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IN THE COURT OF COMMON PLEAS
BELMONT COUNTY, OHIO

STATE OF OHIO, ex rel.
ANTHONY J. CELEBREZZE, JR.
ATTORNEY GENERAL OF OHIO
30 East Broad Street
Columbus, OH 43215,

Plaintiff,

v.

PICOMA INDUSTRIES, INC.,
d/b/a EASTERN PLATING
15 Lombard Street
Martins Ferry, OH 43935,

Defendant.

Case No. 83-CIV-226

JUDGE KNAPP

STATE OF OHIO
BELMONT COUNTY

RANDY L. MARPLE, CLERK OF COURTS, DO
HEREBY CERTIFY THAT THE ABOVE IS A TRUE
AND CORRECT COPY OF THE ORIGINAL ON FILE
IN THIS OFFICE.

RANDY L. MARPLE, CLERK OF COURTS

BY: *[Signature]* DEPUTY

CONSENT DECREE

The Amended Complaint in the above-captioned case having been filed herein, and the Plaintiff State of Ohio by its Attorney General, Anthony J. Celebrezze, Jr. (hereinafter "Plaintiff") and the Defendant Picoma Industries, Inc., d/b/a Eastern Plating, (hereinafter "Picoma"), having consented to entry of this Consent Decree,

Now, therefore, without trial of any issues of law or fact, and upon the consent of the parties hereto, it is hereby ORDERED, ADJUDGED, and DECREED as follows:

I. JURISDICTION

1. This Court has jurisdiction over the subject matter herein pursuant to Chapter 3734 and 6111 of the Ohio Revised Code. The Amended Complaint states a claim upon which relief can be granted. This Court has jurisdiction over the parties hereto. Venue is proper in this Court.

II. PARTIES

2. The provisions of this Consent Decree shall apply to and be binding upon the parties to this action, their agents, officers, employees, assigns, successors, predecessors in

interest, and those persons in active concert or participation with them who receive actual notice of this Decree whether by personal service or otherwise.

III. SATISFACTION OF LAWSUIT

3. Plaintiff alleges in its Amended Complaint that Picoma has operated its plant and grounds at 15 Lombard Street, Martins Ferry, Ohio (hereinafter the "property") in violation of various state hazardous waste and water pollution laws. The boundaries of the property are defined in Volume 544, Page 788 of the deeds at the Belmont County Recorder's Office and are also shown by the map attached hereto as Exhibit A. By entering into this Consent Decree, Picoma wishes to settle and resolve disputed claims and to clean up and remove certain contaminated soils from the property to an approved hazardous waste landfill, and does not admit the allegations in the Amended Complaint. Except as provided in Paragraph 4 below, compliance with the terms of this Consent Decree shall constitute full satisfaction of any civil, administrative, or criminal liability, claims or allegations by Picoma, its past or current directors, and its current employees, to the State of Ohio for all actions described below which pre-date the entry of this Consent Decree.

(a) Noncompliance with the Director's Findings and Orders of December 11, 1981;

(b) Spills of hazardous waste and water pollutants from the property into the Belmont County Sewerage System;

(c) Spills of hazardous waste and water pollutants from the property through the First and Center Street Regulator into the environment;

(d) Spills of hydrochloric acid at the property;

(e) Storage and spillage or leakage of hazardous waste at the property;

(f) Failure to have a hazardous waste permit for the facility;

(g) Violations of Ohio Administrative Code (OAC) 3745-54-15, OAC 3745-54-16, OAC 3745-54-51, OAC 3745-54-56, OAC 3745-55-71, OAC 3745-55-73, and the equivalent rules in OAC Chapters 3745-65 and OAC 3745-66, and OAC 3745-31-02 which may have occurred or are alleged to have occurred at the property;

(h) Violations of Ohio Environmental Protection Agency ("Ohio EPA") Permits to Install 06-169 and 06-1180 which may have occurred or are alleged to have occurred;

(i) With regard to drums of hazardous waste stored at the property, failure to mark, label, keep lids on, keep accumulation dates on, keep free of ruptures or otherwise prevent puncturing, creasing, or dropping of the drums, and prevent spillage therefrom, which may have occurred or which is alleged to have occurred at the property.

