

EXHIBIT AYee 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. 5219, Ashtabula County Record of Deeds);

Thence S. 89 deg. 35' 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. 486, Ashtabula County Records of Deeds);

Thence S. 0 deg. 04' W., along a westerly line of C.E.I. Co., 1052.39' ft. to an iron pin;

# 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.*

# Exhibit B

## Hg Reduction Process Description

(Early MACT\* Compliance)

August 2004

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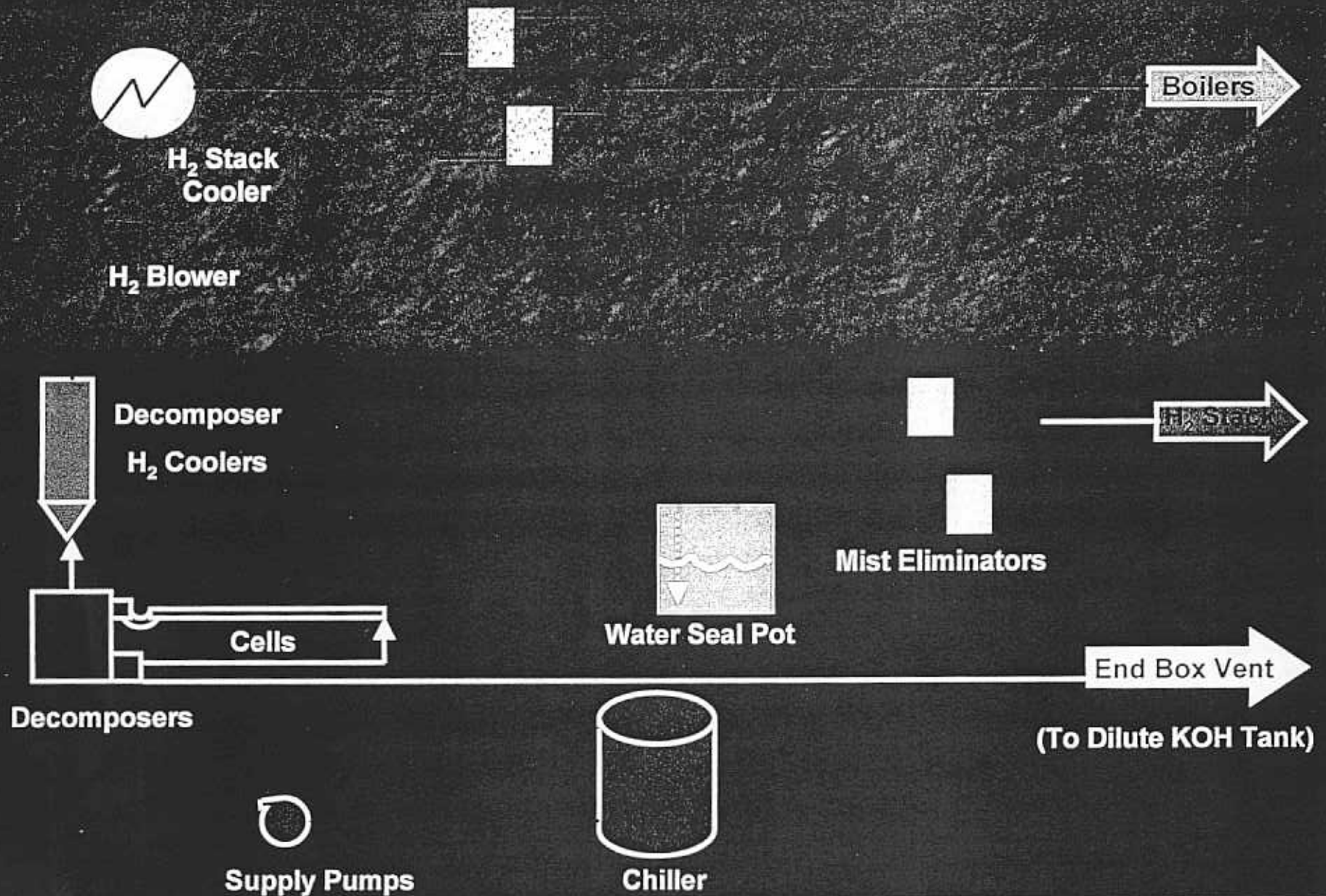
# Early MACT\* Compliance

