BEFORE THE
OHIO ENVIRONMENTAL PROTECTION AGENCY

In the Matter of:

Hearn Plating Co., Ltd.
3184 Bellevue Road
Toledo, Ohio 43606

Respondent

Director's Final Findings and Orders

PREAMBLE

It is hereby agreed by and among the parties hereto as follows:

I. JURISDICTION

These Director's Final Findings and Orders (Orders) are issued to Hearn Plating Co., Ltd. (Respondent) pursuant to the authority vested in the director of the Ohio Environmental Protection Agency (Ohio EPA) under § 3734.13 and § 3745.01 of the Ohio Revised Code (ORC).

II. PARTIES BOUND

These Orders shall apply to and be binding upon the Respondent, its assigns and successors in interest. No changes in ownership relating to the Facility will in any way alter the Respondent's responsibilities under these Orders. The Respondent's obligations under these Orders may be altered only by the written approval of the director of Ohio EPA.

III. DEFINITIONS

1. Unless otherwise stated, all terms in these Orders shall have the same meaning as used in Chapter 3734. of the ORC and the regulations promulgated thereunder.

2. The effective date of these Orders is the date these Orders are entered into the Ohio EPA director's journal.

IV. FINDINGS OF FACT

The director of Ohio EPA has determined the following findings of fact:

1. Respondent owns and operates an electroplating facility located at 3184 Bellevue Road, Toledo, Lucas County, Ohio (Facility). Respondent is a domestic limited liability company incorporated to do business in the State of Ohio on October 4, 1995. On December 5, 1988, U.S. EPA assigned hazardous waste generator identification number OHD005045554 to this Facility. Respondent is registered as a small quantity hazardous waste generator.

2. Respondent is a "person" as defined in ORC § 3734.01(G) and Ohio Administrative Code (OAC) rule 3745-50-10(A).

3. At the Facility, Respondent generates "hazardous waste" as that term is defined by ORC § 3734.01(J) and OAC rules 3745-50-10(A) and 3745-51-03. Respondent generates hazardous electroplating sludge (F006) at the Facility.

4. On March 7, 2001, Ohio EPA conducted an inspection of Respondent's Facility. As a result of this inspection, Ohio EPA determined that Respondent had:

   a. Stored F006 hazardous waste greater than 180 days without obtaining an Ohio Hazardous Waste Facility Installation and Operation Permit, in violation of ORC §§ 3734.02(E) and (F);

   b. Failed to label and date a container of hazardous waste, in violation of OAC rules 3745-52-34(D)(4) and 3745-52-34(A)(2) and (A)(3). This violation was corrected at the time of the inspection;

   c. Failed to post emergency information by the telephone, in violation of OAC rule 3745-52-34(D)(5)(b);

   d. Failed to conduct weekly inspections of emergency equipment, in violation of OAC rules 3745-52-34(D)(4) and 3745-65-33; and

   e. Failed to conduct weekly inspections of container accumulation areas, in violation of OAC rules 3745-52-34(D)(2) and 3745-66-74.

5. By letter dated March 16, 2001, Ohio EPA notified Respondent of the results of the March 7, 2001 inspection.

6. By letter dated April 13, 2001, Respondent submitted information in an effort to abate the violations referenced in Finding Nos. 4.a., 4.c., 4.d. and 4.e.

7. The director of Ohio EPA has also determined that from at least 1998 to the present, Respondent periodically accumulated hazardous waste in quantities exceeding six thousand kilograms at its Facility, in violation of ORC §§ 3734.02(E) and (F).

8. The director of Ohio EPA has determined that the violation referenced in Finding No. 7 has been abated.

9. By letter dated April 27, 2001, Ohio EPA notified Respondent that the violations referenced in Finding Nos. 4.a., 4.c., 4.d. and 4.e. have been abated.

V. ORDERS

The Respondent shall achieve compliance with Chapter 3734. of the ORC and the regulations promulgated thereunder according to the following compliance schedule:

1. Respondent shall pay to Ohio EPA the amount of $18,100 in settlement of Ohio EPA's claims for civil penalties which may be assessed pursuant to ORC Chapter 3734. Within thirty (30) days after the effective date of these Orders, Respondent shall pay to Ohio EPA the amount of $5,000 which will be deposited into the hazardous waste cleanup fund established pursuant to ORC § 3734.28. Payment shall be made by tendering a certified check for $5,000 to Ohio EPA, Department 631, Columbus, Ohio 43265-0631, and shall be made payable to "Treasurer, State of Ohio." A copy of this check shall be submitted in accordance with Section IX of these Orders.

