HZ/RC/~~TE~~

Texas Commission on Environmental Quality

6T

INTEROFFICE MEMORANDUM

To: Central Records Files (MC - 199) **Date:** August 1, 2006

Texas Hydraulic, Inc. (D/b/a Precise
Hard Chrome)
Solid Waste Registration No. 38542

Thru: Jay Carsten, P.G. Manager
Environmental Cleanup Section II, Remediation Division

Cathy Remmert, Supervisor
Team 3, Environmental Cleanup Section II, Remediation Division

From: Luda Voskov, Project Manager
Team 3, Environmental Cleanup Section II, Remediation Division

Subject: Documentation of achievement of facility-wide remedy selection and remedy construction complete
EPA ID No. TXD988019568
TCEQ Agreed Order issued 01/13/93

Based on a file review, **remedies have been selected for the area of concern (AOC) subject to RCRA/HSWA corrective action at the above-referenced facility**. The RCRA milestone of facility-wide Remedy Decision (CA400)[1] has been achieved, based on the approval of the proposed remedy modifications at the facility on May 27, 2004. Remedies had previously been selected for all other units and AOCs subject to corrective action at the facility.

Based on a file review, **physical remedy construction has been completed facility-wide** (CA550RC)[2]. Achievement of this milestone is based on the approval of remedy construction at the facility on April 25, 2005. Remedy completion or construction had previously been approved for all other units and AOCs subject to corrective action at the facility.

The units and AOCs considered in this evaluation include: Entire facility

RFI Units & AOCs subject to Corrective Action	Remedy Decision[1]	Approval of Remedy Construction/ Completion[2]
N/A - No permit or Compliance Plan		
RCRA Regulated, Permitted Units subject to Compliance (or Corrective Action Monitoring)		
N/A - No permit or Compliance Plan		
Interim Status or Unauthorized Units		
Agreed Order - Entire Facility	May 27, 2004	April 25, 2005

To date, no additional units subject to corrective action requirements have been identified at the facility.

Luda Voskov

Attachments

cc: Waste Program Manager, TCEQ Region 9 Office, Waco, TX

Notes:

1 "The event when the state or EPA formally selects a remedy designed to meet RCRA Corrective Action long-term goals of protection of human health and the environment. This event code also applies when no further corrective action is required because stabilization measure(s) have already been implemented or because the site characterization has demonstrated the attainment of the long-term RCRA Corrective Action goals." See RCRAInfo Data Dictionary for complete event code definition. Each unit and AOC must have an approved remedy for this event code to apply facility-wide.

2 "The event when the state or EPA acknowledges in writing that the RCRA facility has completed construction of a facility's remedy that was designed to achieve long-term protection of human health and the environment, and that the remedy is fully functional as designed, whether or not final cleanup levels or other requirements have been achieved. Remedy construction may also acknowledge the event where no remedy is constructed." See RCRAInfo Data Dictionary for complete event code definition. Each unit and AOC must have an approval of the remedy construction or approval of the decision that no physical construction is needed for this event code to apply facility-wide.

DO NOT SEND THIS PAGE[1]

bcc list (format revised 11/08/2005):

Central Records (MC-199)
CAS files (MC-127)
GPRA File

For data entry:

WWC COMMUNICATION ID:	**None**
This letter is (Pick one):	**IOM**
LBB (04 or 07, and number to count):	**n/a**
Reply from facility needed? If so, give reply due date:	**No**
Document Review(s) Complete? (Yes/No)	**N/A**
WWC PROPERTY: CAS Status value changed for entire facility (Put new status or n/a)[2]?	**n/a**
WWC FEATURE UPDATES (n/a, if not applicable)[3]:	**N/A**
Feature Name:	
New Feature Status:	**n/a**
For entry into RCRAInfo: Number of units (n/a, if not applicable):	**Entire Facility**
Corrective Action Codes (RFI units/areas) CA- **or** Closure Codes (RCRA/Interim Status units) CL-	**400, 550**

1. *Only attach bcc page to the writer's copy and CAS File copy.*
2. *If facility will no longer be part of workload, change IHW CA 0 Fea status to Complete or Transferred, verify there are no ongoing PM-defined Features, and verify there are no outstanding Communications that need review.*
3. *If unit/area will no longer be part of workload, update appropriate Status & Characteristics for that unit/area only.*

HZ/RC/~~TE~~ GT

Texas Commission on Environmental Quality

INTEROFFICE MEMORANDUM

To: Central Records Files (MC - 199) **Date:** August 1, 2006

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Solid Waste Registration No. 38542

Thru: Jay Carsten, P.G. Manager
Environmental Cleanup Section II, Remediation Division

Cathy Remmert, Su
Team 3, Environme ection II, Remediation Division

#3

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Team 3, Environment ction II, Remediation Division

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Luda Voskov

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TNRCC Region____ TNRCC Reg. No. _____ ****

Jm 4-29-02

IHW 38542 CO
H2/RC/6T

INDUSTRIAL and HAZARDOUS WASTE CHANGE FORM

This form is to be used by a Facility Representative and/or a TNRCC Investigator to request a change be made in the information in the TNRCC and EPA databases (TRACS and RCRIS).

341400

Current Site Information - SECTION I must be complete for this form to be valid. Please write "N/A" i Section I.

SECTION I:

TNRCC Registration Number: 38542	F Number: N/A	EPA I.D. Number: TXD988019568
Current Company Name: PRECISE HARD CHROME	Current Facility Name: PRECISE HARD CHROME	
TNRCC Region #: 9	County: McLENNAN	

Complete Site Address:
6613N. 19th STREET
WACO, TEXAS 76708

Contact Person: DAVID FORD
Telephone Number (include area code): 254-756-6879

Facility Type (circle all that apply):
Generator
Transporter for Hire/Self (Circle) (TRP)
Receiver:
- ☐ Treatability Study (Hazardous waste only)
- ☐ Landfill
  - ☐ Class 1 ☐ Class 2 ☐ Class 3
  - ☐ Hazardous ☐ Municipal/Nonindustrial
- ☐ Recycler
  - ☐ Hazardous ☐ Class 1 ☐ Other
- ☐ Treatment
- ☐ Storage
- ☐ Injection Well
- ☐ Incineration
- ☐ Recovery
  - ☐ Energy ☐ Metals
  - ☐ Solvents ☐ Other
- ☐ Other disposal

Transfer Facility

Generator Type (circle all that apply):
Industrial
Nonindustrial
Municipal
Railroad Commission Jurisdiction

6-18-02

Facility is currently registered as (circle all that apply):
Large Quantity Generator (LQG)
Small Quantity Generator (SQG)
Conditionally Exempt Small Quantity Generator (CESQG)
No Hazardous Waste (NHW) - Generates more than 100kg/220 lbs monthly of Class 1 industrial waste but no hazardous waste

UH 2/4/02
1403 SC

***** An entry in this column indicates corrective action or comment is needed.**

(rev. 10/13/98)

Requested Changes - SECTION II - VII: It is only necessary to fill out the section(s) for which you are requesting changes.

SECTION II: Registration Number Needed: (complete if applicable)

Facility is required by rule to register with (Circle all that apply):
TNRCC
EPA

Facility is not required by rule to register but needs a Field Operations Identification Number (Circle below):
F Number needed

SECTION III: Company Name Change: (complete if applicable)

Name is being changed to: N/A

Reason for name change: N/A

SECTION IV: Site Name Change: (complete if applicable)

Name is being changed to: N/A

Reason for name change: N/A

SECTION V: Mailing Address Change: (complete if applicable)

New and complete mailing address:
N/A

SECTION VI: Contact Person and/or Telephone Number Change: (complete if applicable)

New contact person:
Title: N/A

Telephone number (include area code) of new contact person: N/A

SECTION VII: Generator Status/Facility Type Change (complete if applicable)

***** An entry in this column indicates corrective action or comment is needed.**

NRCC Region____ TNRCC Reg. No: _____

Facility Type (circle all that apply):
Generator
Transporter for Hire/Self (Circle) (TRP)
Receiver:
- ☐ Treatability Study (Hazardous waste only)
- ☐ Landfill
  - ☐ Class 1 ☐ Class 2 ☐ Class 3
  - ☐ Hazardous ☐ Municipal/Nonindustrial
- ☐ Recycler
  - ☐ Hazardous ☐ Class 1 ☐ Other
- ☐ Treatment
- ☐ Storage
- ☐ Injection Well
- ☐ Incineration
- ☐ Recovery
  - ☐ Energy ☐ Metals
  - ☐ Solvents ☐ Other
- ☐ Other disposal

Transfer Facility

Generator Type (circle all that apply):
Industrial
Nonindustrial
Municipal
Railroad Commission Jurisdiction

Generator/Facility Status (circle all that apply):
Large Quantity Generator (LQG)
Small Quantity Generator (SQG)
Conditionally Exempt Small Quantity Generator (CESQG)
No Hazardous Waste Generator (NHW) (Generates more than 100kg/220 lbs monthly of Class 1 industrial waste but no hazardous waste)
Inactive (no waste of any kind is being generated but may have hazardous or non-hazardous waste left on-site)
Non-Handler (an active site that does not generate hazardous waste and does not generate more than 100kg/220 lbs monthly of Class 1 Industrial waste)
Abandoned (no identifiable responsible party for the site)
Closed RCRA Unit(s) [RCRA Permit Number(s)_____]

SECTION VIII: Additional Comments: (Optional):

SECTION IX: Signature Block: (must be signed by TNRCC Investigator and/or Facility Representative for this form to be considered valid):

_____ (Date)
(Signature of TNRCC Investigator)

David Ford 1-31-02
(Signature of Facility Representative) *(Date)*

Facility Representatives should send this form to:
The Texas Natural Resource Conservation Commission
The Industrial and Hazardous Division/Waste Evaluation Section
P.O. Box 13087/MC-129, Austin, Texas 78753

9/1/97 TRR

***** An entry in this column indicates corrective action or comment is needed.**

(rev. 10/13/9

JAN-31-2002 THU 10:51 AM FAX NO. P. 04

In 4-29-02

IHW 31194 CO

Sara Lee
BAKERY GROUP

Refrigerated Dough Division
1820 North Josey Lane
Carrollton, TX 75006
972 416-4395

Jan. 28, 2002

Waste Evaluation Section
MC 129
Industrial and Hazardous Waste Division
Texas Natural Resource Conservation Commission
P.O. Box 13087
Austin, TX 78711-3087

Dear Mr./ Ms.:

We are not required to file an Annual Waste Summary this year due to our status of TXCESQG and low amounts and classes of waste.

Thank you very much.

Regards,

B. Hendershot

Bob Hendershot
SaraLee Bakery Group
Formerly EarthGrains Refrigerated Dough Products, Inc.
1820 N. Josey Ln.
Carrollton, TX 75006

Solid Waste registration no.: 31194

Inactive Site
Dallas
UH 2/11
(135
SC

478A.TXD988019568 0002
PRECISE HARD CHROME
WACO, TX 76708

$000234531 HZ/RC/NT

478A.TXD988019568 0002

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25 × 10 32 × 10

RCRA RECORDS CENTER
INFILING COVER SHEET

NAME Ralph W. Frank DATE 6/21/99

PHONE X2249 MAIL CODE 6EN-HT

EPA IDENTIFICATION NUMBER TXD988019568

NAME OF FACILITY Precise Hard Chrome, Waco, TX

FILE TYPE RCRA Technical

V. 22809

25x

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
1445 ROSS AVENUE, SUITE 1200
DALLAS, TEXAS 75202-2733

David Ford
Environmental Operations
PRECISE HARD CHROME
P.O. Box 5660
Waco, Texas 76708-0660

Dear Mr Ford:

Enclosed is a copy of the Compliance Evaluation Inspection report for the inspection conducted at your facility on August 18, 1997, under the Resource Conservation and Recovery Act (RCRA).

Although the inspection did not reveal RCRA violations for which the EPA intends to take enforcement actions under RCRA, we encourage you to address any areas of concern noted in the inspection report and in the exit interview.

Attachments provided by the facility during the inspection have not been included with the report. A copy of this report has also been sent to the Texas Natural Resource Conservation Commission. We thank you for your cooperation and assistance.

If you have any questions, please contact me, or you may contact Ralph Frank of my staff at (214)665-2249.

Sincerely yours,

Desi A. Crouther, Chief
Hazardous Waste Enforcement Branch

Enclosure

cc: John Young Director
TNRCC, Austin
Office of Field Operations

ESIERRA, Chief
6EN-HT

RCRA File TXD988019568 Technical
6EN-HT\RFRANK\3-30-98\LTTRTRNS.PHC

25x

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
1445 ROSS AVENUE, SUITE 1200
DALLAS, TX 75202-2733

Inspection Date: 08/18/97

Inspection Participants: EPA only

Lead EPA Inspector: Ralph W. Frank (RCRA) Initials: RWF
Other Participants: Dorothy A. Crawford (RCRA)
Samplers: A.T. Kearney, Inc. (NO SAMPLES WERE REQUIRED)

EPA ID Number: TXD988019568

Facility Name: PRECISE HARD CHROME

Physical Location: 6613 N. 19th Street, Waco, TX

Facility Mailing Address: P.O. Box 5660, Waco, TX 76708-0660

Type of Ownership: Private

Facility Owner: A DOVER INDUSTRIES COMPANY

Facility Representative(s) David Ford-Environmental Operations

Phone Number: (817) 756-6879

Facility Description:

The PRECISE HARD CHROME facility is located on Farm-to-Market Road 1637, with a street address of 6613 N. 19th Street, P.O.Box 5660, in Waco, McLennan County, Texas, Zip Code 76708-0660. The facility carries a SIC Code of 3471. The facility consists of one large, segmented, metal-framed building on concrete flooring, with tools and machinery applicable to the operations located in basically straight-line movement through production sequence. Three Chrome plating baths (see photographs 13 and 14) are located in the southwest portion of the building. The plating tanks are equipped with hoods vented to chemical mist eliminators prior to exhaust discharge to the environment. Operations at the facility consists of cutting, grinding and polishing various diameter shafts and tubing, for hard chrome plating and finishing.

The facility operates 24-hours/day, with a minimum of personnel dependent upon the consumer demand.

The facility is identified with the EPA as a Large Quantity Generator of Hazardous Waste, and generates waste containing D002 (Characteristic of Corrosivity), and D007 (Trivalent and Hexavalent Chromium) constituents in excess of the EPA regulatory levels.

Wastewater is managed through two systems inside the containment areas, and the effluent discharged by city permit to the Waco POTW.

The facility is located in a sparsley populated light commercial and residential area.

Recycled/Recyclable • Printed with Vegetable Oil Based Inks on 100% Recycled Paper (40% Postconsumer)

Facility Classification: Large Quantity generator: >than 1000 kg/mo.

Inspection Type: CEI: RCRA Lead
Reason for Evaluation: (07) General

Summary of Inspection:

The Inspector entered the plantsite at 0930, and was met by Mr.David Ford, of PRECISE Environmental Operations, at 0940. EPA Credentials were presented and accepted, and the purpose of our presence was explained. Preparations were made for the EPA Compliance Evaluation Inspection, including a brief discussion of Plant safety rules and personal protective equipment necessary.

The facility on-site inspection began at 1015 in the southeast grinding and polishing areas. The area contained waste collection bins from the grinding coolant water separation system (non-hazardous), and a collection bin for the filter media from the large air exhauster system in the vicinity. This bin was marked `hazardous waste', dated, and in a medium sized roll-off bin. The exhauster and filter (with demister) also serviced the Chromium plating lines in the southwest area of the building (see Facility layout). The inspection then proceeded past another bar/tubing grinding and polishing area to the two 6000-gallon Chromic Acid plating tanks, one 3000-gallon Chromic Acid plating tank, and one 3000-gallon rinse tank. All of the work areas were clean and in orderly, uncluttered condition. Drip and spill sumps were satisfactory. At 1050 into the inspection, immediately outside of the building, in the vicinity of the Chrome plating tanks, there was evidence of a reportable spill (see photographs 15 and 16), with corresponding excavation of soil placed in a large rolloff container. Both the excavation and rolloff container contents were covered pending analytical results of the material removed.

The inspection then continued past a 5000-gallon, fiberglas tank used for storage of Chromic Acid for use and reuse as needed. The tank was marked `hazardous waste'.

Immediately north of the plating tank area was another expanse for bar/tubing saws and grinding/polishing, along with bar/tubing storage racks.

The hazardous waste storage was located just north of the building, in large rolloff truck containers. These containers were marked with hazardous waste labels, were tightly covered, on level ground and concrete, and accessible for transport.

Throughout the tour of the facility, there was evidence of well-marked and color-coded satellite accumulation areas and containers. All containers were closed.

At 1120, the inspection entered the wastwater treatment area, which consisted of two 5000-gallon water holding tanks, treatment tanks, filters, laboratory, and an automated monitoring console for the operator to control all necessary additions, movements and releases to the City of Waco POTW.

The inspection concluded without any samples being taken or necessary, as the operation was well managed from an environmental and regulatory standpoint.

A record review was then held in the office, wherein Mr. Ford provided requested information, copies, plot plan, training program, bienneal report, contingency plan, manifests, analytical results from `Intertech ITS' laboratory in Dallas, and a history of previous compliance.

CONCLUSION AND EXIT CONFERENCE

After reviewing the documentation received during the morning inspection and records review, the events of the day were discussed with Mr. Ford. Since the EPA inspection team had no knowledge of the groundwater recovery and treatment program from an off-site contamination (TNRCC Oversight), and Mr. Ford had no questions or concerns about the inspection, the EPA party left the premisis at 1330.
Mr. Ford requested that the Company be furnished a copy of the Inspection Report and any ensuing action concerning same.

The inspector then expressed appreciation for the time and expertise extended, and exited the facility premisis at or about 1330.

Checklists Completed:

XX Generator	Waste Piles	Thermal Treatment
TSD	Closure	Chemical, Physical and
Tanks	Post Closure	Biological Treatment
XX Containers	Incinerator	Surface Impoundments
Landfill	Land Treatment	XX Generator Supplement
Transporter	LOIS	XX Photographs
Land Ban	Groundwater	BIF
Subpart AA/BB	Subpart CC	Sampling Data
Other - RCRA screening checklist		

Attachments: Document copies from facility files

Inspector: Ralph W. Davis Date: 3/5/98

Peer Reviewed by: Stephan Johnson Date: 3/5/98

FACILITY NAME: PRECISE HARD CHROME

EPA ID NUMBER: TXD 988019568

RCRA COMPLIANCE INSPECTION REPORT
GENERATORS CHECKLIST

NOTE: On multiple part questions, circle those not in compliance.

EPA Identification NO. (262.12)

1. Does the Generator have an EPA I.D. No.? ✓Yes ___No
   A. If yes, what is that number?
   TXD 988019568

Hazardous Waste Determination (262.11)

1. Does the generator generate hazardous waste(s) listed in Subpart D? (261.30 - 261.33 - List of Hazardous Waste) ___Yes ✓No
   a. If yes, list wastes and quantities on attachment (Include EPA Hazardous Waste Number, waste name and description).

2. Does the generator generate solid waste(s) that exhibit hazardous characteristics? (circle those applicable - corrosivity, ignitability, reactivity, ~~TC toxicity~~) (261.20 - 261.24 - Characteristics of Hazardous Waste) ✓Yes ___No
   a. If yes, list wastes and quantities on attachment (Include EPA Hazardous Waste Number, Waste Name and Description.) D002
   b. Does the generator determine characteristics by testing or by applying knowledge of processes?
      i. If determined by testing, did the generator use test methods in Part 261, Subpart C (or Equivalent)? ✓Yes ___No
      ii. If equivalent test were methods used, attach copy of equivalent methods used.

3. Are there any other solid wastes deemed non-hazardous generated by the generator? (i.e. process waste streams, collected matter from air pollution control equipment, water treatment sludge, etc.) ✓Yes ___No
   a. If yes, did the generator determine non-hazardous characteristics by testing or knowledge of process? KoP

25x10

FACILITY NAME: PRECISE

EPA ID NUMBER: TXD988019568

i. If determined by testing, did the generator use test methods in Part 261, Subpart C (or Equivalent)? N.A. ___Yes___No

ii. If equivalent test methods were used, attach copy of equivalent methods used.

b. List wastes and quantities deemed non-hazardous or processes from which non-hazardous wastes were produced. (Use narrative explanations sheet)

4. Are any wastes recycled, reused or reclaimed on-site? ___Yes ✓No

If yes, use narrative sheet to describe the type and quantity of the waste and the method used for reclamation.

5. Are any wastes shipped off-site for reclamation? ✓Yes ✓No

If yes, use narrative to describe the type and quantity of the waste and its destination. Also give a description of storage prior to shipment. METAL SHAVINGS

6. Is the total quantity of hazardous wastes generated?

a. Less than 100 kg/month? ___Yes___No

b. More than 1000 kg/month? ✓Yes___No

c. More than 100 but less than 1000 kg/month? ___Yes___No

Manifest

1. Does the generator ship hazardous waste off-site? ✓Yes___No

a. If no, do not fill out Section C ard D.

b. If yes, identify primary off-site facility(s). (Use narrative explanations sheet) ELTEX CHEMICAL SUPPLY - HOUSTON

Has the generator shipped hazardous waste off-site since November 19, 1980? ✓Yes___No

3. Is the generator exempted from regulation because of:

Small quantity generator (261.5 - Special requirements) ___Yes ✓No

OR

25x10

FACILITY NAME: PRECISE

EPA ID NUMBER: TXD 988019568

Produces only non-hazardous solid waste at this time (261.4 - Exclusions) ___Yes ✓No

4. If the generator is exempted as a small quantity generator are the following requirements met?

a. The waste is reclaimed under a contractual agreement in which: N.A.

i. The type of waste and frequency of shipments specified in the agreement? ___Yes___No

ii. The vehicles used to transport the waste to the recycling facility and to deliver regenerated material back to the generator is owned and operated by the reclaimer of the waste? ___Yes___No

b. The generator maintains a copy of the reclamation agreement in his files for a period of at least three years after termination or expiration of the agreement? ___Yes___No

Required Information (262.21)

5. If not exempted does the generator use manifest? ✓Yes___No

a. If yes, does manifest include the following information (262.21 - Required information) ✓Yes___No

(Circle those not on manifest)

i. Manifest Document No.

ii. Generators Name, Mailing Address, Tele. No.

iii. Generator EPA I.D. No.

iv. Transporter(s) Name and EPA I.D. No.

v. Facility Name, Address and EPA I.D. No.

vi. DOT description of the waste

vii. a. Quantity (weight or volume)
b. Containers (type and number)

viii. Emergency Information (optional) (Special handling instructions, Phone No.)

FACILITY NAME: PRECISE

EPA ID NUMBER: TXD988019568

ix. Waste minimization certification

x. Is the following certification on each manifest form? ✓Yes___No

This is to certify that the above named materials are properly classified, described, packaged, marked and labeled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation and the EPA.

Uses of the Manifest (263.23)

6. Does the generator retain copies of manifests? ✓Yes___No

(Check completed manifests at random. Indicate how many manifests were inspected, how many violations were noted and the type of violation.)

If yes, complete a through e. If questions contain more than one item, circle those not in compliance.

a. i. Did the generator sign and date all manifests inspected? ✓Yes___No

ii. Who signed for the generator?
Name: DAVID FORD
Title: ENVIRONMENTAL OPERATIONS
I.D. Number TXD988019568

b. i. Did the generator obtain handwritten signature and date of acceptance from initial transporter? ✓Yes___No

ii. Who signed for the transporter?
Name: RICK MACK
Title: DRIVER
I.D. Number: TXD982552874

c. Does the generator retain one copy of manifest signed by generator and transporter? ✓Yes___No

d. Do returned copies of manifest include facility owner/operator signature and date of acceptance? ✓Yes___No

e. If copy of manifest from facility was not returned within 45 days, did the generator file an exception report? (262.42 - Exception reporting) NA ___Yes___No

25x10

FACILITY NAME: PRGCISS

EPA ID NUMBER: TXD988019568

i. If yes, did it contain the following information:

Legible copy of manifest — NA ___Yes___No

AND

Cover letter explaining generators efforts to locate waste. — NA ___Yes___No

f. Does (will) the generator retain copies for 3 years? — ✓ Yes___No

Pre-Transport Requirements

1. Does the generator package waste? — ✓ Yes___No

If no, skip to question 9.
If yes, complete the following questions.

Inspect containers ready for immediate shipment.
If there are no such containers, skip to question 8.

2. Does the generator package waste in accordance with 49 CFR 173, 178, and 179? (DOT requirements) (262.30 - Packaging) — ✓ Yes___No

3. Are containers to be shipped leaking, corroding or bulging? — ___Yes ✓ No

Use narrative explanations sheet to describe containers and condition.

4. Does the generator use DOT labeling requirements in accordance with 49 CFR 172 when containers are offered for shipment? (262.31 - Labeling) — ✓ Yes___No

5. Does the generator mark each package in accordance with 49 CFR 172 when containers are offered for shipment? (262.32 - Marking) — ✓ Yes___No

6. a. Is each container of 110 gallons or less marked with the following label when containers are offered for shipment? — ✓ Yes___No

HAZARDOUS WASTE - Federal Law Prohibits Improper Disposal. If found, contact the nearest police or public safety authority or the U.S. Environmental Protection Agency.

Generator's Name and Address _____

Manifest Document Number_____

b. If other labels exist, list in narrative.