- 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

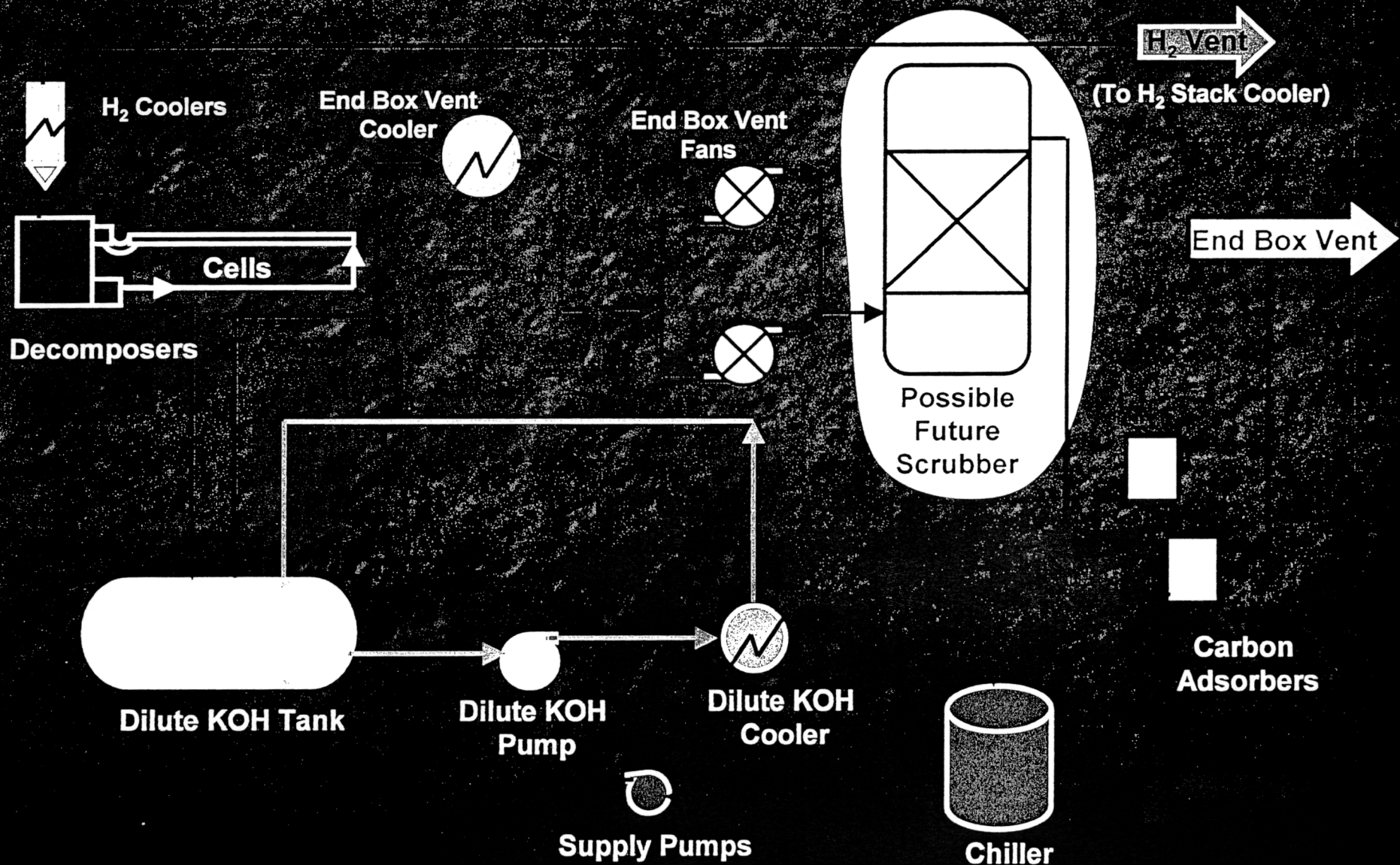
- Estimated total capital costs for Early MACT\* Compliance- Hydrogen
  - \$1,250,000
- Estimated annual operating & maintenance costs for Early MACT\* Compliance - Hydrogen
  - \$190,000/yr
- Estimated total mercury reduction from Hydrogen point-source – >99% or 127grams/day