(j) Any and all claims under ORC 3734, 6111, and OAC Part 3745 which were raised and which could have been raised on the facts alleged in the Amended Complaint.

4. Paragraph 3 above shall not be construed to release Picoma from any liability pursuant to the Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. 9601 et seq., or Ohio Revised Code Section 3734.20 through 3734.26, including natural resource damages.

IV. CIVIL PENALTIES AND DAMAGES

5. Picoma shall pay to the State of Ohio civil penalties and damages of Eight Hundred Thousand Dollars (\$800,000.00). Because the first priority of the parties is to have Picoma use its available funds to prevent harm to the environment by cleanup and removal of contaminated soil and hazardous waste from the property to a licensed landfill, the first payment of these civil penalties and damages is not required immediately upon the entry of this Consent Decree. Instead, Fifty Thousand Dollars (\$50,000.00) of these civil penalties and damages shall be paid within six (6) months after the entry of this Consent Decree and another Fifty Thousand Dollars (\$50,000.00) of these

civil penalties and damages shall be paid within twelve (12) months after the entry of this Consent Decree.

6. Beginning in the thirteenth (13th) month after entry of this Consent Decree, Picoma shall make monthly payments of Ten Thousand Dollars (\$10,000.00) for seventy (70) months, such payments to be made by the fifteenth (15th) day of each month. To make these installment payments equivalent to an immediate payment of Eight Hundred Thousand Dollars (\$800,000.00), Picoma shall, by the forty-fifth day after each anniversary of the entry of this Consent Decree, pay interest at the rate of Seven and One-Half Percent (7-1/2%) interest on the balance of the civil penalties and damages unpaid as of the anniversary date (for a total of five annual interest payments). To make its payments equal a present value of Eight Hundred Thousand Dollars (\$800,000.00), Picoma shall also make an additional payment of Fifty-Two Thousand Seven Hundred and Sixty-Six Dollars (\$52,766.00) with the last of the seventy monthly payments (for a total of \$62,766.00 during that month). This additional payment has been calculated pursuant to the formula set forth in the inter-office communication written by Jim Gould, attached as Exhibit B. Picoma may make any of these payments at an earlier date without incurring a prepayment penalty or may pay the balance with accrued interest at any time. Should Picoma complete all of its payments by a date earlier than eight-two months after entry of this consent decree, the payment of Fifty-Two Thousand Seven Hundred and Seventy-Six Dollars (\$52,766.00) will be recalculated pursuant to the formula in Exhibit B to make the total payments equal a present value of Eight Hundred Thousand Dollars (\$800,000.00).

7. Each payment required by this Part IV of the Consent Decree shall be made by delivering to Plaintiff's counsel or his successor in the Office of the Attorney General, a check in such amount made to the order of "Treasurer of the State of Ohio". Three-fourths of each payment will be payable as a civil penalty pursuant to Ohio Revised Code Section 3734.13(C)

into the Hazardous Waste Cleanup Special Account created by Ohio Revised Code Section 3734.28. The other one-fourth of each payment will be payable into the Immediate Removal Special Account created by Ohio Revised Code Section 3745.12 as costs incurred by the Ohio EPA in investigating, mitigating, minimizing, removing, or abating spills or releases of material into or upon the property requiring action to protect the public health or safety of the environment. Should the name of one or both of these accounts change, the payment shall be made into the account(s) despite the name change. Should one of the accounts be succeeded by another Ohio EPA account, the payments shall be paid into the succeeding account. Should any change be made in one or both of the accounts that necessitates a change in the manner of payment (e.g., abolishment of the account), the payments shall be made in the manner requested by Ohio EPA.

V. CLEANUP

8. In order to prevent damage to underground water and neighboring property, Picoma shall remove all materials required by Paragraphs 9 through 17 to be removed from the property and lawfully dispose of such materials at a facility licensed for hazardous waste disposal. As used in this Consent Decree, "contaminated soil" means any soil which contains cyanide, cadmium, chromium, or zinc in concentrations higher than background. Background is defined as any concentration of cyanide higher than 1.0 micrograms per gram (ug/g), any concentration of cadmium higher than 1.5 ug/g, any concentration of chromium higher than 11.4 ug/g, or any concentration of zinc higher than 297 ug/g. For purposes of removing contaminated soil pursuant to Paragraphs 13 and 15 below, soil shall be deemed not to be contaminated if the cadmium, chromium, and zinc concentrations are no higher than those set forth in the preceding sentence and the cyanide concentration is no higher than 10 ug/g.