25 x 10

FACILITY NAME: PRECISE

EPA ID NUMBER: TXD 988014568

7. If there are any vehicles present on site loading or unloading hazardous waste, inspect for presence of placards. Note this instance on narrative explanation sheet. — NOT AVAILABLE

8. Satellite Accumulation (effective June 20, 1985)

a. Does the generator accumulate waste in containers at or near "Satellite" generation points? — ✓ Yes ___ No

If no, skip to question 9.
If yes, complete the following.

b. Are containers in good condition? — ✓ Yes ___ No

c. Is the waste compatible with the containers? — ✓ Yes ___ No

d. Is waste transferred from leaking containers or otherwise managed to control leakage? — NA ___ Yes ___ No

e. Are containers closed? — ✓ Yes ___ No

f. Are containers marked with the words "hazardous waste" or identification of the contents? — ✓ Yes ___ No

g. Has waste accumulation exceeded one (1) quart of acutely hazardous waste (261.33 e.) or 55 gallons of other hazardous waste? — ___ Yes ✓ No

If yes,

i. Has the container holding the excess amount been marked with the date the excess began accumulating? — N.A. ___ Yes ___ No

ii. Have excess amounts remained in the satellite accumulation area longer than three (3) days? — N.A. ___ Yes ___ No

9. Accumulation Time (262.34 - Accumulation Time for Small Quantity Generators) — N.A.

a. Is waste generated > 100 kg/month, but < 1000 kg/month? — ___ Yes ___ No

If yes, answer rest of question #9.
If no, skip to question #10.

b. Is hazardous waste shipped offsite within 180 days? — ___ Yes ___ No

c. Has the quantity of waste accumulated on-site exceeded 6000 kilograms? — ___ Yes ___ No

25x10

FACILITY NAME: PRECISE

EPA ID NUMBER: TXD 988019568

d. Does the generator comply with the requirements of Part 265 Subpart C, Preparedness and Prevention? ✓ Yes ___ No

10. Accumulation Time (262.34 - Accumulation Time)

a. Is the site a permitted/interim status storage facility? ✓ Yes ___ No

If yes, skip to Section E, and complete and attach the TSD checklist and appropriate supplemental checklists. If no, answer rest of question #8.

b. Is hazardous waste shipped offsite within 90 days? ✓ Yes ___ No

c. Is waste stored in containers or tanks? ✓ Yes ___ No

d. Is the beginning date of accumulation time clearly indicated on each container? ✓ Yes ___ No

e. Is each container or tank marked with the words "Hazardous Waste"? ✓ Yes ___ No

f. Complete and attach the containers/tanks supplemental checklists as appropriate.

g. If the generator accumulates waste on-site for less than 90 days, complete RCRA Generators Checklist Supplement.

Recordkeeping and Report

1. Is the generator keeping the following reports for a minimum of three (3) years? (262.40 - Recordkeeping):

a. Manifests and signed copies from designated facilities? ✓ Yes ___ No

b. Biennial reports (or reports as required by state agencies) ✓ Yes ___ No

c. Exception Reports N.A. Yes ___ No

d. Test results, where applicable. ✓ Yes ___ No

2. Where are records kept (at facility or elsewhere)?

AT FACILITY

25x10

FACILITY NAME: Precise

EPA ID NUMBER: TXD988019568

3. Who is in charge of keeping the records?

Name: David Ford

Title: Environmental Operations

Special Condition

1. Has the generator received from or transported to a foreign source any hazardous waste? (262.50 - International Shipments) ___Yes ✓No

If yes, N.A.

a. Has a note been filed with the R.A.? ___Yes___No

b. Is this waste manifested and signed by Foreign Consignee? ___Yes___No

c. If the generator transported wastes out of the country has he received confirmation of delivered shipment? ___Yes___No

d. Has the generator filed an annual report (by March 1 of each year) giving the type, quantity, frequency and destination of all exported hazardous waste? (Per HSWA 1984) ___Yes___No

FACILITY NAME: PRECISE

EPA ID NUMBER: TXD988019568

CONTAINERS STORAGE CHECKLIST
(SUBPART I - USE AND MANAGEMENT OF CONTAINERS 265.170)

1. Does the facility store hazardous waste in containers? ✓ Yes ___ No

   If no, do not complete this form.

Condition of Containers (265.171)

2. Are the containers in good condition? (check for leaks, corrosion, bulges, etc.) ✓ Yes ___ No

   If no, explain in narrative and document with photograph.

3. If a container is found to be leaking, does the operator transfer the hazardous waste from the leaking container? ✓ Yes ___ No

Compatibility of Waste with Containers (265.172)

4. Is the waste compatible with the containers and/or its liner? ✓ Yes ___ No

   If no, explain in narrative.

Management of Containers (265.173)

5. Are the stored containers closed? ✓ Yes ___ No

   If no, explain in narrative.

6. Are containers holding hazardous waste opened, handled or stored in such a manner as to cause the container to rupture or leak? ___ Yes ✓ No

   If yes, explain in narrative.

Inspections (265.174)

7. Are each of the containers inspected at least weekly? ✓ Yes ___ No

   If no, explain in the narrative the frequency of inspection.

25x10

FACILITY NAME: PAGCISG

EPA ID NUMBER: TXD988019568

Special Requirements for Ignitable or Reactive Waste (265.176)

8. Are containers holding ignitible or reactive wastes located at least 15 meters (50 feet) from the facility property line? N.A. ___Yes___No

   If no, explain in narrative and document with photograph.

Special Requirements for Incompatible Wastes (265.177)

9. Are incompatible wastes stored in the same containers? ___Yes ✓No

   If yes, explain in narrative.

10. Are hazardous waste stored in an unwashed container that previously held an incompatible waste? ___Yes ✓No

11. Are containers holding incompatible wastes kept apart by physical barrier or sufficient distance? ✓Yes___No

    If no, explain in narrative.

FACILITY NAME: PRECISE

EPA ID NUMBER: TXD 988019568

RCRA GENERATORS CHECKLIST SUPPLEMENT

Personnel Training (265.16)

1. Have facility personnel successfully completed a program of classroom or on-the-job training? ✓Yes___No

   a. Does the training program include instructions in the following:

      (1) procedures for using, inspecting, repairing and replacing facility emergency and monitoring equipment? ✓Yes___No

      (2) key parameters for automatic waste feed cut-off systems? ✓Yes___No

      (3) operation of communication or alarm systems? ✓Yes___No

      (4) response to fires, explosions and groundwater contamination incidents? ✓Yes___No

      (5) shutdown of operations? ✓Yes___No

      (6) general hazardous waste management procedures? ✓Yes___No

   b. Is the program directed by a person trained in hazardous waste management procedures? ✓Yes___No

   c. Have personnel completed annual training reviews? ✓Yes___No

   d. Does the owner/operator maintain the following documents:

      (1) Job title, job description and name of employee for each position at the facility related to hazardous waste management? ✓Yes___No

      (2) Written description of the type and amount of both introductory and continuing training? ✓Yes___No

      (3) Written documentation that the training has been completed by facility personnel? ✓Yes___No

FACILITY NAME: PRECISE

EPA ID NUMBER: TXD 988019568

Preparedness and Prevention (265.30)

1. Is there evidence of fire, explosion or contamination of the environment? (265.31 - Maintenance and operation of facility) ✓ Yes ___ No

If yes, use narrative explanations sheet to explain. SEE NARRATIVE SW CORNER OF BUILDING EXTERIOR

2. Is the facility equipped with (265.32 - Required equipment)

   a. Internal communications or alarm system ✓ Yes ___ No

   b. Telephone or two-way radio to call emergency response personnel ✓ Yes ___ No

   c. Portable fire extinguishers, fire control equipment spill control equipment and decontamination equipment ✓ Yes ___ No

      1. Is this equipment tested to assure its proper operation? ✓ Yes ___ No

   d. Water of adequate volume for hoses, sprinklers or water spray system ___ Yes ___ No

      1. Describe source of water

         CITY OF WACO

      2. Indicate flow rate and/or pressure and storage capacity, if available.

         NOT AVAILABLE

3. Is there sufficient aisle space to allow unobstructed movement of personnel and emergency equipment? (265.35-Required Aisle Space) ✓ Yes ___ No

4. Has the owner/operator made arrangements with the local authorities to familiarize them with characteristics of the facility? (layout of facility, properties of hazardous waste handled and associated hazards, places where facility personnel would normally be working, entrances to roads inside facility, possible evacuation routes.) (265.37 - Arrangements with local authorities) ___ Yes ___ No

   If no, has the owner/operator attempted to make such arrangements? ✓ Yes ___ No

FACILITY NAME: PRECISE

EPA ID NUMBER: TXD 988019568

5. In the case that more than one police or fire department might respond, is there a designated primary authority? (265.37 - Arrangements with local authorities) ✓Yes___No

If yes, indicate primary authority:

WACO FIRE DEPT.

a. Is the fire department a city or volunteer fire department?

CITY OF WACO

6. Does the owner/operator have phone numbers or and agreements with State emergency response teams, emergency response contractors and equipment suppliers? ✓Yes___No

Are they readily available to the emergency coordinator? (265.37 - Arrangements with local authorities) ✓Yes___No

7. Has the owner/operator arranged to familiarize local hospitals with the properties of hazardous waste handled and types of injuries that could result from fires, explosions, or releases at the facility? ✓Yes___No

If no, has the owner/operator attempted to do this? (265.37 - Arrangements with local authorities) ___Yes___No

Contingency Plan and Emergency Procedures (265.50) (

1. Does the facility have a contingency plan? (265.52 Content of Contingency Plan) ✓Yes___No

a. If yes, does it contain:

1. actions to be taken in response to emergencies? ✓Yes___No

2. description of arrangements with police, fire and hospital officials? ✓Yes___No

3. list of names, addresses, phone numbers of persons qualified to act as emergency coordinator? ✓Yes___No

4. list, including the location and physical description of all emergency equipment? ✓Yes___No

FACILITY NAME: Precise

EPA ID NUMBER: TXD988019568

5. evacuation plan for facility personnel including signals, primary and alternate routes? ✓Yes ___No

2. Is a copy of the contingency plan maintained at the facility? (265.53 - Copies of contingency plan). ✓Yes ___No

3. Has a copy been supplied to the local police, fire depts., and hospitals? (265.53 - Copies of contingency plan) ✓Yes ___No

4. Has the contingency plan been updated and amended as necessary? ✓Yes ___No

5. Is the plan a revised SPCC Plan? (265.52 - Content of contingency plan) ✓Yes ___No

6. Is there an emergency coordinator on-site or within short driving distance of the plant at all times? ___Yes ___No

If yes, list primary emergency coordinator:

DAVID FORD

POOR QUALITY DOCUMENT

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Official Photograph Log

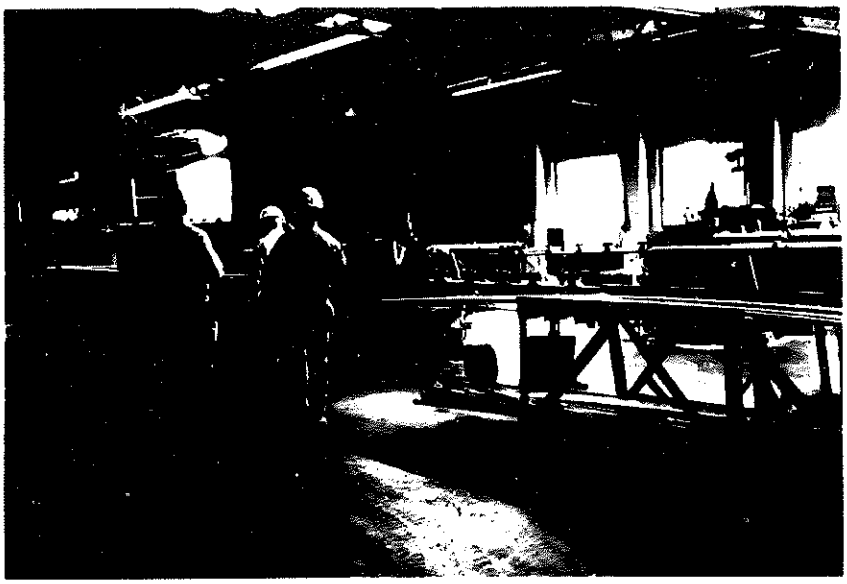


Photo Number: 1 Photographer: dac
Location: Precise Hard Chrome
Subject: grinding/polishing area near office (east side)
City, County: Waco State: TX
Date: 08/18/97 Time: 10:27 am Weather: partly cloudy

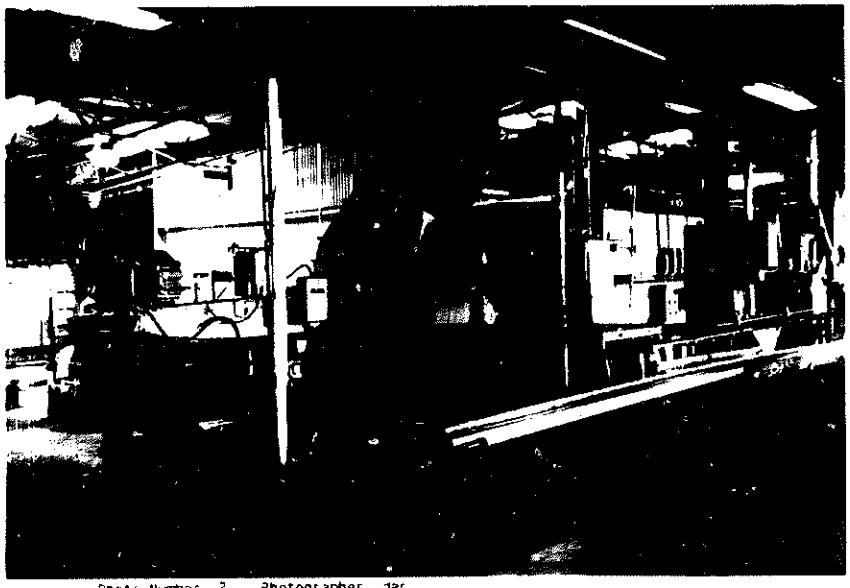


Photo Number: 2 Photographer: dac
Location: Precise Hard Chrome
Subject: Grinding/polishing area near office (west side)
City, County: Waco State: TX
Date: 08/18/97 Time: 10:28 am Weather: partly cloudy

POOR QUALITY DOCUMENT

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Official Photograph Log

Photo Number: 3 Photographer: dac
Location: Precise Hard Chrome
Subject: MW-20 well
City/County: Waco State: TX
Date: 08/18/97 Time: 10:30 am Weather: partly cloudy

POOR QUALITY DOCUMENT

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Official Photograph Log

Number: 5 Photographer: dac
Location: Precise Hard Chrome
Subject: Containers of waste from grinding coolant water
City/County: Waco State: TX
Date: 08/18/97 Time: 10:33 am Weather: partly cloudy

POOR QUALITY DOCUMENT

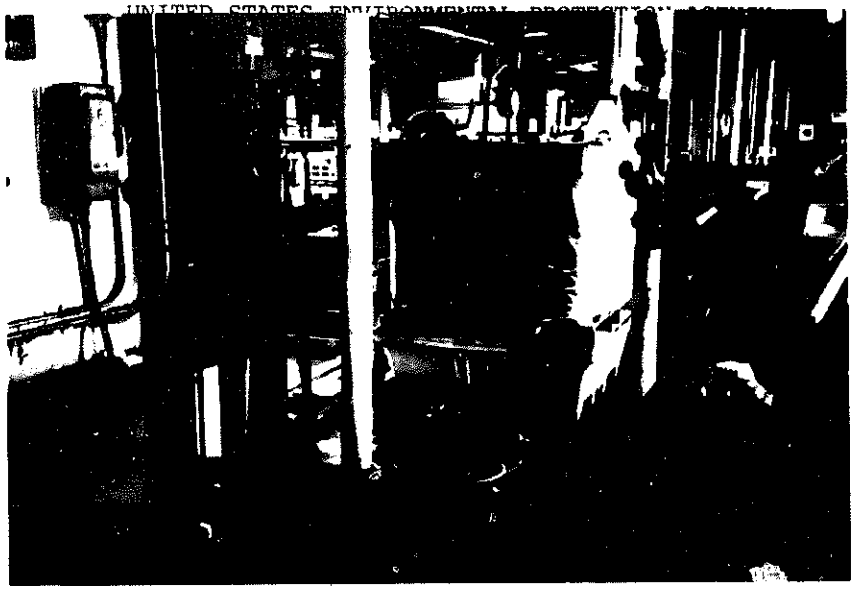


Photo Number: 4 Photographer: dac
Location: Precise Hard Chrome
Subject: MW-20 well
City/County: waco State: TX
Date: 08/18/97 Time: 10:30 am Weather: partly cloudy

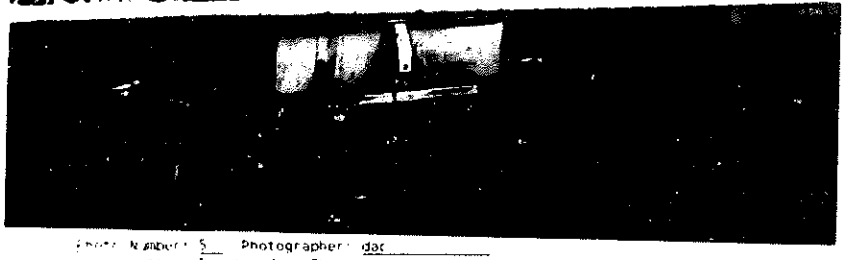
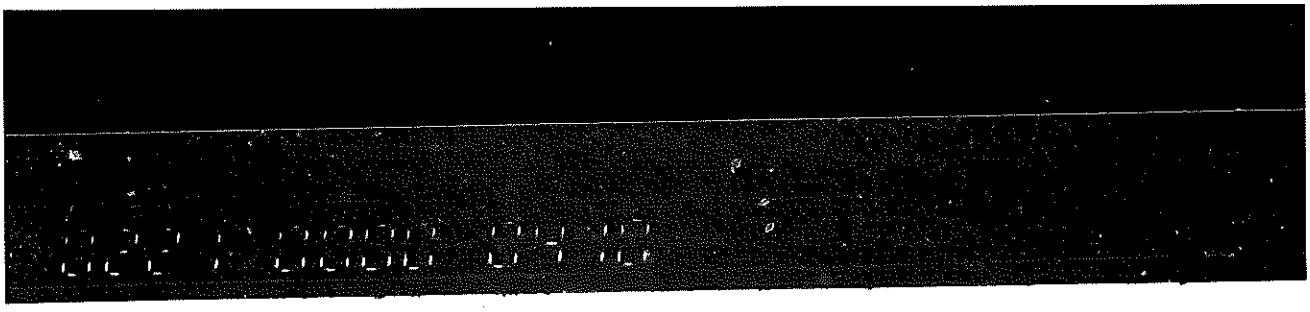


Photo Number: 5 Photographer: dac
Location: Precise Hard Chrome
Subject: Containers of waste from grinding coolant water
City/County: Waco State: TX
Date: 08/18/97 Time: 10:33 am Weather: partly cloudy



POOR QUALITY DOCUMENT

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Official Photograph Log

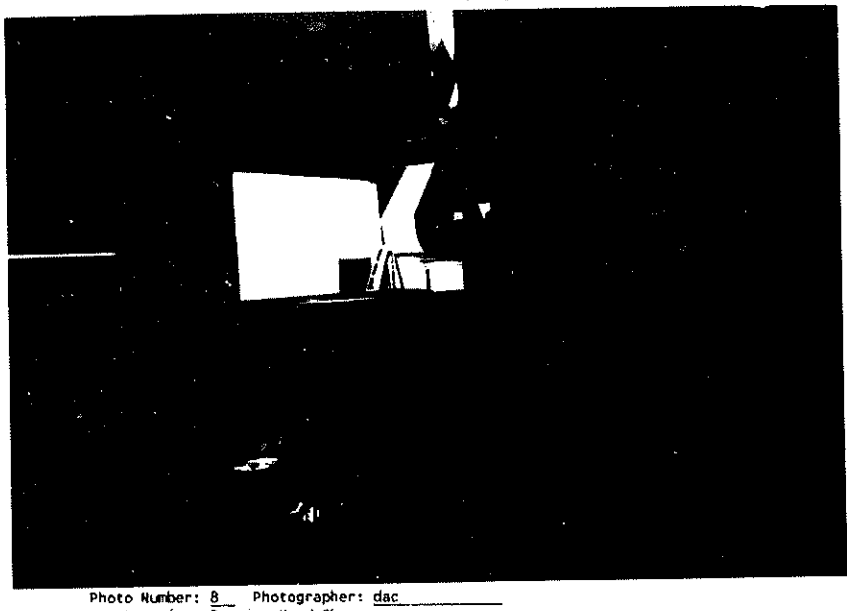


Photo Number: 8 Photographer: dac
Location: Precise Hard Chrome
Subject: Chrome plating line
City/County: Waco State: TX
Date: 08/18/97 Time: 10:38 am Weather: partly cloudy

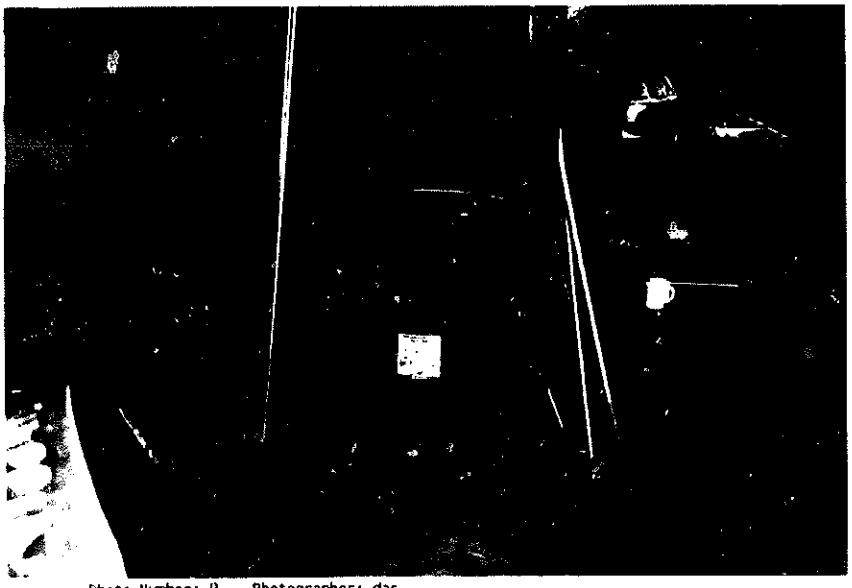
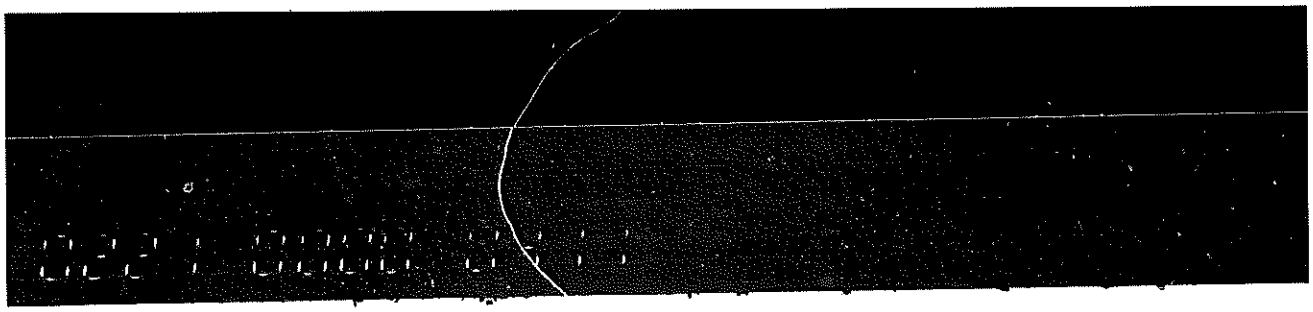


Photo Number: 9 Photographer: dac
Location: Precise Hard Chrome
Subject: Container in satellite accumulation area, neat chrome plating line
City/County: Waco State: TX
Date: 08/18/97 Time: 10:39 am Weather: partly cloudy



POOR QUALITY DOCUMENT

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Official Photograph Log

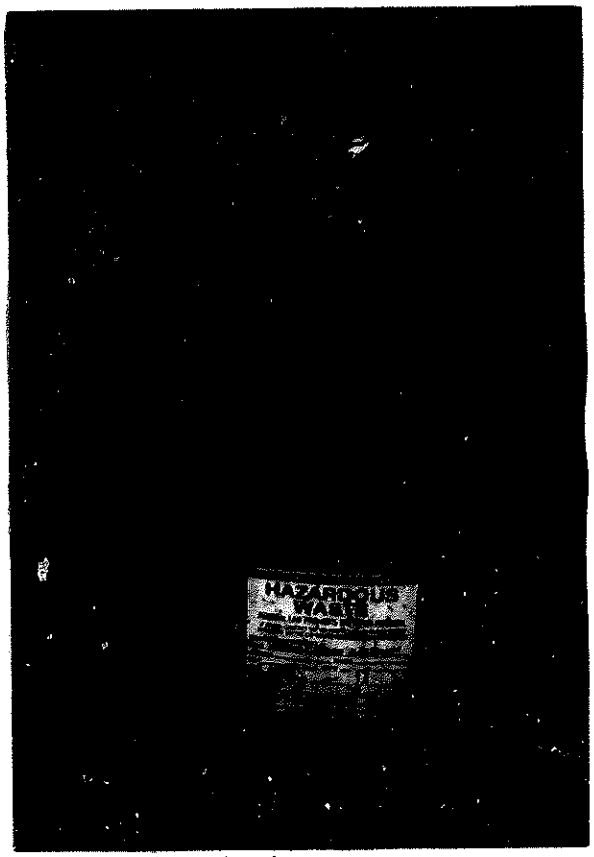


Photo Number: 10 Photographer: dmc
Location: Precise Hard Chrome
Subject: Closeup of label on container in satellite accumulation area
City/County: Waco State: TX
Date: 08/18/97 Time: 10:39 am Weather: partly cloudy