# 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 1:
  - 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

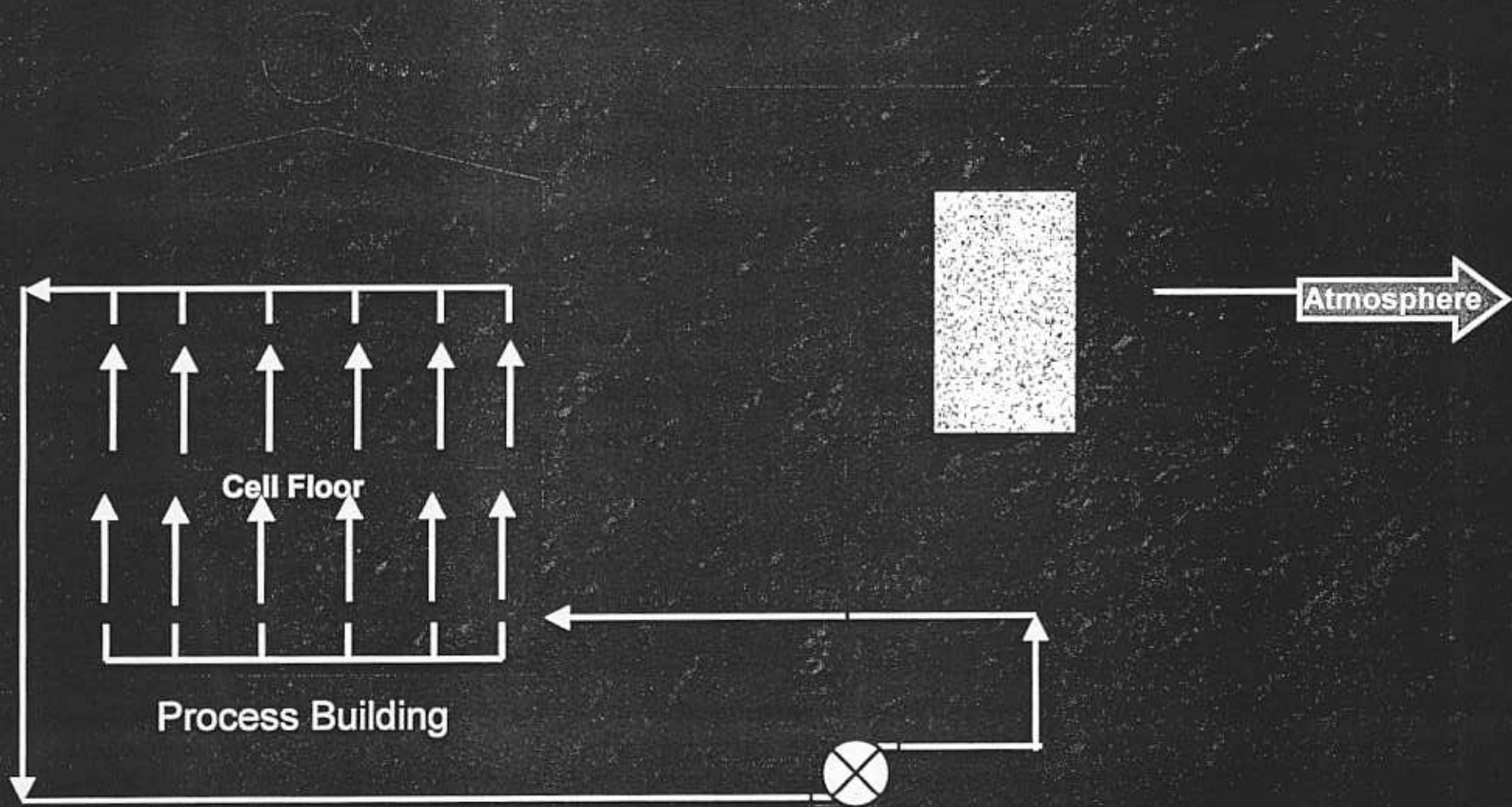
## Fugitive Emissions Control from the Cell Floor

