine Grove Landfill for disposal. Restoration activities were continued in the lagoon and a pipe was installed in the northwest corner of the lagoon to allow surface water runoff to drain into the lagoon.

16 - 25 August 1997

ERCS continued site restoration activities. All site related equipment was decontaminated and demobilized. All site personnel demobilized from site on Thursday, 21 August 1997. The ERCS foreman mobilized to the site on Monday, 25 August 1997, to observe the hydroseeding subcontractor complete the final stage of on-site restoration.

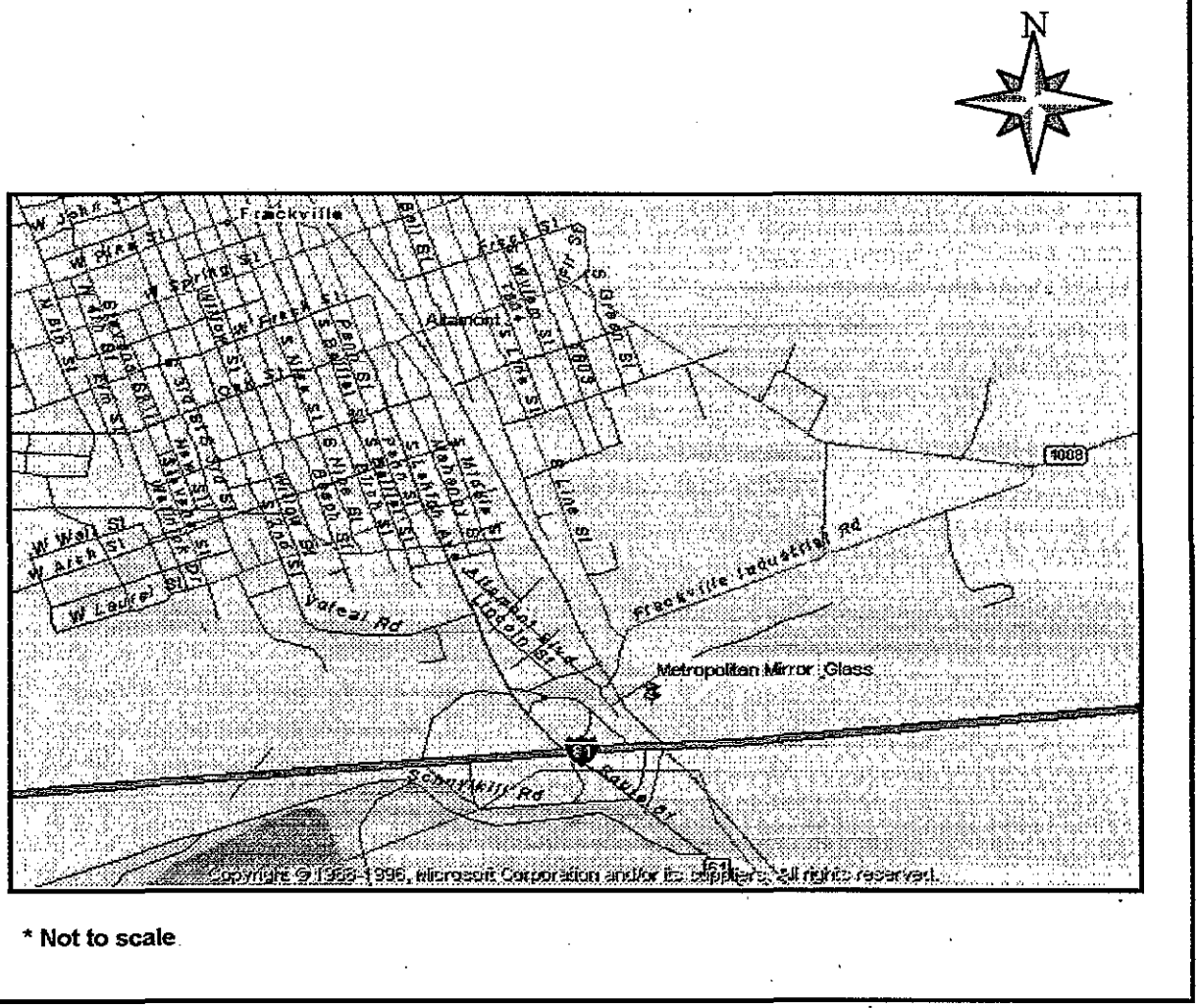
7.0 PROBLEMS ENCOUNTERED AND RECOMMENDATIONS

No significant problems were encountered throughout the duration of the removal action.