POOR QUALITY DOCUMENT

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Official Photograph Log

Photo Number: 11 Photographer: dac
Location: Precise Hard Chrome
Subject: Closeup of waste in container in satellite accumulation area
City/County: Waco State: TX
Date: 08/18/97 Time: 10:41 am Weather: partly cloudy

Photo Number: 12 Photographer: dac
Location: Precise Hard Chrome
Subject: Sump under chrome plating line
City/County: Waco State: TX
Date: 08/18/97 Time: 10:45 am Weather: partly cloudy

POOR QUALITY DOCUMENT

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Official Photograph Log

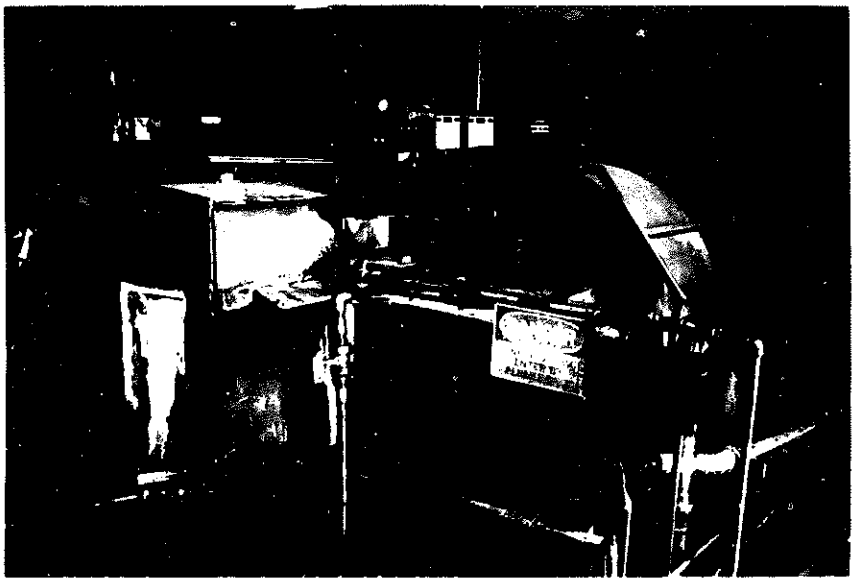


Photo Number: 13 Photographer: dac
Location: Precise Hard Chrome
Subject: Tanks 1 and 2 in chrome plating line
City/County: Waco State: TX
Date: 08/18/97 Time: 10:46 am Weather: partly cloudy

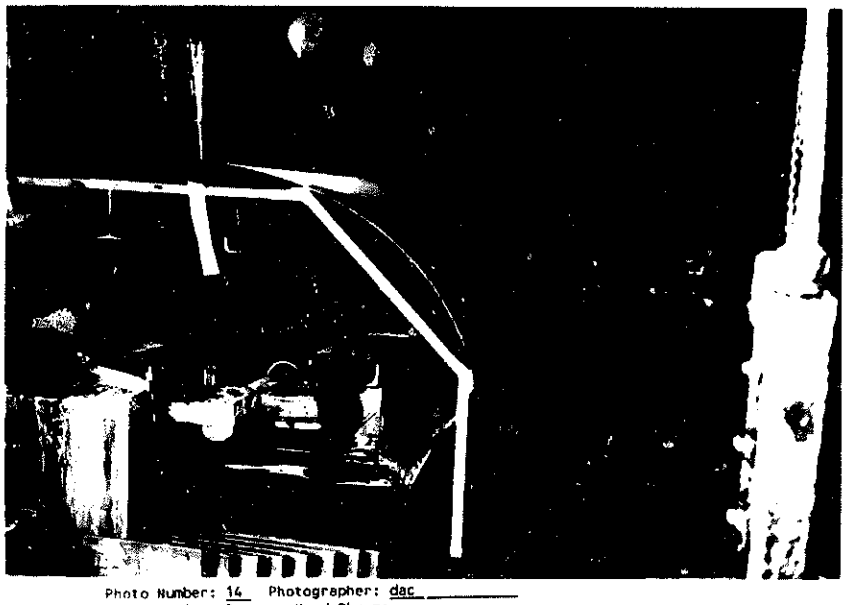


Photo Number: 14 Photographer: dac
Location: Precise Hard Chrome
Subject: Tank 3 in chrome plating line
City/County: Waco State: TX
Date: 08/18/97 Time: 10:49 am Weather: partly cloudy

POOR QUALITY DOCUMENT

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Official Photograph Log

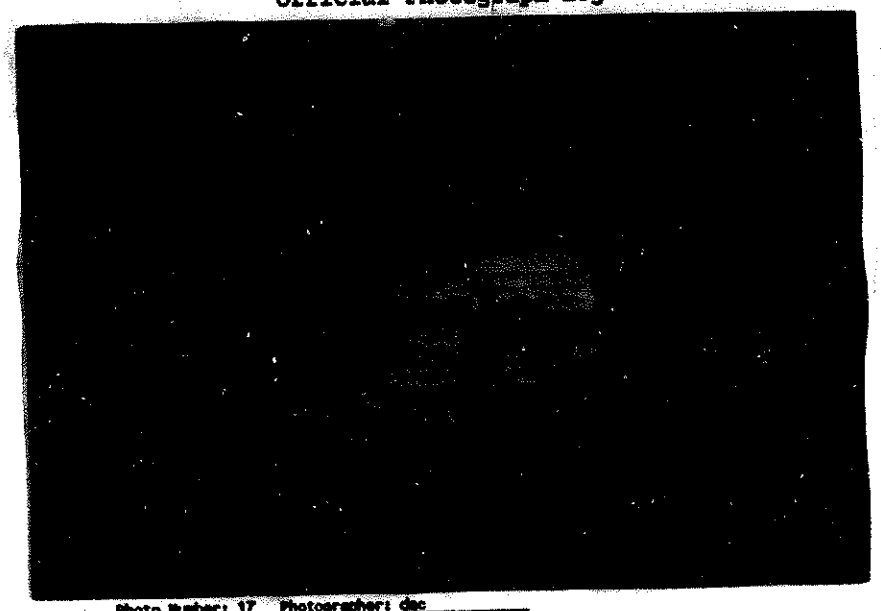


Photo Number: 17 Photographer: dac
Location: Precise Hard Chrome
Subject: Closeup of label on rolloff
City/County: Waco State: TX
Date: 08/18/97 Time: 10:51 am Weather: partly cloudy

POOR QUALITY DOCUMENT

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Official Photograph Log

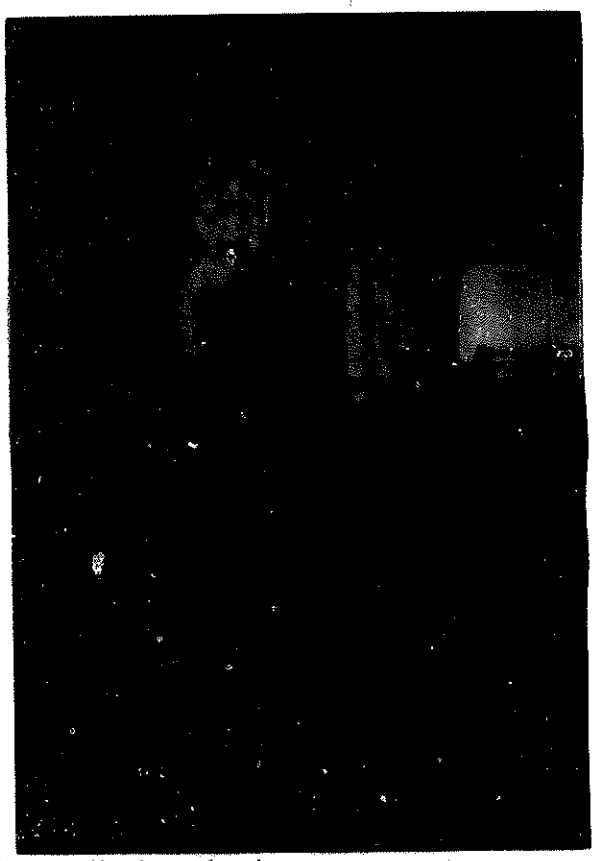
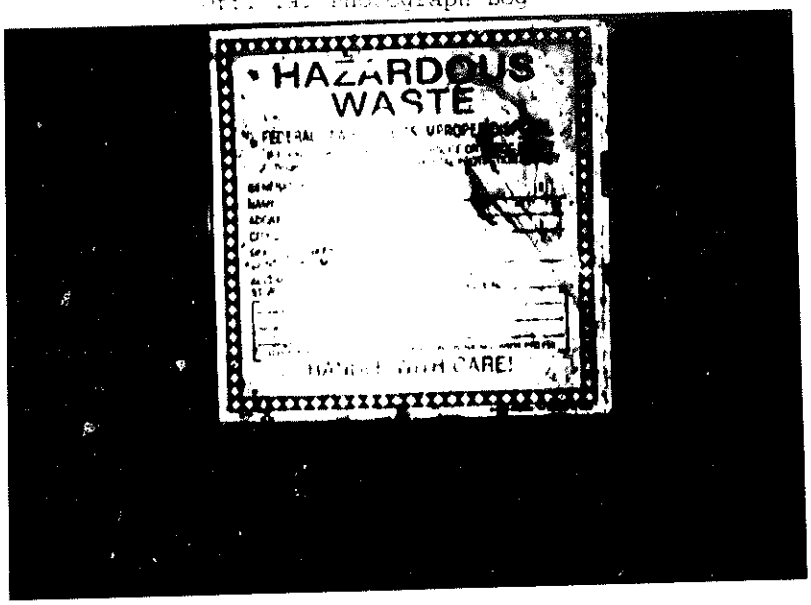


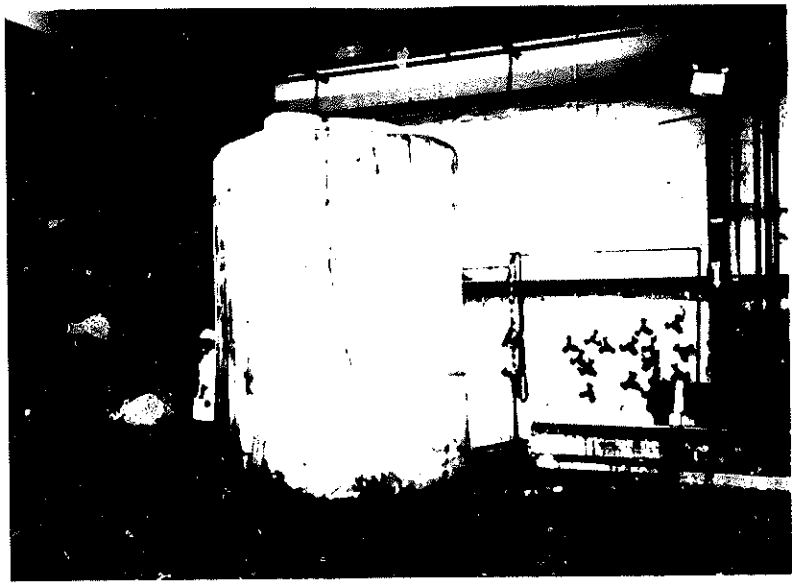
Photo Number: 18 Photographer: dac
Location: Precise Hard Chrome
Subject: 5000 gal. storage tank, north of chrome plating line tank 3
City/County: Waco State: TX
Date: 08/18/97 Time: 10:54 am Weather: partly cloudy

POOR QUALITY DOCUMENT

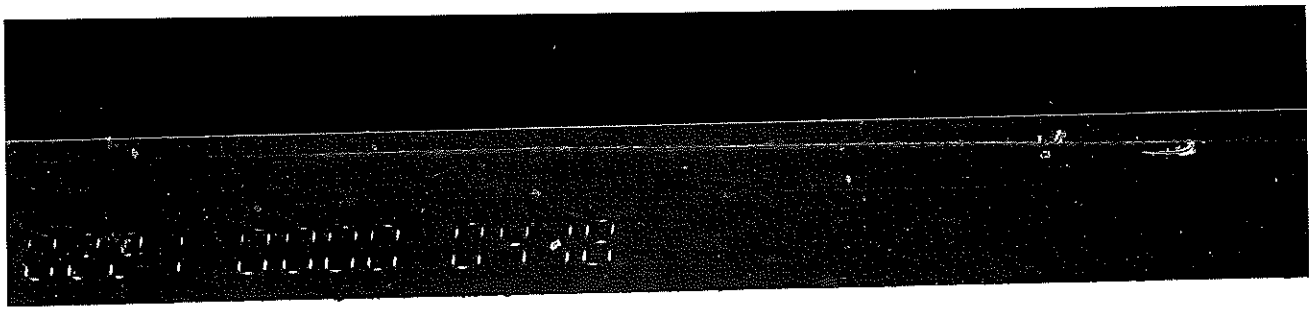
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Official Photograph Log



Number: 19 Photographer: [illegible]
[illegible]
[illegible] storage tank
[illegible] State: [illegible]
[illegible] weather: partly cloudy



Number: 20 Photographer: [illegible]
[illegible]
[illegible]
[illegible] State: [illegible]
[illegible] weather: partly cloudy



POOR QUALITY DOCUMENT

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Official Photograph Log

Photo Number: 21 Photographer: dac
Location: Precise Hard Chrome
Subject: Container [illegible] area (by grinders north of chrome line)
City/County: Wacc State: TX
Date: 9/18/97 [illegible] am Weather: partly cloudy

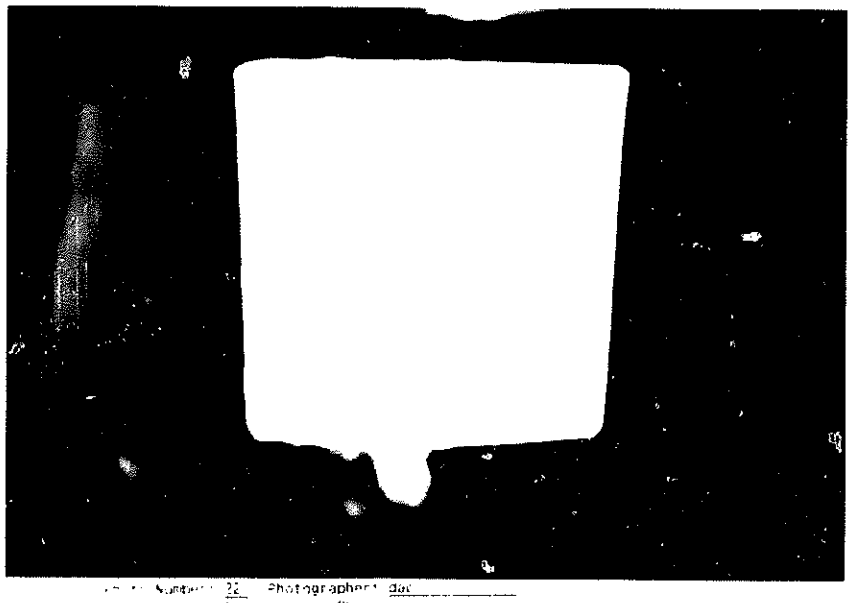
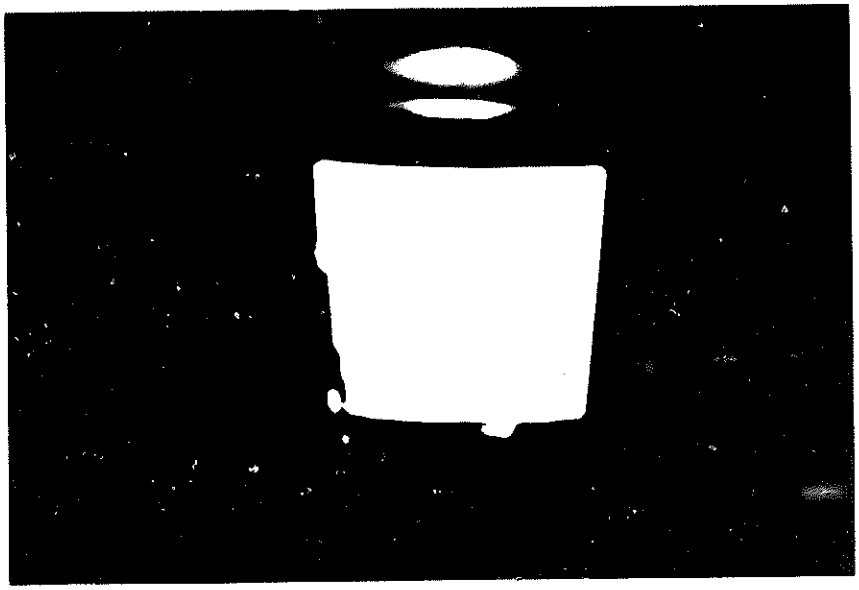


Photo Number: 22 Photographer: dac
Location: Precise Hard Chrome
Subject: Closeup of label on container
City/County: Wacc State: TX
Date: 9/18/97 Time: [illegible] am Weather: partly cloudy

POOR QUALITY DOCUMENT



POOR QUALITY DOCUMENT

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Official Photograph Log

Photo Number: 25 Photographer: dac
Location: [illegible]
Subject: [illegible] container located in satellite area
[illegible] State: TX
[illegible] weather: partly cloudy

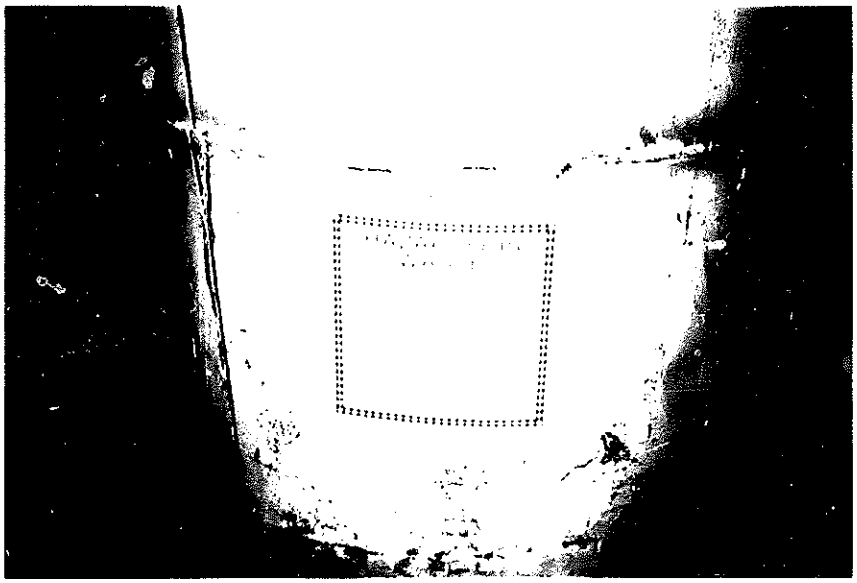


Photo Number: [illegible] Photographer: dac
Location: [illegible] Income
Subject: [illegible] container located in satellite area
[illegible] State: TX
[illegible] Time: [illegible] weather: partly cloudy

POOR QUALITY DOCUMENT

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Official Photograph Log

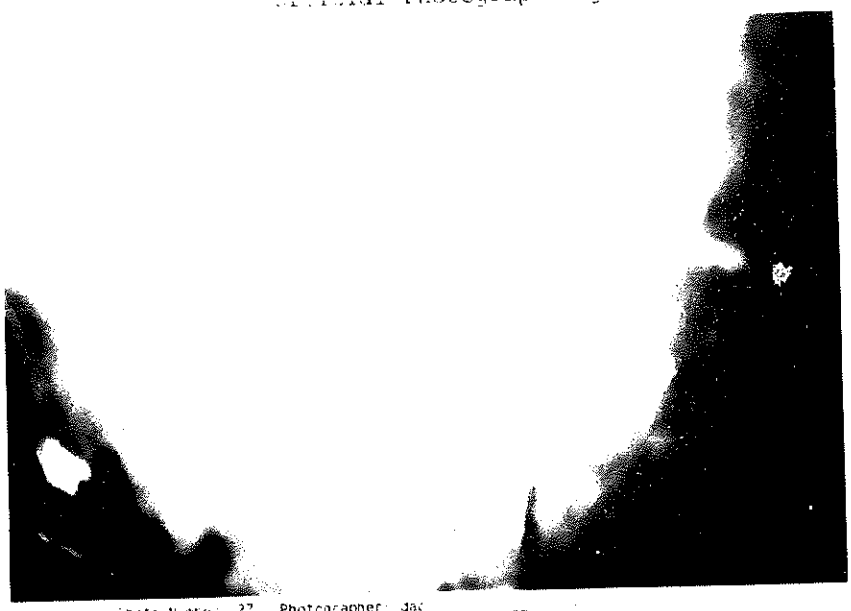


Photo Number: 27 Photographer: dac
Location: Precise Hard Chrome
Subject: Closeup of label on container located in satellite area
City/County: Waco State: TX
Date: 08/18/97 Time: 11:26 am Weather: partly cloudy

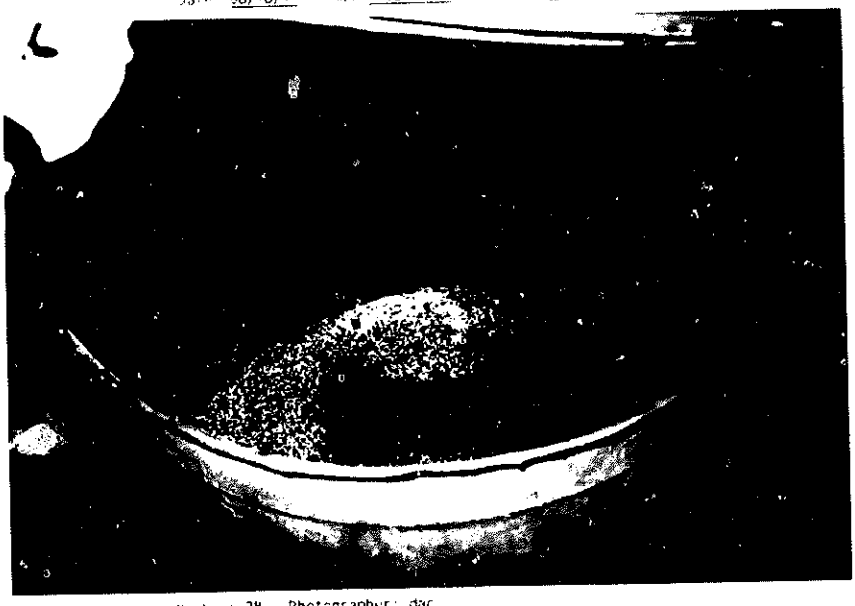


Photo Number: 28 Photographer: dac
Location: Precise Hard Chrome
Subject: Closeup of waste in container located in satellite area
City/County: Waco State: TX
Date: 08/18/97 Time: 11:28 am Weather: partly cloudy

POOR QUALITY DOCUMENT

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Official Photograph Log

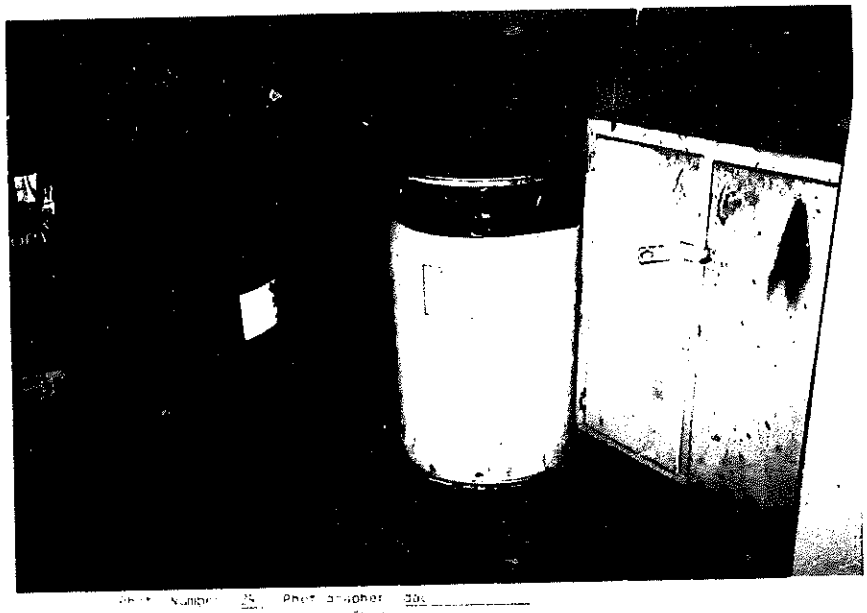


Photo Number: 24 Photographer: dac
Location: Chrome Hard Chrome
Subject: Container located in satellite area in treatment area
Site Count: 40 State: TX
Date: 9/18/97 Time: 11:23 am Weather: partly cloudy

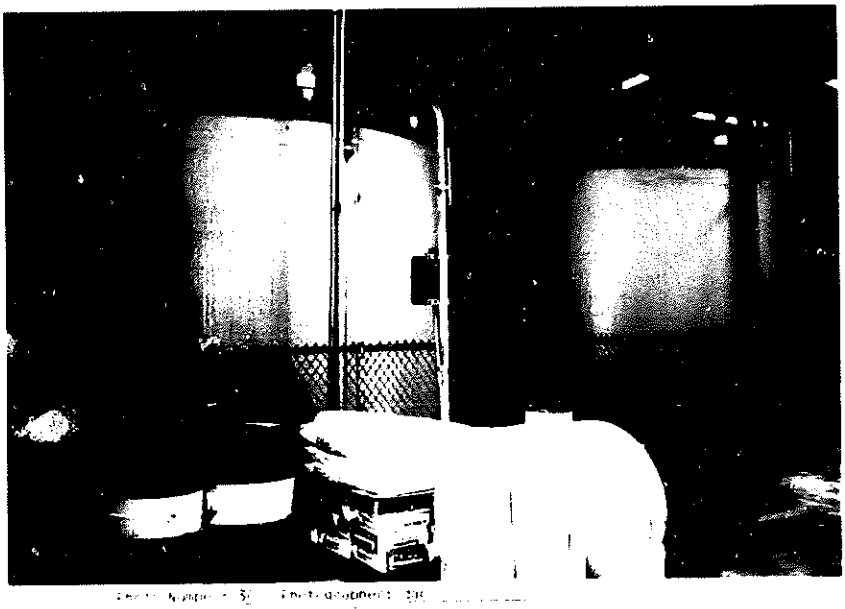


Photo Number: 3[illegible] Photographer: dac
Location: Chrome Hard Chrome
Subject: Tanks holding groundwater, located in treatment area
Site Count: 40 State: TX
Date: [illegible] Weather: partly cloudy