August 2004

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# Fugitive Emissions Collection and Treatment



# 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.

# Fugitive Emissions Reduction

## Fugitive Emissions Collection and Treatment (Cont'd)

- Implementation of the LDAR standards for leak detection and maintenance is expected to maintain the mercury concentration in the air less than the target of  $0.05\text{mg/m}^3$  when the equipment is not open for maintenance. In this case the system would not be circulating air to the carbon adsorbers.
- An Operational Protocol will be submitted to the Ohio EPA for approval that will specify the details with respect to the sampling and the actions that will be taken at what limits.
- If the Operational Protocol indicates that the mercury concentration is  $>$  than the target of  $0.05\text{mg/m}^3$ , the operator will start immediately the system and circulate the air through the carbon adsorbers and return the treated air to the duct work under the cell floor until the mercury concentration returns within target, e.g.,  $<0.05\text{mg/m}^3$ .
- Most of the treated air will be returned to the duct work under the cell floor and recycled. Any excess will be vented outside the building.



# Fugitive Emissions Reduction

- Estimated total capital cost
  - \$1,950,000
- Estimated annual operating and maintenance costs
  - \$156,500
- Estimated total mercury reduction from fugitive emissions sources
  - 1,287 grams/day\*

\* Based on the allowable of 1,300 grams/day under former NESHAP

# Fugitive Emissions Reduction

- Estimated Mercury Reduction 1,287grams/day
- Key Operating Dates
  - Commissioning and Startup (C&S) = 20 Months after approval of Operational Protocol and Fugitive Emission Limits by the Ohio EPA

# EXHIBIT D

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

August 2004

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# 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

# Storm Water Collection Calculations

## ■ Assumptions:

- At the time of an emergency release, because of the excess rainfall the ground water absorption is zero
- Treatment system's maximum storm water consumption is 30 GPM
- The formulae for Maximum\* containment are:
  - For 1.8 MM Gallons Storm Water Capacity
    - One Day = 3.4"
    - One Week = 3.8"
    - One Month = 5.6"
  - For 2.3 MM Gallons Storm Water Capacity
    - One Day = 4.3"
    - One Week = 4.9"
    - One Month = 7.2"
  - For 2.6 MM Gallons Storm Water Capacity
    - One Day = 4.8"
    - One Week = 5.4"
    - One Month = 8.0"