APPENDICES

APPENDIX A
SITE MAPS

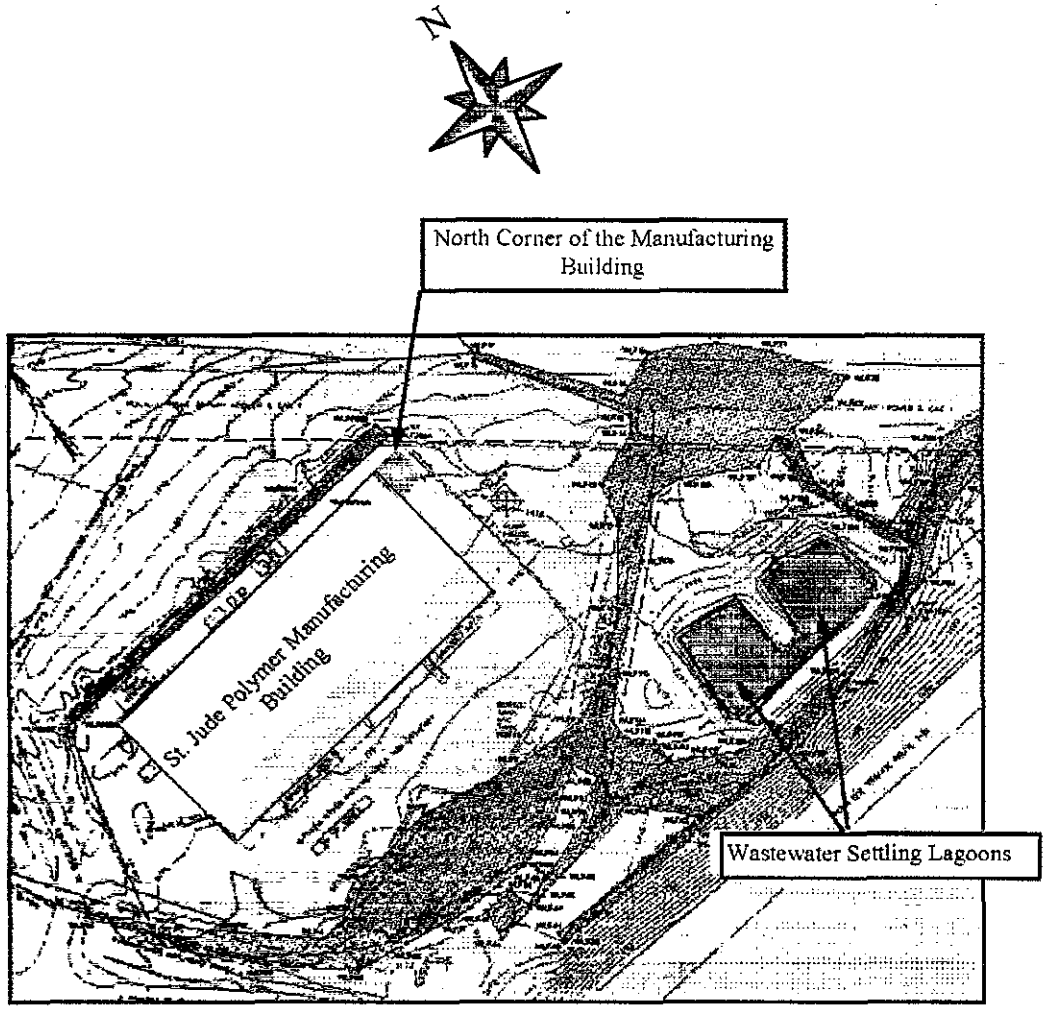
WESTON® MANAGERS DESIGNERS/CONSULTANTS FEDERAL PROGRAMS DIVISION	Metropolitan Mirror & Glass Frackville, Schuylkill County, PA	TDD No. 9801-58 CONTRACT No. 68-S5-3002



* Not to scale

Figure 1
Site Location Map

WESTON® FEDERAL PROGRAMS DIVISION	Metropolitan Mirror & Glass Frackville, Schyulkill County, PA	TDD No. 9801-58 CONTRACT No. 68-S5-3002



* Not to scale

Figure 2.
Site Map

APPENDIX B
FUNDING DOCUMENTS

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
841 Chestnut Building
Philadelphia, Pennsylvania 19107

SUBJECT: Approval of a Request for a Removal Action
Metropolitan Mirror & Glass NPL Site
Frackville, Schuylkill County,
Pennsylvania

DATE: MAY 0 2 1997

FROM: Thomas C. Voltaggio, Director
Hazardous Waste Management Division (3HW00)

TO: Timothy Fields, Acting Assistant Administrator
Office of Solid Waste and Emergency Response (5101)

THRU: Stephen Luftig, Director
Office of Emergency and Remedial Response (5201)

ATTN: Thomas R. Sheckells, Director
Region 3/8 Accelerated Response Center (5201G)

ISSUE

The attached Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Funding request pertains to the Metropollitan Mirror & Glass NPL Site which is located in Frackville, Schuylkill County, Pennsylvania. A Removal Assessment performed in accordance with the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), 40 CFR Part 300.415, has identified a threat to the public health or welfare or the environment posed by the threat of release of hazardous substances or pollutants or contaminants found onsite.