POOR QUALITY DOCUMENT

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Official Photograph Log

Photo Number: 31 Photographer: dac
Location: Precise Hard Chrome
Subject: Rolloffs of waste (north of treatment area)
City/County: Waco State: TX
Date: 08/18/97 Time: 11:30 am Weather: partly cloudy

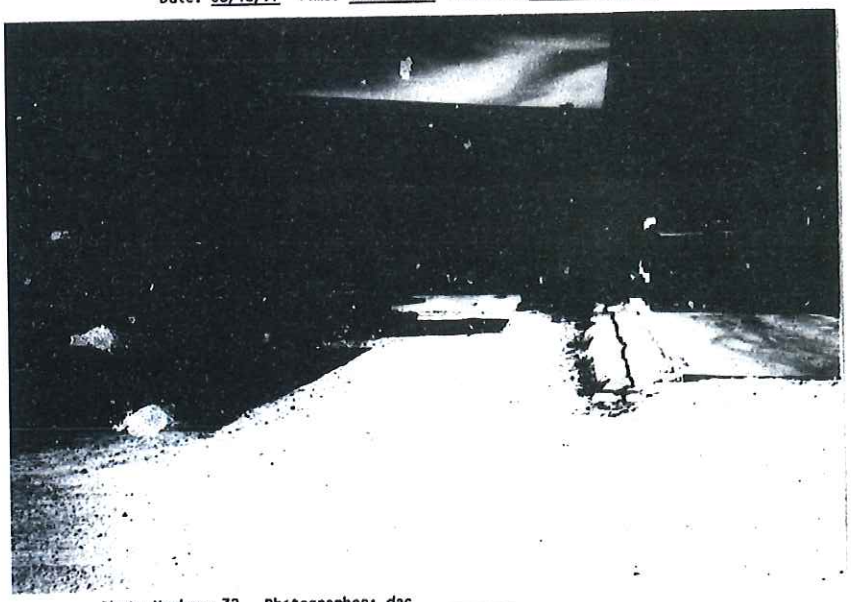
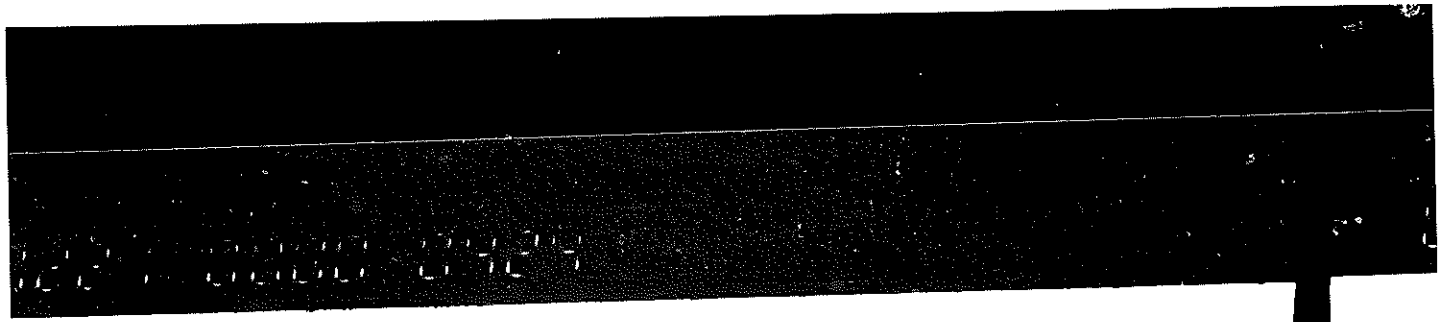


Photo Number: 32 Photographer: dac
Location: Precise Hard Chrome
Subject: Rolloff of waste (north of treatment area)
City/County: Waco State: TX
Date: 08/18/97 Time: 11:30 am Weather: partly cloudy



POOR QUALITY DOCUMENT

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Official Photograph Log

Photo Number: 33 Photographer: [illegible]
Location: Precise Hard Chrome
Subject: [illegible] of waste (north of bar/tubing storage area)
City/County: Wa[illegible] State: TX
Date: 08 [illegible] Time: [illegible] am Weather: partly cloudy

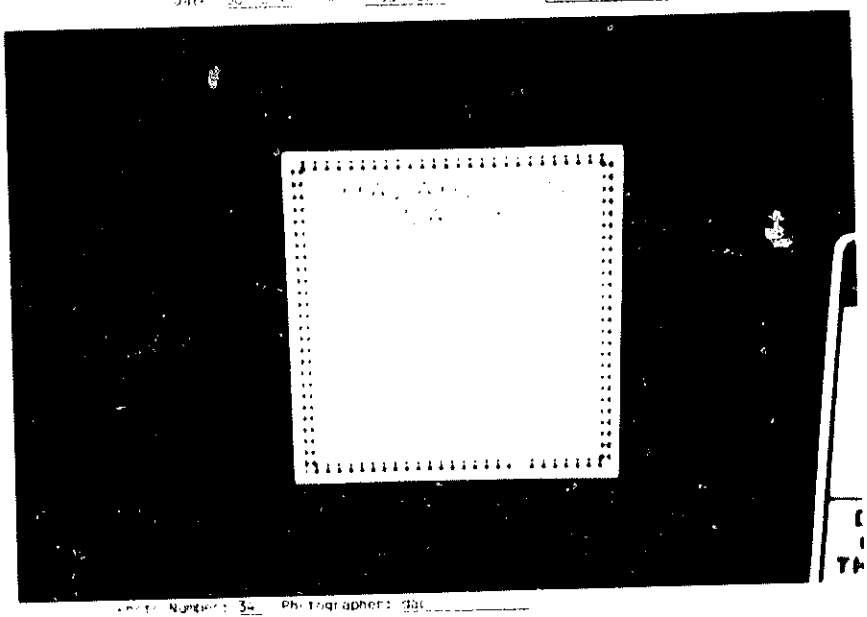
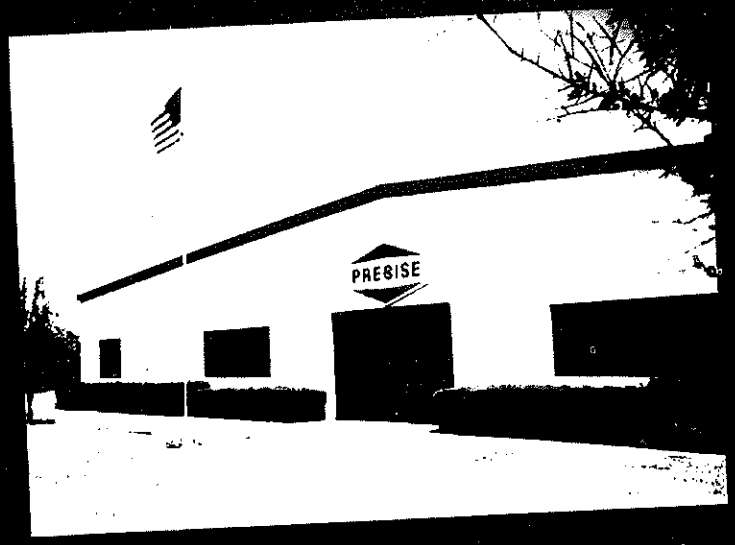


Photo Number: 34 Photographer: [illegible]
Location: Precise Hard Chrome
Subject: Closeup of label on [illegible] of waste (north of treatment area)
City/County: Wa[illegible] State: TX
Date: [illegible] Time: [illegible] am Weather: partly cloudy

POOR QUALITY DOCUMENT



RCRIS Data Information

Date submitted: August 19, 1997

INSPECTION/VIOLATIONS/ENFORCEMENT ACTIONS

Responsible person: Ralph W. Frank (RWF) (Lead Inspector/Enforcement Officer)

FACILITY NAME: PRECISE HARD CHROME
6613 N. 19th St.
Waco, Texas 76708

EPA ID# TXD988019568

EVALUATION DATE: 08/18/97

AGENCY: EPA

REASON FOR EVALUATION (if known): 07

TYPE OF EVALUATION: CEI

NOTE: This Inspection replaces the PRECISION INTERNATIONAL CORP., Waco, Texas, Inspection originally scheduled for this time frame. PRECISION INTERNATIONAL does not exist anymore, and should be struck from the projections

6EN-HT\RFRANK\08-19-97\RCRIS FRM.PHC

0 159 0000 1913

478A.TXD988019568 0001
PRECISE HARD CHROME
WACO, TX 76708

000000022809 HZ/RC/NT

RCRA RECORD CENTER

Cover Sheet

EPA I.D. #	Facility Name	Where to file	Your code	Date	Signature
TXD 988019568	Precise Hard Chrome	I. 2	WH-HS	9/23/92	Katy Griffith

TXD988819568

This facility has been modified in the Resource Conservation and Recovery Information System (RCRIS) to a Large Quantity Generator (LQG). This modification to RCRIS was done April 29, 1995 per the instruction of the State of Texas (TNRCC). The LQG modification was based on responses TNRCC received to letters regarding their annual report. Due to the response received from this company, they have been coded as a LQG. All supporting documentation can be found in TNRCC's central records.

Griffith

John Hall, Chairman
Pam Reed, Commissioner
Peggy Garner, Commissioner

TEXAS WATER COMMISSION

PROTECTING TEXANS' HEALTH AND SAFETY BY PREVENTING AND REDUCING POLLUTION

September 10, 1992

Ms. Gloria A. Vasquez, Chief Clerk
Texas Water Commission
P.O. Box 13087, Capitol Station
Austin, Texas 78711-3087

Re: Notice of Executive Director's Preliminary Report and Petition for a Texas Water Commission Order Assessing Administrative Penalties and Requiring Certain Actions of Texas Hydraulics, Inc. d/b/a Precise Hard Chrome; Texas Solid Waste Registration No. 38542

Dear Ms. Vasquez:

Concerning the above-referenced matter, please find twelve (12) copies of the letter, "Notice of Executive Director's Preliminary Report and Petition for a Texas Water Commission Order Assessing Administrative Penalties and Requiring Certain Actions of Texas Hydraulics, Inc. d/b/a Precise Hard Chrome." Also included are twelve (12) copies of the Executive Director's Preliminary Report, which are included as Attachment A to the respective letter.

The enclosed letter and attachment have been sent to all parties and serve as notice of the enforcement action.

Sincerely,

Anne C. Dobbs

Anne C. Dobbs, Manager
Enforcement Section
Industrial and Hazardous Waste Division

Enclosures

RECEIVED
SEP 14 1992
RCRA PROGRAMS BRANCH

John Hall, Chairman
Pam Reed, Commissioner
Peggy Garner, Commissioner

TEXAS WATER COMMISSION

PROTECTING TEXANS' HEALTH AND SAFETY BY PREVENTING AND REDUCING POLLUTION

September 10, 1992

CERTIFIED MAIL RETURN RECEIPT REQUESTED

Mr. Robert M. Baugh
Texas Hydraulics, Inc. d/b/a
Precise Hard Chrome
P.O. Box 5660
Waco, Texas 76708-0660

Re: Notice of Executive Director's Preliminary Report and Petition for a Texas Water Commission Order Assessing Administrative Penalties and Requiring Certain Actions of Texas Hydraulics, Inc. d/b/a Precise Hard Chrome; Texas Solid Waste Registration No. 38542

Dear Mr. Baugh:

The Executive Director of the Texas Water Commission (the "Commission" or "TWC") by this letter hereby serves you with his Notice of Executive Director's Preliminary Report and Petition for a Texas Water Commission Order Assessing Administrative Penalties and Requiring Certain Actions. You are hereby advised that the Executive Director has concluded that Texas Hydraulics, Inc. d/b/a Precise Hard Chrome has committed violations of the Texas Solid Waste Disposal Act, TEX. HEALTH AND SAFETY CODE ANN. Chapter 361 (Vernon Pamph. 1992) (the "Act"), the Texas Water Code, TEXAS WATER CODE ANN. Chapter 26 (Vernon Supp. 1992) (the "Code") and the rules of the Commission. Pursuant to this Report, the Executive Director petitions the Commission to assess administrative penalties under the authority of §361.252 of the Act and §26.136 of the Code against Texas Hydraulics, Inc. d/b/a Precise Hard Chrome and, pursuant to §361.302 of the Act, and §26.019 of the Code and 31 Texas Administrative Code ("TAC") §337.1, to order Texas Hydraulics, Inc. d/b/a Precise Hard Chrome ("Precise") to undertake certain actions necessary to bring the facility into compliance with the Act, the Code and rules of the Commission.

The Executive Director's Preliminary Report in the matter of Precise's violations, attached hereto as Attachment A and incorporated herein by reference, concludes that violations of 31 TAC §§335.4, 335.2, 335.43, 335.6, 335.9, 335.62, 335.10(a), 335.5, and 335.431 and §26.121 of the Code have occurred and the Executive Director requests that a civil penalty of One Hundred Ninety-Three Thousand Forty Dollars ($193,040.00) be imposed on Precise. The

Preliminary Report also includes Technical Recommendations concerning the actions which need to be taken by Precise to achieve compliance with applicable regulations.

The Executive Director of the Texas Water Commission is hereby notifying you that Commission consideration of the "Notice of Executive Director's Preliminary Report and Petition for a Texas Water Commission Order Assessing Administrative Penalties and Requiring Certain Actions of Texas Hydraulics, Inc. d/b/a Precise Hard Chrome" has been scheduled for:

December 2, 1992 at 9:00 a.m.
Room 118, Stephen F. Austin Building
1700 North Congress Avenue
Austin, Texas 78711

Texas Hydraulics, Inc. d/b/a Precise Hard Chrome has the right to an evidentiary hearing on the occurrence of the violations, the amount of the recommended penalty and/or the required actions. The Texas Solid Waste Disposal Act, the Texas Water Code and 31 TAC §337.38 require that a request for a hearing be made in an answer submitted not later than twenty (20) days after the date on which this notice is received. Except for good cause shown, all factual matters contained in the Executive Director's Preliminary Report shall be presumed admitted and all claims, defenses or mitigating factors shall be presumed waived pursuant to 31 TAC §337.38(e) unless such matters are specifically addressed by the person charged in his/her sworn answer.

Should you or other representatives of Precise desire to meet with members of the Commission staff, please contact us as soon as possible. **In any event, you or your representative must provide either your consent to the recommended administrative penalty and required actions or your request for an evidentiary hearing before the Commission within twenty (20) days of receipt, as provided under §361.252 of the Texas Solid Waste Disposal Act and §26.136 of the Code.**

Please contact either Mary Ruth Holder, Director, at (512) 463-8069, or Sally Jo Hahn, Staff Attorney, of the Commission's Legal Division at (512) 908-2061 with any questions or requests for consultation.

Sincerely,

Jesús Garza
Executive Director

Enclosures

cc: Nick Petelski, President, Texas Hydraulics, Inc.,
P.O. Box 1067, Temple, Texas 76503
John Hegar, State Programs Section (6H-HS), Hazardous Waste Management Division, Environmental Protection Agency, 1445 Ross Avenue, Dallas, Texas 75202
Gloria A. Vasquez, Chief Clerk
Celina Romero, General Counsel
Carol Batterton, Director, Field Operations Division
Susan Ferguson, Director, Industrial and Hazardous Waste Division
Lydia Gonzalez Gromatzky, Senior Attorney, Legal Division
Sally Jo Hahn, Staff Attorney, Legal Division
Mary K. Sahs, Public Interest Counsel
Ed Clark, Office of Public Information and Education
Janice Earley, Information and Technical Services Section, Industrial and Hazardous Waste Division
J. Mac Vilas, Enforcement Section, Industrial and Hazardous Waste Division
Don Wyrick, TWC District 3 - Waco

TEXAS WATER COMMISSION
INTEROFFICE MEMORANDUM

TO : The Commissioners **DATE:** 9/10/92

THRU :

FROM : Jesús Garza, Executive Director

SUBJECT: Texas Hydraulics, Inc., d/b/a
Precise Hard Chrome
TWC Registration No. 38542

Attached for you consideration is the Executive Director's Preliminary Report for the Texas Hydraulics, Inc., d/b/a Precise Hard Chrome.

Also attached is an Executive Summary which includes a list of violations, the calculated penalty, staff recommended penalty, and negotiated penalty for each violation. The reason for any penalty adjustments and the required corrective action are also included in the Executive Summary.

The staff recommends that Texas Hydraulics, Inc. d/b/a Precise Hard Chrome be issued a Commission Order to resolve their noncompliances by implementing the Technical Recommendations found in Part III of the attached Preliminary Report.

Jesús Garza
Executive Director

Attachments

ATTACHMENT A

EXECUTIVE SUMMARY
Executive Director's Preliminary Enforcement Report
Precise Hard Chrome
TWC Registration No. 38542

List of Violations	Calculated Penalty	Staff Recommendation	Negotiated Penalty	Reason for Adjustment	Required Corrective Action
1. 31 TAC §335.4/ Texas Water Code §26.121 - Allowing unauthorized discharge and disposal of chromium contaminated waves both on-site and off-site.	$16,800	$16,800			Conduct source investigation, soil and ground-water contamination assessments, and remedial action and on-site and off-site locations.
2. 31 TAC §335.2(a) and §335.43 - Failure to obtain a permit or other authorization for disposal of hazardous waste on-site.	$132,000	$132,000			Conduct source investigation, soil and ground-water contamination assessments, and remedial action at on-site and off-site locations.
31 TAC §335.2(b) - Allowing hazardous waste to be disposed of at an unpermitted and unauthorized site in Robinson, Texas	$44,000	$10,000		Penalty was adjusted to account for maximum $10,000 per day amount.	
31 TAC §335.2(b) - Allowing Class I waste to be disposed of at an unauthorized site in Waco (§335.2(b)).	$8,800	$8,800			
3. 31 TAC §335.6 - Failure to notify the TWC of all waste generated and waste management methods.	$2,240	$2,240			Notify the TWC of all waste generated and waste management methods.
4. 31 TAC §335.9 - Failure to maintain records regarding waste generation and disposal.	$3,200	$3,200			Maintain records of waste generated and disposed of.
5. 31 TAC §335.62 - Failure to complete hazardous waste determination of chromium contaminated debris.	$8,800	$8,800			Complete hazardous waste determination of all waste generated and provide notification of the wastes.

EXECUTIVE SUMMARY
Executive Director's Preliminary Enforcement Report
Precise Hard Chrome
TWC Registration No. 38542

List of Violations	Calculated Penalty	Staff Recommendation	Negotiated Penalty	Reason for Adjustment	Required Corrective Action
6. 31 TAC §335.10 - Failure to use manifests for off-site shipment of hazardous and industrial solid waste to a site in Robinson, Texas. Failure to manifest waste shipments of Class I industrial solid waste to a site in Waco.	$40,000 $8,000	$0 $8,000		Penalty was adjusted to account for maximum $10,000 per day amount. $10,000 was assessed for this day in a portion of violation no. 2 (31 TAC §335.2(b).	Comply with the requirement of manifesting all future Class I waste shipments.
7. 31 TAC §335.5 - Failure to deed record information concerning the on-site disposal of industrial waste.	$3,200	$3,200			Complete deed recordation for any any Precise property which is not cleaned up to background levels.
8. 31 TAC §335.431 - Failure to determine if waste generated at the site is restricted from land disposal and to use land disposal restriction notices for the off-site shipment.	$0	$0			Determine if waste generated is restricted from land disposal.
Total Penalty	- $267,040	$195,040			

EXECUTIVE DIRECTOR'S PRELIMINARY REPORT
TO THE COMMISSION

FACILITY:	Texas Hydraulics, Inc. d/b/a Precise Hard Chrome 6613 North 19th Street Waco, Texas
CONTACT PERSONS AND MAILING ADDRESSES:	Robert M. Baugh, President Precise Hard Chrome P.O. Box 5660 Waco, Texas 76708-0660
	Nick Petelski, President Texas Hydraulics 3410 North Range Road, P.O. Box 1067 Temple, Texas 76503-1067
TWC REGISTRATION NO.:	38542
EPA IDENTIFICATION NO.:	TXD988019568

I. WASTE MANAGEMENT ACTIVITIES

Location

Texas Hydralics, Inc. d/b/a Precise Hard Chrome is located on approximately 5 acres in north Waco approximately 1/2 mile from the north bank of the Bosque River in the unincorporated community of Bosqueville in McLennan County, Texas. The site address is 6613 North 19th Street (FM 1637). This facility is in the North Texas Geographical Region (The State of Texas Water Quality Inventory, 10th edition, 1990). The primary land uses within a one-mile radius of the site include residential, commercial and agricultural activities. The City of Waco Municipal Airport is located approximately one mile west of the site. Lake Waco is also near the site approximately 2 miles or less south to west of the facility.

Background Information

Precise Hard Chrome hereafter in this report is referred to as Precise. Precise manufactures hydraulic cylinder shafts at this site. Process operations at the facility include centerless grinding and hard chrome plating of steel bars and tubing. Precise Hard Chrome registered as a generator of industrial solid waste with the TWC in August, 1988 after an inspection by the TWC District 3 office on July 10, 1988.

The enforcement action addressed in this report was initiated by notification to the Texas Water Commission (TWC) from the Texas Parks and Wildlife Department in December 1991, of discolored water seepage discharging into an unnamed tributary of the Bosque River located off 19th Street in Waco. The TWC investigation determined that the seep was discharging a yellow colored water into the unnamed tributary which was discolored yellow for a distance of approximately one fourth of a mile to the confluence of the Bosque River. The TWC determined that the seep water was contaminated with elevated levels of chromium and immediately initiated a state funded cleanup action. Cleanup of the contaminated area was turned over to Precise with TWC oversight via an Emergency Order and a prior demand letter. The Precise facility is located upgradient of the contaminated seep area.

Facility Ownership and Operation

Precise Hard Chrome is a division of Texas Hydraulics, Inc. which is owned by Dover Industries Company. Texas Hydraulics, Inc. purchased the plant site in 1981 from Precise Products Corporation. Precise Products had operated a chrome plating facility at the site since 1975. Dover Industries Company purchased Texas Hydraulics, Inc. in 1987.

Waste Generated

Three wastestreams, two of which are hazardous, are listed on Precise's Notice of Registration (NOR). In addition, the TWC has identified at least three additional wastes generated at the facility including chromium contaminated soil, chromium contaminated ground water and chromium contaminated concrete and debris as detailed below:

1. Metal grindings (NOR waste no. 001) is generated from grinding steel bars and tubes and is listed as a Class I non hazardous waste.

2. Solvent contaminated solids (NOR waste no. 002) includes paper rags used to clean cylinder shafting prior to chrome plating and is listed as a Class I hazardous waste (F001).

3. Chromic acid - (NOR waste no. 003) is generated from an occasional clean out of a chrome bath solution. This

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3. Chromic acid - (NOR waste no. 003) is generated from an occasional clean out of a chrome bath solution. This

waste is listed as a Class I hazardous waste (D002) due to corrositivity.

4. Chromium contaminated ground water (seep water) - This waste was identified by the TWC investigation. Some of the samples collected on-site and off-site were hazardous due to leachable chromium content (D007).

5. Chromium contaminated soil - This waste has been identified by soil borings completed during monitor well installation. Soil from the installation of monitor well MW-20 inside the facility process building had total chromium levels of up to 2,740 mg/kg (18'-19' depth).

6. Chromium contaminated concrete and debris - This waste was identified by the TWC investigation and sampling in Robinson, Texas. This waste was generated from the repair of an on-site concrete containment pit. Samples of the contaminated concrete were hazardous due to leachable concentrations of chromium (D007). Refer to Part II - Summary of Noncompliances and Penalties, violation no. 1 c for analytical data.

Waste Management Units

There are two industrial solid waste management units listed on the Precise NOR as well as at least two additional waste management areas or categories of waste management areas with include several separate waste management units as described below.

1. Land treatment area - (NOR facility no. 01) is described as a lot behind parking area and truck drive. This area is listed to receive a Class I non hazardous waste (metal grinding waste).

2. Bulk storage area - (NOR facility no. 02) is described as a dumpster for storage of a hazardous waste (solvent contaminated solid material).

3. As a result of release of a chromic acid plating solution, a subsurface area (soil and ground water) of on-site and off-site contamination has been identified. Off-site contamination was identified at the unauthorized disposal area in Robinson, Texas, the off-site frac tank storage area on 19th street west of the

site (near 19th street and FM 1637 intersection) and areas adjacent to the site.

4. The company also has set up a storage and treatment system to treat and release the recovered seep waters to the City of Waco sewer system. The storage and treatment system consists of the damming of an off-site tributary to contain contaminated seep waters, transportation of the dammed water by vacuum truck to temporary storage tanks (frac tanks) and two waste water treatment facilities located at the Precise facility. The frac tanks used for storage of the contaminated seep water have a capacity of 21,000 gallons each. The frac tanks are located on the Precise plant location and at another location (15 acres near the intersection of 19th street and FM 3051) on 19th street (FM 1637) on the opposite side (south side) to which the Precise plant is located.

