

COPY

**IN THE COURT OF COMMON PLEAS
ASHTABULA COUNTY, OHIO**

STATE OF OHIO, ex rel.
JIM PETRO,
ATTORNEY GENERAL OF OHIO,

CASE NO. 2001-CV-982

JUDGE VETTEL

COPY

Plaintiff,

vs.

ASHTA CHEMICALS INC.,

Defendant.

FILED
2004 NOV 18 P 4:45
CAROL A. HEAD
CLERK OF COURTS
COMMON PLEAS COURT
ASHTABULA CO. OH

CONSENT ORDER

The Complaint in the above-captioned matter having been filed herein, and Plaintiff State of Ohio by its Attorney General Jim Petro (hereinafter referred to as "Plaintiff") and Defendant ASHTA Chemicals Inc. (hereinafter referred to as "Defendant") having consented to the entry of this Order. Defendant denies the violations of law alleged in the Complaint.

NOW THEREFORE, without trial of any issue of fact or law, without any admission of fact or law by Defendant, and upon consent of the parties hereto, it is hereby ORDERED, ADJUDGED AND DECREED as follows:

I. JURISDICTION AND VENUE

1. The Court has both personal and subject matter jurisdiction over the Parties. The Complaint states a claim upon which relief can be granted against Defendant under Chapter 6111 of the Ohio Revised Code (hereinafter referred to as R.C.) and the rules promulgated under that Chapter. Venue is proper in this Court.

II. PARTIES

2. The provisions of this Consent Order shall apply and be binding upon the Plaintiff State of Ohio and Defendant, Defendant's agents, officers, employees, assigns, successors in interest and any person acting in concert or privity with any of them. Defendant shall provide a copy of this Consent Order to each contractor and consultant it employs to perform the work itemized herein. Defendant shall require each general contractor to provide a copy of this Consent Order to each subcontractor for such work.

III. SATISFACTION OF LAWSUIT AND RESERVATION OF RIGHTS

3. Plaintiff has alleged that Defendant has operated its wastewater treatment system in such a manner as to result in violations of the requirements of Defendant's National Pollution Discharge Elimination System ("NPDES") permit and in violation of the water pollution laws of the State of Ohio. Compliance with the terms of this Consent Order shall constitute full satisfaction of any civil liability by Defendant for all claims of violations alleged in the Complaint, including the claims for injunctive relief and civil penalties.

4. Nothing in this Consent Order shall be construed so as to limit the authority of the State of Ohio to seek relief against other appropriate persons for claims or conditions alleged in the Complaint. Nothing in this Consent Order shall be construed so as to limit the authority of the State of Ohio to seek relief against Defendant or other appropriate persons for claims or conditions not alleged in the Complaint, including violations which occur after the filing of the Complaint, nor shall anything in this Consent Order limit the right of Defendant to any defenses it may have for such claims. Similarly, nothing in this Consent Order shall be construed so as to limit the authority of the State of Ohio to undertake any action against any person, including

Defendant, to eliminate or mitigate conditions which may present a threat to the public health, welfare or the environment.

Provided that Defendant commences and continues the investigation and remediation of the ASHTA Chemicals Inc. facility located at 3509 Middle Road, Ashtabula, Ohio, Ashtabula County (a detailed description of the property is attached hereto and marked as Exhibit A) pursuant to the Voluntary Action Program as set forth in R.C. Chapter 3746 and rules promulgated thereunder, Plaintiff agrees not to move this Court or file a separate action under Ohio law seeking remediation of the ASHTA Chemicals Inc. facility under R.C. Chapter 3734, the Resource Conservation and Recovery Act of 1976, as amended, 42 U.S.C. 6901 et seq. (RCRA), or CERCLA, for a period of three (3) years after the Effective Date of the Consent Decree, unless Ohio EPA obtains evidence that the ASHTA Chemicals Inc. facility presents an imminent threat to human health or the environment.

IV. PERMANENT INJUNCTION

5. Defendant is permanently enjoined and ordered to immediately comply with all applicable provisions of R.C. Chapter 6111 and the rules promulgated under that Chapter.

V. TIME EXTENSIONS

6. If any date for performance falls upon a weekend or state or federal holiday, the time for performance is extended to the next working day following the weekend or holiday.