Conditions at the Site meet the removal criteria set forth in the NCP, Section 300.415, pursuant to Delegation of Authority 14-1-A, giving the Director of the Hazardous Waste Management Division (HWMD) authority to approve CERCLA Removal Actions with a total cost less than $2 million and completion within 12 months. Region III has approved this request for $1,640,740 of which $1,572,740 are Extramural Costs, to mitigate the threat to public health or welfare or the environment.

Attachment: Request for Approval of a Removal Action

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
841 Chestnut Building
Philadelphia, Pennsylvania 19107

SUBJECT: Request for Approval of a Removal Action
Metropolitan Mirror & Glass NPL Site
Frackville, Schuylkill County,
Pennsylvania

DATE: MAY 0 2 1997

FROM: Douglas P. Fox, On-Scene Coordinator
Removal Response Section (3HW31)

TO: Thomas C. Voltaggio, Director
Hazardous Waste Management Division (3HW00)

THRU: Abraham Ferdas, Associate Division Director
for Superfund Programs (3HW02)

I. PURPOSE

The Environmental Protection Agency (EPA) Region III On-Scene Coordinator (OSC) conducted a Removal Assessment of the Metropolitan Mirror & Glass Site, Frackville, Schuylkill County, Pennsylvania (the Site). This assessment was conducted in accordance with the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), 40 CFR Section 300.415. Analytical results from previous site assessments performed by the EPA's Remedial Branch determined that the Site poses an imminent and substantial threat to human health or welfare or the environment. This threat is a result of elevated levels of silver and lead in soil and sediment exceeding the EPA Region III Removal Action Levels (RALs). The presence of this contaminated soil and sediment presents a threat of release of contaminants to surface water and an ingestion threat to anyone who might disturb the sediment or consume contaminated soil or water from this source. The OSC has determined that the Site meets the criteria for initiating a time critical Removal Action pursuant to Section 104 of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) as amended, 42 USC Section 9604. The actions necessary at this Site are anticipated to require less than 12 months and $2 million dollars for completion.

II. SITE CONDITIOINS AND BACKGROUND

A. Site Description

The Metropolitan Mirror & Glass Site is located in an industrial park, at Park Road and Altamount Boulevard in the southern part of West Mahanoy Township. The Site is approximately 0.25 miles southeast of Frackville, Schuylkill County,

Pennsylvania. The Site is approximately 12.5 acres, including several rights-of-ways for utilities, interstate highway 81 (I-81), and an abandoned rail line. This property includes a single-story manufacturing building, a small pump house, a water tower, two lagoons, three drainage ditches, a small building connected to the north wall of the manufacturing building, a water supply well located inside of the pump house, and a parking lot located along the south wall of the manufacturing building.

Metropolitan Mirror and Glass purchased the property in 1959 for the production of mirrors. The facility operated until 1982 when it declared bankruptcy. In 1987 the property was bought by St. Jude Polymer Company which currently operates a plastic bottle recycling center.

B. Site Background

When Metropolitan Mirror and Glass was in operation it manufactured mirrors. Manufacturing of the mirrors was a five-stage assembly line process. The chemicals used in the manufacturing process included stannous chloride, copper, copper sulfate, triethanolamine, silica oxide, ceric oxide, trisodium phosphate, sodium hydroxide, sulfuric acid, ferric oxide, silver nitrate, formaldehyde, Keltex S, dextrose, and potassium dichromate. Wastewater generated from the process was sent to two settling lagoons located approximately 250 feet southeast of the manufacturing building. The lagoons are unlined and received liquid waste from the mirror manufacturing operation until 1982. The lagoons were used to settle suspended solids and when filled, the supernatant was discharged into the Stony Creek. Stony Creek, located just beyond the earthen berm of the lagoons, departs the Site and flows under I-81 to join with Mud Run 700 feet downstream. Mud Run flows into Mill Creek and then out to the Schuylkill River. The normal operating volume of each lagoon was 330,000 gallons. The lagoons were periodically dredged and the sludge was staged to drain free liquids. This staging area, a mound of reddish soil covered with vegetation, is located off the northwest corner of Lagoon number 1. In the north corner of the manufacturing building, drums were also believed to be stored.

