MANISTEE CITY PLANNING COMMISSION

70 Maple Street, Manistee, Michigan 49660
Public Hearing/Special Meeting of Thursday, November 20, 2003
7:00 p.m. - Library, Manistee Middle School, 550 Maple Street

AGENDA

I Roll Call

II Public Hearing **(See Hearing Rules of Procedure on the Reverse Side)**

1. Manistee Saltworks Development Corporation - Coal Fired Power Plant
2.

III Citizen Questions, Concerns and Consideration

IV Approval of Minutes

Planning Commission Meeting (11/6/03)

V New Business

1. None

VI Unfinished Business

1. Manistee Saltworks Development Corporation - Proposed Power Plant
2.

VII Other Communications

1.

VIII Work/Study Session

1.

IX. Adjournment

Public Hearing Procedures

The City of Manistee Planning Commission welcomes public comment in support of its decision-making process. To assure an orderly, fair and balanced process, the Planning Commission asks that participants at all public hearings observe the following rule of procedure:

1. The Chairperson will recognize each speaker. When a speaker has the floor, he/she is not to be interrupted unless time has expired. Persons speaking without being recognized shall be out of order.

2. Each speaker shall state their name and address for the record and may present written comments for the record.

3. Speakers shall address all comments and questions to the Planning Commission.

4. Unless waived by the Planning Commission for a specific meeting or a specific speaker, public comment shall be limited to five (5) minutes per speaker, one time only. If a group of people wish to be heard on one subject, a spokesperson may be designated who may request that more than five (5) minutes be permitted for the collective comments of the group as presented by that speaker.

5. The Chairperson may request that repetitive comments be limited or abbreviated in the interest of saving time and allowing others to speak.

6. The Chairperson may establish additional rules of procedure for particular hearings as he/she determines appropriate.

7. Normal civil discourse and decorum is expected at all times. Applause, shouting, outbursts, demonstrations, name-calling or other provocative speech or behavior is not helpful to the decision-making process and may result in removal from the hearing or an adjournment.

Thank you for your interest in the work of the City of Manistee Planning Commission and for your cooperation with these rules of procedure.

MEMORANDUM

TO: Planning Commission Members

FROM: Denise Blakeslee
Administrative Assistant Community Development Department

DATE: November 14, 2003

RE: Public Hearing/Special Meeting November 20, 2003

We will hold the Public Hearing/Special Meeting on the Manistee Saltworks Development Corporation/Special Use Permit - Coal Fired Power Plant. This **meeting will be held in the Library at the Manistee Middle School**, 550 Maple Street (use the Sixth Street entrance). This public hearing will give citizens the opportunity to comment on the proposed power plant. We only have the room until 11:00 p.m. and will need to end the meeting by 10:30 p.m. to have time to clear the building and clean up the room.

Enclosed you will find the following information:

Memo from Jon Rose
Report from Brian Sousa, Wade Trim
Report from Jay Kilpatrick, Williams & Works
Memo from Sid Scrimger, Fire Chief
Information from the Health Department regarding Health Statistics
Citizens comments/information regarding proposed Power Plant

Two new members will be appointed at the City Council Meeting on November 18, 2003. Four people have submitted applications they are as follows:

Mark Wittlief, 363 Tenth Street
Christa Johnson-Ross, 215 First Avenue
Cyndy Fuller, 18 Cottage Lane
William Brooks, 385 ½ River Street

Reminder - Ethics /Conflict of Interest Workshop - Wednesday, November 19, 2003 at 7:00 p.m., Manistee Township Hall.

If you are unable to make the meeting please call me at 723-2558.

:djb

City of Manistee

Planning Commission

SPECIAL USE PERMIT APPLICATION

Manistee Saltworks Development Corporation
Applicant
14701 St. Mary's Lane - Suite 625
Address
Houston, TX 77079
City, State, Zip Code

Phone Numbers (Work) 832-379-4222

(Home) _____

FOR OFFICE USE ONLY

Case number _____
Date Received _____
Date Received _____
Fee Received _____
Receipt Number _____
Hearing Date _____
Action Taken _____
Expiration Date of Permit _____

FEE FOR SPECIAL USE PERMIT $250.00

I. ACTION REQUESTED:

A Special Use Permit is hereby requested for the following purpose: Per Section 6703 of Zoning Ordinance a Special Use Permit is required for 1) Activity outside enclosed buildings (coal pile), 2) Discharge of treated Wastewater to Manistee Lake, 3) Alteration to Manistee Lake shoreline (shipping dock) for a coal fueled power plant

II. PROPERTY INFORMATION:

A. Address of Property 1501 Main Street, Manistee, Michigan 49660
Tax Roll Parcel Code Number: 51-51 -712-475-04, 51-51-712-475-02, 51-51-713-175-10 51-51-713-175-15, 51-51-713-175-20, and 51-06-018-325-01

B. List all deed restrictions -cite Liber & Page where found and attach: _____
Pending title investigation.

C. Names and addresses of all other persons, firms, or corporations having a legal or equitable interest in the land. See correspondence from Gockerman, Wilson, Saylor & Hesslin to Jim Tondu and November 5, 2003 letters to the Planning Commission.