VI. SUBMITTAL OF DOCUMENTS

7. All documents and reports required under this Consent Order shall be submitted to:

- a. Ohio EPA
Northeast District Office
2110 East Aurora Road
Twinsburg, Ohio 44087
Attn.: Manager, Division of Surface Water
& Manager, Division of Air Pollution Control
- b. Ohio EPA
P.O. Box 1049
Columbus, Ohio 43216-1049
Attn.: Paul Novak or his successor
Division of Surface Water

and
Tom Kalman or his successor
Division of Air Pollution Control
- c. ASHTA Chemicals Inc.
Attention: Richard Jackson
3509 Middle Road
Ashtabula, Ohio 44005
- d. Christopher C. McCracken, Esq.
Ulmer & Berne LLP
1300 East Ninth Street, Suite 900
Cleveland, Ohio 44114

The foregoing addresses can be changed by giving written notice to the other party.

VII. CIVIL PENALTY AND SUPPLEMENTAL ENVIRONMENTAL PROJECTS

8. Pursuant to R.C. 6111.09, the Defendant shall be assessed a total civil penalty of One Million Five Hundred Forty-One Thousand Six Hundred and Forty-Seven Dollars (\$1,541,647.00). In lieu of paying One Million Five Hundred Forty-One Thousand Six Hundred and Forty-Seven Dollars (\$1,541,647.00) of the civil penalty, the Defendant shall perform the following supplemental environmental projects:

- a). In lieu of paying Two Hundred Forty-One Thousand Six Hundred and Forty-

Seven Dollars (\$241,647.00) of the civil penalty, Defendant shall as a supplemental environmental project install the necessary equipment and controls to achieve early compliance with the National Emission Standards for Hazardous Air Pollutants: Mercury Emissions from Mercury Cell Chlor-Alkali Plants, 40 CFR Part 63, Subpart IIII, promulgated December 19, 2003 ("MACT for Mercury Cell"). This work will include but not be limited to the process description set forth in Exhibit B entitled "Hg Reduction Process Description" which is attached hereto and incorporated herein. The early compliance with MACT for Mercury Cell shall be completed under the following schedule:

<u>Stage of Work</u>	<u>Completion Deadline</u>
i) Hydrogen System Phase I, II & III	December 31, 2005 ¹
ii) Hydrogen System Performance Testing	March 31, 2006
iii) Air System Phase I & II	December 31, 2005
iv) Air System Phase I & II Performance Testing	March 31, 2006
v) Full compliance with MACT for Mercury Cell	July 1, 2006

b) In lieu of paying Six Hundred and Fifty Thousand Dollars (\$650,000.00) of the civil penalty, Defendant shall as a supplemental environmental project install additional fugitive mercury emission controls beyond the requirements set forth in the MACT for Mercury Cell.

No later than December 31, 2004, Defendant shall submit to Ohio EPA preliminary engineering drawings for this project (including Design Basis, Process Flow Diagrams, Process and Instrumentation Diagrams, and Material Balances). No later than March 31, 2005, Defendant

¹ The completion deadlines for the Hydrogen System and Air System are based upon all parties' belief at the time of signing of the decree that a permit to install from Ohio EPA would not be necessary based upon Defendant's description of the scope of the work.

C shall submit to Ohio EPA for review the detailed engineering drawings, and for approval an operational protocol and fugitive emission limits in accordance with the process description set forth in Exhibit C entitled "Fugitive Emissions Control from the Cell Floor" which is attached hereto and incorporated herein. This system shall be installed and fully operational no later than 20 months after receiving approval from Ohio EPA of the operational protocol and fugitive emission limits. Once approved by Ohio EPA the fugitive emission limits and operational protocol shall become enforceable terms and conditions of this Consent Order until such time as the fugitive emission limits and operational protocol are incorporated into Defendant's Title V permit as permanently enforceable requirements.

c) In lieu of paying Six Hundred and Fifty Thousand Dollars (\$650,000.00) of the civil penalty, Defendant shall as a supplemental environmental project install a system to recover additional storm water from an area of industrial activity on Defendant's property. Specifically, Defendant shall recover the storm waters that are originating in the area of industrial activity (bounded by the following points: *starting at a point of origin at the SE Corner (Lat: 41°53'51" N 80°44'57"W) north to the NE corner (Lat: 41°54'03" N 80°44'57"W) west to the NW Corner (Lat: 41°54'03" N 80°45'07" W) south to a corner (41°53'54" N 80°45'07" W) east to a corner (41°53'54" N 80°45'03" W) south to the SW Corner (41°53'49" N 80°45'03" W) east to a corner (41°53'49" N 80°45'02" W) east returning to the origin at the SE Corner*) and are currently being directed to Outfall 002 which is located at storm water catch basin (Lat: 41 degrees N 53 ' 47 ''; Long: 80 degrees W 45 ' 02 ''), Outfall 003 which is located at storm water discharge east discharge ditch at Middle Road (Lat: 41 degrees N 53 ' 48''; Long: 80 degrees W 44 ' 57''), and Outfall 004 which is located at storm water discharge, north drainage swale (Lat: 41 degrees N