Under the direction of Pennsylvania Department of Environmental Resouces (PADER), an initial sampling event was conducted in August 1987, and between 1988 and 1990 three phases of the Site inspection, under the direction of EPA, have been conducted. A Preliminary Assessment (PA) was completed in 1989. The PA identified five areas of concern (AOC) where chemical contamination was suspected. A Screening Site Inspection (SSI) was completed in 1989, and the Listing Site Inspection (LSI) was completed in 1990. Extensive sampling was conducted for the SSI and LSI in the five AOCs. Silver was discovered in lagoon sediments above the 100 parts per billion (ppb) Removal Action

Level (RAL) for silver in drinking water (March 1995), and in two of the five AOCs. Silver is the primary contaminant of concern in the wastewater settling lagoons, and the dredge disposal area. The RAL for silver in drinking water (March 1995) was used because of the relationship between the shallow ground water and the sludge and wastewater in the settling lagoon. Elevated levels of lead(1,660 mg/kg) were also detected in soils. This level is above 1430 mg/kg as identified in the new draft Emergency Removal Guidelines for Commercial and Industrial soil, in one of the remaining AOCs. The Emergency Removal Guidelines for Commercial and Industrial lead in soil were used because the facility is in an industrial park and the workers are only potentially exposed while at work. Lead is the primary contaminant of concern for the north corner of the manufacturing building. These areas, in accordance with the Site characteristics and shallow ground water, are believed to pose a threat to public health, welfare, and the environment. A draft Remedial Investigation (RI) is currently being reviewed and under the direction of EPA Region III, the Feasibility Study (FS) process has been initiated.

C. Quantities and Types of Substances Present

In the LSI and SSI Site investigation phases, multi-media samples were collected for each AOC. The analysis of sediment and soil samples collected from the two lagoons revealed elevated levels of silver in the approximate range of 10 to 270 ppm (mg/kg). Volatile Organic Compounds (VOCs) and heavy metals such as copper, chromium, iron, lead, and zinc were also detected. The heavy metals were present at or above the background levels established for the Site. Aqueous samples collected from the standing water in the lagoons and from the onsite monitoring wells were analyzed and hazardous substances were detected. Heavy metals and VOCs were detected. In the dredge disposal area soil samples were collected and analyzed. The analysis detected levels of silver present in the samples at the approximate range of 19 to 68 ppm (mg/kg). Heavy metals and VOCs were also found to be present in the soil samples. In the north corner of the manufacturing facility, soil samples were collected and analyzed. Lead levels ranging from approximately 7 to 1660 ppm (mg/kg), additional heavy metals and VOCs were detected in soil samples. Lead and silver are hazardous substances as defined in Section 101(14) CERCLA, as amended by 42 U.S.C. Section 9601(14).

D. National Priorities List Status

The Metropolitan Mirror and Glass Site is on the National Priorities List (NPL) and a draft Remedial Investigation (RI) report is moving through the review process. The Feasibility Study (FS) process has also been initiated.

E. State and Local Authorities' Roles

The OSC and the Remedial Project Manager (RPM) continue to coordinate and apprise local and State officials of Site activities.

III. THREATS TO PUBLIC HEALTH, WELFARE, OR THE ENVIRONMENT

Section 300.415 of the NCP (40 CFR 300.415) lists the factors to be considered in determining the appropriateness of a Removal Action. Paragraphs (b)(2)(i), (ii), (v), and (vii) of Section 300.415 directly apply as follows to conditions at the Metropolitan Mirror and Glass Site:

300.415 (b)(2)(i) "Actual or potential exposures to nearby human populations, animals, or food chain from hazardous substances or pollutants or contaminants"

Silver concentrations in soil samples collected in the dredge disposal area, and in the soil and sediment samples collected in the two lagoons, exceed the EPA Region III Removal Action Levels (RAL). The contaminated soil in this area is a threat if further development of the property is to occur. There is also a threat of contamination, or further contamination, of the shallow ground water system that moves through and just below this area. Shallow ground water movement is also a large concern near the two lagoons. The silver concentrations found in the sediment samples of AOC 2 (the lagoons) were as high as 86 ppm (mg/kg). The levels in the sediment are a concern because the shallow water table passes through the bottom of the lagoon coming in contact with the sediment and water. The lagoon may also act as a recharge for the underlying ground water which moves laterally across the Site, and is suspected to discharge into Stony Creek. The elevated lead levels also present an inhalation hazard to workers at the current facility. The contamination is found at the north corner of the manufacturing building. The soil in this area with the highest concentrations is from the surface soil to a depth of two feet. If this soil is disturbed either through excavation or high winds, the particles could travel offsite or be inhaled by the workers in the area.

300.415 (v)(2)(ii) "Actual or potential contamination of drinking water supplies or sensitive ecosystems"

The silver concentrations found in the sediment samples of the two lagoons were as high as 86 ppm (mg/kg). The levels in the sediment are a concern because the shallow water table passes through the bottom of the lagoon coming in

contact with the sediment and water. The lagoon may also act as a recharge for the underlying ground water which moves laterally across the Site, and is suspected to discharge into Stony Creek. Stony Creek flows into Mud Run, Mill Creek, and finally the Schuylkill River. Each carries a protective water use designation as Cold Water Fishes (CWF), in accordance in Title 25, Chapter 93, of the Pennsylvania Code. The protected use is described as maintenance and/or propagation of fish species including the family Salmonidae and additional flora and fauna which are indigenous to a cold water habitat. Stony Creek is also considered to represent suitable habitat for wildlife species typical of streams in the area, including a variety of benthic organisms, reptiles, amphibians, and fishes.