9. In the course of removing contaminated soil from the property, Picoma shall excavate the soil from all of the areas designated as TP 4, TP 5, TP 8, TP 9, and TP 10 on the map of the property attached hereto as Exhibit A. These areas were also marked by markers placed at the property on April 17, 1986 by Picoma's consultant under the direction of the Ohio EPA. Picoma shall excavate the soil from each of these designated areas to a depth of at least one foot and to the circumferences shown on Exhibit A. In the case of TP 10, the interior of that area, marked as TP 10A, shall be excavated to a depth of three feet.

10. To verify removal of contaminated soil from these areas to background levels, Picoma shall collect samples from the bottom and sides of each excavation. Picoma shall collect at least one sample from every ten linear feet around the perimeter of the side wall of the hole at a depth of approximately six inches.

11. Picoma shall collect at least one sample from the bottom of each excavation. A total of six samples shall be collected from the bottom of TP 10, two of these samples being collected from the bottom of the three foot excavation, two samples being collected from the bottom of the one foot excavation within 18 inches of the eastern perimeter of the three foot excavation, and two samples being collected from the one foot excavation within 18 inches of the western perimeter of the three foot excavation.

12. Samples collected pursuant to this Consent Decree shall be analyzed by an Ohio EPA approved laboratory in accordance with U.S. Environmental Protection Agency approved procedures for the concentrations of cyanide, cadmium, zinc, and chromium. For purposes of quality control, Picoma shall split ten percent of the samples collected (the identity of the ten percent to be designated by Ohio EPA), and send them to a second Ohio EPA approved laboratory to be analyzed for the same contaminants. Samples shall be split with Ohio EPA upon

request. Except for the ten percent split samples and the samples described in Paragraph 14 below, samples collected pursuant to this Consent Decree shall not be composited. Within 10 working days after receiving all of the analyses of samples required by this Consent Decree, Picoma shall submit to Michael Moschell or Steve Hamlin of Ohio EPA the results of all sample analyses, laboratory quality assurance and quality control reports, and a property map showing the location of samples and area of excavation. Analyses shall be performed in the manner set forth in Exhibit C attached hereto, with the exception of volatile organics, copper, and ph, and no additional sampling and analysis plan is required.

13. Should any analyses of the soil remaining on the sides or in the bottoms of the excavations show the soil to be contaminated, Picoma shall remove all remaining contaminated soil. Samples from the walls and bottom of the additional excavation shall be collected in accordance with the procedures of paragraph 12 above. This excavation and sampling process shall be repeated until all contaminated soil has been removed.

14. In addition to the sampling described above, Picoma shall arrange for and pay for the analysis of up to 12 samples as designated by Exhibit A as SP-1 through SP-12, which Ohio EPA has agreed to collect from the property at a depth of approximately 6 to 8 inches. These samples shall be analyzed for the concentrations of cyanide, cadmium, zinc, and chromium in the same manner as the samples collected pursuant to Paragraphs 10, 11, and 13. Picoma shall deliver the samples to an Ohio EPA approved laboratory for analysis, shall arrange to have the analyses delivered to Picoma, and shall submit the analyses to Ohio EPA upon request.

15. If the samples analyzed pursuant to paragraph 14 above show the presence of contaminated soil, Picoma shall remove all such contaminated soil in accordance with the excavation and sampling procedures described in paragraphs 8 through 12 above.

16. For each excavation, after Ohio EPA confirms that all contaminated soil has been removed from the excavation, Picoma shall backfill the excavation with clean fill soil. The soil shall be mounded to allow for subsidence, and shall be fertilized, seeded with grass, and mulched to the extent necessary to provide for growth of the grass. Backfilled areas in driveways and parking lots shall be covered with gravel or slag instead of grass.