2. Within 180 days after the effective date of these Orders, and in lieu of payment of the remaining $13,100 civil penalty, Respondent shall implement supplemental environmental projects (SEPs) as follows:

   a. In lieu of payment of $2,800 of the remaining civil penalty, Respondent shall purchase and install liquid cleaners, an automatic feeding system and conductivity controllers at its Facility to reduce its generation of sludge wastes as described in Attachment A to these Orders. Within thirty (30) days after purchasing the liquid cleaners, automatic feeding system and conductivity controllers, Respondent shall submit to Ohio EPA a copy of the invoice for the purchase and installation of these items in accordance with Section IX of these Orders.

b. In lieu of payment of $500 of the remaining civil penalty, Respondent shall purchase and install two oil skimmers on the plating tanks at its Facility as described in Attachment A to these Orders. Within thirty (30) days after purchasing the oil skimmers, Respondent shall submit to Ohio EPA a copy of the invoice for the purchase and installation of these items in accordance with Section IX of these Orders.

c. In lieu of payment of $6,000 of the remaining civil penalty, Respondent shall purchase and install rolling dry tanks with air knives at its Facility to reduce its generation of sludge wastes as described in Attachment A to these Orders. Within thirty (30) days after purchasing the rolling dry tanks with air knives, Respondent shall submit to Ohio EPA a copy of the invoice for the purchase and installation of these items in accordance with Section IX of these Orders.

d. In lieu of payment of $3,800 of the remaining civil penalty, Respondent shall install geothermal wells at its Facility to reduce its water usage, chemical usage and generation of sludge wastes as described in Attachment B to these Orders. Within thirty (30) days after purchasing and installing the geothermal wells, Respondent shall submit to Ohio EPA a copy of the invoice for the purchase and installation of these items in accordance with Section IX of these Orders.

e. Within 365 days after the effective date of these Orders, Respondent shall submit a report to Ohio EPA that includes an estimate of the annual Facility sludge reduction (pound or tons) and the annual Facility water use reduction (gallons) resulting from the implementation of the SEPs listed in this Order.

3. Should Respondent fail to fully implement a SEP within the time frame established in Order No. 2 of these Orders, Respondent shall pay to Ohio EPA the amount of the penalty associated with that project (e.g., $ 2,800 for the liquid cleaners, automatic feeding system and conductivity controllers, etc.). Payment of this penalty shall be in accordance with the procedures set forth in Order No. 1 of these Orders. Payment shall be due no later than 7 days after the date the implementation of the SEP was required to be completed.

VI. TERMINATION

The Respondent's obligations under these Orders shall terminate when the

Respondent demonstrates in writing and certifies to the satisfaction of Ohio EPA that all obligations under these Orders have been performed and Ohio EPA's Division of Hazardous Waste Management acknowledges, in writing, Ohio EPA's acceptance of this demonstration and certification.

This certification shall be submitted by the Respondent and shall be signed by a responsible official of the Respondent. The certification shall make the following attestation: "I certify that the information contained in or accompanying this certification is true, accurate and complete."

For purposes of these Orders, a responsible official is a corporate officer who is in charge of a principal business function of the Respondent.

VII. OTHER CLAIMS

Nothing in these Orders shall constitute or be construed as a release from any claim, cause of action or demand in law or equity against any person, firm, partnership or corporation, not a signatory to these Orders, for any liability arising out of or relating to the operations of the Respondent's Facility.

VIII. OTHER APPLICABLE LAWS

All actions required to be taken pursuant to these Orders shall be undertaken in accordance with the requirements of all applicable local, state and federal laws and regulations. Nothing in these Orders shall be construed as waiving or compromising in any way the applicability and enforcement of any other statutes or regulations applicable to the Respondent's operation of its Facility. Ohio EPA reserves all rights and privileges except as specified herein.