300.415 (b)(2)(v) "Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released"

An earthen berm is the only barrier that separates the two lagoons and Stony Creek which is located approximately 20-25 feet from the lagoons. If severe flooding were to occur in the lagoons, there is a high probability that the berm would fail and wastewater and the majority of the sludge would migrate directly into Stony Creek. An instantaneous release of the contaminated materials would severely impact Stony Creek and down river areas.

300.415 (b)(2)(vii) "The availability of other appropriate Federal or State response mechanisms to respond to the release"

The State of Pennsylvania and the current owner do not have the available resources to mitigate the threats posed by the Site at this time.

IV. ENDANGERMENT DETERMINATION

Actual or threatened release of pollutants or contaminants from this Site, unless addressed by the actions outlined in this Request for Approval for a Removal Action, present an immediate and substantial endangerment to public health or welfare or to the environment.

V. ENFORCEMENT

The EPA Removal Enforcement Section has been provided with all background information available to pursue any and all enforcement actions pertaining to the Metropolitan Mirror and Glass Site. (See Confidential Enforcement Addendum)

VI. PROPOSED ACTION AND COSTS

The proposed action for the Metropolitan Mirror and Glass Site are designed to eliminate the imminent and substantial threats posed by the contaminated soil and sediment. At this time, it is estimated that the project will run less than the statutory 12-month and $2 million limit for Removal Actions.

A. Proposed Action

The estimated length of the project is expected to be approximately three months or 68 days. The total project costs are estimated for this time frame. The following are the proposed Removal Actions:

- Restrict access to the Site to prevent unauthorized entry to areas of contamination during the removal action
- Provide 24 hour Site security
- Sample and analyze the lagoon water, sludge, and areas of soil contamination for disposal analysis
- Provide a temporary access road to the lagoon area
- Pump, transport, and dispose of the lagoon wastewater offsite at an EPA accepted, permitted Clean Water Act (CWA) facility
- Recover, stabilize, transport and dispose of the lagoon sludge at an offsite facility appropriate under the Resource Conservation and Recovery Act (RCRA) for disposal of this waste.
- Excavate soils to levels of at least 1430 mg/kg. Transport and dispose of the excavated soils at an EPA accepted, appropriately permitted facility
- Backfill all excavated areas to elevation and gradient
- Perform Site restoration including removal of access road and any temporary fencing installed

B. Estimated Costs

<u>Extramural Costs</u>	
ERCS	$1,300,000
SATA	67,600
Subtotal	$1,367,600
15% Contingency	205,140
Total Extramural	$1,572,740
<u>Intramural Costs</u>	
EPA Direct	$ 27,200
EPA Indirect	40,800
Total Intramural	$ 68,000
ESTIMATED TOTAL PROJECT CEILING	$1,640,740

C. Contribution to Remedial Performance

The Metropolitan Mirror and Glass Site is on the NPL. A Remedial investigation (RI) has been completed and is in the review process. Future remedial actions could possibly include a call for no further action and with periodic monitoring of the ground water. A Feasibility Study (FS) is expected to be completed by the end of May. The proposed removal activity is consistent with accepted removal practices and is expected to abate the threats associated with the contaminated soil and sediment.

D. Compliance with ARARs

The proposed Removal Action set forth in this memorandum will comply with applicable or relevant and appropriate environmental and health requirements, to the extent practicable, considering the exigencies of the situation. Although lead and silver, Resource Conservation and Recovery Act (RCRA) regulated compounds, are present on the Site, the analytical results indicate that the levels are below any RCRA regulated requirements. If during this removal action any analytical results that indicate otherwise are found, the appropriate actions will be reviewed. A small portion of the wetlands will be unavoidably impacted by the temporary access road and will be mitigated by the use of a culvert pipe during the lagoon operations. This area will be restored prior to the completion of the project. The RPM has contacted Len Zelinka of the Pennsylvania Department of Environmental Protection (PADEP) and requested a complete listing of Pennsylvania ARARs, including RCRA, by May 12, 1997. If they are more stringent than federal regulations, they will be complied with to the extent practicable during all phases of this Removal Action.

VII. EXPECTED CHANGE IN THE SITUATION SHOULD NO ACTION BE TAKEN OR ACTION DELAYED

If no action is taken or it is delayed, the ingestion threat posed by the contaminated soil will increase as the contaminants continue to come in contact with the shallow ground water that discharges to Stony Creek.

VIII. OUTSTANDING POLICY ISSUES

There are no outstanding policy issues pertaining to the Metropolitan Mirror and Glass Site.