17. Picoma shall accomplish the actions described in Paragraphs 8 through 16 above by the following dates:

Commencement of the excavation described in Paragraph 9 - within 30 days after entry of this Consent Decree;

Completion of the excavation described in Paragraph 9 and removal of contaminated soil to a licensed hazardous waste facility - within 60 days after entry of this Consent Decree;

Completion of the sampling described in Paragraphs 10 and 11 - within 75 days after entry of this Consent Decree; and

Completion of all other actions required by Paragraphs 8 through 16 - by October 15, 1986;

18. A mutual inspection by the parties was performed on April 17, 1986 and it is agreed that the following actions by Picoma will constitute removal of all hazardous waste from the interior of the building at the property. As soon as possible, but no later than one year after the entry of this Consent Decree, Picoma shall do the following:

- (a) remove the equipment in plating lines 1 through 8 from the property;
- (b) remove all liquids from the pits under the plating lines;
- (c) sweep all loose materials from the floors in the production area of the building at the property;
- (d) sweep all loose materials from the sides and bottoms of the pits under the plating lines; and
- (e) dispose of the liquids and materials removed and swept from the pits and floor pursuant to (b) through (d) above in the manner required by the hazardous waste rules of the State of Ohio.

Upon five working days notice to Mike Moschell or Steve Hamlin, (614) 385-8501, Ohio EPA agrees to conduct an

inspection of the interior of the building to verify that steps (a) - (e) outlined above have been performed.

19. Upon Ohio EPA's verification that the requirements of this Part V of the Consent Decree have been performed, Plaintiff agrees to file with the Court a Satisfaction of Judgment acknowledging that Picoma has performed the requirements of this Part.

20. Picoma shall give Michael Moschell or Steve Hamlin of Ohio EPA five working days notice before commencing excavation or sampling of soils pursuant to this Consent Decree.

21. It is understood and agreed by the parties that the actions required by this Consent Decree fulfill the requirements of OAC 3745-55-10 through OAC 3745-55-15 (closure), OAC 3745-55-17 through OAC 3745-55-20 (post-closure), and the equivalent rules in OAC Chapters 3745-65 and 3745-66.

22. In determining the sampling and soil excavation necessary to remove the contaminated soil from the property, the State of Ohio has interviewed numerous former employees of Picoma to ascertain the locations of hazardous waste spillage and leakage. Compliance with this Consent Decree will remove the hazardous waste and contaminated soil discovered as a result of these interviews and legal proceedings. In addition, as stated in Paragraph 14, this Consent Decree requires sampling in other property locations to determine whether they are contaminated. While Ohio EPA, as a matter of law, cannot and does not waive its right to require removal of any contamination discovered in the future, compliance with this decree addresses all contamination of which Ohio EPA is aware as a result of the investigation described above. Ohio EPA has no knowledge of contaminated soil which will remain on site after the removal required by this Consent Decree.

VI. MISCELLANEOUS

22. Picoma is prohibited and enjoined from violating Ohio Revised Code Sections 6111.04, 3734.02(E), 3734.02(F) and 3734.05(B); OAC 3745-54-15, OAC 3745-54-16, OAC 3745-54-51, OAC 3745-54-56, OAC 3745-55-71, OAC 3745-55-73, OAC 3745-31-02, and any terms of permits to install or findings and orders issued by the Director of Environmental Protection.

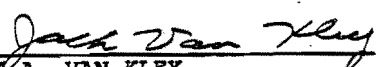
23. The Court retains jurisdiction of this suit for the purpose of making any order or decree which it may deem at any time to be necessary to carry out this Consent Decree.

24. Defendants shall pay court costs.



CHARLES F. KNAPP, JUDGE

APPROVED:

STATE OF OHIO, ex rel.
ANTHONY J. CELEBREZZE, JR.
ATTORNEY GENERAL OF OHIO

By: 
JACK A. VAN KLEY
DAVID I. SCHIFF
Assistant Attorneys General
Environmental Enforcement Section
30 East Broad Street
Columbus, OH 43215

PICOMA INDUSTRIES, INC.

By: 
JOHN C. KINDER
Kinder, Harper & Hazlett
185 West Main Street
St. Clairsville, OH 43950

INTER-OFFICE COMMUNICATION

TO: JACK VAN KLEY, ATTORNEY GENERAL'S OFFICE
 FROM: JIM GOULD THROUGH MAAN OSMAN, MANAGER - WQM
 DATE: MAY 8, 1986
 RE: PICOMA INDUSTRIES CIVIL PENALTY CALCULATIONS

Here are the details of the present value calculations which I did to arrive at the present value of \$766,145 for all the various payments proposed.