IX. NOTICE

All documents demonstrating compliance with these Orders, and other documents required under these Orders to be submitted to Ohio EPA, shall be addressed to:

Ohio Environmental Protection Agency
Northwest District Office
Division of Hazardous Waste Management
Attn: DHWM Manager
347 North Dunbridge Road
Bowling Green, Ohio 43402

and Ohio EPA Central Office at the following address:

For mailings, use the post office box number:

Christopher Jones, Director
Ohio Environmental Protection Agency
Lazarus Government Center
Division of Hazardous Waste Management
Attn: Manager, Compliance Assurance Section
P.O. Box 1049
Columbus, Ohio 43216-1049

For deliveries to the building and courier services:

Christopher Jones, Director
Ohio Environmental Protection Agency
Lazarus Government Center
Division of Hazardous Waste Management
Attn: Manager, Compliance Assurance Section
122 South Front Street
Columbus, Ohio 43215

or to such persons and addresses as may hereafter be otherwise specified in writing by Ohio EPA.

X. RESERVATION OF RIGHTS

Nothing contained herein shall be construed to prevent Ohio EPA from seeking legal or equitable relief to enforce the terms of these Orders or from taking administrative, legal or equitable action as deemed appropriate and necessary, including seeking penalties against the Respondent for noncompliance with these Orders. Nothing contained herein shall be construed to prevent Ohio EPA from exercising its lawful authority to require the Respondent to perform additional activities, including closure of hazardous waste units at the Facility, pursuant to ORC Chapter 3734. or any other applicable law in the future. Nothing herein shall restrict the right of the Respondent to raise any administrative, legal or equitable claim or defense with respect to such further actions which Ohio EPA may seek to require of the Respondent. Nothing in these Orders shall be construed to limit the authority of Ohio EPA to seek relief for violations not addressed in these Orders.

XI. SIGNATORIES

Each undersigned representative of a signatory to these Orders certifies that he or she is fully authorized to enter into these Orders and to legally bind such signatory to this document.

IT IS SO ORDERED:

Christopher Jones
Director

DEC 14 2001
Date

XII. WAIVER

In order to resolve disputed claims, without admission of fact, violation or liability, and, subject to Section X of these Orders, in lieu of further enforcement action by Ohio EPA for only the violations addressed in these Orders, the Respondent agrees that these Orders are lawful and reasonable, that the time frames provided for compliance herein are reasonable and that the Respondent agrees to comply with these Orders. Subject to Section X., above, compliance with these Orders shall be a full accord and satisfaction for the Respondent's liability for the violations cited herein.

The Respondent hereby waives the right to appeal the issuance, terms and service of these Orders and it hereby waives any and all rights it might have to seek administrative or judicial review of these Orders either in law or equity.

Notwithstanding the preceding, Ohio EPA and the Respondent agree that in the event that these Orders are appealed by any other party to the Environmental Review Appeals Commission, or any court, the Respondent retains the right to intervene and participate in such appeal. In such an event, the Respondent shall continue to comply with these Orders notwithstanding such appeal and intervention unless these Orders are stayed, vacated or modified.

IT IS SO AGREED:

Hearn Plating Co., Ltd.

11/20/01
Date

OWNER
Title

Ohio Environmental Protection Agency

Christopher Jones
Director

DEC 14 2001

Date

ATTACHMENT A

Hearn Plating Co., Ltd.
3184 Bellevue Rd.
Toledo, OH 43606
(419) 473-9773 fax (419) 473-0919

Recid OPP
9-12-01
JWL

9-07-01

Ohio EPA
Office of Pollution Prevention
Attn: Jeff Lewis
The Lazarus Government Center
Columbus, OH 43216-1049

Re: Supplemental Environmental Projects

Dear Jeff,

Regarding the proposed projects that Hearn Plating made in a letter from Jeff Fort at Shumaker, Loop & Kendrick, LLP dated July 18, 2001, I have fleshed in some details as best I could. These details are estimates using an orderly method of determination which is included in the proposal. Some of the SEP's don't easily lend themselves to quantification, but rather appeal to a common sense approach (i.e. oil skimmers). While I cannot give you even an estimate of the amount of tramp oil that we would skim from the tanks, I'm sure it will be significant and that common sense dictates that segregation and proper disposal is preferable to mixing the oils with our solid waste. I have included an additional SEP that was not included in our original letter, that being the installation of a cooling tower for our process cooling water (plating tanks & power supplies). This project seems to be a natural fit as it dovetails with the installation of "dry tanks" and conductivity controllers on the rinses. I have also included an excellent article titled THE ART & SCIENCE OF WATER RINSING by Ted Mooney. Additionally, I have included the article ELECTROCLEANING by Nabil Zaki. I think you will find these articles very informative and enlightening.