D. Zoning District: I2 Industrial District (lakefront)

E. Present use of the property: Brine Manufacturing including on-site power plant

F. Attach a Site Plan which meets the requirements of the Special Use Permit Ordinance (see attached).

G. Is a Property survey attached? ☐ Yes ☑ No. To be issued under a separate submittal

H. Estimated completion date of construction (if applicable): 2008

III STATEMENT OF JUSTIFICATION FOR REQUESTED ACTION:

A. State specifically the reason for this Special Use Permit request at this time:
For activity outside of enclosed buildings, discharge of treated wastewater to Manistee Lake, and alteration to Manistee Lake shoreline for a coal fueled power plant.

B. Statement of support for the request. Please justify your request for a Special Use Permit below. The justification should address the following concerns: (Attach additional sheets if necessary)

1 The relationship of the Special Use Permit conditions (Article 86, Section 8610 and if applicable, Article 16) to the particular Special Use proposed. Do they pose any unusual problems for compliance?

2. Relationship of the proposed use to the development plans of Manistee County and the City of Manistee.

3. Impacts of the adjacent property and neighborhood. Indicate what impacts of the proposed use on the adjacent property are anticipated and what steps will be taken to mitigate any negative impacts. Consider the following:

a. Will the proposed use adversely affect the health, safety, or enjoyment of property of persons residing or working in the neighborhood?

b. Will proposed use be detrimental to the public welfare or injurious to property in the neighborhood?

IV. INFORMATION REQUIRED IN APPLICATION:

A. An Application for Special Use shall include

1. A detailed Site Plan, as spelled out in Section 9406 of this ordinance, a copy of which is attached.

2. A specific statement and supporting information regarding the required findings for the Special Use Permit, as stated in Section 8609 (as follows).

a. Is the use reasonable and designed to protect the health, safety, and welfare of the community.
b. Is the use consistent with the intent and purpose of the Land Use District.
c. Is the use compatible with adjacent land uses,
d. Is the use designed to insure that public services and facilities are capable of accommodating increased loads caused by the land use or activity, and
e. Does the use comply with all applicable regulations of this Ordinance.
f. Does the use comply with all specific standards found in the respective Land Use District, Section 1601 *et. seq., and Section* 101 *et. seq. of this Ordinance.*

3. Proposed location of any open spaces, landscaping and buffering features such as greenbelts, fences, etc.

B. In Addition, the applicant may be required to furnish:

1. Elevations on all buildings, including accessory buildings.

2. An Environmental assessment.

3. Evidence of having received or having an agreement for concurrent approval for any other necessary permits required prior to a construction code permit.

4. Measures which will be undertaken to control soil erosion, shoreline protection, excessive noise, or adverse impacts of the development on the surrounding properties.

V. CERTIFICATION AND AFFIDAVIT:

The undersigned affirm(s) that he/she/they is/are the ☐ owner, ☐ leasee, ☑ owner's representative, ☐ contractor involved in the application; and that the information included in this application is correct. Further, if the request is approved, the applicant will comply with all of the requirements of the City of Manistee Zoning Ordinance and certifies that measures proposed to mitigate adverse impacts will be completed in a timely fashion.

Signature (8) of Applicant (8): _____

Dated 11.6.07

☑ By checking this box permission is given for Planning Commission Members to make a site inspection if necessary.

Manistee Salt Works Development Corporation
Special Use Permit Application Supplemental

Response to Section III.B of the Special Use Permit Application

1. *The relationship of the Special Use Permit conditions (Article 86, Section 8610 and if applicable, Article 16) to the particular Special Use proposed. Do they pose any unusual problems for compliance?*

The special use conditions do not pose any unusual compliance problems.

2. *Relationship of the proposed use to the development plans of Manistee County and the City of Manistee.*

The proposed use is a modification to the existing use of the site and is also congruent with the purpose statement of the current I2 Lakefront Industrial District zoning.