54' 02"; Long: 80 degrees W 45' 01"). These additional recovered storm waters shall be sent for treatment to the Defendant's existing Process Water Recovery/Process Water Management Systems. Defendant shall submit to Ohio EPA a Permit to Install Application that will be in accordance with the project design description set forth in Exhibit D entitled "Conceptual Project Design for Storm Water Recovery From Outfall 002, 003 and 004" which is attached hereto and incorporated herein. Defendant shall obtain all necessary permits to install prior to beginning construction of the project. The Storm Water Recovery System shall be completed under the following schedule:

Stage of Work	Completion of Work
i) Submission of Preliminary Engineering Report	December 31, 2004
ii) Submission of a Permit to Install Application	March 1, 2005
iii) Start of Construction	No later than 90 days after receipt of the Permit to Install
iv) Commissioning and Start Up	No later than 18 months after receipt of the Permit to Install
v) System Fully Operational	No later than 20 months after receipt of the Permit to Install
vi) Submittal of Report	No later than 21 months after receipt of the Permit to Install

VIII. STIPULATED PENALTIES

9. Defendant shall be liable for and shall pay stipulated penalties for noncompliance with this Consent Order in accordance with the following schedule:

a) If Defendant fails to achieve early compliance with the MACT for Mercury Cell by July 1, 2006 as stated in paragraph 8(a), Defendant's penalty credit for this supplemental environmental project will be reduced. Accordingly, Defendant shall pay to the State One Thousand Four Hundred Dollars (\$1,400.00) a day for each day it is delayed in achieving compliance from July 2, 2006 through December 19, 2006 (the actual MACT compliance deadline).

b) If Defendant fails to complete the work described in paragraph 8(b) within 20 months after receiving approval from Ohio EPA on the operational protocol and fugitive emission limits Defendant shall pay Six Hundred and Fifty Thousand Dollars to the State as a civil penalty. Further if Ohio EPA determines that Defendant has failed to submit the preliminary engineering drawings, the detailed engineering drawings, operational protocol and fugitive emission limits as required by paragraph 8(b), Defendant shall pay Six Hundred and Fifty Thousand Dollars (\$650,000.00) to the State as a civil penalty upon notification by the State. If, for any reason, Ohio EPA determines that Defendant's submittals for this project are unapprovable, then Ohio EPA shall promptly notify Defendant, and the parties shall meet in a good faith effort to resolve the issue. If the issue cannot be resolved by the parties acting in good faith, then Defendant will submit a new proposal to Ohio EPA for another supplemental environmental project valued at no less than Six Hundred Fifty Thousand Dollars (\$650,000.00). This new submittal will include a schedule for completion of the project. Once approved by Ohio EPA this new supplemental environmental project and schedule will become an enforceable part of this decree.

c) If, after completion of the work described in paragraph 8(b), Defendant ceases to operate the additional fugitive emissions control as may be necessary in order to meet the

approved operational protocol and/or fugitive emission limits without the written approval of the Plaintiff, Defendant shall pay to the State One Thousand Dollars (\$1,000.00) per day for each day the system is not operational.

d) If Defendant fails to complete the work described in paragraph 8(c) within 20 months after receipt of the permit to install, Defendant shall pay Six Hundred and Fifty Thousand Dollars (\$650,000.00) to the State as a civil penalty.

e) If after installation Defendant ceases to operate the Storm Water Recovery System described in paragraph 8(c) without the written approval of the Plaintiff, Defendant shall pay to the State One Thousand Dollars (\$1,000.00) per day for each day the system is not operational.

10. Any payment required to be made under the provisions of this section of the Consent Order shall be made by delivering to Amy Laws, or her successor, at the Ohio Attorney General's Office, Environmental Enforcement Section, 30 East Broad Street, 25th Floor, Columbus, Ohio 43215 within forty-five (45) days from the date of the failure to meet the requirement of the Consent Order, a certified check or checks for the appropriate amount(s), made payable to the order of "Treasurer, State of Ohio". Defendant shall also state in writing the specific deadline or requirement of the Consent Order that was not complied with, and the date(s) of non-compliance. The payment of stipulated penalties by Defendant and the acceptance of such stipulated penalties by the Plaintiff for specific violations pursuant to this Section shall not be construed to limit Plaintiff's authority to seek additional relief or to otherwise seek judicial enforcement of this Consent Order.