The Supplemental Environmental Projects as proposed are as follows:

1. INSTALLATION OF LIQUID CLEANERS & AUTOMATIC FEEDING SYSTEM - As detailed in our earlier correspondence, this would include the installation of conductivity controllers and automatic feeders to maintain a

consistent solution strength. The initial capital outlay for this installation is approximately $2874 based on the following breakdown:

Initial Liquid Cleaner Purchase (4 x 55 gal. drums)	$2374
Automatic Feeders (2 - Barrel & Rack Lines)	N/C*
Conductivity Controllers (2 - Barrel & Rack Lines)	N/C*
Installation Cost (Labor + Materials)	500
TOTAL COST (Initial)	$2874

* Vendor will provide at N/C

Ongoing Higher Cost (more expensive cleaner)	($3000/Yr)
Ongoing Savings (less treatment & sludge)	$2000/Yr
NET ONGOING COSTS	($1000/Yr)

Per the article by Nabil Zaki titled ELECTROCLEANING, sludge reductions from cleaner waste treatment can be reduced 70 to 80%. We believe this will reduce our annual sludge production by approximately 20% total or approximately 5000# per year.

2. INSTALLATION OF OIL SKIMMERS ON PLATING TANKS - These oils are currently pulled out with the parts and subsequently removed during waste treatment and disposed of with the solid waste. Segregation and proper disposal would decrease the oils in the wastestream & solid waste. I have no estimate on the amount of oil that may be removed, but suffice to say that it should be several drums a year at a minimum.

Purchase & installation of two (2) oil skimmers	$2000

3. INSTALLATION OF ROLLING DRY TANKS W/AIR KNIVES - The drag-in/drag-out tank after plating would be replaced with a rolling dry tank equipped with an air knife to facilitate the release of plating solution from the barrel and parts inside. The tank would be fitted with a small pump that would automatically pump the solution back to the plating tank and keep it

out of the waste stream. If it is feasible, we would also do this on the second rinse after pickle before plate so that we didn't build solution in the plating tank. If a second rolling dry tank is not feasible because of process constraints, then some batch treating or evaporation may be required. An integral part of this installation is the installation of conductivity controllers that shut the water off when it is sufficiently clean for proper rinsing. If the water flow was still required for cooling purposes, then a three way valve would simply shunt the water to the drain without having to pre-treat. If this installation is made in conjunction with a cooling tower installation, then consideration of cooling needs would be unnecessary when considering water usage. We think that the water savings would be of little consequence without the installation of the cooling tower (or another way to cool the power supplies & plating tanks separate from running city water through them) since the water would still be needed for cooling purposes. There would, however, be a significant reduction in sludge production as there would be less water to be treated and less contamination in that water. I have estimated that if each barrel coming out of the plating tank yields one pint of plating solution and we process 160 barrels per day, that we could keep 100 gallons of concentrated plating solution out of the waste stream. Less water with less contamination means less pre-treatment. We conservatively estimate the annual sludge reduction at 20% or 5000# per year.

Equipment (conductivity probes & controllers, solenoid valves, pumps, air knife, air generator, piping, etc... ... ...)	$6000
Installation	2000
TOTAL	$8000
Ongoing Higher Costs (maintenance)	($1000/ Yr)
Ongoing Savings (less treatment & sludge)	$2000/Yr
NET ONGOING SAVINGS	$1000/Yr

Hearn Plating Co., Ltd.
3184 Bellevue Rd.
Toledo, Ohio 43606
(419) 473-9773 fax (419) 473-0919

10-08-01

Mr. Jeff Fort
Shumaker,Loop & Kendrick, LLP
North Corthouse Square
1000 Jackson Street
Toledo, Ohio 43624-1573