3. *Impacts of the adjacent property and neighborhood.*

The proposed use will not create any impacts inconsistent with the anticipated uses of the I2 Lakefront Industrial District in which the project is located. Impacts to the residential neighborhood adjacent to the project will be minimized as outlined in the Attachment A.

Response to Section IV.A.2 of the Special Use Permit Application

a. *Is the use reasonable and designed to protect health, safety , and welfare of the community?*

The proposed use is consistent with the current use of the property and will be designed in accordance with all state and federal health requirements as previously described. See Attachment A.

b. *Is the use consistent with the intent and purpose of the Land Use District?*

The use in consistent with the purpose statement of the I2 Lakefront Industrial District. See Attachment A.

c. *Is the use consistent with adjacent land uses?*

The proposed use is consistent both with the current use and the adjacent land uses in the I2 Lakefront Industrial District. Impacts to the residential neighborhood adjacent to the project will be minimized as outlined in the attached memo dated November 4, 2003. See Attachment A.

d. *Is the use designed to ensure that public services and facilities are capable of accommodating increased loads caused by the land use or activity?*

Yes. The project design will ensure that the public services and facilities will not be overwhelmed by the proposed use. See Attachment A.

e. *Does the use comply with all applicable regulations of this Ordinance?*

Yes. The use complies with the ordinance subject to the special use requirements of this application. See

f. *Does the use comply with all specific standards found in the prospective Land Use District, Section 1601 et. Seq., and Section 101 et. seq. of this Ordinance?*

Yes. The use complies with the ordinance.

Environmental Permits Checklist

Business Name: Manistee Saltworks Development Corporation
Mailing Address: 14701 St. Mary's Lane - Suite 625
Street Address: Huston, Texas 77079
Telephone: (8 3 2) 3 7 9 - 4 2 2 2 Fax: (8 3 2) 3 7 9 - 4 3 3 3 Type of Business: _____
Facility Contact (Owner or Manager): Robert Joe Tondu - President

Date 10-6, 20 03 Signature: _____

NOTE: For assistance with permits and approvals from the Michigan Department of Environmental Quality, including permit coordination among MDNR and DEQ divisions, contact the Permit Coordinator, (517)335-4235.

This checklist (prepared March 2000) is designed to assist businesses in their efforts to identify and comply with state and county environmental permit requirements. Please submit the completed form to the zoning administrator at the time that site plans are submitted.

Circle (Y/N) the items that may pertain to your project or facility, then contact the office(s) listed to determine specific requirements. Return a copy of this Checklist to the municipality as part of your site plan. (If the municipality requires the permits as part of the site plan you will need to have these permits before submitting the site plan. If permits are not needed first, then still submit this form, then an updated copy should be submitted prior to occupancy.)

1. (Y) N Will the project involve the discharge of any type of wastewater to a storm sewer, drain. lake. stream, wetland or other surface water? *Contact: MI Dept. of Envir. Quality, Surface Water Quality Div., Permits Section: 517/373-8088.*

2. Y (N) Will the project involve the direct or indirect discharge of waste. waste effluent, wastewater. pollutants, and/or cooling water into the groundwater or oil the ground? *Contact: MI Dept. of Envir. Quality, Waste Management Div., Groundwater Program Sec.:* 517/373-8148.

3. Y (N) Will the project involve construction or alteration of any sewage collection or treatment facility For facilities discharging to surface waters, *Contact: MI Dept. of Envir. Quality, Surface Water Quality Division, District Office:*_____. *For facilities discharging to groundwater, Contact: MI Dept. of Envir. Quality, Waste Management Div.. District Office:* _____.

4. (Y) N Will the project or facility store or use chemicals, petroleum products, or salt? Depending upon the type substance. secondary containment and a Pollution Incident Prevention Plan (PIP) may be required. *Contact: MI Dept. of Envir. Quality, Waste Mgmt. Division, District Office:* _____.

5. (Y) N Will the project involve the installation, operation, or removal of an underground or above ground storage tank containing a petroleum product or a hazardous substance? *Contact: MI Dept. of Envir. Quality, Storage Tank Division:* 517/373-8168.

6. Y (N) Will the project involve liquified petroleum gas storage tanks or container filling locations? *Contact: MI Dept. of Environmental Quality, Storage Tank Division:* 517/373-8168.