   Construction of the first treatment facility began on January 13, 1992 (completed January 21, 1992) and is located approximately 250 feet north of the Precise plant. A second treatment facility located within the Precise facility was completed on March 15, 1992. The wastewater treatment facilities consist of several reagent tanks and a clarifier to reduce the hexavalent chromium to trivalent chromium and meet the City of Waco pretreatment standards. Construction of a pipeline from the seep area under 19th street (FM 1637) in an existing culvert to the Precise wastewater storage and treatment area is underway pending final negotiations with a property owner.

Surface Water

Precise is located in the Brazos River Basin close to the north bank of the Bosque River near Waco Lake. Surface water runoff from the site (elevation approximately 455 feet MSL) would tend to flow downgradient toward the south to southeast portion of the facility into tributaries of the Bosque River which flows into the Brazos River Stream Segment No. 1242 and finally into the Gulf of Mexico. The uses for this stream segment, as identified in 31 Texas Administrative Code (TAC) Chapter 307 (Texas Surface Water Quality Standards, July 1991), are contact recreation, high quality aquatic habitat and public water supply.

sources. It may be from rainfall recharge of extensive terrace deposits upgradient of the site and/or from Lake Waco. At normal conservation pool elevations of Lake Waco the Buda (limestone) and Del Rio (clay) formations form a vertical barrier between the lake and the seep areas. When the lake is in flood stages the water level can be in contact with the terrace deposits above the Buda and Del Rio formations. Hydrographs of the lake levels indicated that except for 1991, the lake is in flood stages infrequently. However it is possible that the Buda and Del Rio formations are not completely efficient as vertical barriers. Faulting, which is prevalent in the area may allow hydraulic connection from Lake Waco to shallow ground water deposits.

Ground water seeps or springs with elevated levels of chromium have been identified downgradient or south southeast of the site within unnamed tributaries to the Bosque River. Seeps are common in this area along the face of slopes where the subsurface gravel deposits intersects a slope. Containment dams have been built in the tributary to collect the contaminated flow for treatment. Twenty ground water monitor wells have been completed at the Precise Hard Chrome facility and adjacent properties to determine the extent of contamination. Analytical results from sampling of these wells indicated a plume of chromium contaminated shallow ground water emanating from the site toward the southeast near the seep areas.

Shallow wells within one mile radius of the site were not in operation and were not in use for potable purposes. Fifteen shallow wells were located and sampled by Emtech. Only one of the wells had total chromium levels (.08 mg/l) above drinking water standards of .05 mg/l. Several deep ground water domestic use wells were identified within a one-mile radius of the site. Borehole baildown tests were conducted at monitor wells MW-1, MW-5 and MW-15 to determine the hydraulic conductivity or horizontal permeability of the alluvium which was calculated to be .062 cm/sec. The overall average rate of ground water movement within the tested alluvium at the site was determined to be 1.76 ft/day. Pump tests have also been performed to determine the effective radius of influence from a ground water recovery operation. The radius of influence at monitor well MW-1 at 5 gpm pumping rate was calculated to be approximately 30-35 feet.

II. SUMMARY OF NONCOMPLIANCES AND PENALTIES

Discussion of Violations

1. 31 Texas Administrative Code (TAC) §335.4 - General Prohibitions, Texas Water Code §26.121- Unauthorized Discharges Prohibited

No person may cause, suffer, allow, or permit the collection, handling, storage, processing, or disposal of industrial solid waste in such a manner so as to cause:

(1) The discharge or imminent threat of discharge of such waste into or adjacent to waters in the state without obtaining specific authorization for such a discharge from the TWC;
(2) the creation or maintenance of a nuisance; or
(3) the endangerment of the public health and welfare.

In addition, no person may engage in any activity which causes or will cause pollution of any water in the state.

a. Precise Hard Chrome has allowed the discharge of waste and/or pollutants into and adjacent to waters in the state. Facility operations have resulted in chromium contamination of both on-site and off-site soil, ground water and surface water. Off-site migration of chromium contamination has been documented from three ground water seep areas located down gradient from the facility, across 19th street, and approximately 600 feet south of the site. The seeps were observed on adjacent and nearby properties. Yellow-colored water was observed discharging from the seep areas into an unnamed tributary of the Bosque River. The yellow-colored water was observed for approximately one fourth of a mile downstream of the seep area in the tributary to the confluence of the Bosque River. TWC representatives first observed the seeps on December 16, 1991 after notification by the Texas Parks and Wildlife Department of the discolored water discharge.

On December 17, 1991, in response to the discharge, the TWC mobilized an emergency response contractor, had an emergency containment dam built and collected a sample of the yellow-colored, liquid seep discharge. Analytical results from this sampling indicate total

chromium concentration of 204 mg/l and hexavalent chromium at 200 mg/l. Eight additional samples were collected by the TWC on December 18, 1991 as described in the enclosed table. This data indicates that the seep water discharging into an unnamed tributary of the Bosque River exhibits the hazardous characteristic for toxicity for chromium (40 Code of Federal Regulations (CFR) §261.24, EPA Hazardous Waste No. D007). The leachable chromium concentration from the seep water is over 18 times the regulatory level of 5 mg/l.

On December 20, 1991, contamination at the Precise Hard Chrome facility was confirmed by a soil boring completed adjacent to and on the west side of the process building. Analytical results of the TWC sampling of a water sample collected from the borehole revealed a total chromium concentration of 27.8 mg/l and Toxic Characteristic Leaching Procedure (TCLP) concentration of chromium of 18.9 mg/l. The sampled ground water is hazardous pursuant to 40 CFR §261.24 exhibiting the characteristic of toxicity for chromium. The leachable chromium concentration in the sampled ground water is over three times the regulatory level of 5 mg/l.

On January 8, 1992, two additional seeps were identified with drainage into the same unnamed tributary of the Bosque River. A second containment dam was constructed the same day to ensure containment of the additional seep areas. On January 23, 1992, the TWC collected water and sediment samples from the seep area which flows into an unnamed creek adjacent to a day care center ("A Small World Day Care"). Analytical results indicate that the sampled water is hazardous pursuant to 40 CFR §261.24 exhibiting the characteristic of toxicity for chromium (D007). The sample was analyzed with a TCLP chromium concentration of 12.0 mg/l. This is over twice the regulatory level of 5 mg/l. The sediment was analyzed with a TCLP chromium concentration of .15 mg/l. This creek flows into the creek or unnamed tributary initially identified to be contaminated.

Contaminated water from the creek is being pumped from the creek into vacuum trucks then into temporary 21,000 gallon storage tanks (Frac tanks) on Precise property prior to being treated on-site and discharged to the City of Waco wastewater treatment system. Forty

thousand (40,000) to 60,000 gallons of contaminated water were being pumped from the creek daily in April 1992. There was a total of 230 frac tanks in use in April for the storage of contaminated water from the seep areas. There are currently 10 frac tanks in use for storage of the contaminated seep water.

Twenty monitor wells have been completed at the Precise Hard Chrome facility and adjacent properties to determine the extent of contamination. Analytical results from sampling of these wells indicate a plume of chromium contaminated shallow ground water emanating from the site to the southeast near the seep areas. On-site monitor wells MW-1 and MW-17 and MW-20 have ground water with total chromium levels of greater than 1,000 mg/l (1,430 mg/l, 1,050 mg/l and 1,510 mg/l, respectively).

On February 5, 1992, the TWC issued an Emergency Order requiring Precise Hard Chrome to complete certain actions including the requirement to determine the extent and source of contamination both on-site and off-site. The Emergency Order was affirmed and modified on April 1, 1992.

b. Precise Hard Chrome allowed the discharge or threat of discharge of a hazardous waste and/or pollutants into or adjacent to waters in the state by mismanagement of an on-site below grade open top concrete pit (approximately 20 ft. x 20 ft. by 15 ft. in depth) used for containment of acidic plating solutions with a pH less than 2. The TWC inspections of December 17-20, 1991 and April 21, 1992 documented evidence of the remaining contamination and prior releases of acidic plating solutions from the pit, past deteriorating condition of the pit including cracks and pitting, and the disposal of contaminated debris and covering the contamination within the pit and an adjacent pit with concrete. Refer to section c below for analytical data.

c. Precise Hard Chrome allowed the discharge or threat of discharge of hazardous waste and/or pollutants into or adjacent to waters in the state by contaminating soils at an off-site unauthorized facility in Robinson, Texas. Approximately 5 dump truck loads of chromium contaminated concrete debris waste generated from the repair of the concrete pit in July 1991 were reported

as disposed of at a vacant lot at Highway 77 and Baker Lane in Robinson, Texas. The concrete rubble and some of the surrounding soils were observed to have yellow staining. TWC samples of the concrete and discolored soil and collected on January 22, 1992, revealed chromium contamination. Analytical results from the TWC sampling indicates that the concrete and soil near the concrete are hazardous pursuant to 40 CFR §261.24 exhibiting the characteristic of toxicity for chromium (D007). The sampled concrete had a TCLP chromium concentration of 70 mg/l and total chromium concentration of 21,200 mg/kg while the soil had TCLP chromium concentrations of 7.31 mg/l and 7.37 mg/l and total chromium concentrations of 202 mg/kg and 257 mg/kg, respectively.

Penalty Calculation

Part I - Recommended Penalty Range Based on Violation

1. Level of extent and gravity of violation - Major

Justification: Persons managing industrial solid waste or materials which may cause pollution if improperly handled must not allow such activities to adversely impact or to cause a discharge or an imminent threat of discharge into or adjacent to waters in the state. Precautions must be taken to minimize and prevent contamination and discharges and threat of discharges of wastes including immediate remediation upon determining that a discharge has occurred and designing and constructing waste management and containment facilities to ensure that they will not discharge into the soil and/or ground water.

Precise has not complied with the requirements of 31 TAC §335.4 and the Texas Water Code §26.121 by allowing unauthorized discharge of chromium bearing materials both on-site and off-site from a below grade concrete pit at the facility. Precise allowed the waste to remain at this inadequate unit and continued to use the concrete pit even after evidence of leakage was observed. In addition, the company allowed contamination of soils at an unauthorized site in Robinson, Texas through the mismanagement of waste generated from a repair of an on-site concrete pit. Such a practice is a significant deviation from the

requirement and resulted in a discharge into and adjacent to waters in the state.

2. Level of impact or hazard of violation: Major

Justification: The on-site and off-site unauthorized discharges and the mismanagement of the on-site concrete pit including the lack of immediate attention to the noted evidence of contamination, and the total disregard for environmental regulations concerning the generation, handling and disposal of a characteristically toxic (chromium) waste resulted in on-site and off-site soil, surface water and ground water contamination.

RECOMMENDED PENALTY RANGE: $8,000 - $10,000

Part II - Penalty Adjustments

1. History of Noncompliance: No adjustment

2. Degree of Culpability: Upward adjustment of 20% = $400

Justification: Precise's activities resulted in the discharge of chromium bearing wastes to unauthorized areas both off-site (Robinson, Texas) and on-site. Areas of visible on-site contamination were covered with concrete in an on-site pit. Despite visual evidence of leakage from an on-site concrete pit used for containment of a low pH chromium plating solution, Precise proceeded to cover the contamination from the pit resulting in a discharge and threat of discharge of chromium contaminated waste. The company was previously inspected by the TWC and was registered with the TWC as a generator of hazardous and industrial solid waste, therefore they were aware that there are environmental regulations governing waste generation, handling and disposal. The company should have notified the TWC of the situation and immediately initiated activities to abate and remove the contamination.

3. Good Faith Efforts to Comply: No adjustment

4. Economic Benefit of Noncompliance: No adjustment

5. Enhanced Penalty Needed to Deter Future Violations: No adjustment

6. Other Factors: No adjustment

Part II - Total Penalty Range Adjustment: Upward adjustment of 20% = $400

Total Penalty Amount per Event (Part I + Part II) = $8,000+ [0.20 x ($10,000 - $8,000)] = $8,400

Part III - Recommended Total Penalty Calculation

Total Number of Penalty Events: 2

Justification: Two penalty events are calculated for this violation. One penalty event is calculated for the soil, ground water and surface water contamination resulting from the ongoing release of chromium bearing materials from the site documented during TWC site inspections and sampling completed between December 17-20, TWC sampling of January 23, 1992 and TWC record review inspection of April 21, 1992.

Another penalty event is calculated for the discharge of elevated levels of chromium into the soil at the Robinson, Texas site where Precise disposed of chromium contaminated concrete and debris generated from its site. This penalty event was documented during the TWC inspection and sampling of the Robinson site on January 22, and 24, 1992 and the TWC record review of April 21, 1992.

Total Penalty Amount: $8,400 x 2 = $16,800

2. 31 TAC §335.2(a)(b) and §335.43 - Permit Required

No person may cause, suffer, allow, or permit any activity of storage, processing, or disposal of any industrial solid waste or municipal hazardous waste unless such activity is authorized by a permit, or other authorization from the Texas Water Commission. No generator, transporter, owner or operator of a facility, or any other person may cause, suffer, allow, or permit its waste to be stored, processed, or disposed of at an unauthorized facility.

a. Precise Hard Chrome allowed the unpermitted and unauthorized disposal of a hazardous waste on-site. Chromium contaminated debris was disposed within and below the on-site below grade open top concrete containment pit. The contamination within and below the pit was subsequently covered over with concrete during the July 1991 repair of the tank. This action constitutes operation of the concrete pit as a land disposal unit or landfill subject to a TWC permit in accordance with §31 TAC §§335.2(a) and 335.43.

b. Precise Hard Chrome allowed disposal of its hazardous waste to an unauthorized off-site facility in violation of 31 TAC §335.2(b). Approximately 5 truck loads of chromium contaminated concrete and debris generated from the July 1991 breakup and removal of the concrete bottom of the on-site concrete containment pit were disposed of at a vacant lot at Highway 77 and Baker Lane in Robinson, Texas. This waste was determined to be hazardous based upon the TWC sampling of the waste at the Robinson site in January 1992. Refer to violation No. 1 section c for discussion of the sampling and results.

c. Precise Hard Chrome has also allowed the unauthorized disposal of additional industrial waste (solvent contaminated waste) to the City of Waco's sanitary landfill in violation of 31 TAC 335.2(b). This violation was documented in the TWC inspections conducted on December 17-20, 1991 and April 21, 1992 and confirmed by the TWC facts meeting with the company on August 12, 1992. This waste is listed as a hazardous waste (waste code 980790) on the company's Notice of Registration. Municipal landfills are not authorized to accept hazardous waste and may not accept industrial waste without specific authorization from the TWC or prior authorization from the former Texas

Department of Health Municipal Solid Waste Program.

Precise submitted a request to reclassify this waste to a non hazardous waste by letter of November 26, 1990. The company stated in the letter that approximately 38 dozen (456) used teri wipers (paper rags) contaminated with 1,1,1-trichloroethane are generated each week. TWC Waste Classification Team records indicate that the request was processed in May 1991 and reclassified the waste as a Class I Non hazardous waste. As such, the waste would still require manifesting and shipment to an authorized industrial waste disposal facility.

Penalty Calculation

Part I - Recommended Penalty Range Based on Violation

1. Level of extent and gravity of violation - Major

   Justification: A permit or other authorization from the Texas Water Commission is required for disposal of hazardous and industrial solid waste. This ensures that adequate precautions are taken to prevent endangerment to human health and the environment. A hazardous and solid waste permit includes a detailed description of facility construction and operation, safety procedures, and monitoring systems required to operate the facility safely.

   Precise failed to comply with 31 TAC §335.2 (a)(b) and §335.43 by allowing hazardous waste it generated to be disposed of at unauthorized and unpermitted off-site facilities (Robinson, Texas site and the City of Waco landfill) and by allowing unauthorized disposal of a hazardous waste in and below a concrete pit undergoing repair. Such actions constitute a major deviation from this rule.

2. Level of impact or hazard of violation: Major

   Justification: Allowing unpermitted and unauthorized disposal of hazardous waste to facilities without minimum operational standards poses a significant threat to human health and the environment. A hazardous waste permit would specify the types of waste to be accepted and require that only such wastes are accepted and require certain minimum standards for the

associated waste management units and specific treatment and disposal methods. A permit would have specified that a land disposal area meet certain geological and engineering requirements such as liner or soil permeability requirements and leak detection and ground water monitoring requirements. Hazardous waste was disposed of at an area not designed for such a purpose. The Robinson site disposal facility is not operated with proper safeguards for the management of hazardous waste, including daily inspections, personnel training, emergency contingency plans, proper site security, closure plans, and financial assurance. The Robinson site contains hazardous waste and has not been closed. Soil at the Robinson site has been discolored and contaminated from the disposal activities. In addition, the City of Waco Landfill is not permitted or operated for the management of industrial Class I waste which Precise had shipped and disposed of there. This violation has resulted in the exposure of hazardous and industrial solid waste to the environment potentially compromising the health or safety of the public.

RECOMMENDED PENALTY RANGE: $8,000 - $10,000

Part II - <u>Penalty Adjustments</u>

1. History of Noncompliance: No adjustment

2. Degree of Culpability: Upward adjustment of 20% = $400

Justification: Precise covered up contaminated areas with concrete in an on-site concrete pit. Precise also allowed a hazardous waste (concrete debris from the concrete pit repair) to be disposed of at an unpermitted and unauthorized facility (vacant lot in Robinson, Texas). The company was inspected by the TWC in 1988 and registered as a result of the inspection, and therefore was aware that there were environmental regulations governing waste generation, handling and disposal. The company could have avoided the unauthorized off-site disposal by sending their waste to authorized hazardous waste disposal sites and could also have avoided the on-site disposal by not ignoring the releases from the concrete pit area and by not covering contaminated subsurface areas with concrete.

3. Good Faith Efforts to Comply: No adjustment

4. Economic Benefit of Noncompliance: Upward adjustment of 20% = $400

   Justification: The disposal of waste at unauthorized sites resulted in economic benefits for the company. By disposing of hazardous waste to unpermitted sites the company has saved disposal costs, analytical costs, operational costs and record keeping costs associated with the management of hazardous and industrial wastes. Obtaining a hazardous waste permit through the TWC and EPA is a time consuming and costly process due to the technical and administrative expertise required to properly complete a permit application and to undergo the regulatory review process.

5. Enhanced Penalty Needed to Deter Future Violations: No adjustment

6. Other Factors: No adjustment

Part II - Total Penalty Range Adjustment: Upward adjustment of 40% = $800

Total Penalty Amount per Event (Part I + Part II) =
$8000 + [.40 x ($10,00 - $8000)] = $8,800

Part III - Recommended Total Penalty Calculation

Total Number of Penalty Events: 21

Twenty one events are calculated for allowing the unpermitted and unauthorized disposal of hazardous and industrial wastes. The penalty events are calculated as follows:

One penalty event is calculated for the off-site disposal of a Class I waste (solvent contaminated solids) to an unauthorized facility (City of Waco landfill) for an unspecified number of shipments in violation of 31 TAC §335.2(b) as documented by the TWC inspections of December 17-20, 1991 and April 21, 1992;

Five penalty events are calculated for the off-site disposal of a hazardous waste (concrete rubble and debris) to an unpermitted and unauthorized facility (vacant lot in

Robinson, Texas) based upon shipments made to the site in violation of 31 TAC §335.2(b) completed between July 1991 (tank repair) and the TWC inspections in December 1991. The penalty amount for these five events is adjusted so as not to exceed $10,000 per day. The penalty for this portion of the cited violation was adjusted from $44,000 to $10,000 based on the assumptiom that the chromium contaminated concrete from Precise's below grade concrete pit was shipped during a one day period which would have occurred after the tank repair in July 1991 and before the TWC inspections beginning in December 1991. Violation No. 6 is also adjusted for the same reason. Both adjustments are reflected in the Executive Summary; and

Fifteen penalty events are calculated for the unauthorized on-site disposal including releases and the covering of contamination from the on-site concrete pit (violation of 31 TAC §§335.2 and 335.43) based on monthly events elapsed since the repair and construction activities initiated in July 1991 to the present.

July 1991 - December 1991 =	6 months
January 1992- September 1992 =	9 months
	15 months

Total Penalty Amount: $8,800 x 21 = $184,800

Total Adjusted Penalty Amount: $150,800

3. 31 Texas Administrative Code (TAC) §335.6 - Notification Requirements

Any person who generates hazardous or industrial solid waste shall notify the TWC concerning the waste generated and the waste management facilities utilized in the handling of such waste. Such person shall also submit to the Executive Director, upon request, information required to enable the Executive Director to determine whether the storage, processing, or disposal is compliant with the terms of this chapter. Notifications submitted pursuant to this section shall be in addition to information provided in any permit applications or any required records. Additionally, that person has the continuing obligation to immediately provide written notice of any changes or additional information regarding waste management practices. If waste is recycled on-site, the generator must also comply with the notification requirements specified in subsection (h) of 31 TAC §335.6.

Precise Hard Chrome failed to notify the TWC of all waste generated including the concrete contaminated debris, contaminated soils, and contaminated ground water and associated waste management units. Precise notified (letter dated January 28, 1992) the TWC of emergency remediation activities including containment and treatment of the seep water after the TWC investigation and inspection of December 17 through 20, 1991.

Penalty Calculation

Part I - Recommended Penalty Range Based on Violation

1. Level of extent and gravity of violation - Moderate

Justification: Precise failed to comply with 31 TAC §335.6 by not notifying of the generation of hazardous and industrial solid waste and the description of the type and use of on-site waste management units. This requirement is a continuing obligation for the generator. The company notified that they were a generator of three waste streams but failed to notify of the generation of waste removed and disposed of as a result of repair work on an on-site concrete pit. Failure to notify of the generation of hazardous and industrial solid waste and waste management practices deviates from the rules of the agency.

2. Level of impact or hazard of violation: Moderate

   Justification: Notification of the generation of management of hazardous and industrial solid waste is one of first and most important requirements of the industrial and hazardous waste program. Waste management facilities are categorized, classified, inspected and regulated in accordance with information initiated by the notification process. Lacking the proper notification information the TWC district office was unaware of waste generated from the repair of the concrete pit. It was also unaware that the company had a concrete containment pit which was undergoing repair and needed to be inspected to verify that it had leaked. If the company had notified of this waste the TWC would have had the opportunity to inquire about the generation and disposal of the waste which may have resulted in proper disposal of a hazardous waste (concrete contaminated debris). It may have also alerted the TWC to the contamination problem sooner, resulting in a lesser impact to the environment.

RECOMMENDED PENALTY RANGE: $2,000 - $3,199

Part II - Penalty Adjustments

1. History of Noncompliance: No adjustment

2. Degree of Culpability: Upward adjustment of 20% = $240

   Justification: The company had previously (1988) been inspected by the TWC and notified of the generation of hazardous and industrial solid waste as a result of the inspection and thus were aware of notification requirements.

3. Good Faith Efforts to Comply: No adjustment

4. Economic Benefit of Noncompliance: No adjustment

5. Enhanced Penalty Needed to Deter Future Violations: No Adjustment

6. Other Factors: No adjustment

Part II - Total Penalty Range Adjustment: Upward adjustment of 20% = $240

Total Penalty Amount per Event (Part I + Part II) =
$2,000+ [.20 x ($3,199 - $2,000)] = $2,240

Part III - Recommended Total Penalty Calculation

Total Number of Penalty Events: 1

Justification: One penalty event is calculated for the failure to notify the TWC of the generation of waste associated with the repair of an on-site concrete containment pit documented by the TWC inspections of December 17 through 20 and April 21, 1992.

Total Penalty Amount: $2,240 x 1 = $2,240

4. 31 TAC §335.9 - Recordkeeping and Annual Reporting Procedures Applicable to Generators

Each generator of hazardous waste or industrial solid waste shall keep records of all hazardous waste or industrial solid waste activities regarding the quantities generated, stored, processed, and disposed of on-site, or shipped off-site.

Precise Hard Chrome failed to maintain records regarding generation and disposal (on-site and off-site) of a hazardous waste (chromium contaminated media) at its site as documented during the TWC inspections of December 17 through December 20, 1991 and April 21, 1992.

Penalty Calculation

Part I - Recommended Penalty Range Based on Violation

1. Level of extent and gravity of violation - Major

Justification: Precise failed to comply with 31 TAC §336.9 by not maintaining any records for generation, storage and disposal of hazardous wastes including concrete contaminated debris. Failure to maintain waste management records deviates significantly from the rules.

2. Level of impact or hazard of violation: Moderate

Justification: Failure to maintain waste generation and disposal records is contrary to the self reporting system which allows for tracking and accountability of waste generation, storage, treatment and disposal. Since the TWC had no records of the company reporting generation of this waste on monthly and annual report forms and the company did not have records of amounts generated or disposed of, it was difficult to track the final destination and quantity of the waste generated and disposed. This made it difficult for the TWC to verify company data during an inspection and determine the generator status and applicable regulations and generator and facility fees.

RECOMMENDED PENALTY RANGE: $3,200 - $4,399

Part II - Penalty Adjustments

1. History of Noncompliance: No adjustment

2. Degree of Culpability: No adjustment

3. Good Faith Efforts to Comply: No adjustment

4. Economic Benefit of Noncompliance: No adjustment

5. Enhanced Penalty Needed to Deter Future Violations: No Adjustment

6. Other Factors: No adjustment

Part II - Total Penalty Range Adjustment: No adjustment

Total Penalty Amount per Event (Part I + Part II) =
$3,200 + $0 = $3,200

Part III - Recommended Total Penalty Calculation

Total Number of Penalty Events: 1

Justification: One penalty event is calculated for the failure to maintain required waste management records for all waste generated as documented by the TWC inspections conducted on December 17 through the 20th, 1991 and April 21, 1992.

Total Penalty Amount: $3,200 x 1 = $3,200

5. 31 TAC §335.62/ 40 Code of Federal Regulation (CFR) §262.11 - Hazardous Waste Determination

A person who generates a solid waste must determine if that waste is hazardous using the following method.