IX. RECOMMENDATION

Because the conditions at the Site meet the NCP Section 300.415 (b)(2) for a Removal Action, I recommend your approval of this request for $1,640,740, of which $1,572,740 is for

Extramural cleanup contractor costs. You may indicate your approval or disapproval by signing below. I recommend your approval to initiate response actions due to the nature of the threat described herein.

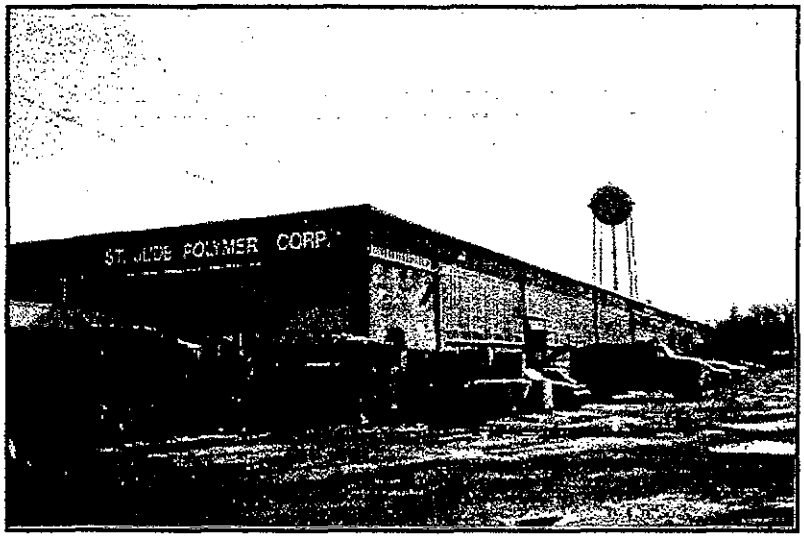
APPROVED: Allan Fink **DATE:** 5/2/97

DISAPPROVED: _____ **DATE:** _____

Attachment: Confidential Enforcement Addendum

APPENDIX C
PHOTO DOCUMENTATION

Photograph Log
Metropolitan Mirror & Glass Site After Action Report
Frackville, Schuylkill County, Pennsylvania



Date: 14 May 1997
Photographed By: EPA Region III SATA
Description: The old MM&G manufacturing building now occupied by St. Jude Polymer Corporation who operates a plastics recycling facility.

Date: 14 May 1997
Photographed By: EPA Region III SATA
Description: A view of the earthen berm from the edge of lagoon #2. Note the spillway between lagoon #2 and lagoon #1 (in the center of the picture). Also note the standing water in the lagoon.

Photograph Log
Metropolitan Mirror & Glass Site After Action Report
Frackville, Schuylkill County, Pennsylvania

Date: 14 May 1997
Photographed By: EPA Region III SATA
Description: A view of lagoon #1 from the earthen berm that contains the water from Stony Creek. Note the overflow pipe on the right hand side of the photo. The overflow pipe discharges to Stony Creek.

Date: 14 May 1997
Photographed By: EPA Region III SATA
Description: A view of the dredge disposal area prior to removal activities. This mound of vegetation is believed to be where dredged sludge from the lagoons was stored prior to disposal, however, historical disposal records were not located.

Photograph Log
Metropolitan Mirror & Glass Site After Action Report
Frackville, Schuylkill County, Pennsylvania

Date: 14 May 1997
Photographed By: EPA Region III SATA
Description: The area to be excavated in the north corner of the manufacturing building.

Date: June 1997
Photographed By: EPA Region III SATA
Description: The area in the north corner of the manufacturing building after excavation activities had been completed. The excavated area was surrounded with orange hurricane fence to distinguish it to St. Jude employees working in the area.

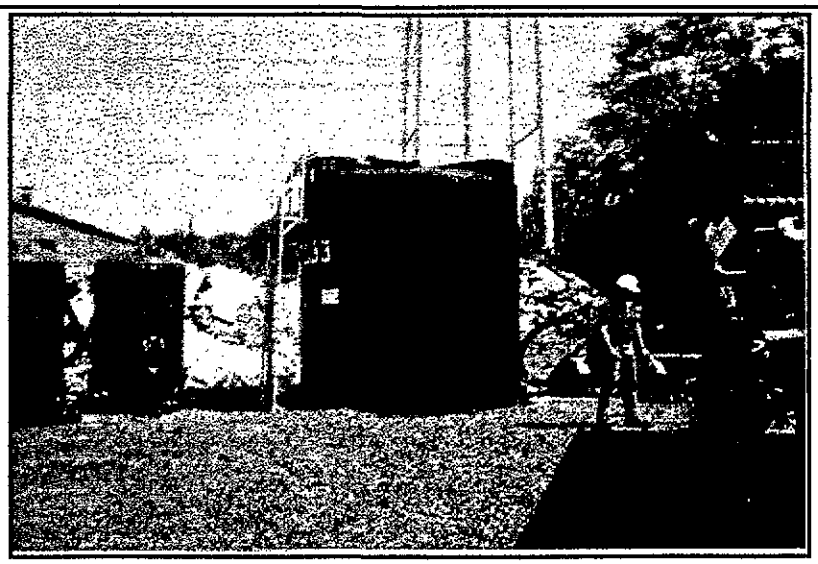
Photograph Log
Metropolitan Mirror & Glass Site After Action Report
Frackville, Schuylkill County, Pennsylvania

Date: June 1997
Photographed By: EPA Region III SATA
Description: Excavation activities in the dredge disposal area that was excavated to allow construction of the sludge staging/drying pits.