7. Y (N) Will the project involve the installation of a compressed natural gas dispensing station with storage? *Contact: MI Dept. of Environmental Quality, Storage Tank Division: 517/373-8168.*

8. Y (N) Will the project involve the generation of hazardous waste? *Contact: MI Dept. of Environmental Quality, Waste Mgmt. Div., District Office:* _____.

9. Y (N) Will the project involve the on-site treatment, storage, or disposal of hazardous waste? *Contact: MI Dept. Environmental Quality. Waste Mgt. Div., Hazardous Waste Program Section:* 517/373-9875.

10. Y (N) Will the project involve the transport of hazardous waste or non-hazardous liquid industrial waste? *Contact: MI Dept. of Environmental Quality. Waste Mgmt. Div., Hazardous Waste Program Section:* 517-373-9875.

11. Y (N) Will the project involve landfilling, transferring, or processing solid non-hazardous wastes on-site? *Contact: MI Dept. of Environmental Quality, Waste Mgmt Div., District office telephone:* _____.

12. (Y) N Will the project involve the installation, construction, reconstruction, relocation, or alteration of any process or process equipment (including air pollution control equipment) which has the potential to emit air contaminants? Contact: MI Dept. of Environmental Quality, Air Quality Div., Permit Section. 517/373-7023.

13. Y (N) Will the project or facility involve the storage, mixing. or distribution of pesticides or fertilizers in bulk quantities? *Contact: MI Dept, of Agriculture, Pesticide and Plant Pest Management Division:* 517/373-1087.

14. (Y) N Will the project involve any man-made change in the natural cover or topography of land, including cut and fill activities which may contribute to soil erosion and sedimentation? Will the earth change disturb an area of one acre or more, or occur within 500 feet of a lake or stream? If the answer to both of these questions is yes, a soil erosion and sedimentation control permit is required. *Contact: County Drain Commission (or other responsible office):* _____.

15. (Y) N Will the project involve dredging. filling. or construction in, across, or under (I) a river, stream, creek, ditch, drain, lake, pond, or swamp? (2) wetlands? (3) floodplain (area that may have or ever had either standing or flowing water)? *Contact: MI Dept. Environmental Quality, Permit Consolidation Unit, Land and Water Mgmt. Div.,* 517/373-9244.

16. (Y) N Will the project involve any dredging proposed within 500 feet of a lake, river, stream, creek, or ditch? *Contact: MI Dept. Environmental Quality, Permit Consolidation Unit. Land and Water Mgmt. Div.,* 517/373-9244.

17. (Y) N Will the project involve an earth change activity within 500 feet of a lake or stream, creek or ditch? *Contact: MI Dept. Environmental Quality, Land & Water Mgmt. Div., Soil Erosion & Sedimentation:* 517/373-3178.

18. Y (N) Will the project involve construction of a building or land alteration within 400 feet of a designated natural river or tributary? *Contact: MI Dept. of Natural Resources, Forest Mgmt. Div., Natural Rivers Program Unit,* 517/373-1275.

19. Y (N) Will the project involve construction of a building or section system in a designated great lakes high risk erosion area? *Contact: MI Dept. of Environmental Quality, Land and Water Mgmt Div., Great Lakes Section,* 517/373/1950.

20. Y (N) Will the project involve dredging. filling. grading, or other alteration of the soil, vegetation or natural drainage, or placement of f permanent structures in a designated environmental area? *Contact: MI Dept. Environmental Quality, Land and Water Management Div,. Great Lakes Section:* 517/373-1950.

21. Y (N) Will the project involve development. silvicultural activities or contour alterations within a designated critical dune area? *Contact:* I *MI Dept. Environmental Quality, Land and Water Management Div.. Great Lakes Section: 517/373-1950.*

22. Y (N) Will an on-site wastewater treatment system or septic system be installed?

For sanitary sewage in quantities of 10,000 gallons per day or less: County or District Environmental Health _____. For any subsurface discharge of sanitary sewage in quantities equal to or greater than 10,000 gallons per day. *Contact: MI Dept. of Environmental Quality. Waste Management Div:* 517/373-8148.

For sanitary sewage in quantities of 6,000 to 10,000 gallons per day: In addition to obtaining a construction permit from the county or district environmental health department, submit a state wastewater discharge notification form. Flow monitoring and reporting are required. *Contact: MI Dept. of Environmental Quality. Waste Management Div., Groundwater Permits Unit: 517/373-8148.*

23. Y (N) Will the project involve the construction of a water supply well or the extension of a water supply service from an existing water system? *Contact: MI Dept. Environmental Health:* _____.