IX. REPORTING REQUIREMENTS

11. Within seven (7) days from the completion date of each task listed in Section VII,

Defendant is ordered to submit a written report stating whether it has performed the actions set forth therein to the Ohio EPA Northeast District Office at the address referenced in paragraph 7. Additionally, Defendant will provide to Ohio EPA quarterly reports on its progress to complete the work described in paragraphs 8 (a), (b), and (c).

No later than February 1 of each year, ASHTA Chemicals Inc. shall submit to Ohio EPA for the previous calendar year, a mass balance of the mercury added to and lost from the system. The mass balance shall be an estimate. The mass balance shall evaluate losses/gains from the following sources:

1. Air Emissions
2. Waste Off-Site
3. Waste Sent for Mercury Recovery
4. Product Sold to Customers
5. Storm Water Leaving the Site
6. Mercury Recovered From Item 3 Wastes
7. Changes in Quantity of Hg in Cells
8. Mercury Added to Process From Inventory or Purchased
9. Mercury Increase in Sumps/Tanks
10. Total Annual Mercury Usage Accounted For
11. Total Annual Additions of Mercury
12. Total Annual Unaccounted for Loss/(Gain) in Mercury

X. EFFECT OF CONSENT DECREE

12. This Consent Order does not constitute authorization or approval of the construction of any physical structure or facilities, or the modification of any existing treatment works or sewer system or disposal of any waste. Approval for any such construction or modification or waste disposal shall (where necessary) be by permit issued by the Ohio EPA or other such permits as may be required by applicable federal, state, or local laws, rules or regulations.

XI. RETENTION OF JURISDICTION

13. The Court will retain jurisdiction over this action for the purpose of enforcing and administering Defendant's compliance with this Consent Order. The Court will retain jurisdiction for the purpose of interpretation of this Consent Order should any disagreement arise between the parties.

XII. COMPLIANCE NOT DEPENDENT ON GRANTS OR LOANS

14. Performance of the terms of this Consent Order by Defendant is not conditioned on the receipt of any Federal or State grant or loan funds. In addition, Defendant's performance is not excused by the failure to obtain or the shortfall of any Federal or State grant or loan funds, or by the processing of any applications for the same.

XIII. POTENTIAL FORCE MAJEURE

15. If any event occurs which causes or may cause a delay of any requirement of this Consent Order, Defendant shall notify the Ohio EPA in writing within 10 days of the event, describing in detail the anticipated length of the delay, the precise cause or causes of the delay, the measures taken and to be taken by Defendant to prevent or minimize the delay and the timetable by which measures will be implemented. Defendant will adopt all reasonable measures to avoid or minimize any such delay.

16. In any action by the State of Ohio to enforce any of the provisions of this Consent Order, Defendant may raise that it is entitled to a defense that its conduct was caused by reasons beyond its control such as, by way of example and not limitation, acts of God, strikes, acts of war or civil disturbances. While the State of Ohio does not agree that such a defense exists, it is, however, hereby agreed upon by Defendant and the State of Ohio that it is premature at this time

to raise and adjudicate the existence of such a defense and that the appropriate point at which to adjudicate the existence of such a defense is at the time that an enforcement action, if any, is commenced by the State of Ohio. At that time the burden of proving that any delay was or will be caused by circumstances beyond the control of Defendant shall rest with Defendant.

Unanticipated or increased costs associated with the implementation of any action required by this Consent Order or changed financial circumstances shall not constitute circumstances beyond the control of Defendant, or serve as a basis for an extension of time under this Consent Order.

Failure by Defendant to comply with the notice requirements of this Section shall render this Section void and of no force and effect as to the particular incident involved but shall not constitute a waiver of Defendant's right to request an extension of its obligations under this Consent Order based on such incident. An extension of one date based on a particular incident does not mean that Defendant qualifies for an extension of a subsequent date or dates. Defendant must make an individual showing of proof regarding each incremental step or other requirement for which an extension is sought.

XIV. COURT COSTS

17. Defendant is hereby ordered to pay the court costs of this action.

XV. ENTRY OF CONSENT ORDER AND FINAL JUDGMENT BY CLERK

18. The parties agree and acknowledge that final approval by the Plaintiff and Defendant, and entry of this Consent Order, is subject to the requirement of 40 C.F.R. § 123.27 (d) (2) (iii), which provides for notice of the lodging of this Consent Order, opportunity for public comment, and consideration of any public comment. The Plaintiff and Defendant reserve the right to withdraw consent to this Consent Order based on comments received during the

public comment period. Defendant shall pay the cost of publishing the public notice within thirty days of receipt of a bill or notice from Ohio EPA.