Re: Geothermal Well Supplemental Environmental Project

Dear Jeff,

I am proposing a geothermal well as a supplemental environmental project. This project would entail having supply & discharge wells drilled. The supply well would supply Hearn Plating with 55 degree year round water that would be used for its temperature differential only (completely non-contact) and the discharge well would be used to return the water right back to the aquafer. Cooling water is used at Hearn Plating to cool the plating tanks (2) as well as the power supplies (2). We currently use city water for this purpose and circulate the water from cooling to process rinses. We use much more water than we need for process rinse because the cooling needs require more. This proposal would isolate the two water needs - cooling & rinsing. Then we can begin to utilize different technologies to limit the use of rinsing water on the lines. These would include dry tanks & conductivity controllers among other things. Beside using much less water overall, we would also have to treat far less water which means less energy and chemical usage, as well as less sludge produced. I had originally proposed using a cooling tower to accomplish isolating the two water needs, but a well is a much more efficient way to do it. Not only would I need far less energy to pump water around, I will need far less water as the temperature coming out of the ground is much cooler than either city water during the Summer (in Toledo around 70 degrees F.) or cooling tower water which could be expected to yield at most a 10 degree temperature differential during Summers in Toledo. The cost is roughly the same initially, but ongoing maintenance costs are far higher for

the cooling tower vs. the geothermal wells. I have itemized the estimated costs for the geothermal well project below:

Well drilling & associated work outside buildings (see attached proposal from Automatic Septic & Well Corp.)	$10,678.00
Paving Repair for parking Lot	2,000.00
Inside Plumbing & Electrical	3,000.00
Purchase of S.S. Plate & Frame Heat Exchanger	3,000.00
Thermostatic controls & valves	1,500.00
TOTAL PROJECT COST	$20,178.00

I would stick by my earlier projections that we would conservatively estimate our reductions in water usage at 20% or roughly 2,160,000 gallons per year. This is water that Hearn would not have to purchase, pretreat, or send back to the city through the sewer system. It also allows Hearn to begin to work on reducing process rinse needs. My earlier proposals for a dry tank & conductivity controllers would also significantly reduce water usage, pretreatment, etc... ..

Ongoing Savings (water & pretreatment)	$10,000.00
Ongoing Costs (power & maintenance)	(4,000.00)
NET ONGOING SAVINGS	$6,000.00/Yr

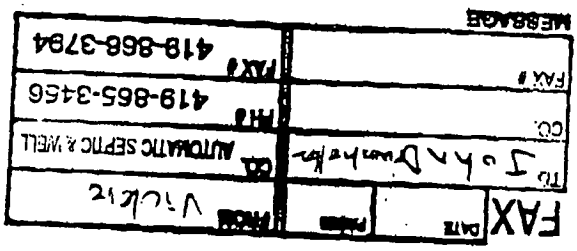
These savings are best estimates, but are conservative and can probably be beat without too much trouble. I would rather estimate low and beat that estimate than the other way around. If you have any questions, please feel free to call me.

Sincerely,

John D. Drumheller
Owner - Hearn Plating Co., Ltd.

Automatic Septic & Well Corporation

9540 AIRPORT HIGHWAY
MONCLOVA, OHIO 43542
(419) 865-3456



HPC
3184 Bellvue
Toledo, OH 43606

10-4-01

RE: Wells
WE ARE PLEASED TO QUOTE YOU AS FOLLOWS:

Cost to drill 5" well @17.00 pr ft estimated 175'	$2,975.00
Cost to drill 6" well @21.00 pr ft estimated 175'	$3,675.00
Cost to grout both wells @350.00/@425.00	$ 775.00
Cost to install a 3hp,1ph, 35 gpm submersible pump, 2" galv. Drop pipe, wire, 2"line and underground wire into building, pipe to return well, pitless adapters, well seal, all material and labor to install out side work, clean up and stone trenches	$6,928.00

Estimated total.....$10,678.00

John,

As I understand, you will contact the electric company and take care of any cost for that and repairing blacktop, permits and inside work. Also, if it is necessary to pressurize the water into the discharge well, you will consider that work extra.

The 3HP pump can be throttled up and down as you wanted. It will pump between 25-50 gallons per minute at 150' with no pressure on it.

I look forward to hearing from you.

**Prices may vary according to depth.