24. (Y) N Are there out-of-service wells, abandoned wells, or cisterns on the site? (Drinking water, irrigation, & monitoring wells). *Contact: County or District Environmental Health Dept.:* _____.

25. Y (N) Will the project involve a subdivision or site condominium project utilizing individual on-site subsurface disposal systems or individual wells? *Contact: County or District Environmental Health Dept:* _____.

26. Y (N) Will the project involve the on-site storage of sanitary sewage prior to transport and disposal off-site (pump and haul?) *Contact: MI Dept. of Environmental Quality, Waste management Div., Groundwater Program Section:* 517/373-8148.

27. (Y) N Has the property ever been subject to remedial action, limited closure, or other environmental cleanup response under part 201, natural Resources and Environmental Protection Act (NREPA)? Is the property currently subject to a response action? Has a Baseline Environmental Assessment (BEA) been completed for the property? *Contact: MI Dept. of Environmental Quality, Environmental Response Division:* 517/373-9893 *and/or MI Dept. of Environmental Quality, Storage Tank Division:* 517/373- 8168.

Hazardous Substances Reporting Form for Site Plan Review

Note: This form should be completed and submitted as part of the site plan for facilities which may use, store, or generate hazardous substances or polluting materials (including petroleum-based products)

Name of business: Manistee Saltworks Development Corporation
Name of business owner: Robert Joe Tondu
Street and mailing address: 14701 St. Mary's Lane Suite 625
Telephone: (832) 379-4222.

I affirm that the information submitted is accurate.

Owner's signature: R Tondu
Information compiled by: Cummins & Barnard, Inc. – Lyle Thornton; NTH Consultants, Ltd. – John Caudell

Part I: Management of Hazardous Substances and Polluting Materials

1. (Y) N Will the proposed facility store, use or generate hazardous substances, as defined in the Zoning Ordinance, or polluting materials (including petroleum-based products) now or in the future? If yes, please complete this form and submit with your site plan.
2. Y (N) Will hazardous substances or polluting materials be reused or recycled on-site?
3. (Y) N Will any hazardous substances or polluting materials be stored on-site? If yes, identify the storage location on the site plan. Describe the size and type of secondary containment structure here or on an attached page:
   State of Michigan Spill Prevention Program
   Design for 125% area
4. Y (N) Will new underground storage tanks be located less that 2,000 feet from drinking water wells serving two or more i establishments or Jess than 300 feet from a single family drinking water well?
5. Y N NA Are existing underground storage tanks on-site Jess than 200 feet from a drinking water well serving more than a single household?
   If the answers to #4 or #5 are yes, you may be in violation of State of Michigan underground storage tank regulations. Contact the State police Fire Marshal Division Lansing Central office for specific requirements. Telephone (517)322-5470 or 1(800) MICH UST (1(800)642-4878).
6. (Y) N Will the interior of the facility have general purpose floor drains?* If yes, the floor drain will connect to: (circle one)
   a. Sanitary sewer system; r
   (b.) On-site holding tank; or f
   (c.) On-site system approved by the Michigan Department of Environmental Quality in accordance with groundwater discharge permit requirements (Telephone Waste Management Division _____, District Office (___)___-___.
   *NOTE: General purpose floor drains should not be connected to a stormwater drainage system, 1 dry well, or septic system.
7. Y (N) Will hazardous substances or polluting materials be stored, used, or handled out-of-doors near storm drains which l discharge to lakes, streams, or wetlands? If yes, describe the type of catch basin or spill containment facilities (which will be used (use an attached sheet with diagram, if appropriate): t

Additional information may be requested from the municipality to assure tllat site plans comply with local, county and state lenvironmental protection requirements.