19. Upon the signing of this Consent Order by the Court, the Clerk is hereby directed to enter it upon the journal. Within three (3) days of entering the judgment upon the journal, the Clerk is hereby directed to serve upon all parties notice of the judgment and its date of entry upon the journal in the manner prescribed by Rule 5(B) of the Ohio Rules of Civil Procedure and note the service in the appearance docket.

XVI. SIGNATORIES

20. The undersigned is a representative of Defendant and understands the terms and conditions of the Consent Order and certifies that he or she is fully authorized to enter into the terms and conditions of this Consent Order and legally bind the Defendant to this document.

IT IS SO ORDERED:

Date

Judge Ronald W. Vettel

**JUDGE, COURT OF COMMON PLEAS,
ASHTABULA COUNTY, OHIO**

APPROVED:

**JIM PETRO
ATTORNEY GENERAL**

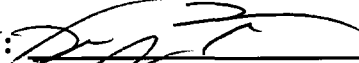
BY:



STEVEN D. BELL (0031655)
Simon Law Firm
1300 East Ninth Street
1717 Penton Media Building
Cleveland, Ohio 44114-1503
(216) 575-1002

*Attorney for Defendant,
Ashta Chemicals Inc.*

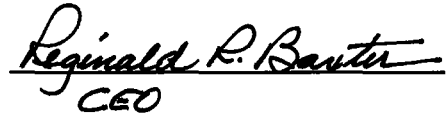
BY:



TERI JO FINROCK (0037903)
KRISTINA ERLEWINE(0071469)
Assistant Attorneys General
Environmental Enforcement Section
30 East Broad Street, 25th Floor
Columbus, Ohio 43215
(614) 466-2766

*Attorneys for Plaintiff,
State of Ohio*

BY:


CEO

*Authorized Representative of
Defendant, Ashta Chemicals Inc.*

EXHIBIT A

See Parcel

situated in the Township of Ashtabula, County of Ashtabula, State of Ohio, and being part of original lots 10 & 11 O.S. and part of original lot 7; Beginning at an iron pin where the centerline of Middle Rd. is intersected by the centerline of Cook Rd.;

Thence S. 49 deg. 40' W., along the centerline of Middle Rd., 1653.65 ft. to a point in the southeast corner of land conveyed to ESAB Welding Products, Inc., (as recorded in Volume 47, Page 9953, Ashtabula County Record of Deeds);

Thence N. 0 deg. 35' E., along an easterly line of ESAB Welding Products, Inc., 1044.70' ft. to a bolt in the asphalt;

Thence N. 89 deg. 25' W., along a northerly line of ESAB Welding Products, Inc., 340.00' ft., to a point;

Thence N. 0 deg. 35' E., along an easterly line of ESAB Welding Products, Inc., 150.00' ft. to a point,

Thence N. 89 deg. 25' W., along a northerly line of ESAB Welding Products, Inc., 24.00' ft. to a point;

Thence N. 0 deg. 35' E., along an easterly line of ESAB Welding Products, Inc., 753.00' ft. to a point in the southerly line of land conveyed to Elkem Metals Company, (as recorded in Vol. 14, Pg. 5425, Ashtabula County Record of Deeds);

Thence S. 89 deg. 25' E., along a southerly line of Elkem Metals Company, 1594.08' ft. to an iron pin;

Thence N. 0 deg. 15' E., along an easterly line of Elkem Metals Company, 1001.32' ft. to an iron pin in the southwest corner of land conveyed to C.E.I. Co. (as recorded in Vol. 11, Pg. 3219, Ashtabula County Record of Deeds);

Thence S. 89 deg. 36' E., along a southerly line of C.E.I. Co., 736.45' ft. to an iron pin in the westerly line of land conveyed to C.E.I. Co. (as recorded in Vol. 9, Pg. 488, Ashtabula County Records of Deeds);

Thence S. 0 deg. 04' W., along a westerly line of C.E.I. Co., 1059.39' ft. to an iron pin;

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Thence S. 89 deg. 46' E., along a southerly line of C.E.I.
Co., 47.70' ft. to an iron pin;

Thence S. 00 deg. 04' W., along a westerly line of C.E.I.
Co., 137.72' ft. to a point in the centerline of Middle Rd.;

Thence S. 49 deg. 27' W., along the centerline of Middle
Rd., 1021.78' ft. to the place of beginning according to a
survey by Ronald M. Bianco, P.S. 4841.