Date: June 1997
Photographed By: EPA Region III SATA
Description: The two sludge staging/drying areas located above the lagoons. Riprap was placed in gabian baskets surrounding the two sludge pits.

Photograph Log
Metropolitan Mirror & Glass Site After Action Report
Frackville, Schuylkill County, Pennsylvania

Date: July 1997
Photographed By: EPA Region III ERCS
Description: The sludge staging/drying pits in use.
Their main purpose was to stage the sludge that was excavated from the lagoons. The sludge in the lagoons was staged to allow water trapped in the media to drain back into the lagoons by gravity.



Date: June 1997
Photographed By: EPA Region III SATA
Description: The 6,500-gallon holding tank used to hold
the treated wastewater before being discharged into the local POTW. Note the two carbon filter systems next to the holding tank.

Photograph Log
Metropolitan Mirror & Glass Site After Action Report
Frackville, Schuylkill County, Pennsylvania

Date: July 1997
Photographed By: EPA Region III SATA
Description: A view from the southeast corner of lagoon #2. Note the excavation of the earthen berm, the pump located on the berm to pump groundwater, and the water reduction in the lagoons.

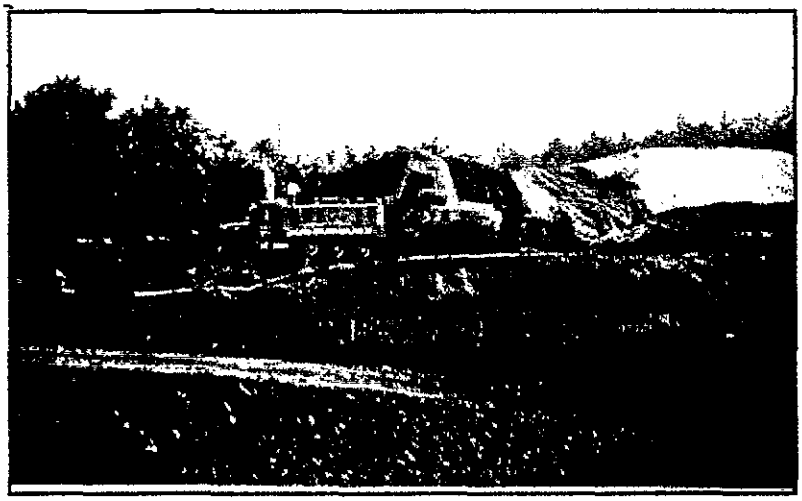
Date: June 1997
Photographed By: EPA Region III SATA
Description: A view from the west edge of lagoon #1. Note the excavation of the middle berm and the reduction of the water in the lagoons. The groundwater pump has been moved to the top of the berm.

Photograph Log
Metropolitan Mirror & Glass Site After Action Report
Frackville, Schuylkill County, Pennsylvania

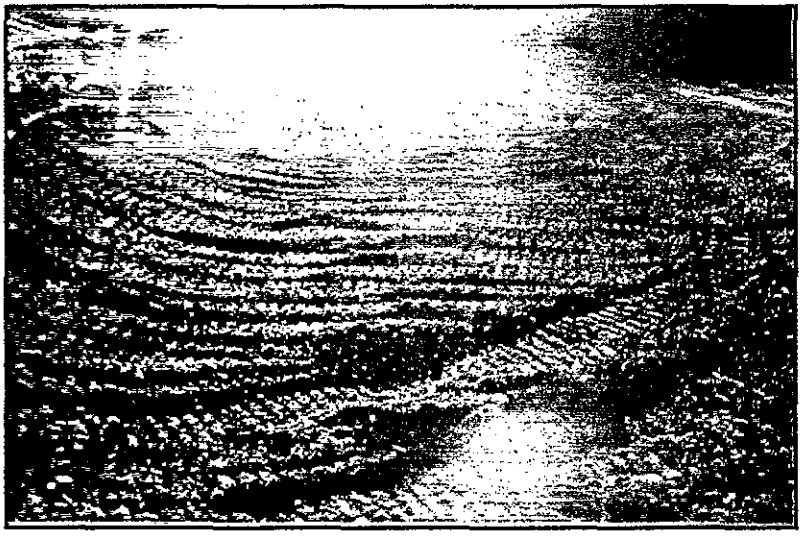
Date: July 1997
Photographed By: EPA Region III SATA
Description: Two pieces of heavy equipment in lagoon #1 mixing up the lime, fly ash and cement kiln dust that was used to bulk the sludge in the lagoon. The white powder (lime dust) on the bank of the lagoon and the sludge in the staging pits in the background.