Hazardous Substances Reporting Form for Site Plan Review
Input Data

Hazardous Substance	Trade Name	Chemical Components	Chemical Component Form	Maximum Stored Quantity	Storage Container Type	Use
Water Treatment Chemicals						
15% Sodium Hypochlorite		NaOCl	Liquid	800 gallons	400 gal plastic totes	Water Pretreatment System
Coagulant		$FeCl_2$ or Alum (Al_2SO_4)	Liquid	5,000 gallons	FRP Tank	Water Pretreatment System
Polymer		Proprietary Chemical	Liquid	800 gallons	400 gal plastic totes	Water Pretreatment System
Antiscalant		Proprietary Chemical	Liquid	800 gallons	400 gal plastic totes	Cycle Make-up Water Treatment
Sodium Bisulfite	BT-3838	Proprietary Chemical	Liquid	800 gallons	400 gal plastic totes	Cycle Make-up Water Treatment
Sulfuric Acid		H_2SO_4	Liquid	800 gallons	400 gal plastic totes	Cycle Make-up Water Treatment
Clean In Place Chemicals		Proprietary Chemical	Liquid	55 gallon drum	Plastic Drum	Cycle Make-up Water Treatment
Coagulant		$FeCl_2$ or Alum (Al_2SO_4)	Liquid	400 gallons	FRP Tank	Wastewater Treatment
Lime		CaO	Liquid	Later	RLCS Silo	Wastewater Treatment
Organo-Sodium Sulfide		Proprietary Chemical	Solid	800 gallons	400 gal plastic totes	Wastewater Treatment
Polymer		Proprietary Chemical	Liquid	800 gallons	400 gal plastic totes	Wastewater Treatment
Sulfuric Acid		H_2SO_4	Liquid	10,000 gallon	CS Tank	Adjustment of Circulating Water Alkalinity
15% Sodium Hypochlorite		NaOCl	Liquid	15,000 gallon	FRP Tank	Control Biological Growth In Cooling Tower Basin
Non-Oxidizing Biocide		Proprietary Chemical	Liquid	10 gallons	5 gallon pail	Destroy Hypochlorite Resistant Biological Species in Cooling Tower
Corrosion/Scale Inhibitor	Corrshield MD4100	Proprietary Chemical	Liquid	800 gallons	400 gal plastic totes	Corrosion Inhibition of Circulating Water Components
Oxygen Scavenger	Cortrol OS7780	Proprietary Chemical	Liquid	800 gallons	400 gal plastic totes	Boiler Chemicals (AVT)
Amine	Steammate	Proprietary Chemical	Liquid	800 gallons	400 gal plastic totes	Boiler Chemicals (AVT)
Other						
19% Aqueous Ammonia		NH_4OH	Liquid	17,000 gallons	CS Tank	NOx Emissions Control
Lime		CaO	Solid	75 tons	RLCS Silo	SO2 Emissions Control
Coal			Solid	670,000 tons	Exposed Pile	Fuel
Ash			Solid	2,595 tons	Silos	Ash
Lubricating/Hydraulic Oil			Liquid	10,600 gallons	Steel Reservoir	Steam Turbine
Hydrogen		H2	Pressurized Gas	25,000 scf	Bottles	Steam Turbine Generator
Hydrogen		H2	Pressurized Gas	5,000 scf	Generator Housing	Steam Turbine Generator
Carbon Dioxide		CO2	Pressurized Gas	10,000 scf	Bottles	Steam Turbine Generator
Lubricating/Hydraulic Oil			Liquid	5,000 gallons	Equipment Reservoirs	Lubricated Equipment
GSU Transformer Oil			Liquid	25,000 gallons	Steel Oil Reservoir	GSU Transformer
Auxiliary Transformer Oil			Liquid	5,000 gallons	Steel Oil Reservoir	Aux. Transformer
Diesel Fuel #2			Liquid	50 gallons	Equipment Reservoir	Emergency Generator
Diesel Fuel #2			Liquid	50 gallons	Equipment Reservoir	Diesel Fire Pump
Diesel Fuel #2			Liquid	1,000 gallons	Steel Tank	Mobile Equipment Fuel

Required Permits

1. Air Permit – Issued by the Michigan Department of Environmental Quality. Agency review time estimated 9 months minimum.

2. Stormwater Construction Permit
- Obtain Soil Erosion & Stream Sedimentation permit from Manistee County Planning Department.
- Review Permit-by-Rule (Rule 2190 of Part 31 of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended [Act 451])
- Submit a Notice of Coverage application along with necessary attachments. (This NPDES storm water permit program requires that the soil erosion control measures be under the supervision and control of a certified storm water operator, ant that weekly inspections be completed and documented.)

3. FAA Stack Permit – Color and lighting on the stack will be set by the FAA.

4. High Voltage Transmission Lake Crossing Permit

5. Special Use Permit - A Special Use Permit will be issued by the City of Manistee Planning Commission.

6. NPDES Industrial Stormwater Permit – Following completion of the plant, it is necessary to obtain coverage for Michigan's Industrial Storm Water Permit Program. To obtain coverage, a Notice of Intent must be filed with the MDEQ. To obtain coverage, the plant must develop and implement a storm water pollution prevention plan (SWPPP).

7. Process wastewater. The plant's wastewater treatment system will include a NPDES permit and is designed to handle the process wastewater.

8. Cooling water. NPDES permits will be required for both the water intake and the water discharge. Water that is discharged into Manistee Lake will go through water treatment before discharge.