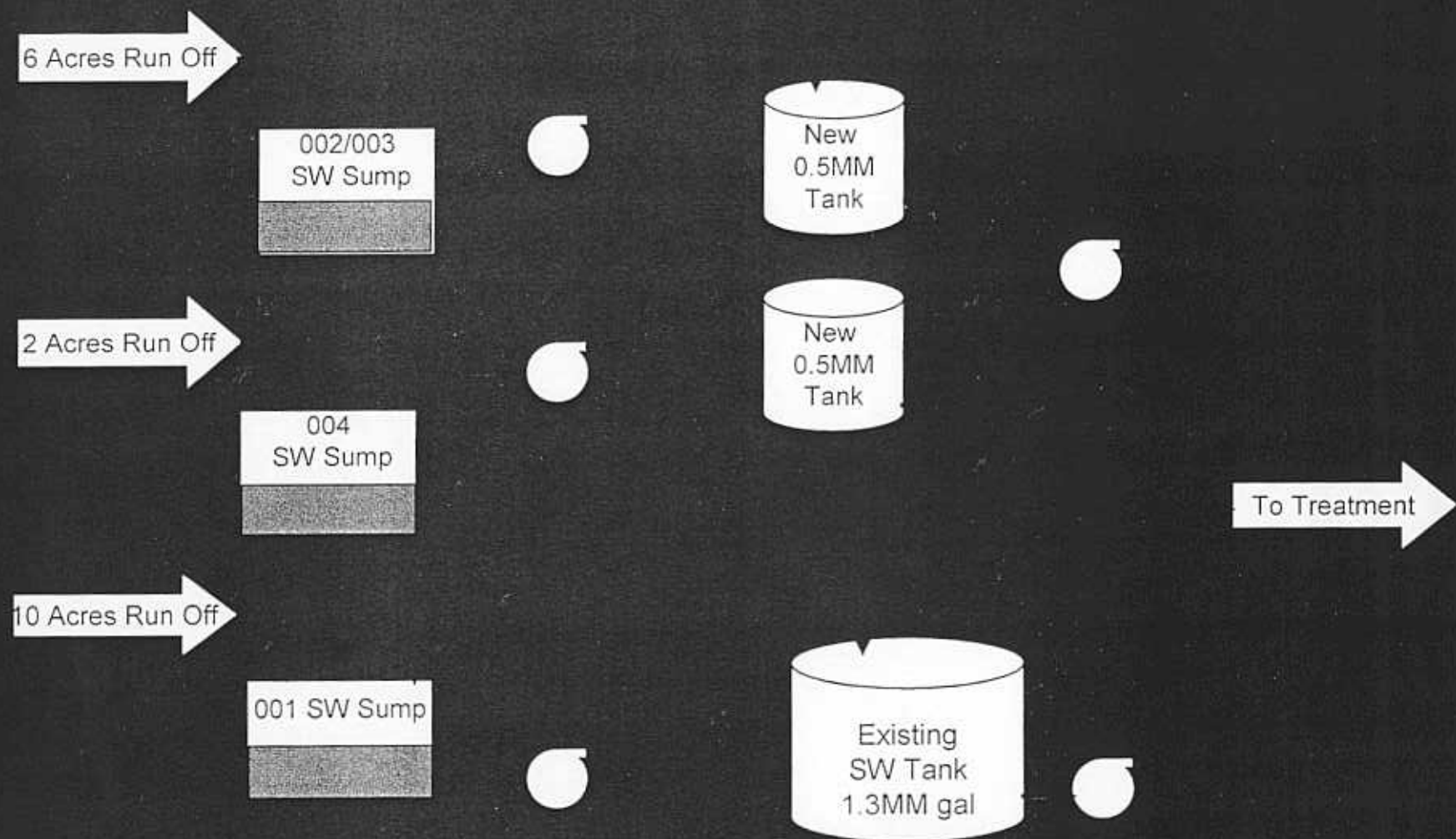
\* Maximum Containment is from empty to overflow to forced relief

# Storm Water Collection Calculations

- Basis: Painesville Rainfall Data 1950 –1990 (Closest source)
- Number of releases in 41 years:
  - For 1.8 MM gallons storage ..... 18
  - For 2.3 MM gallons storage ..... 9 [The choice to add 1MM gallons]
  - For 2.6 MM gallons storage ..... 8
- Estimated volume of releases based on 2.3 MM storage:
  - Minimum .....7,300 gallons (Jul '57)
  - Maximum .....93,500 gallons (Oct '54)