Date: July 1997
Photographed By: EPA Region III SATA
Description: Soil excavation to bedrock in both of the lagoons. An excavator in lagoon #2 continues to excavate to bedrock.

Photograph Log
Metropolitan Mirror & Glass Site After Action Report
Frackville, Schuylkill County, Pennsylvania



Date: August 1997
Photographed By: EPA Region III SATA
Description: A heavy excavator is loading a truck to transport the bulked sludge to the Pine Grove Landfill for disposal.



Date: August 1997
Photographed By: EPA Region III SATA
Description: The first layer of shale placed in the lagoons. The grade of the lagoon was established using a laser level. The final layer of soil for restoration was a screened topsoil.

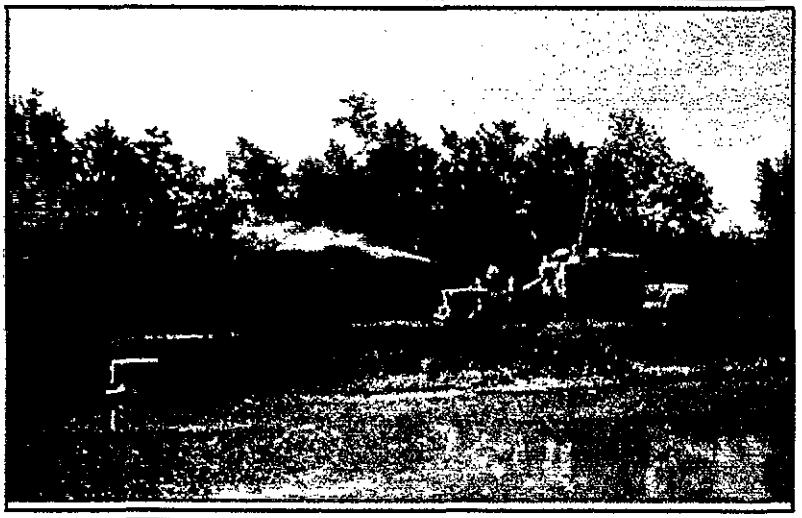
Photograph Log
Metropolitan Mirror & Glass Site After Action Report
Frackville, Schuylkill County, Pennsylvania

Date: June 1997
Photographed By: EPA Region III SATA
Description: The dredge disposal area, after removal of the sludge staging/ drying pits were removed, excavated to approximately 6 feet.

Date: August 1997
Photographed By: EPA Region III SATA
Description: Final site restoration. A layer of fine screened topsoil was applied on site. The hydroseed contractor was expected on site but due to heavy rains they were not able to seed the area when this photo was taken. On the far right bank of the lagoon vegetation has begun to grow.

Photograph Log
Metropolitan Mirror & Glass Site After Action Report
Frackville, Schuylkill County, Pennsylvania

Date: August 1997
Photographed By: EPA Region III SATA
Description: ERCS crew members installing the grate on top of the concrete catch basins. Two were installed in the lagoon to allow overflow water to discharge into Stony Creek. Note the black corrugated pipe that connects the catch basin to Stony Creek.



Date: August 1997
Photographed By: EPA Region III SATA
Description: The hydroseed contractors applying hay to the bank on the lagoon in preparation for the vegetative seed mixture to be applied. Note the stone placed on the side of the bank that was used to allow water to percolate in the lagoon.

APPENDIX D
GLOSSARY OF ABBREVIATIONS AND DEFINITIONS

GLOSSARY OF ABBREVIATIONS AND DEFINITIONS

CERCLA	Comprehensive Environmental Compensation and Liability Act
CFR	Code of Federal Regulations
CLP	Contract Laboratory Program
COD	Chemical Oxygen Demand
EPA	Environmental Protection Agency
ERCS	Emergency Response Cleanup Services
FAMA	Frackville Area Municipal Authority
MM&G	Metropolitan Mirror & Glass Site
NCP	National Contingency Plan
OPA	Oil Pollution Act (1990)
ORC	Office of Regional Council
OSC	On-Scene Coordinator
PADEP	Pennsylvania Department of Environmental Protection
POTW	Publicly Owned Treatment Works
PP&L	Pennsylvania Power & Light
PPM	Parts Per Million
PRP	Potentially Responsible Party
RM	Response Manager
RPM	Remedial Project Manager
SARA	Superfund Amendment Reauthorization Act
TCLP	Toxic Characteristic Leachate Procedures
T&D	Transport and Disposal
VOC	Volatile Organic Compound