9. Inland Lakes and Streams – MDEQ / Corps of Engineers permit for the dock, sheet piling, and seawall reconstruction. Required for any construction, dredging, or filling of any part of a lake or streambed.

10. Pollution Incident Prevention Plan (PIPP) – PIPPs and Integrated plans are required to be kept at the facility for inspection by MDEQ.

11. Emergency Response Plan required for "planning facilities" that have an extremely hazardous substance (EHS) on-site in an amount at or above the threshold planning quantity (EPA's list of EHSs in Appendix A of 40 CFR Part 355).

12. Spill Prevention Control and Countermeasure Plan (SPCC) – This may be combined into an integrated PIPP/SPCC plan.

Additional Regulatory Requirements:

Building Code:
Current Michigan Building Code
Mechanical Code:
Current Michigan Mechanical Code
Fire Protection:
As adopted by the City of Manistee (International Fire Code)
Plumbing Code:
Current Michigan Plumbing Code
Electrical Code:
Current Michigan Electrical Code
Michigan Energy Code:
Current Michigan Uniform Energy Code-part 10
Michigan Barrier Free Rules:
Michigan Department of Consumer and Industry Services
Food Service Operation:
Michigan Food Service Sanitation Rules and various documents currently in effect – Michigan Department of Public Health, administered by Local County Health Department.
Americans with Disabilities Act

TONDU

ATTACHMENT A

DATE: **November 4, 2003**

RE: **Attachment to the Manistee Saltworks Development Corporation Special Use Permit**

The following items have been prepared in response to Mr. Kilpatrick and Mr. Sousa's memo dated October 29, 2003. All conditions outlined in this attachment shall be adhered to as part of the special use permit and site plan, unless the administrator or commission approves future changes.

A. Wastewater

The Northern Lights Facility will discharge only normal sanitary wastewater flows to the municipal system. While the city has approached us on the possibility of connecting to the municipal system, no agreement has been reached for process or stormwater to be discharged to the City system. As currently proposed, stormwater or process water will be treated on-site by using the proposed water treatment plant and will then be discharged to Manistee Lake following the appropriate permit requirements.

B. Coal Pile Runoff

Coal pile runoff will be controlled using runoff retention basins. These basins are sized to hold a 24-hour rainfall event with a 25-year recurrence frequency. For the Manistee area the level of rainfall amounts to a 3.9" accumulation over a 24-hour period. These basins are sized to hold the full volume of runoff from the total pile area. This retention volume does not consider the storage capacity of the collection ditch system, which provides a 30% reserve, or safety factor in the overall capacity of the system. The basins will be designed with an impervious liner to prevent infiltration in the ground water. Water retained in the basins will be dispersed of primarily by evaporation, both in the basins and as utilized for dust suppression on the coal pile. Under high volume conditions some water may be utilized for cooling tower make-up water and or enter the wastewater treatment system.

TONDU CORPORATION
14701 ST. MARY'S LANE
SUITE 625
HOUSTON, TX 77079
(832) 379-4222
fax (832) 379-4333

C. On-site Water Usage and Supply

Process Water
Water supply to the plant will be sourced from Manistee Lake through the proper permitting process. Actual water usage figures are unavailable at this time.

Fire Protection
The fire protection system proposed for the Northern Lights project is generally in accordance with the NFPA code requirements, accepted fire protection engineering practices, and International Building Code requirements as applicable. It is understood that the final design approach will require local and/or state review and approval as well as the approval of our fire insurance carrier.

Fire pumping provisions will be in accordance with NFPA 20 which will supply lake water to a fire water supply system providing stored water to hydrants, hose stations, water spray, and sprinkler systems. As an emergency back-up supply, this system will also be connected to the city water supply. A jockey pump will be provided to maintain water pressure in the distribution headers. The system will supply the largest fixed fire suppression demand plus flow for fire hydrants and hose stations per NFPA 850 requirements. Applicable hydrants, valving and other appurtenances required by state and local codes will be included. Fire hydrants will be spaced around the fire loop and around the coal pile in accordance with NFPA 24 and local fire codes.

Augmenting the fixed fire protection system, portable UL listed and/or FM approved dry chemical extinguishers will be located throughout the project and will be sized, rated and spaced in accordance with NFPA 10. Selection of extinguisher capacity and extinguishing agent type will be based on the review of the hazard to be protected. In addition, a fire alarm system will be provided with local fire alarms, automatic fire detectors, and fire signaling panels as required by design codes and in accordance with NFPA 72.