Exhibit A

Property Description

Note: Awaiting completion of property survey

The description will show:

- All of ASHTA's property,*
- The area of industrial activity*
- The present 10 acres and future 8 acres for Storm Water Recovery*
- The home office and parking lots, which are not part of the industrial activity.*

August 2004

©ASHTA Chemicals Inc. 2004

Exhibit B

Hg Reduction Process Description (Early MACT* Compliance)

August 2004

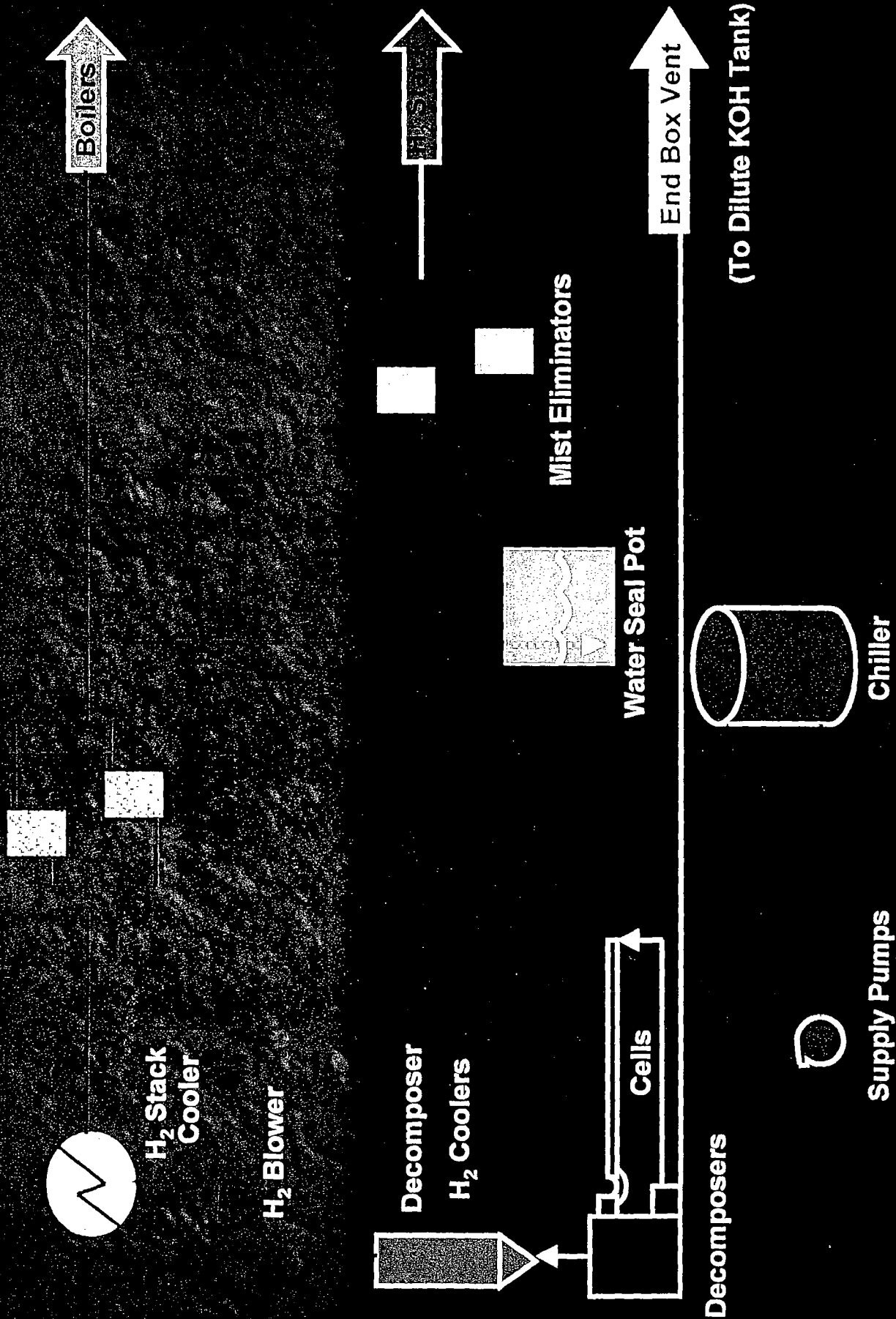
©ASHTA Chemicals Inc. 2004

Early MACT* Compliance

- Hydrogen point-source reduction
- End Box Vent point-source reduction
- Stringent housekeeping standards
- Stringent Leak Detection and Repair (LDAR) standards