(1) He should first determine if the waste is listed as a hazardous waste in 40 Code of Federal Regulations (CFR) Part 261, Subpart D.

(2) If the waste is not listed as a hazardous waste in 40 CFR Part 261, Subpart D, he or she must then determine whether the waste is identified in 40 CFR Part 261 Subpart C, by either:

(A) testing the waste according to methods set forth in 40 CFR Part 261 Subpart C, or according to an equivalent method approved by the administrator under 40 CFR 260.21; or

(B) applying knowledge of the hazardous characteristic of the waste in light of the materials or process used.

Precise Hard Chrome failed to complete a hazardous waste determination on chromium contaminated debris generated as a result of the reconstruction project of the concrete containment pit.

Penalty Calculation

Part I - Recommended Penalty Range Based on Violation

1. Level of extent and gravity of violation - Major

Justification: Precise did not comply with the requirements of 31 TAC §335.62 by failing to perform a hazardous waste determination on chromium contaminated debris generated as a result of a repair of an on-site concreted containment pit. The waste was subsequently determined to be hazardous for leachable amounts of chromium by TWC sampling data. This regulation ensures that waste is properly categorized and if determined to be a hazardous waste is regulated by very stringent federal and state regulations. The company's action resulted in a significant deviation from the rules.

2. Level of impact or hazard of violation - Major

Justification: By failing to perform a hazardous waste determination, company and contract personnel involved

in managing the waste including removing, transporting and disposing of the waste during and after the repair of the concrete containment pit were not aware of the potential hazards associated with the waste and the proper personnel protection required to reduce those hazards. The company's action resulted in the improper management of and subsequent release of hazardous waste threatening human health and the environment.

RECOMMENDED PENALTY RANGE: $8,000 - $10,000

Part II - Penalty Adjustments

1. History of Noncompliance: No adjustment

2. Degree of Culpability: Upward adjustment of 20% = $400

   Justification: The company was aware of the process which generated the waste (containment pit for chrome plating solutions) and should have known or had available information on the raw materials or chemicals used in the process (such as Material and Safety Data sheets) and should have known the hazards associated with the chemicals in the process in accordance with federal regulations including OSHA. Since the concrete pit provided containment for process materials the company should have known the hazards and been able to complete an appropriate hazardous waste determination. The TWC sample determined that the waste was hazardous due to concentrations of chromium. The company should have been aware that their process materials which the pit was designed to contain could have high concentrations of chromium. There was visual evidence of yellow staining in the removed concrete from the site. This should have alerted company personnel that the concrete should be analyzed for chromium content.

3. Good Faith Efforts to Comply: No adjustment

4. Economic Benefit of Noncompliance: Upward adjustment of 20% = $400

   Justification: Precise saved money by failing to complete a hazardous waste determination. The company saved money in sampling and analysis costs and recordkeeping costs. Since the company had failed to complete a hazardous waste determination, the TWC

conducted a sampling and analysis of Precise's waste and discharges to determine hazardous chararacteristics. Analysis costs associated with the Toxic Characteristic Leaching Procedure may cost several hundred or more dollars, depending on the number of constituents analyzed.

5. Enhanced Penalty Needed to Deter Future Violations: No Adjustment

6. Other Factors: No adjustment

Part II - Total Penalty Range Adjustment: Upward adjustment of 40% = $800

Total Penalty Amount per Event (Part I + Part II) =

$8,000 + [.40 x ($10,000 - $8,000)] = $8,800

Part III - Recommended Total Penalty Calculation

Total Number of Penalty Events: 1

Justification: One penalty event is calculated for the failure to complete a hazardous waste determination of waste resulting from the repair of the on-site concrete containment pit completed on or about July 8, 1991.

Total Penalty Amount: $8,800 x 1 = $8,800

6. 31 TAC §335.10(a) - Shipping and Reporting Procedures Applicable to Generators of Hazardous Waste or Class I Waste

Except as provided by §335.10(g), no generator of Class I waste shall cause, suffer, allow, or permit the shipment of hazardous waste or Class I waste consigned to an off-site solid waste storage, processing, or disposal facility in Texas without preparing a TWC manifest or form TWC-0311, and if necessary, TWC-0311B. Any hazardous waste or Class I waste generated in Texas for consignment in another state must be accompanied by the consignment state's manifest, if provided, or by a TWC manifest if the consignment state does not provide a manifest.

a. Precise Hard Chrome failed to manifest off-site shipments of a hazardous waste (chromium contaminated concrete debris). The waste was subsequently shipped to an unauthorized facility in Robinson, Texas.

b. Precise Hard Chrome failed to manifest shipments of solvent contaminated waste listed on the Notice of Registration as a hazardous waste (waste code no. 980970). The waste was subsequently shipped to a site not authorized to accept hazardous waste (City of Waco municipal landfill).

Penalty Calculation

Part I - Recommended Penalty Range Based on Violation

1. Level of extent and gravity of violation - Major

Justification: Manifests allow a "cradle to grave" tracking system to ensure that Class I hazardous or industrial solid waste destined for off-site treatment, storage or disposal actually reaches its destination. The manifest is a control and transport document that must accompany shipments of Class I hazardous and industrial solid waste at all times from the generators facility to the final Treatment, Storage, and Disposal facility. The manifest provides a record and accountability of persons who handle a particular waste. Precise allowed shipments of waste it generated to be shipped without manifests constituting a major deviation from the rule.

2. Level of impact or hazard of violation: Major

   Justification: By not manifesting its waste, Precise was outside of the normal waste tracking system resulting in the lack of accountability for persons handling the waste. Manifests contain information vital to the transporter and receiving facility to ensure the proper management and final disposal of the waste. Information contained on a manifest include the classification of the waste, hazard class, quantity of the waste, and the names, state and federal identification numbers and signatures of the generator, transporter, and receiving facility. Waste generated at Precise was not shipped to an authorized facility and was not tracked by manifests resulting in a release of the waste to the environment and/or compromising human health.

RECOMMENDED PENALTY RANGE: $8,000 - $10,000

Part II - Penalty Adjustments

1. History of Noncompliance: No adjustment

2. Degree of Culpability: No adjustment

3. Good Faith Efforts to Comply: No adjustment

4. Economic Benefit of Noncompliance: No adjustment

5. Enhanced Penalty Needed to Deter Future Violations: No Adjustment

6. Other Factors: No adjustment

Part II - Total Penalty Range Adjustment: No adjustment

Total Penalty Amount per Event (Part I + Part II) =

$8,000 + 0 = $8,000

Part III - Recommended Total Penalty Calculation

Total Number of Penalty Events: 6

Justification: Six penalty events are calculated for the failure to use manifests for shipments of hazardous

and industrial solid wastes.

Five penalty events are calculated based on information that about 5 shipments of waste from the July 1991 repair of the concrete below grade tank were made to the Robinson, Texas site between July 1991 and the TWC December 1991 inspections. The penalty amount for these five events is adjusted so as not to exceed $10,000 per day. The penalty for this portion of the cited violation was reduced from $40,000 to $0 because the maximum $10,000 per day amount is assessed for a portion of violation no. 2 and is reflected in the Executive Summary.

One penalty event is calculated for an unspecified number of shipments of solvent contaminated solids (listed as a hazardous waste on the company's NOR) to the City of Waco landfill without manifests as documented by the TWC inspections of December 17-20, 1991 and April 21, 1992.

Total Penalty Amount: $8,000 x 6 = $48,000

Total Adjusted Amount: $8,000

7. 31 TAC §335.5 - Deed Recordation

No person may cause, suffer, allow, or permit the disposal of industrial solid waste or municipal hazardous waste prior to recording in the county deed records of the county or counties in which the disposal takes place, the metes and bounds description of the area, the class(s) of waste(s) and a waste description, and a name and address of a contact person. Proof of the recordation shall be provided to the Executive Director and the owners of the property are subject to additional requirements including 31 TAC §335.112(a)(6).

Precise Hard Chrome failed to record in the county deed records any information regarding on-site disposal including the landspreading area for metal grinding waste (waste code no. 172110).

Penalty Calculation

Part I - Recommended Penalty Range Based on Violation

1. Level of extent and gravity of violation - Major

Justification: Precise failed to comply with the requirements of 31 TAC §335.5 by failing to deed record the site prior to or even after the disposal of industrial solid waste. This constitutes a major deviation from the rules.

2. Level of impact or hazard of violation: Moderate

Justification: The deed recordation requirement is an important provision to protect human health and the environment in that it alerts potential purchasers of the property and adjacent properties of the potential hazards and risks and the developmental and economic limitations of the property. Failure to deed record the property did not affect any other buyers of the site since the Precise did not sell the property but potentially could have had adverse consequences had the property been sold.

RECOMMENDED PENALTY RANGE: $3,200 - $4,399

Part II - Penalty Adjustments

1. History of Noncompliance: No adjustment

2. Degree of Culpability: No adjustment

3. Good Faith Efforts to Comply: No adjustment

4. Economic Benefit of Noncompliance: No adjustment

5. Enhanced Penalty Needed to Deter Future Violations: No Adjustment

6. Other Factors: No adjustment

Part II - Total Penalty Range Adjustment: No adjustment

Total Penalty Amount per Event (Part I + Part II) =
$3,200 + $0 = $3,200

Part III - Recommended Total Penalty Calculation

Total Number of Penalty Events: 1

Justification: One penalty event is calculated for the failure to deed record a land spreading area as documented during the TWC inspections of December 17 through the 20th, 1991 and April 21, 1992.

Total Penalty Amount: $3,200 x 1 = $3,200

Violation for which no Penalty is Sought

8. 31 TAC §335.431 - Land Disposal Restriction incorporating 40 CFR §268.7 - Waste Analysis and Recordkeeping

The generator must test his waste or an extract developed using the test method described in Appendix I of this part, or use knowledge of the waste, to determine if the waste is restricted from land disposal under this part.

Precise Hard Chrome failed to determine that waste generated at the site is restricted from land disposal and provide required land disposal notices for two wastestreams (chromium contaminated concrete debris and solvent contaminated waste). The chromium contaminated debris shipped off-site to an unauthorized site in Robinson, Texas, was analyzed to be a hazardous waste (D007) and a third third land disposal restricted waste (40 CFR §268.35) above treatment standards and was shipped without a land disposal restriction notice.

Chronology

July 10, 1988 - A representative from the TWC District 3 office conducted an industrial solid waste inspection at the Precise facility.

August 1, 1988 - Precise submitted an industrial solid waste management inventory form to register with the TWC as a result of the July 10, 1988 TWC inspection.

September 20, 1988 - A representative of the TWC District 3 office conducted a complaint investigation at Precise. The investigation revealed chemical odors emanating from disposal of construction debris. The company was instructed to identify and properly dispose of on-site chemicals and contaminated soil.

December 16, 1991 - TWC District 3 representatives conducted an investigation in response to a Texas Parks and Wildlife report of seepage of a yellow-colored water into an unnamed tributary of the Bosque River located off of 19th street in Waco. The TWC investigation confirmed seepage of a yellow-colored water from the banks of ravine located across 19th street downgradient from Precise.

December 17 to 20, 1991 - A representative of the TWC District 3 office conducted an industrial solid waste inspection of the Precise facility.

December 17, 1991 - The TWC mobilized emergency response contractors, had an emergency containment dam built and collected a sample of the yellow-colored, liquid seep discharge. Analytical data indicated that the seep water had elevated levels of hexavalent chromium.

December 18, 1991 - TWC District 3 representatives collected eight additional samples from the seep area and downstream within an unnamed tributary. Analytical results from the sampling indicated that the water in the unnamed tributary from the seep was characteristically hazardous due to leachable concentrations of chromium.

December 20, 1991 - Contamination at the Precise facility was confirmed by a soil boring completed adjacent to the west side of the Precise process building. TWC District 3 representatives collected a ground water sample from the borehole. Analytical results from the sampling indicated that the ground water was characteristically hazardous due to toxicity for chromium (TCLP).

December 20, 1991 - The TWC Emergency Response Section issued a "demand" letter to Precise signed by the Executive Director. The letter required the company to assume cleanup operations and financial responsibilities for the expenses incurred by the state in the emergency response action.

December 20, 1991 - Precise notified the TWC that it is willing to assume cleanup responsibilities and financial expenses incurred in the cleanup operations to date.

December 31, 1991 - The City of Waco issued a temporary sewer use permit to Precise. The permit was issued so Precise could discharge treated wastewater collected from the seep area.

January 8, 1992 - Two additional seep areas were discovered. A second containment dam was constructed to ensure containment of additional seep areas.

January 15, 1992 - Nine ground-water monitor wells were completed, including five wells on Precise property (MW-1, MW-2, MW-3, MW-4, and MW-5) and four off-site wells (MW-6, MW-7, MW-8 and MW-9).

January 22, 1992 - Representatives of the TWC District 3 office conducted an inspection and collected samples from an unauthorized disposal site in Robinson, Texas (Doye Baker property) which received chromium contaminated concrete debris from Precise. TWC samples collected from the concrete debris and soil below indicated chromium contamination. The samples were hazardous due to leachable concentrations of chromium. Water samples were also collected from pooled water at the site and a stream below the landfill. The water samples did not indicate elevated levels of total chromium.

January 23, 1992 - TWC District 3 representatives collected water and sediment samples from a seep area which flows into an unnamed creek adjacent to a day care center ("A Small World Day Care"). The analytical results indicated that the seep water was hazardous due to leachable concentrations of chromium.

January 24, 1992 - TWC District 3 representatives collected additional samples at the unauthorized disposal site in Robinson, Texas on the Baker property. Water and sediment samples were collected from six locations in a creek and pond area to determine if immediate surface water runoff areas were contaminated from the disposal activities. A sample collected from a pool of water behind the contaminated area had elevated levels (24.6 mg/l) of total chromium. The remaining analytical

results did not indicate high levels of chromium.

January 25, 1992 - Fencing was installed on both sides of the creek area adjacent to the Small World Day Care.

January 31, 1992 - The TWC held a public meeting with interested parties at the Brazos River Authority Headquarters in Waco. The TWC requested that Precise organize a public meeting where citizens could receive information about the release and address public health concern questions.

February 16, 1992 - The TWC issued an Emergency Order requiring certain actions of Precise.

February 17, 1992 - Eight additional ground-water monitor wells were installed to determine the areal extent of contamination (MW-10, MW-11, MW-12, MW-13, MW-14, MW-15, MW-16 and MW-17).

March 19, 1992 - A public meeting was held for interested citizens concerning the situation at Precise at Bosqueville High School. Participants included Dr. Scott Lee, M.D. from Waco-McLennan County Public Health District and Dr. Caryl Shaver, M.D. from EnviroMD, Medical Toxicological Division in Tucson, Arizona to answer medical questions.

March 20, 1992 - Three more ground-water monitor wells were completed (MW-18, MW-19 and MW-20) for a total of 20 wells. Monitor Well MW-20 was installed inside the Precise process building near an previously unlined concrete containment pit believed to be the source of contamination.

April 17, 1992 - The February 1992 Emergency Order issued to Precise was affirmed and modified by the TWC.

July 28, 1992 - The TWC Industrial & Hazardous Waste Enforcement Section issued a Notice of Violation (NOV) letter to Precise based upon the TWC inspections of December 17th to December 20th, 1991 and April 21, 1992. The following violations were cited:
31 TAC §335.4 and Texas Water Code § 26.121 - General Prohibitions and Unauthorized Discharges Prohibited;
31 TAC §§335.2 and 335.43 - Permit Required;
31 TAC §335.6 - Notification Requirements;
31 TAC §335.9 - Recordkeeping Requirements;
31 TAC §335.62 - Hazardous Waste Determination;
31 TAC §335.10(a) - Shipping and Reporting Requirements;
31 TAC §335.5 - Deed Recordation; and
31 TAC §335.431 - Land Disposal Restriction Requirements.

August 12, 1992 - A facts meeting was held at the TWC Park 35 Office in Austin with representative of Precise to discuss the alleged violations cited in the July 28, 1992 NOV letter.

August 19, 1992 - Precise's environmental consultant (Dames & Moore) submitted proposed design plans for a containment system for tanks to store contaminated seep water. The containment system was proposed to be constructed over an area of chromium contaminated soil which the TWC had not been notified of by the company.

August 25, 1992 - The TWC Industrial and Hazardous Waste Enforcement Section rejected Precise's August 19th, 1992 tank containment pad plan due to the underlying contamination and associated limitations.

III. TECHNICAL RECOMMENDATIONS

1. Any Order issued pursuant to this report, shall supersede any ordering provisions of the TWC Emergency Order No. 92-3E issued on February 16, 1992 and the affirmed and modified Emergency Order issued on April 17, 1992 that required certain actions of Precise.

2. Immediately upon the effective date of any Order issued pursuant to this report, Precise shall complete the following:

   (a) Precise shall expedite determination of both the vertical and areal extent of subsurface contamination, both on and off the plant site, by placement of ground water monitoring wells, including on any adjacent property more specifically described in Appendix 1, attached hereto and incorporated by reference herein. Precise shall convert groundwater monitoring wells to recovery wells when indicated to enhance remediation activity;

   (b) Precise shall substantially reduce the stored volume of recovered contaminated water from seep areas by intensifying treatment effort and pursuing other possible disposal methods;

   (c) Precise shall implement measures to divert uncontaminated surface water away from contaminated seepage areas and shall perform other measures, as necessary, to minimize the volume of contaminated liquid from containment, storage and recovery efforts;

   (d) Precise shall immediately plug the deep well (Trinity Sands) on the property owned by Rick and Candy Tighe ("Tighes") and more specifically described in Appendi. 1 to eliminate the potential for major aquifer contamination by pulling all removable casing from the well and pressure filling the entire well with cement from the bottom up to the land surface in accordance with 31 Texas Administrative Code (TAC) §287.50(a). Precise shall further install wells pursuant to its agreement with Tighes, attached as Appendix 2 and incorporated herein by reference;

(e) Precise shall install wells as indicated in its agreement with Respondents H. Dwayne and Martha Breedlove, attached as Appendix 3 and incorporated herein by reference. In addition, Precise shall install any additional groundwater monitoring wells as are necessary to determine the exact source and extent of chromium contamination. Information obtained by the Breedloves' hydrogeologist, pursuant to the agreement attached as Appendix 3, shall be shared by said hydrogeologist with the other property owners listed in Appendix 1;

(f) Precise shall determine the exact source of the chromium contamination and shall report to the Texas Water Commission as to that source of contamination, including investigation of all additional possible sources of chromium contamination on Respondents' property. Precise shall immediately report the occurrence of any spills or discharges or other releases to the Texas Water Commission;

(g) Respondents shall provide reasonable access to Precise for the purpose of complying with the Technical Recommendations. Such access may include, but is not limited to, installation of ground water monitoring wells or water recovery wells, conversion of ground water monitoring wells to water recovery wells, ingress and egress of equipment and personnel, and construction of temporary or permanent roads;

(h) Precise shall take reasonable precautions to ensure that any identified habitat of the golden-cheeked warbler is not destroyed while addressing chromium contamination;

(i) To the extent that this Technical Recommendation requires Respondents to submit to certain cleanup actions on their property, such actions shall not increase Respondents' liability with respect to the chromium contamination on their property;

(j) This Technical Recommendation does not convey any property rights in either real or personal property nor any exclusive privilege; nor does it authorize any injury to private property nor any

invasion of personal rights nor any infringement of federal, state or local laws or regulations. This Technical Recommendation does not obviate the necessity of obtaining any federal, state or local authorization that may be required by law for the activities otherwise authorized by the Technical Recommendations;

(k) If any provision, sentence, clause or phrase of this Technical Recommendation is for any reason held to be invalid, the invalidity of such a provision, sentence, clause or phrase shall not affect the validity of the remaining portions of the Technical Recommedations;

(l) Precise shall implement measures designed to significantly reduce the flow rate and/or chromium concentrations of the contaminated groundwater on-site and off-site, including any seepage areas on the property owned by Respondents. This Technical Recommendation does not authorize the placement of a treatment unit on the Breedlove property;

(m) Precise shall provide security at any off-site location where recovered contaminated wastes or groundwater are being stored; and

(n) Precise shall submit to the Texas Water Commission a contingency plan that delineates security efforts and spill response measures to be implemented during any activities undertaken to address chromium contamination.

3. Immediately upon the effective date of any Order issued pursuant to this report, Precise shall cease to allow or permit any hazardous waste or industrial solid waste as defined in 31 TAC $335.1, which it receives, generates or transports, to be stored, treated, or disposed of at its facility or any facility, not authorized or permitted by the TWC or another state agency as specified in 31 TAC $335.2 and $335.43.

4. Immediately upon the effective date of any Order issued pursuant to this report, Precise shall report all spills and releases to the TWC as soon as possible and not later than within 24 hours of the occurrence, in accordance with $26.039 of the Texas Water Code. In the event of any discharges or spills, Precise shall

take immediate action to contain, remove and abate the spill or discharge in accordance with §26.266 of the Texas Water Code. In addition, Precise shall notify the TWC in writing within (7) seven days of any spill occurrences when requested by the TWC.

5. Immediately upon the effective date of any Order issued pursuant to this report, Precise shall not allow the collection, handling, storage, processing or disposal of industrial solid waste in such a manner so as to cause discharge or imminent threat of discharge of such waste into or adjacent to the waters in the state without obtaining specific authorization for such a discharge from the TWC in accordance with 31 TAC §335.4 and Texas Water Code §26.121.

6. Within 30 days of the effective date of any Order issued pursuant to this report, Precise shall submit to the Executive Director information necessary for the facility to comply with 31 TAC §335.6 - Notification Requirements. This shall include, at a minimum the following information:

   (a) Notification of the generation and management of any hazardous waste as described in 40 CFR Part 261 or any industrial solid waste as defined in 31 TAC §335.1, including all waste generated from the remediation activities such as contaminated groundwater, contaminated soil, and other contaminated debris.

   Notification shall include a proper hazardous waste determination and documentation of the appropriate EPA hazardous waste number(s) described in 40 CFR Part 261 and required by 31 TAC §335.6; and

   (b) Notification of all on-site waste management units including wastewater storage and treatment tanks. Description of the waste management units including the capaci / or size of the unit, and the specific company identification, numbering system or other internal naming system of each waste management unit.

7. Immediately upon the effective date of any Order issued pursuant to this report, Precise shall keep records of all hazardous and industrial solid waste activities in

accordance with 31 TAC §335.9.

8. Immediately upon the effective date of any Order issued pursuant to this report, Precise shall ensure that any Class I industrial solid waste or hazardous waste as defined in 31 TAC §335.1, generated by Precise shall be accompanied by a properly completed TWC manifest or other appropriate manifest for out of state shipments in accordance with 31 TAC §335.10.

9. Immediately upon the effective date of any Order issued pursuant to this report, Precise shall complete hazardous waste determinations on all wastes generated in accordance with 31 TAC §335.62 and determine if the waste is restricted from land disposal pursuant to 31 TAC §335.431, incorporating 40 CFR §268.7 and provide required land disposal restriction notices as required under 40 CFR Part 268.

10. Within thirty (30) days of the effective date of any Order issued pursuant to this report, Precise shall submit to the Executive Director, an On-site and Off-site Monitoring and Security Inspection Plan and Schedule for review, possible modification, and approval. Copies of the plan shall be sent to any off-site landowner upon which the security measures affect. The purpose of the plan shall be to address On-Site and Off-Site Security and Monitoring Measures to prevent the unknowing entry and to minimize the possibility of the unauthorized entry, of persons, or livestock onto the identified contaminated areas and to monitor all remediation and monitoring equipment including ground water monitoring and recovery wells and shall include provisions for the following:

    (a) Fencing or other artificial or natural barriers, which completely surround the known contaminated areas from facility operations and/or a 24-hour surveillance system which continually monitors and controls entry;

    (b) A means to control entry, at all times through the gates or other entrances to the known contaminated on-site and off-site area resulting from Precise operations;

    (c) Posting of signs at each entrance and at other locations in sufficient numbers to be seen from

any approach, to warn the general public of the danger of contamination of the off-site areas. The signs must be legible from a distance of at least 25 feet;

(d) Surveillance and periodic inspections to ensure integrity of fencing, signs and all security and monitoring devices and equipment including monitor wells; and

(e) The plan shall be modified as necessary to incorporate inspections of remedial equipment approved in the IRAP (Technical Recommendation No. 12) and CMI (Technical Recommendation No. 22).

Precise shall maintain an inspection log showing the item inspected, inspector, time of inspection, repairs, or replacement made and time of service. Precise shall provide copies of the log to the Executive Director on an annual report beginning one year form the issuance of any Order issued pursuant to this report. These logs shall be provided in the Annual Progress Reports required in Technical Recommendation No. 34.

11. Upon receipt of written approval or approval with modifications by the Executive Director of the Inspection Plan and Schedule, Precise shall implement the plan in accordance with its approved schedule.

12. Within 30 days of the effective date of any Order issued pursuant to this report, Precise shall submit to the Executive Director an Interim Remedial Action Plan (IRAP) for review, possible modification and approval. Precise shall continue all emergency containment measures and source reduction measures in place to control the contaminated ground water and seep water, including ground water and seep water recovery operations until the Interim Remedial Action Plan required in this Technical Recommendation is submitted and approved by the Executive Director and implemented in accordance with Technical Recommendation No. 13. Existing containment and cleanup operations and any proposed changes in the current emergency cleanup program shall be included in an Interim Remedial Action Plan. The purpose of the IRAP is to present corrective measures necessary to secure and contain on-site, and off-site contamination from the facility.