If you have any questions concerning this matter, please contact Jim Gould at 6-5455.

- 1) The following calculations reflect the present value of a \$50,000 initial payment within six months and an additional \$50,000 within twelve months using a rate of 7.5% annually.

	(payment within twelve months)	
\$50,000	+ \$50,000	= \$50,000 + \$48,193 = \$98,193 ←
(payment within six months)	(1 + .075) 2	(present value of second \$50,000 payment)
		(present value of both payments)

- 2) Present value calculations of \$10,000 per month for 70 months are listed below

\$10,000 (monthly payment)	x	$\left(\frac{\left(\frac{.075}{12} \right)^{70*} - 1}{\left(1 + \frac{.075}{12} \right)^{70*} - 1} \right)$	=
\$10,000 (monthly payment)	x	$\frac{(1.00625)^{70*} - 1}{.00625 (1.00625)^{70*}}$	=
\$10,000 (monthly payment)	x	$\left(\frac{1.54672 - 1}{0.009667} \right)$	=
\$10,000 (monthly payment)	x	(56.5555)	= \$565,555

* 70 represents total number of months used in the penalty calculations.

Document 0313M

\$565,555 is the value of 70 monthly payments at the beginning of the second year. The present value of this figure is:

$$\begin{aligned} \$565,555 &= \underline{\$526,098} \\ &(1.075) \end{aligned}$$

3) The present value of interest payments on the outstanding balance at the end of each year paid after 45 days of the year.

2nd year = \$52,500 on balance of \$700,000

$$\text{Present value} = \frac{\$52,500}{(1.009247)} \text{ discount to the end of the 1st year} = \$51,019$$

$$\text{Present value} = \frac{\$52,019}{1.075} = \underline{\$48,390}$$

3rd year = \$43,500 on the balance of \$580,000.

$$\text{The present value} = \frac{\$43,500}{(1.009247)} \text{ discounted to the}$$

end of the 3rd year = \$43,102

$$\text{The present value of this sum is } \frac{\$43,102}{(1.075)^2} =$$

$$\frac{\$43,102}{1.155625} = \underline{\$37,297}$$

4th year = \$34,500 on the balance of \$460,000.

$$\text{Discounted to the end of the 3rd year} = \frac{\$34,500}{(1.009247)} =$$

\$34,184 discounted to present value =

$$\frac{\$34,184}{(1.075)^3} = \frac{\$34,184}{(1.2423)} = \underline{\$27,517}$$

The present value for the 5th year = \$18,920.

The present value for the 6th year = \$11,388.

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The sum total present value for all interest payments is \$143,512.

\$ 48,390
\$ 37,297
\$ 27,517
\$ 18,920
\$ 11,388
\$143,512

Total present value of all payments = \$143,512 interest payments
\$ 98,193 1st year present value payments
\$526,098 Monthly present value payments
\$767,803

\$800,000 - 767,803 = \$32,197

*\$32,197 represents the cash shortfall.

*If Picoma paid \$52,776 at the end of the contract period, the total present value of all payments would equal \$800,000.

JG:bg

cc: Jim Gould
File - Economics

EXHIBIT C

Eastern Plating, Inc.
Martins Ferry, Ohio
Sampling and Analysis Plan
Prepared by: Burgess & Niple, Limited

Date: August 29, 1985

The following soil and groundwater sampling and analysis plan will be conducted at the Eastern Plating, Inc. facility, located at 15 Lombard Street, Martins Ferry, Ohio. The plan is directed toward investigating shallow soils and subsoils in the southern and western portions of the plant property for possible impacts from previous waste activities at the site. Waste handling and storage has reportedly occurred in these portions of the property. The plan also includes the sampling and analysis of an existing water well situated near the southeast corner of the plant building.

I. Soil Sampling

- A. Soil samples will be collected from test pits excavated with a backhoe.
- B. Test pits will be approximately 5 feet deep.
- C. Soil samples will be collected every 18 inches \pm and at a significant change in the soils type. The soil samples will be obtained from an approximately 6-inch horizontal excavation into the sidewall of the excavation.
- D. A log indicating the materials and conditions encountered within each test pit will be prepared.
- E. Location of the test pits is as follows:
 1. TP 1, northeast corner of main plant building, this location is expected to represent background conditions for the property.