* MACT NESHAP for Mercury Cell Chlor-Alkali Manufacturers as promulgated December, 2003

Hydrogen System - Upgraded



Early MACT* Compliance - Hydrogen

■ Mercury Reduction from Hydrogen Stream

- Install new water chiller for the MACT projects
- Evaluate using chilled water on the existing hydrogen coolers on the cell decomposer (depending on the outcome of tests now being conducted (August 12, 2004))
- Insulate piping for chilled water circulation
- Install new hydrogen stack cooler
- Install a hydrogen blower to move gas through the cooler at increased pressure
- Evaluate a molecular sieve for economical removal of mercury and less mercury waste.
- Install iodine impregnated carbon beds

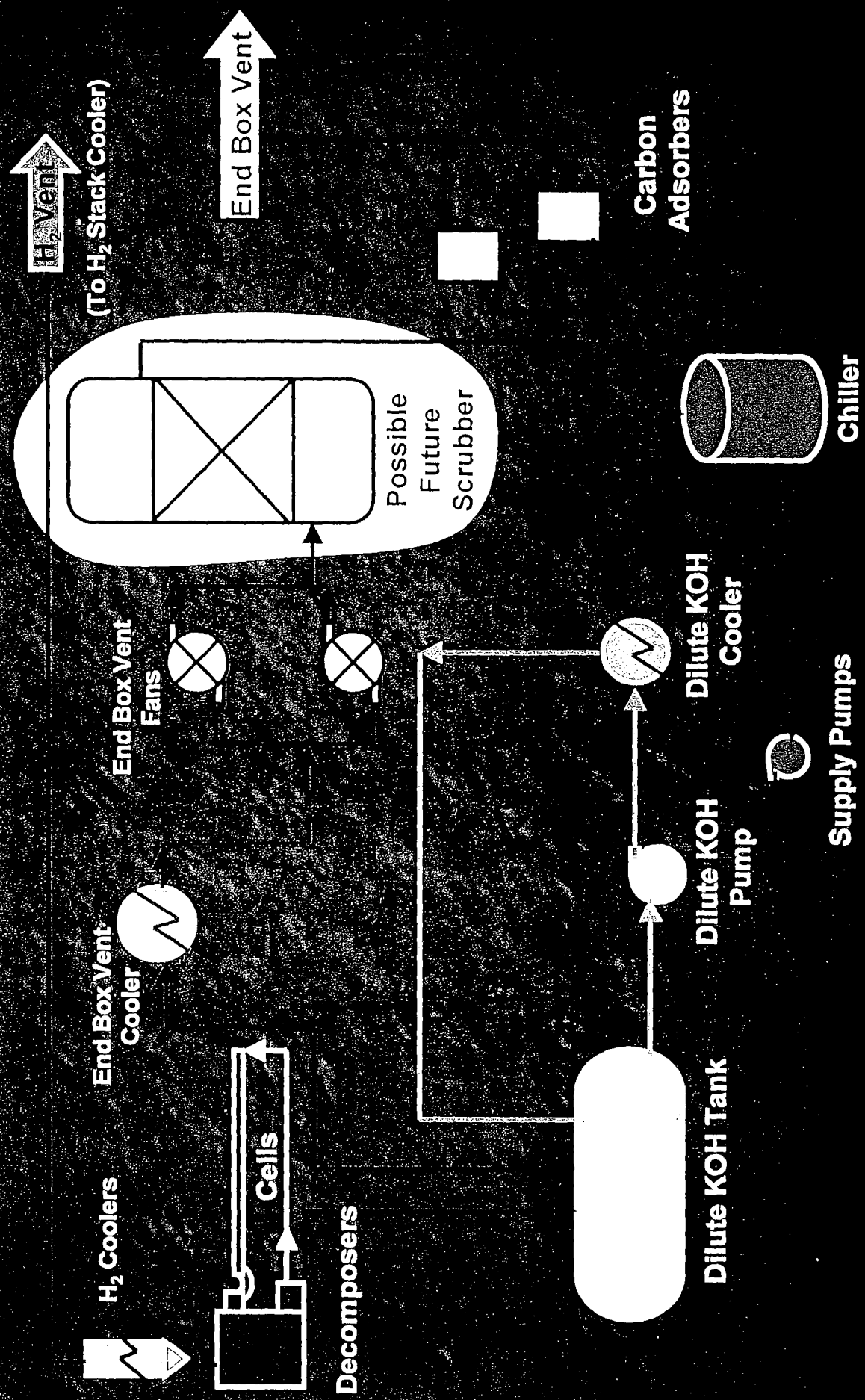
Early MACT* Compliance - Hydrogen

- Estimated total capital costs for Early MACT* Compliance- Hydrogen
 - \$1,250,000
- Estimated annual operating & maintenance costs for Early MACT* Compliance - Hydrogen
 - \$190,000/yr
- Estimated total mercury reduction from Hydrogen point-source – >99% or 127grams/day