The IRAP shall be designed to contain and/or remove to the extent possible contaminated soil and ground water including seep water by all available means including pumping, diverting, treating and final disposition. The plan shall be designed such that all on-site contaminated soil and runoff will be contained or removed to the extent possible, such that leaching of hazardous constituents to surface or ground water will be significantly reduced. The IRAP shall include at a minimum the following information:

(a) Detailed description of all procedures that will take place, including any removal, treatment, storage, off-site transport, and off-site disposal activities which will occur;

(b) Detailed description of the steps needed to remove the contaminated ground water and seep water or a detailed description of other process to be used if on-site treatment is proposed;

(c) Sampling locations and analytical methods to be used for verification sampling, to verify that the containment system and or treatment process is effective;

(d) The methods of containment, and transport and disposal of contaminated soils if off-site disposal is required;

(e) A requirement that the Interim Remedial Action be performed under the supervision of an independent Texas Registered Professional Engineer;

(f) Health and Safety precautions to be observed during the Interim Remedial Action process;

(g) A detailed schedule of implementation; and

(h) A provision to submit copies of the IRAP and any approved changes to the IRAP to affected landowners upon which proposed remediation will occur.

13. Upon receipt of written approval or approval with modifications by the Executive Director of the Interim Remedial Action Plan, Precise shall implement the plan in accordance with its approved schedule.

14. Within 30 days of the effective date of any Order issued pursuant to this report, Precise shall submit a Second Phase Site Investigation Plan (SPSIP) to the Executive Director for review, possible modification and approval. This plan shall be developed in conjunction with the existing investigative data and Remedial Investigation Report of June 12, 1992.

    The purpose of the plan is to determine the full extent of both on-site and off-site soil contamination both areal and vertically, resulting from the management of hazardous industrial solid waste and releases of waste and/or pollutants from the Precise site, and to define the site hot spots and/or the source(s) either known or suspected. A ground water investigation shall be completed in the Ground Water Assessment Plan specified in Technical Recommendation No. 16. The SPSIP shall include the information contained in Appendix IV.

15. Upon receipt of written approval or approval with modifications by the Executive Director of the Second Phase Site Investigation Plan, Precise shall implement the plan in accordance with its approved schedule.

16. Within 30 days of completion of the SPSIP, Precise shall submit to the Executive Director, a Second Phase Site Investigation Report detailing the findings of the site investigation required in Technical Recommendation No. 14 above. If additional information pertaining to the site investigation is requested by the Executive Director after review of the findings, a supplemental report shall be provided by Precise within 60 days of the date of the written request by the Executive Director. The 60 day period for the supplemental report may be extended by the Executive Director upon written request from Precise, if additional field work is required. The Second Phase Site Investigation Report shall include, at a minimum, the following:

    (a) (A) map(s) drawn to scale showing the facility, impacted off-site areas, seep locations and the waste management units including suspected sources of any contamination addressed by the investigation, actual sampling locations, borehole locations, piezometers or monitor wells installed, the horizontal and vertical extent of contamination, surface topography, runoff drainage

patterns, and any drainage control features including drainage discharge points;

(b) Analytical data obtained during the investigation with a summary of findings, analytical methods used, detection limits of constituents, chain of custody forms, and laboratory quality assurance/quality control data;

(c) Isopleth maps showing the concentration of contaminants and the depths of contaminants in the soil;

(d) Geological cross-sections which show the vertical extent of contamination and the top and bottom of the monitored saturated zone;

(e) Completed soil logs for all boring and monitor well installations;

(f) Results of substructure assessment information; and

(g) Conclusions and recommendations.

17. Within 30 days of the effective date of any Order issued pursuant to this report, Precise shall submit a Ground-Water Assessment Plan to the Executive Director, for review, approval, and possible modification. The specific objective of the Ground-Water Assessment Plan is to determine the extent of ground water contamination from Precise's activities. The Plan shall include at a minimum the information specified in Appendix V.

18. Upon receipt of written approval by the Executive Director, including any modifications, of the Ground-Water Assessment Plan specified in Technical Recommendation No. 17 above, Precise shall implement the Ground-Water Assessment Plan, including any modifications made to that plan by the Executive Director, in accordance with its approved schedule.

19. Within 60 days of completion of a Ground-Water Assessment plan, Precise shall submit to the Executive Director a Ground-Water Assessment Report detailing the findings of the Ground-Water Assessment Plan required in Technical Recommendation No. 17 above. If

additional information pertaining to the investigation is requested by the Executive Director after review of the Ground-Water Assessment Report, a supplemental report shall be prepared by Precise within 60 days of written request by the Executive Director. If additional field work is required by Precise, the 60-day period for the supplemental report may be extended by the Executive Director upon written request by Precise.

20. All off-site contaminated soils attributed to the management of wastes or substances on or from the Precise property shall be cleaned up to background levels, or alternate concentration levels acceptable to the Executive Director. All on-site and off-site contaminated ground water released from the site shall be cleaned up to Maximum Contaminant Levels (MCLs), or alternate concentration levels approved by the Executive Director.

    All on-site contaminated soils shall be removed and disposed of at an authorized facility, treated in place, or contained (e.g. capping) to the extent that leaching of hazardous constituents to the ground water will be significantly reduced or eliminated.

21. Within 120 days of completion of approved activities from the Ground Water Assessment Plan, Precise shall submit to the Executive Director a Corrective Measures Study (CMS), for review, possible modification and approval. The purpose of the CMS is to investigate and evaluate potential remedies. The CMS shall include, but not be limited to the factors outlined in Appendix VIII.

22. Precise shall design, construct, operate, maintain, and monitor the performance of any remedial alternative(s) selected from the CMS and approved by the Executive Director. Within 60 days of Executive Director approval or approval with modifications of the CMS, Precise shall submit a Corrective Measures Implementation (CMI) Workplan to the Executive Director for review, possible modification, and approval. The purpose the CMI Workplan is to provide for a long term solution for the facility's contamination problem. The CMI Workplan shall include at a minimum:

    (a) Schedules of implementation for any remedial alternatives selected;

(b) Detailed final engineering design plans, field plot or laboratory studies;

(c) A step by step description of any remedial activities including removal, treatment, storage, off-site transport, and disposal activities;

(d) A ground-water monitoring program designed to demonstrate the effectiveness of the proposed corrective action system and demonstrate cleanup goals;

(e) Sampling locations and analytical methods to be used for verification sampling. This shall include provisions to conduct post-remediation soil sampling and analysis. Frequency and duration of post remediation soil sampling and analysis will be dependent of the TWC's concurrence that closure standards, set forth in Technical Recommendation No. 20 have been attained;

(f) An estimate of the volume of contaminated soils and ground-water to be treated and/or removed;

(g) The methods of transport and disposal of contaminated soils and ground water if off-site disposal is required;

(h) Health and safety precautions to be observed during the remediation process; and

(i) A requirement that the approved CMI activities be performed under the supervision of an independent Texas Registered Professional Engineer.

23. Upon receipt of written approval by the Executive Director, including any modifications, of the CMI workplan specified in Technical Recommendation No. 22 above, Precise shall implement the CMI, including any modifications made to the plan by the Executive Director, in accordance with its approved schedule.

24. Within 30 days of the effective date of any Order issued pursuant to this report, Precise shall submit a two separate Site Investigation Plans, one for the off-site disposal area located at Highway 77 and Baker Lane on the Baker property in Robinson, Texas (Robinson site) and one for the frac tank storage area located

near the intersection of 19th Street (FM 1637) and FM 3051 to the Executive Director for review, possible modification and approval.

The purpose of the plans are to determine the extent of contamination, both areal and vertical, resulting from the management of industrial solid waste at the site, and shall include at a minimum:

(a) The methods of investigation and a detailed description of all procedures that will occur during the site investigation including, but not limited to, sampling and analysis addressing number, depth, and location of samples with provisions to sample the ground water, constituents to be analyzed, methods of analysis, decontamination of equipment and chain of custody procedures;

(b) A map drawn to-scale showing the location of the waste management unit listed above and proposed sampling locations; and

(c) A detailed schedule for the implementation of the Site Investigation Plan.

25. Upon receipt of written approval or approval with modifications by the Executive Director of the Site Investigation Plans for the Robinson site and the Off-site Frac Tank Storage Area required in Technical Recommendation No. 24, Precise shall implement the plans in accordance with its approved schedule.

26. Within 30 days of completion of the Site Investigation Plans (Robinson site and Off-site Frac Tank Storage Area) required in Technical Recommendation No. 24, Precise shall submit to the Executive Director, two separate Site Investigation Reports for the subject areas detailing the findings of the site investigation. If additional information pertaining to the site investigations are requested by the Executive Director after review of the findings, a supplemental report(s) shall be provided by Precise within 60 days of the date of the written request by the Executive Director. The 60 day period for the supplemental report(s) may be extended by the Executive Director upon written request from the Precise, if additional field work is required. The Site Investigation Reports shall include, at a minimum, the following:

(a) (A) map(s) drawn to scale showing the facility and the waste management unit addressed by the investigation, actual sampling locations, borehole locations, piezometers or monitor wells installed, surface topography, runoff drainage patterns, and drainage control features (i.e. drainage discharge points, etc.) and the horizontal and vertical extent of contamination. Geological cross sections shall be completed to show soil types and depth to ground water.

(b) Analytical data obtained during the investigation with a summary of findings, analytical methods used, detection limits of constituents, chain of custody forms, and laboratory quality assurance/quality control data;

(c) Isopleth maps showing the concentration of contaminants and the depths of contaminants in the soil;

(d) Completed soil logs for all borings and monitor well installations and descriptions of drilling and construction procedures for any monitor wells completed during the investigation. For each piezometer or monitoring well installed pursuant to the Site Investigation Plan, Precise shall provide a copy of the driller's log, a detailed description of sediments encountered during the drilling showing all lithological breaks greater than one foot in thickness, well depth, screened interval, bentonite packed interval and well construction specifications. Soil borings shall be classified and logged in accordance with the Unified Soil Classification system.

27. Within 60 days of completion of the Site Investigation Plans required in Technical Recommendation No. 24, Precise shall submit two separate Closure Plans for the subject areas to the Executive Director for review, approval, and possible modification. The purpose of the plans are to provide for cleanup of contaminated soil or permanent containment, and removal of any remaining industrial solid waste or waste residues. The plans shall at a minimum, include the following information:

(a) A step-by-step description of soil remediation activities, including a detailed description of

all procedures that will take place, including any removal, treatment, storage, off-site transport, and off-site disposal activities which will occur;

(b) A detailed description of the steps needed to remove the waste if excavation and off-site disposal of the waste is proposed; or a detailed description of other process to be used if on-site treatment is proposed or if constituents are to remain in place.

The plan shall be designed such that all on-site contaminated soil will be removed, treated in place, or contained to the extent that leaching of hazardous constituents to surface or ground water will be significantly reduced or eliminated.

(c) Sampling locations and analytical methods to be used for verification sampling, to verify that the contamination has been remediated;

(d) An estimate of the volume of contaminated soils to be treated and/or removed;

(e) The methods of transport and disposal of contaminated soils if off-site disposal is required;

(f) A requirement that closure activities be performed under the supervision of an independent Texas Registered Professional Engineer;

(f) Health and Safety precautions to be observed during the remediation process; and

(g) A detailed schedule of implementation.

28. Upon receipt of written approval, or approval with modifications by the Executive Director of the Site Closure Plans required in Technical Recommendation No.27, Precise shall implement the Closure Plans in accordance with its approved schedule.

29. If ground-water contamination is determined to be present at Robinson site and/or at the Off-Site Frac Tank Storage Area, then within 60 days of discovery and verification of such contamination or within 60 days of written notification by the Executive Director that ground-water contamination is present, Precise shall

submit a Ground-Water Assessment Plan(s) to the Executive Director, for review, approval, and possible modification. The specific objective of the Ground-Water Assessment Plan(s) is to determine the extent of contamination of ground water in the area. The plan(s), if determined to be required, shall include at a minimum the information described in Appendix V.

30. Upon receipt of written approval by the Executive Director, including any modifications, of the Ground-Water Assessment Plan(s) specified in Technical Recommendation No. 29 above, the Precise shall implement the Ground-Water Assessment Plan(s), including any modifications made to the plan(s) by the Executive Director, in accordance with its approved schedule.

31. Within 60 days of completion of a Ground-Water Assessment Plan specified in Technical Recommendation No. 29, the Precise shall submit to the Executive Director a Ground-Water Assessment Report(s) detailing the findings of the Ground-Water Assessment Plan(s). If additional information pertaining to the investigation is requested by the Executive Director after review of the Ground-Water Assessment Report(s) a supplemental report shall be prepared by Precise within 60 days of written request by the Executive Director. If additional field work is required by Precise, the 60 day period for the supplemental report may be extended by the Executive Director upon written request by Precise.

32. For all contaminated soil and ground water approved to remain in place above background concentration levels, on any Precise property addressed by any Order issued pursuant to this report, Precise shall, within thirty (30) days of completing the authorized corrective measure or closure remedy, record in the county deed records information to specifically identify the areas of contamination exceeding background values in accordance with 31 TAC §335.5. Precise will also state in the deed record the levels of any contaminants remaining in place in the surface soils and in shallow ground water not subject to on-going remediation.

33. If contamination at any Precise property addressed by any Order issued pursuant to this report is not completely removed during the cleanup of the sites, then Precise shall submit a post-closure plan(s) to the

Executive Director, within 60 days of completion of the CMI workplan and/or closure plans, for review, possible modification and approval. The purpose of the plan is to address post-closure care at the facility. If the Executive Director determines that a post-closure care permit or compliance plan will be required for any Precise property addressed by any Order issued pursuant to this report, Precise shall submit a technically and administratively complete permit and/or compliance plan application within 180 days of written notification by the Executive Director that it is required.

If a Post-Closure Care Plan(s) is required, then within 90 days of submittal of the Post-Closure Care Plan, Precise shall submit written proof of financial assurance sufficient to provide for post-closure care for thirty years based on cost estimates in the Post-Closure Care Plan(s). All documents submitted to the Executive Director in fulfillment of this Ordering Provision shall conform to word content, financial mechanism and signatories specified in 31 TAC §335.152(a)(6)/ 40 CFR Part 264 Subpart H or an alternate mechanism approved by the Executive Director.

34. Within one year of the effective date of any Order issued pursuant to this report and annually thereafter or until completion of Post Remedial Activities required in Technical Recommendation No. 33 or issuance of a permit or compliance plan, Precise shall submit annual progress reports to the Executive Director which includes a detailed account and the results of the previous year's Remedial Activities. This shall include, at a minimum:

(a) A detailed site map(s) indicating the locations of all observation and recovery wells;

(b) Potentiometric surface maps for each of the previous year's ground water sampling events (including monitor well and recovery system locations) and lists, in tabular form, of all water level measurements obtained historically for each well and those utilized to prepare these maps. All water level measurements for each ground water sampling event must be collected within one day and must be reported with reference to mean sea level and depth below ground surface;

(c) List(s) of all surface water elevations obtained

historically on each ground water sampling data;

(d) Contaminant isopleth maps for each of the previous year's ground water sampling events (including monitoring well and recovery system locations) and lists, in tabular form, of the ground water analytical results obtained historically from each monitor well and copies of all original laboratory reports, not previously submitted;

(e) A detailed account and the results of the previous year's maintenance activities conducted pursuant to Technical Recommendation No. 10;

(f) Summaries of all remediation operations conducted for the previous year including volumes of recovered or excavated ground water, soils, waste, sediment, surface waters, etc. and documentation of appropriate disposal/recycling including copies of any required uniform hazardous waste manifests or receipts from receiving facilities, not previously submitted; and

(g) Summaries of any modifications to the approved operating procedures of the corrective action program.

35. Within sixty (60) days of issuance of any Order pursuant to this report, Precise shall submit to the Executive Director a schedule summarizing all activities required by the Order. The schedule shall list the activity or report, the Order provision which requires the activity or report and the calendar date the activity or report is to be completed or submitted (if the date can be determined). The schedule shall list the starting dates of all routine activities. Precise shall update this schedule each year by adding completion dates and shall include the updated schedule in the annual report required by Technical Recommendation No. 34.

36. All records of any activities including but not limited to, analytical data, inspection logs, monitoring data, and annual activity reports, etc., conducted pursuant to any Order issued pursuant to this report shall be maintained on-site in an easily retrieved format and made available to any representative of the TWC upon request. Such records shall be maintained until all remedial activities performed pursuant to any Order

issued pursuant to this report are completed.

37. Precise shall notify the TWC District 3 Waco office in writing no less than five (5) days prior to any investigative, remedial, sampling or monitoring activities performed pursuant to any Order issued as a result of this report.

38. Upon issuance of any Order issued pursuant to this report, Precise shall adopt a plan for pollution prevention (source reduction and waste minimization) that complies with 31 TAC Chapter 335 Subchapter Q.

39. All plans, reports, submittals, specifications, certifications, and any other documents required by or resulting from the requirements recommended in this report shall be submitted in duplicate to:

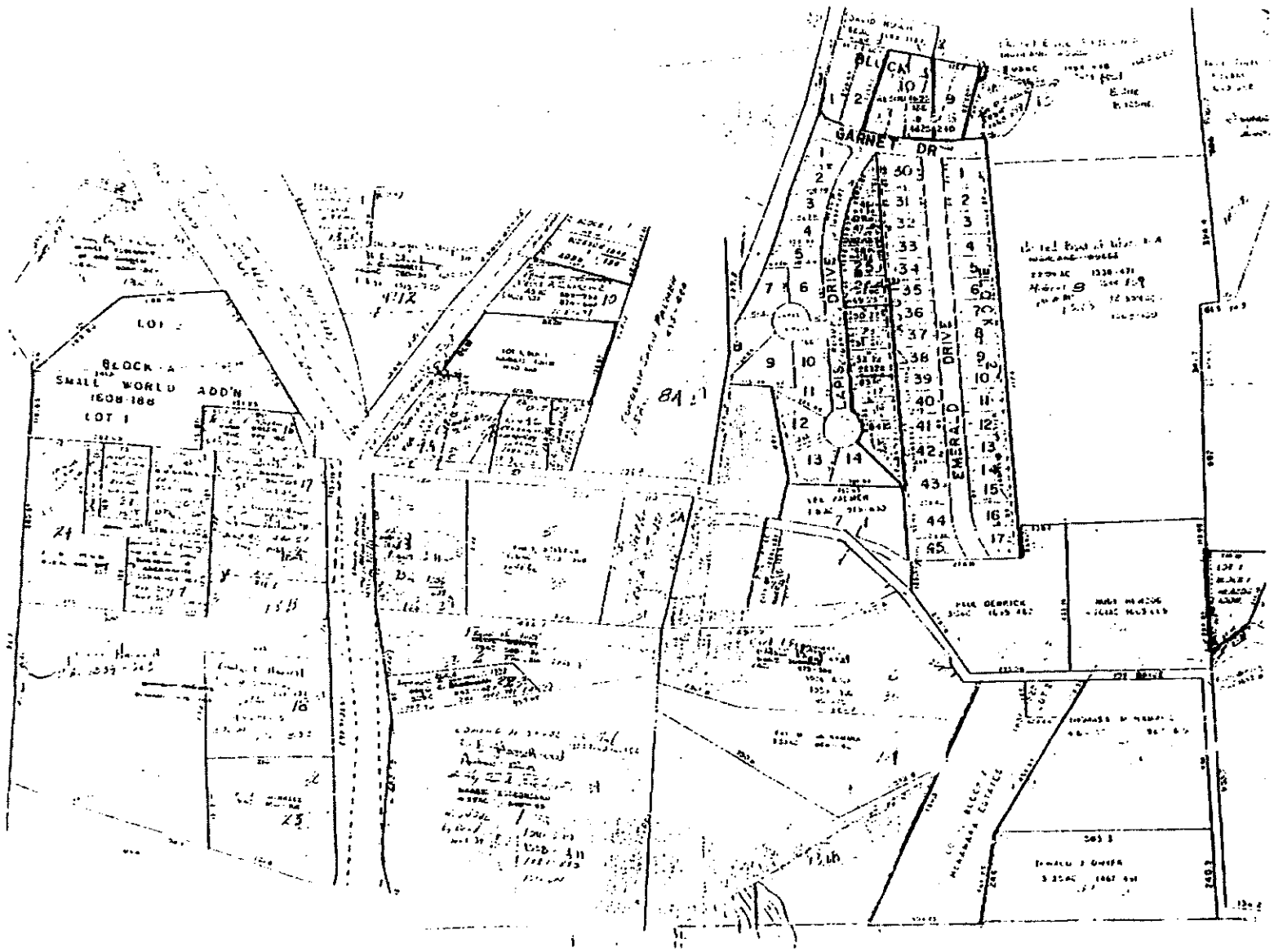
Section Chief
Industrial and Hazardous Waste Enforcement Section
Texas Water Commission
P.O. Box 13087, Capitol Station
Austin, Texas 78711-3087

and a copy of the materials shall be submitted at the same time to :

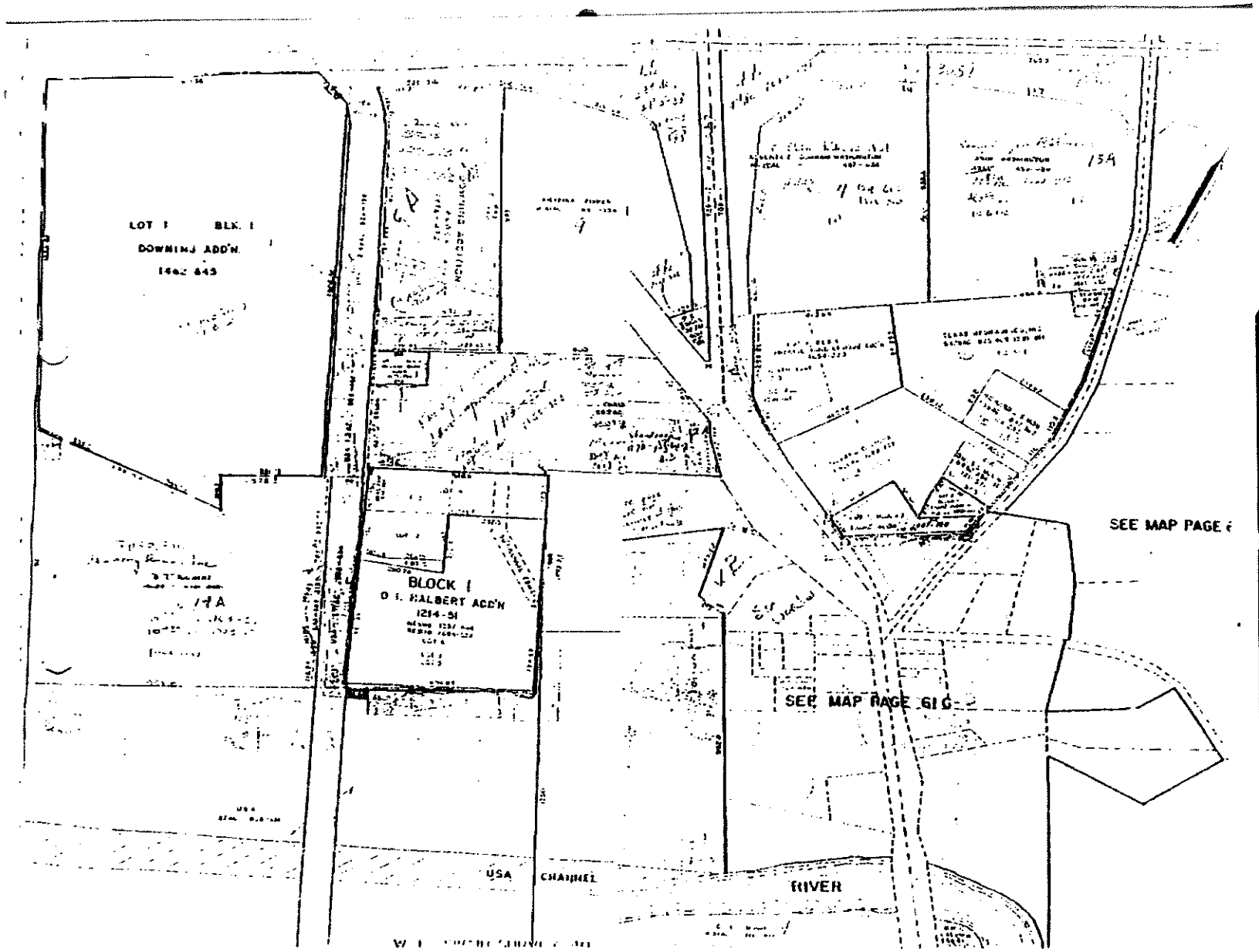
District Manager
Texas Water Commission District 3
6801 Sanger Avenue, Suite 2500
Waco Texas 76710-7807

Enforcement Coordinator: J. Mac Vilas
Enforcement Section
Industrial and Hazardous Waste Division

Field Investigator: Don Wyrick
TWC District 3 Office
Field Operations Division



POOR QUALITY DOCUMENT



POOR QUALITY DOCUMENT

APPENDIX I

ADJACENT LANDOWNER'S LIST

H. Dwayne and Martha Breedlove, Route 3, Box 448-E, Waco, Texas 76708

Ralph and Marta Getman, A Small World Day Care Center, 6412 North 19th Street, Waco, Texas 76708

Reverend Bobby Campbell, Victory Baptist Church, Route 3, Box 171-EE, Waco, Texas 76708

Rick and Candy Tighe, Route 3, Box 534, Waco, Texas 76708

Richard L. Simon, Route 3, Box 533, Waco, Texas 76708

0154 0000 1981

APPENDIX II

EmTech
Environmental Services, Inc.

January 9, 1992

Mr. Rick Tighe
Route 3
Waco, TX 76708

Dear Mr. Tighe:

EmTech Environmental Services, Inc. (EmTech) acting on behalf of Precise Hard Chrome, would like to request permission for EmTech to install three monitoring wells at the portion of your property located near 19th Street. These monitoring wells are necessary to help determine the extent of the release which has occurred and help understand the site geology so that a solution to the situation which exists can be determined.