2. TP 2, northeast corner of main plant building. This location is also expected to represent background conditions for the property.
3. TP 3, east of main plant building opposite doorway.
4. TP 4, west of surface storm drain located in gravel parking lot south of main plant building.
5. TP 5, east of electric substation along south fence line.
6. TP 6, south of main plant building in area of previous drummed waste storage and where surface drainage appears to be easterly.
7. TP 7, south of main plant building in area of previous drummed waste storage and where surface drainage appears to be westerly.
8. TP 8, southwest corner of main plant building at drain for acid tanks containment dike.
9. TP 9, west of main plant building opposite doorway.

F. The sequence of the test pit excavation shall be as follows:

1. TP 1 - background site
2. TP 2 - background site
3. TP 3
4. TP 9
5. TP 5
6. TP 4
7. TP 8
8. TP 6
9. TP 7

The sequence of test pit excavation involves progressing from the background sites to those sites that potentially may be impacted by the plant activities.

- G. An abandoned storm sewer reportedly located south of the main plant building shall be attempted to be field located as follows:
 - 1. Review existing City of Martins Ferry sewer maps, if available. Also, contact will be made with the contractor reportedly involved with the sewer line excavation for additional information.
 - 2. Excavate a test pit where sewer is presumed to be located.
 - 3. If the location of the abandoned sewer is identified, soil samples will be collected and analyzed for the parameters specified below.

II. Groundwater Sampling

- A. One groundwater sample will be collected from the existing plant nonpotable water supply well.
- B. The groundwater sample will be collected from a field determined sampling point.
- C. The existing well pump will be utilized to collect the groundwater sample after the well has been properly purged.

III. Soil and Groundwater Laboratory Analysis

- A. The following parameters will be assayed:

- | | |
|----------------------------|-------------------------------|
| 1. Cyanide | 20. 1,4-Dichlorobenzene |
| 2. Chromium, Total | 21. 1,1-Dichloroethane |
| 3. Cadmium | 22. 1,2-Dichloroethane |
| 4. Copper | 23. 1,1-Dichloroethene |
| 5. Zinc | 24. trans-1,2-Dichloroethene |
| 6. pH | 25. 1,2-Dichloropropane |
| 7. Benzene | 26. cis-1,3-Dichloropropene |
| 8. Bromodichloromethane | 27. trans-1,3-Dichloropropene |
| 9. Bromoform | 28. Ethyl benzene |
| 10. Bromomethane | 29. Methylene chloride |
| 11. Carbon tetrachloride | 30. 1,1,2,2-Tetrachloroethane |
| 12. Chlorobenzene | 31. Tetrachloroethene |
| 13. Chloroethane | 32. Toluene |
| 14. Chloroethylvinyl ether | 33. 1,1,1-Trichloroethane |
| 15. Chloroform | 34. 1,1,2-Trichloroethane |
| 16. Chloromethane | 35. Trichloroethene |
| 17. Dibromochloromethane | 36. Trichlorofluoromethane |
| 18. 1,2-Dichlorobenzene | 37. Vinyl chloride |
| 19. 1,3-Dichlorobenzene | 38. Xylenes |

B. Soil and groundwater samples will be analyzed as described below and as specified in U.S. Environmental Protection Agency (U.S. EPA) "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods" SW 846.

1. Metals and Cyanide - Atomic absorption spectrophotometry. Prior to analysis, the soil samples shall be digested to provide total concentrations.
2. Volatile Organics - Gas chromatograph/Mass Spectrophotometry, method 8240, or 8020 for xylene.

C. At least one soil horizon within each test pit will be analyzed. If laboratory results indicate the presence of high concentrations relative to background of the analyzed constituents, further soil horizons may be analyzed from within the test pit. The initial soil sample analyzed from each pit shall be as follows:

1. If gravel, slag, or other fill material is present, the soil sample collected within 1 foot of the bottom of the fill shall be analyzed.

2. If no gravel, slag, or other fill material is present, the soil sample collect at 1 foot below the land surface shall be analyzed.