# Proposed Storm Water Collection



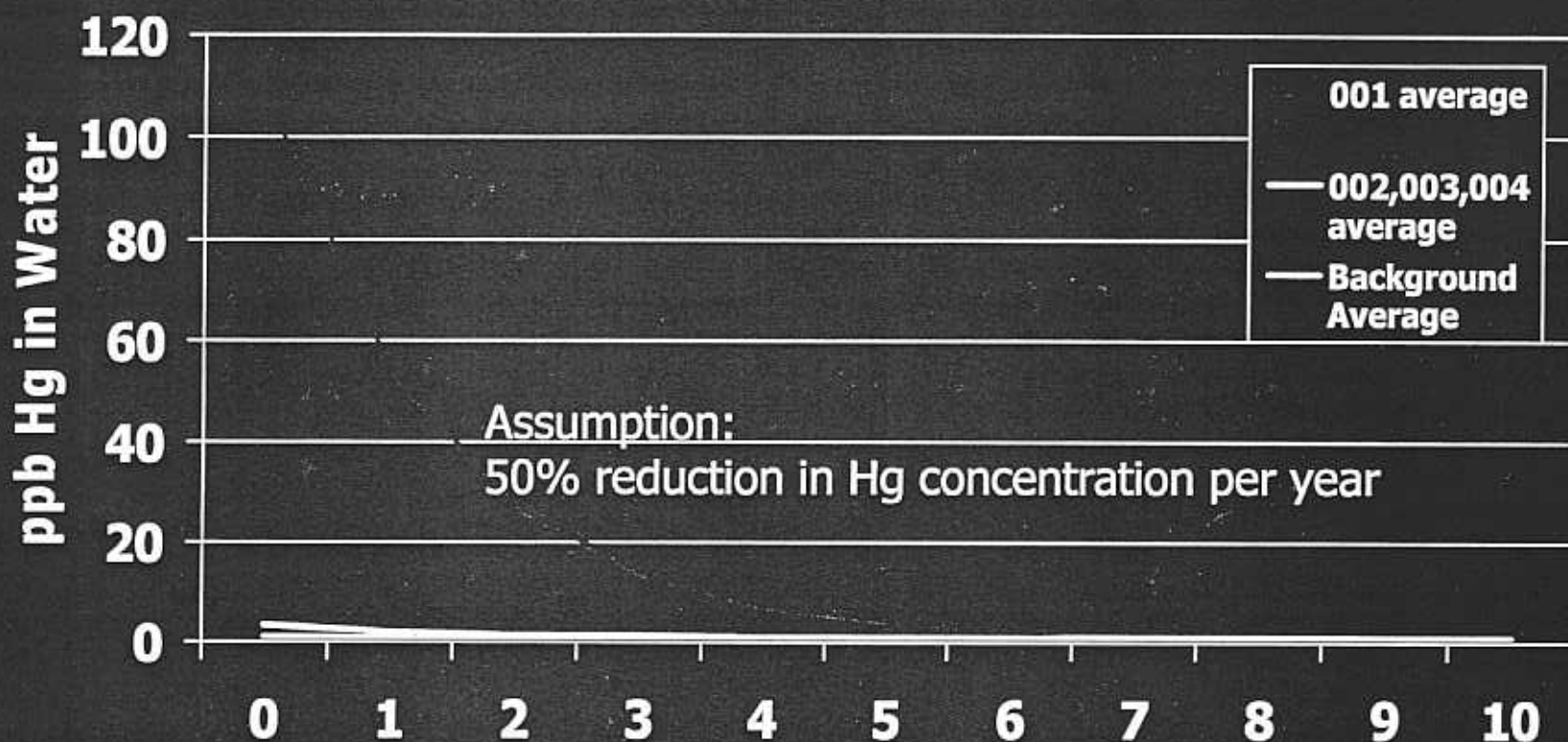
August 2004

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# 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
■ <b>TOTALS</b>	<b>\$6,910MM</b>	<b>\$482,500</b>	<b>598,955</b>

# Projected Impact on Mercury Recovery



Year	0	1	2	3	4	5	6	7	8	9	10
001 average	107.00	53.93	27.40	14.13	7.50	4.18	2.52	1.69	1.28	1.07	0.97
002,003,004 average	3.35	2.11	1.49	1.17	1.02	0.94	0.90	0.88	0.87	0.87	0.87
Background Average August 2004	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86