Early MACT* Compliance Schedule Hydrogen

- Hydrogen System Compliance Project:
 - Commissioning and Startup (December 31, 2005)
 - Performance Testing (March 31, 2006)
 - Reports to Ohio EPA (April 30, 2006)

End Box Vent System Phases I & II



Early MACT* Compliance – End Box Vent

- Phase I – Mercury Reduction from End Box Vent
 - Install New end box vent cooler
 - Install New dilute tank cooler
 - Install Carbon adsorption beds
 - Estimated mercury reduction* is 99%
 - The mercury reduction is approximately 285 grams/day
 - Estimated cost for Phase I is \$240,000 Cap-X and \$70,000 O&M per year
 - Estimated Cost of Mercury Reduction in Phase I is \$842 /gram/day Cap-X and \$246/gram/day O&M

* Reductions calculated as a percent of current baseline of 288 grams/day based on Apr '97 stack test.

Early MACT* Compliance – End Box Vent

- Phase II – Mercury reduction from End Box Vent
 - Evaluate a liquid scrubber to reduce carbon consumption
 - Estimated cost of Phase II is \$310,000 Cap-x
 - Estimated savings in carbon consumption is \$32,000/year
 - This will be an economic evaluation of Capital cost vs. ongoing O&M costs, thus it may not occur.

* Reductions calculated as a percent of current baseline of 288 grams/day based on the Apr '97 stack test

Early MACT* Compliance – End Box Vent

- Estimated total capital cost for Phases I and II
 - \$550,000
- Estimated annual operating and maintenance costs for Phases I and II
 - \$38,000
- Estimated total mercury reduction from End Box Vent point-source – >99% or 285 grams/day

MACT* Compliance Schedule – End Box Vent

- End Box Vent System Phase I:
 - Commissioning and Startup (December 31, 2005)
 - Phase I Performance Test (March 31, 2006)
- End Box Vent System Phase II (If it is deemed to be economically justified):
 - Commissioning and Startup (December 31, 2005)
 - Performance Testing (if required) (March 31, 2006)
 - Reports to Ohio EPA (if Phase II goes forward) (April 30, 2006)
- Full Compliance with MACT for Mercury cell
 - July 1, 2006

Exhibit C

Fugitive Emissions Control from the Cell Floor

August 2004

©ASHTA Chemicals Inc. 2004

Fugitive Emissions Reduction

- Fugitive Emissions Collection and Treatment
 - Process/Maintenance building, which contains the Cell Floor as well as other production equipment, will control air movement by limiting traffic in and out of the building to only that which is essential for the plant operations.
 - Spikes in mercury concentration occur during maintenance on the cell floor that requires the opening of equipment. A temporary canopy [to be designed] will be utilized during the maintenance of the cells or decomposers or end boxes to collect the mercury vapors via the intake to the suction of a central vacuum/blower.
 - During maintenance the operator will place the system in operation to collect the spikes in mercury with the air being directed to the carbon adsorbers for mercury removal. The treated air will be returned to the duct work under the cell floor.

EXHIBIT D

Conceptual Project Design for Storm Water Recovery From Outfalls 002, 003 and 004

August 2004

©ASHTA Chemicals Inc. 2004

Storm Water Additional Collection and Treatment

- Recover First Flush* of Storm Water Outfalls 002, 003, and 004
 - Collect precipitation from an estimated 8 additional acres within the Manufacturing Plant fence line for a total of approx. 18 acres (excludes office, parking lot and unimproved land) See attached map.
- Project to include:
 - Catch basins, pumps and piping to direct storm water to collection tanks
 - An additional 1,000,000 gallons of storm water storage

* Sized to recover and treat an average of 0.10" of precipitation per day

PROJECTS SUMMARY

Project	Estimated Cap-X	Estimated O&M	Estimated Hg Red. (grams/yr.)
■ Hydrogen	\$1.250MM	\$190,000	44, 450
■ Air	\$0.550MM	\$ 38,000	104,025
■ Fugitive	\$1.950MM	\$156,500	450,450
■			
■ VAP	\$0.200MM		TBD
■ TOTALS	\$6,910MM	\$482,500	598,955

Projected Impact on Mercury Recovery