IV. Health and Safety Plan

A. The attached Health and Safety Plan will be utilized.

V. Chain of Custody Protocols

A. The attached Chain of Custody Protocols will be utilized.

HEALTH AND SAFETY PLAN

Safety Plans

The following health and safety plan has been developed to protect the health and safety of the personnel involved in the proposed site investigation. This health and safety plan addresses the levels of safety based on the anticipated types and concentrations of sampled substances, routes of personnel exposure, and the site conditions. The plan addresses the level of protection required for activities relating to potentially contaminated soils.

Level D Plan (Modified)

A modified level D safety criteria will be used at the groundwater and soil sampling sites. The safety equipment, precautions, and procedures associated with this level are as follows:

Safety Equipment

1. Full face mask.
2. Disposable, one piece, laminated tyvek, chemical resistant coveralls.
3. Disposable gloves.
4. Full face mask air purifying respirators with organic vapor cartridges and dust filters shall be readily available at the site for all personnel involved in sampling and test pit excavation.

Safety Precautions

1. Prior to commencing activities at the site, a health and safety briefing session for the field personnel will be held.

2. The safety equipment used shall be new issue or freshly decontaminated. No other sampling procedure shall be performed in the equipment prior to groundwater or soil sampling.
3. No smoking, drinking, or eating shall be permitted on the site.
4. Bottles containing samples collected in the field will be handled while wearing, at a minimum, disposable vinyl gloves.
5. The soil samples shall be collected from excavated test pits. Prior to personnel entering a test pit, a Draeger Tube gas detector shall be utilized to determine the concentrations of gases within the test pits.
6. Only personnel involved in the collection of the soil or water samples shall be required to wear the specified safety equipment.

Equipment Decontamination

1. The sampling and safety equipment used in this sampling procedure is not considered contaminated but will require proper cleaning prior to reuse.
2. Measures will be taken to prevent any cross contamination of the land surface or subsurface stratum between the test pit sites. The buckets on the backhoe used to excavate and backfill the test pits shall be cleaned by removing all soils with a shovel and broom after excavating and backfilling is completed at each test pit.

CHAIN OF CUSTODY PROTOCOLS

It is the objective of the chain-of-custody control to provide an accurate written record tracing the possession and handling of the samples from collection through analysis. The field person or sample collector will be responsible for the care and custody of the sample(s) until properly transferred to the receiving laboratory or turned over to an assigned custodian. The samples will be kept in the possession of that individual or stored in a locked place. The chain-of-custody provides internal control as well as legal documentation of the sample possession.

The chain-of-custody records will be initiated once the samples have been collected. An example of a record sheet is attached. This record will be attached or accompany the samples until received at the laboratory. When transferring the samples, the transferee will sign and record the date and time on the chain-of-custody form. The first signature under Sample Transfer Information will be the collector and the last signature will be the laboratory representative. It is advisable to have as few people as possible handle the samples.

If the samples are to be packaged and mailed, they should be registered with return receipt requested. For samples sent by common carrier, a Bill of Lading should be retained as part of the permanent chain-of-custody documentation.

Sample seals shall be used on all containers to detect unauthorized tampering of samples following sample collection up to the time of analysis. Gummed paper seals may be used for this purpose. The paper seal should include, at least, the following information:

- Sample number (This number will be identical with the number on the sample label)
- Collector's name
- Date and time of sampling

The seal must be attached in such a manner that it is necessary to break it in order to open the sample container. Seals must be affixed to containers before the samples leave the custody of sampling personnel.

ADDENDUM

Eastern Plating, Inc.
Martins Ferry, Ohio
Sampling & Analysis Plan
Prepared by: Burgess & Niple, Limited

Date: October 23, 1985

The following items have been added to or amend the Sampling and Analysis Plan dated August 29, 1985.

I. Soil Sampling

E. Location of the test pits is as follows:

10. TP 10, southeast of the acid storage tanks at the southeast corner of the plant, and west of TP 7
11. TP 11, northeast of the wooden storage building located along the south property line
12. TP 12, midway between TP 4 and TP 5
13. TP 13, east of previous drummed waste storage area.

III. Soil and Groundwater Analysis

A. The following parameters will be assayed at TP 10, TP 11, TP 12, and TP 13:

- | | |
|--------------------|-----------|
| 1. Cyanide | 4. Copper |
| 2. Chromium, Total | 5. Zinc |
| 3. Cadmium | 6. pH |