These monitoring wells consist of 2" x 2" concrete pad flush with the ground. EmTech and Precise will supply you with all results obtained from this investigation.

In reference to the water well samples removed on December 31, all results were negative. I will forward the final analytical data and report on that sampling event once it becomes available. Rick, I would like to ask that this particular well not be utilized until this investigation can be completed so that it will not spread any potential contamination. If these monitoring wells meet with your approval, we would like to install them on approximately January 15 or 16, 1992.

If this meets with your approval, please acknowledge below and if you have any questions or require further information, please give me a call at (817) 332-5481.

Sincerely,

William W. Cottam
Hydrogeologist

Mr. Rick Tighe

WWC:jm

cc. Mr. Bob Baugh, President
Precise Hard Chrome

303 Arnold Street Fort Worth, TX 76107 FAX 817-336-6[illegible] PHONE 1-817-332-5481
24 HOUR EMERGENCY 800-336-7906

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APPENDIX III

0154 0000 1989

AGREEMENT

This Agreement is entered into between Dwayne and Martha Breedlove (collectively "Breedlove"), _____, Waco, Texas, and Texas Hydraulics, Inc. (including d/b/a Precise Hard Chrome) ("Precise"), 6613 North 19th Street, Waco, Texas 76708.

WHEREAS Breedlove owns a 19.63. acre tract (the "tract") of land in McLennan County, Texas, described in Exhibit A attached hereto;

WHEREAS releases of chromium (the "release") have been detected on the tract;

WHEREAS the parties hereto have denied and continue to deny responsibility for the release;

WHEREAS Precise has nevertheless undertaken clean-up and remediation action with regard to the release and is removing from the tract water contaminated by the release;

WHEREAS Precise desires to drill on the tract three monitoring wells in order to determine the extent and source of the release and to understand the site geology and to test water and to remediate the release;

WHEREAS Breedlove desires to cooperate with the Texas Water Commissions desires to have such wells drilled;

NOW THEREFORE Breedlove and Precise hereby agree as follows:

1. Breedlove consents to the drilling of the monitoring wells, under the terms set out herein.

2. Three monitoring wells will be drilled on the tract at the approximate locations marked with stakes which have been agreed to between Precise's representatives and Breedlove.

3. The monitoring wells will be drilled approximately eight inches in diameter and approximately thirty to forty-five feet deep and will contain four-inch PVC pipes surrounded by grout.

4. The wells will be topped with a concrete slab approximately two feet by two feet with bolted and locked caps.

5. The wells will be drilled in a manner consistent with good engineering and environmental practices and procedures and in accordance with Texas Water Commission standards.

6. Precise will be solely responsible for any permits required in order to drill the monitoring wells.

7. Breedlove may have a hydrogeologist of their choice present at the drilling of the monitoring wells and of all other wells being drilled relating to the release, whether on the tract or elsewhere. Precise will pay this hydrogeologist his fees for being present at the drillings and for his study of the test results at the rate of $100 hour plus his travel and telephone expenses.

8. Dual samples will be taken from a a drilling referred to in paragraph 7 above and will be split with Breedlove's hydrogeologist unless Breedlove's hydrogeologist specifies

otherwise. Tests on such samples will be paid for by Precise. Copies of all such written testing reports and results will be provided by that hydrogeologist to Precise.

9. All cuttings will be collected and disposed of in accordance with Texas Water Commission standards.

10. Copies of all written testing reports and results will be provided by Precise to Breedlove.

11. Upon the lack of need for the monitoring wells, Precise will, as allowed and authorized by the Texas Water Commission, plug the wells in accordance with Texas Water Commissions standards.

12. Precise will be responsible for any damage caused to Breedlove's existing gate or fence or other improvements on the tract caused by the drilling of the monitoring wells.

13. Precise agrees to indemnify and hold harmless Breedlove from any claims (including reasonable attorney's fees, fines, penalties, or response or remediation costs) of anyone arising or resulting from the drilling and existence and operation of the monitoring wells and from the ongoing containment and remediation activities, or otherwise arising by virtue of the presence on the property of or by Precise and its employees, agents, representatives, and contractors and the violation of any environmental laws or regulations caused by those activities.

14. Nothing herein shall constitute a release by Breedlove of any claims against Precise resulting from the

release or from Precise's containment and remediation activities on the tract.

15. For the purposes of this Agreement only, Breedlove grants access to the tract only to officers, employees, and subcontractors of ENTRCO Environmental Services, Inc., Precise's independent consultant, Al Hays, and duly elected officers of Precise Hard Chrome and Texas Hydraulics, Inc., as of the date of this Agreement, unless otherwise agreed by Breedlove. This Paragraph 15 relates only to the installation of the monitoring wells and does not address other activities of Precise and their presence on the tract.

EXECUTED this 28 day of January, 1992.

Dwayne Breedlove

Martha Breedlove

TEXAS HYDRAULICS, INC.

BY: Robert Bauer

EXHIBIT A

Being a 19.63 acre tract or parcel of land lying and being situated in the W. L. Swain Survey, Abstract No. 40, McLennan County, Texas, and being all of the land described as Tract I and Tract II in EXHIBIT "A" of the Substitute Trustee's Deed recorded in Volume 1677, Page 284 of the Deed Records of McLennan County, Texas, and being more particularly described as follows:

BEGINNING at the iron rod found marking the north corner of the beforementioned Tract II in the southwest right-of-way line of a county road;

THENCE S 56° 45' 00" E along a northeast line of the beforementioned Tract II, same being the beforementioned southwest right-of-way line of a county road, for a distance of 229.34 feet to an iron rod set for corner at the upper east corner of the said Tract II in the north line of the Victory Baptist Church 1.28 acre tract of land described in the deed recorded in Volume 1382, Page 765 of the Deed Records of McLennan County, Texas;

THENCE S 81° 55' 08" W along the beforementioned north line of the 1.28 acre tract for a distance of 43.38 feet to an iron rod found for corner marking the northwest corner of the said 1.28 acre tract;

THENCE S 03° 36' 08" W along the west line of the beforementioned 1.28 acre tract, same being the upper east line of the beforementioned Tract II, for a distance of 294.67 feet to an iron rod found for corner marking the southwest corner of the said 1.28 acre tract and an interior corner of the said Tract II;

THENCE S 88° 45' 55" E along the south line of the beforementioned 1.28 acre tract, same being a north line of the beforementioned Tract II, for a distance of 84.00 feet to a concrete monument found for corner marking the north corner of the 40.60 acre tract of land conveyed to the U. S. A. and described in the deed recorded in Volume 345, Page 526 of the Deed Records of McLennan County, Texas;

THENCE S 38° 14' 19" W along the northwest line of the beforementioned 40.60 acre tract for a distance of 1369.41 feet to a concrete monument found for corner marking the west corner of the said 40.60 acre tract;

THENCE N 29° 39' 06" W along the southwest line of the beforementioned Tract II for a distance of 595.76 feet to an iron rod set for corner at the west corner of the said Tract II;

THENCE N 62° 30' 00" E along the northwest line of the beforementioned Tract II for a distance of 1399.31 feet to the PLACE OF BEGINNING containing 19.63 acres of land more or less.

APPENDIX IV
SECOND PHASE SITE INVESTIGATION PHASE CONTENTS

The Second Phase Site Investigation Plan shall include the following:

1. The methods of investigation and a detailed description of all procedures that will occur during the site investigation including, but not limited to, sampling and analysis addressing the number, depth, and location of samples with constituents to be analyzed, methods of analysis, decontamination of equipment and chain of custody procedures;

2. A map drawn to-scale showing the location of the plant and concrete containment pit, the land spreading are (NOR facility No. 01) and any other suspected sources of contamination and proposed and completed sampling locations;

3. Provisions for determining the source of contamination including an assessment of all below grade structures and piping including tanks and associated below grade piping or any below ground structure with an evaluation of surrounding soils and of any tank or structure below ground suspected or showing evidence of leaking. A below grade structure shall be defined as a structure which has 10% or more of its volume capacity below grade including the associated piping. The assessment and leak detection specified in this paragraph shall occur under the supervision of an independent, qualified, Texas registered, professional engineer. The assessment shall include the following information:

   (a) design standards of each below grade system;

   (b) hazardous characteristics of the material handled within each tank;

   (c) corrosion protection measures;

   (d) documented age of each below grade system;

   (e) results of leak test, internal inspection, or other tank integrity examination of each below grade system;

   (f) for any below grade structure which fails a leak test or shows any other evidence of leakage including pitting or cracking etc. the plan shall include provisions for soil borings and sampling immediately outside of the structure as close as physically possible to the outer walls of the structure to a depth of at least equal to that of the depth of the subject structure; and

(g) any available as built engineering drawings for any and all of subsurface tanks and pits at the site including the present and pre-repair concrete containment pit structure.

4. A detailed schedule for the implementation of the Second Phase Site Investigation Plan;

5. Provision to provide affected landowners of proposed off-site sampling location with at least 5 days written notice of intent to sample on their property;

6. Provision to provide a copy of the approved Second Phase Site Investigation Plan required by Technical Recommendation No. 13 to any landowner upon which the sampling is proposed to occur; and

7. Provision to submit copies of a Site Investigation Report and any subsequent supplemental required by Technical Recommendation No. 16 to affected landowners upon which off-site sampling occurs.

APPENDIX V
GROUND-WATER ASSESSMENT PLAN CONTENTS

The Ground-Water Assessment Plan shall at a minimum consist of the following elements:

(a) The number, location, and depths of proposed and existing wells. All wells shall be installed in accordance with Appendix VI. Precise shall plug any new and existing wells in accordance with 31 TAC §§287.48 - 287.50 if not installed in accordance with Appendix VI upon notice by the Executive Director;

(b) A Sampling and Analysis plan which shall include at a minimum the information specified in Appendix IV;

(c) Provisions for maintaining a copy of the Ground-Water Assessment Plan on-site, which must be adhered to by Precise for ground-water sampling. The plan will include the reporting format for analytical results. Results will be reported to the Executive Director as the laboratory reports the data to Precise, and detection limits and quality assurance from the laboratory will also be reported;

(d) Provisions that all sampling equipment shall be constructed of inert material, bottom valve bailers or positive gas displacement bladder pumps shall be used to withdraw samples;

(e) Provisions for determining flow directions, ground-water elevations, gradients and rate and extent of migration of contaminants;

(f) A detailed schedule which provides for completion of specific tasks in the ground-water assessment including the submittal of a Ground-Water Assessment Report; and

(g) Provisions for the submittal of a Ground-Water Assessment Report which shall include field data including sample locations, analyses, tabulation of analytical results, and tabulation of monitor wells where constituents exceed upgradient or background conditions, evaluation of data from which the hydraulic conductivity of the producing aquifer is determined, lithologic logs, construction details, and description of drilling and construction procedures for the wells installed during the assessment, geologic cross-sections of the area covered by the investigation showing each hydrogeological unit and screened intervals of all monitor wells, potentiometric surface maps showing hydraulic gradient and ground water flow paths determined during the investigation, copies of the original laboratory analytical data including detection limits and the detection method used for analyses, conclusions and, as appropriate, general recommendations concerning the Ground-Water Assessment Plan results.

APPENDIX VI
MONITOR WELL CONSTRUCTION/DESIGN CRITERIA

1. Precise shall use well drilling methods which minimize potential adverse effects on the quality of water samples withdrawn from the well and which minimize or eliminate the introduction of foreign fluids into the borehole;

2. All newly installed monitor wells shall be constructed such that the wells can be sampled with a bailer or alternate sampling device;

3. Above the saturated zone the well casing must be two (2)-inch diameter or larger Schedule 40 or 80 polyvinyl chloride (PVC) rigid pipe or stainless steel or polytetrafluoroethylene (PTFE or "teflon"). Solvent cementing compounds shall not be used to bond joints and all connections shall be flush threaded. Below the saturated zone, the well casing shall be stainless steel or PTFE.

   Precise may use an alternate well casing material provided that it yields samples for ground-water quality analysis which are unaffected by the well casing material. However, regardless of the well casing material selected, Precise is responsible for replacing wells which have deteriorated due to incompatibility of the casing material with the ground-water contaminants within ninety (90) days of the date of any inspection which identifies the deterioration;

4. The screen length in wells constructed after the effective date of any Order issued pursuant to this report shall not exceed ten (10) feet within a given transmissive zone;

5. Precise shall design and construct the intake portion of a well so as to allow sufficient water flow into the well for sampling purposes and to minimize the passage of formation materials into the well during pumping. The intake portion of the well shall consist of a commercially manufactured stainless steel or PTFE screen or approved alternate material. The annular space between the screen and the borehole shall be filled with clean siliceous granular material (i.e., filter pack) which has a proper size gradation to provide mechanical retention of the formation sand and silt. The well screen slot size shall be compatible with the filter pack size as determined by sieve analysis data. The filter pack should extend no more than two feet above the well screen. The bottom of the well screen shall be capped with PTFE or stainless steel or approved alternate material;

6. A minimum of two (2) feet of granular bentonite shall

immediately overlie the filter pack in the annular space between the well casing and the borehole. Where the saturated zone extends above the filter pack, granular bentonite shall be used to seal the annulus. The bentonite shall be allowed to settle and hydrate for a sufficient amount of time (at least four hours or in accordance with the manufacturer's instructions) prior to placement of grout in the annular space. Above the minimum two (2)-foot thick bentonite seal, the annular space shall be sealed with a cement/bentonite grout mixture approved by the Executive Director. The grout shall be placed in the annular space by means of a tremie pipe.

The cement/bentonite grout mixture shall fill the annular space to within two (2) feet of the surface. Time shall be allowed for settling to occur. The annular space shall be sealed with concrete, blending into a cement apron at the surface which extends two (2) feet from the outer edge of the borehole;

7. Upon completion of installation of a well, the monitor well must be developed to remove any fluids used during the well drilling and to remove fines from the natural formation to provide a particulate free discharge to the extent achievable by accepted completion methods and by commercially available well screens. Development shall be accomplished by reversing flow direction, surging the well or by air lift procedures. No fluids other than natural formation water shall be added during development;

8. Each well shall be equipped with a locking cap;

9. The well number shall be permanently marked on each well at the site;

10. Precise shall measure and keep a record of the elevation of the top of each casing in feet above mean sea level to the nearest 0.01 foot at each satisfactory existing monitor well and at each replacement monitor well. The top of the casing shall be marked on the top of casing at the survey point;

11. Copies of drilling and construction details demonstrating compliance with the items of this provision shall be kept on site. This record shall include the following information:

    - date/time of construction;
    - drilling method and drilling fluid used;
    - well location (+/- 0.5 ft.);
    - bore hole diameter and well casing diameter;
    - well depth (+/- 0.1 ft.);
    - drilling and lithologic logs;
    - depth to first saturated zone;
    - casing materials;
    - screen materials and design;

- casing and screen joint type;
- screen slot size/length;
- filter pack material/size;
- filter pack volume (how many bags, buckets, etc.);
- filter pack placement method;
- sealant materials;
- sealant volume (how many bags, buckets, etc.);
- sealant placement method;
- surface seal design/construction;
- well development procedure;
- type of protective well cap;
- ground surface elevation (+/- 0.01 ft. MSL);
- top of casing elevation (+/- 0.01 ft. MSL); and
- detailed drawing of well (include dimensions); and

12. Failure to include the items identified above in the record of the newly installed monitor well shall result in replacement of such a well.

APPENDIX VII
GROUND WATER SAMPLING AND ANALYSIS PLAN CONTENTS

The Ground-Water Sampling and Analysis Plan shall include the following elements:

1. Well location map;

2. Schedule of implementation. Provisions for sampling the monitoring system wells on a quarterly basis;

3. Parameters for laboratory analysis which shall include chromium (hexavalent and total) and indicator parameters (e.g., total dissolved solids, specific conductance, total organic carbon, etc.). Provision for field measurement of pH, conductivity, ground water elevations and temperature of each sample;

4. Procedures for inspecting the well pad, surface casing and locking cap on at least a quarterly basis. A sample inspection log sheet to be filled out and maintained at the facility;

5. Procedures for determining the depth to ground water and calculating the ground-water elevation at all monitoring wells. Such measurements shall be obtained within a one day time period. Measurements shall be performed prior to purging the well for sampling;

6. Procedures for purging the wells, prior to sampling including volumes to be evacuated prior to sampling and handling procedures for purged well water;

7. Procedures for sampling the wells including sample withdrawal techniques and equipment, decontamination procedures to be used if non-dedicated equipment is used, the order of sampling, types of containers, sample handling and preservation techniques, filtration devices, etc;

8. Chain of custody procedures to be used for all phases of sample management including descriptions of sample labels, sample seals, field logbook, chain of custody record documents, sample analysis request sheets, and laboratory logbook and analysis notebooks;

9. Laboratory analytical methods, quality assurance and quality control procedures and detection limits. All analysis shall be performed in accordance with the methods contained in the U.S. EPA publication SW-846 "Test Methods for Evaluating Solid Waste."; and

10. The Sampling and Analysis Plan will be modified as necessary with the modifications subject to approval by the Executive Director.

APPENDIX VIII
CORRECTIVE STUDY MEASURES WORKPLAN CONTENTS

The Corrective Measures Study (CMS) shall include at a minimum the following elements:

1. An evaluation of all demonstrated remedial technologies to determine which technology or combination of technologies will be able to, or most likely be able to meet the cleanup criteria specified in Technical Recommendation No. 20;

2. Development of alternatives for removal, containment, treatment and/or other remedial actions. Each alternative should be screened to eliminate the technologies which are not feasible while preserving, if possible a suitable range of effective options. The screening process shall focus on elimination of those technologies which have severe limitations for contaminant type and site specific reasons. Precise shall document the rationale for excluding any reasonable applicable technology;

3. Description and evaluation of each remedial alternative that passes the screening process. The study shall consider all appropriate remedial alternatives and recommend each alternative in order of priority with justifications. The level of detail shall be sufficient to facilitate preparation and submittal of detailed plans for each technology. At a minimum, the following criteria shall be used to rank and justify the remedial alternatives:

   (a) Performance - remedial alternatives which are the most effective at performing their intended functions and maintaining the performance over extended periods of time will be given preference;

   (b) Reliability - remedial alternatives which do not require frequent or complex operation and maintenance activities and that have proven effective under contaminant and site conditions similar to those anticipated or experienced will be given preference;

   (c) Implementibility - remedial alternatives which can be constructed and operated to reduce levels of contamination to attain applicable standards in the shortest period of time will be given preference. Determination of the need to conduct additional studies (i.e., field pilot program, laboratory bench scale study, etc.) before an adequate evaluation of the remedial technology can be performed;

   (d) Safety - remedial alternatives which pose the least

threat to the safety of nearby residents and environments as well as workers during implementation will be given preference;

(e) Human Health - remedial alternatives must comply with existing USEPA criteria, standards, guidelines for protection of human health. Analysis of risks remaining after implementation of the remedy (i.e., the remedy results in source removal or source control and a reduction of the mobility and toxicity of the contamination). Corrective measures which provide the minimum level of exposure to contaminants and the maximum reduction in exposure with time will be given preference;

(f) Environment - remedial alternatives posing the least adverse impact (or greatest improvement) over the shortest time on the environment will be given preference. Analysis of the extent to which the alternative attains or exceeds the soil and ground-water cleanup criteria of Ordering Provision No. 14; and

(g) Cost Effectiveness - the capital and operation and maintenance costs of each corrective measure under consideration will be estimated within an order of magnitude (+/-50%). Present worth cost will be computed to enable direct comparison of the cost for different remedial alternatives. Remedial alternative which provide the most cost-effective protection of human health and the environment will be given preference.

EPA

ACKNOWLEDGEMENT OF NOTIFICATION OF REGULATED WASTE ACTIVITY
(VERIFICATION)

This is to acknowledge that you have filed a Notification of Regulated Waste Activity for the installation located at the address shown in the box below to comply with Section 3010 of the Resource Conservation and Recovery Act *(RCRA)*. Your EPA Identification Number for that installation appears in the box below. The EPA Identification Number must be included on all shipping manifests for transporting hazardous wastes; on all Annual Reports that generators of hazardous waste, and owners and operators of hazardous waste treatment, storage and disposal facilities must file with EPA; on all applications for a Federal Hazardous Waste Permit; and other hazardous waste management reports and documents required under Subtitle C of RCRA.

EPA I.D. NUMBER	TXD988019568		11/06/1990
	PRECISE HARD CHROME SHELTON BETTY ENV-COORD PO BOX 5660 WACO	TX	76708
INSTALLATION ADDRESS	6613 N 19TH WACO	TX	76708

EPA Form 8700-12B (6-90)

Please print or type with ELITE type (12 characters per inch) in the unshaded areas only

Form Approved. OMB No. 2050-0028 Expires 10-31-91
GSA No. 0246-EPA-01

ID - For Official Use Only

VIII. Type of Regulated Waste Activity *(Mark 'X' in the appropriate boxes. Refer to instructions.)*

A. Hazardous Waste Activity

1. Generator (See Instructions)
   - [ ] a. Greater than 1000kg/mo (2,200 lbs.)
   - [ ] b. 100 to 1000 kg/mo (220 - 2,200 lbs.)
   - [X] c. Less than 100 kg/mo (220 lbs.)
2. Transporter (Indicate Mode in boxes 1-5 below)
   - [ ] a. For own waste only
   - [ ] b. For commercial purposes

   Mode of Transportation
   - [ ] 1. Air
   - [ ] 2. Rail
   - [ ] 3. Highway
   - [ ] 4. Water
   - [ ] 5. Other - specify
3. [ ] Treater, Storer, Disposer (at installation) Note: A permit is required for this activity; see instructions.
4. Hazardous Waste Fuel
   - [ ] a. Generator Marketing to Burner
   - [ ] b. Other Marketers
   - [ ] c. Burner - Indicate device(s) - Type of Combustion Device
     - [ ] 1. Utility Boiler
     - [ ] 2. Industrial Boiler
     - [ ] 3. Industrial Furnace
5. [ ] Underground Injection Control

B. Used Oil Fuel Activities

1. Off-Specification Used Oil Fuel
   - [ ] a. Generator Marketing to Burner
   - [ ] b. Other Marketer
   - [ ] c. Burner - Indicate device(s) - Type of Combustion Device
     - [ ] 1. Utility Boiler
     - [ ] 2. Industrial Boiler
     - [ ] 3. Industrial Furnace
2. [ ] Specification Used Oil Fuel Marketer (or On-site Burner) Who First Claims the Oil Meets the Specification

IX. Description of Regulated Wastes *(Use additional sheets if necessary)*

A. **Characteristics of Nonlisted Hazardous Wastes.** Mark 'X' in the boxes corresponding to the characteristics of nonlisted hazardous wastes your installation handles *(See 40 CFR Parts 261.20 - 261.24)*

1. Ignitable (D001)	2. Corrosive (D002)	3. Reactive (D003)	4. EP Toxic (D000)
[ ]	[X]	[X]	[X]

(List specific EPA hazardous waste number(s) for the EP Toxic contaminant(s))

B. **Listed Hazardous Wastes.** (See 40 CFR 261.31 - 33. See instructions if you need to list more than 12 waste codes.)

1	2	3	4	5	6
D007					
7	**8**	**9**	**10**	**11**	**12**

C. **Other Wastes.** (State or other wastes requiring an I.D. number. See instructions.)

1	2	3	4	5	6

X. Certification

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment.

Signature	Name and Official Title *(type or print)*	Date Signed
[signature]	V.P. General Manager	September 27, 1990

XI. Comments

Note: Mail completed form to the appropriate EPA Regional or State Office. (See Section III of the booklet for addresses.)

EPA Form 8700-12 (01-90) Previous edition is obsolete.

0154 0000 2000

Please print or type with ELITE type (12 characters per inch) in the unshaded areas only

Please refer to the *Instructions for Filing Notification* before completing this form. The information requested here is required by law (*Section 3010 of the Resource Conservation and Recovery Act*).

EPA

Notification of Regulated Waste Activity

United States Environmental Protection Agency

Date Received (For Official Use Only): OCT 17 1990

R.V. 10/26/90 DA. 11-13-90

I. Installation's EPA ID Number (*Mark 'X' in the appropriate box*)

[X] A. First Notification [ ] B. Subsequent Notification (*complete item C*)

C. Installation's EPA ID Number: 3X1946619566

II. Name of Installation (*Include company and specific site name*)

Precise Hard Chrome

III. Location of Installation (*Physical address not P.O. Box or Route Number*)

Street: 6613 North 1911

Street (continued):

City or Town: Waco | State: TX | ZIP Code: 76708-0660

County Code: 155 | County Name: Lennan

IV. Installation Mailing Address (*See instructions*)

Street or P.O. Box: PO Box 5660

City or Town: Waco | State: TX | ZIP Code: 76708-0660

V. Installation Contact (*Person to be contacted regarding waste activities at site*)

Name (*last*): Shelton | (*first*): Betty

Job Title: Environmental Coordinator | Phone Number (*area code and number*): 817-756-6879

VI. Installation Contact Address (*See instructions*)

A. Contact Address: Location [X] Mailing [ ]

B. Street or P.O. Box:

City or Town: | State: | ZIP Code: -

VII. Ownership (*See instructions*)

A. Name of Installation's Legal Owner: Dover Corporation

Street, P.O. Box, or Route Number: PO Box 5660

City or Town: Waco | State: TX | ZIP Code: 76708-0660

Phone Number (*area code and number*): 817-756-6879

B. Land Type: O | C. Owner Type: O | D. Change of Owner Indicator: Yes [ ] No [ ] | (Date Changed) Month Day Year

Continue on reverse