The Northern Lights Operating Manual will include an extensive section on fire prevention, protection and proper response. All employees will receive this training when hired and it will be periodically re-taught and reinforced as part of our ongoing safety program. Fire response planning will incorporate the use of local physical resources and will solicit the expertise of local and state personnel in the development of the plan.

Potable Water
Potable water for the Northern Lights facility will be provided by the City of Manistee's municipal water system. Sufficient supply is currently available in comparison to past industrial uses on the site.

D. Dust Suppression

Fugitive dust on the coal pile will be controlled through the use of coal pile dust suppression measures, such as a sprinkler system similar to those used to water crops in the agricultural industry. During much of the winter, freezing temperatures will form a layer of ice on the surface of the coal

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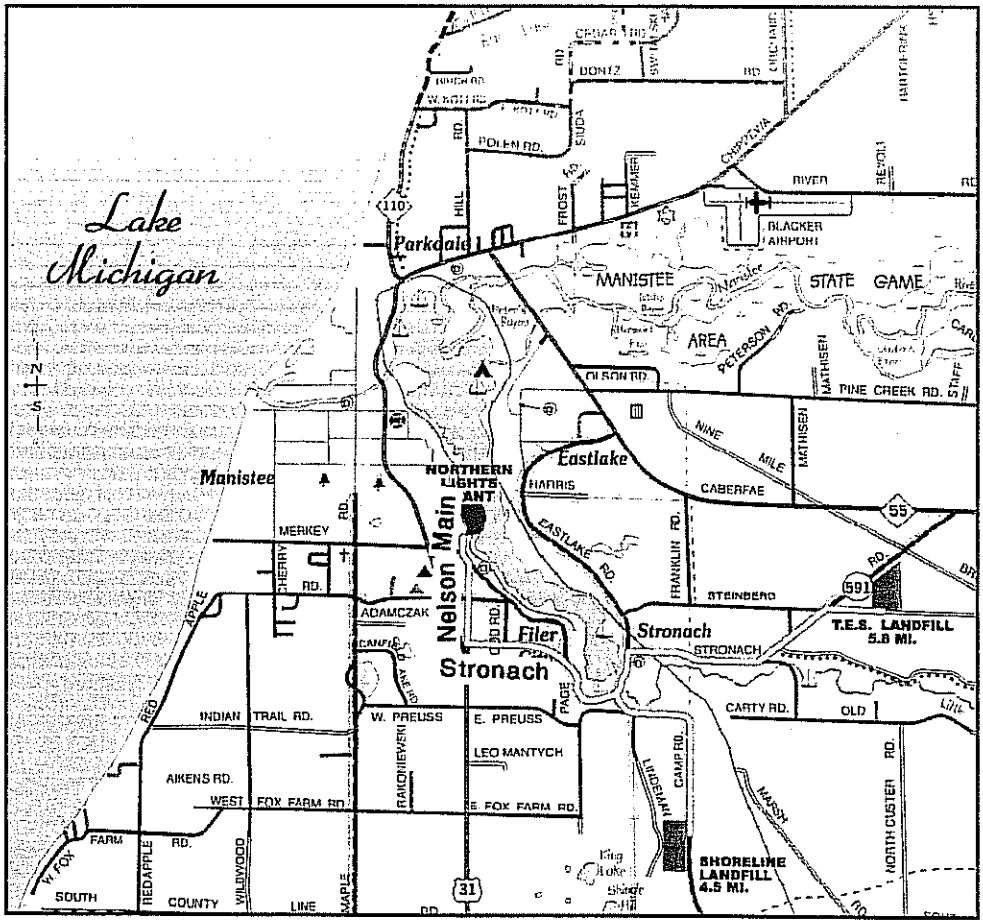
pile, suppressing dust creation. In thawing weather, the ice will melt and create a wet surface layer that will also aid in the control of dust from the coal pile.

E. Ash Handling, Storage, and Disposal

Ash will be pneumatically conveyed to a storage silo using an enclosed system. The silo will be equipped with a baghouse collector. The ash is wetted by a rotary unloader prior to loading onto 50-ton haul trucks. Ash transfer to haul trucks will be within an enclosed building and haul trucks will be tarped to prevent air-borne ash during transfer.

Fly ash will be disposed of at either Shoreline Landfill or the TES Landfill, both of which are located a short distance from the Northern Lights facility and are within Manistee County. It is estimated that up to 20 roundtrip loads per day of fly ash will be hauled to the landfill. Additionally, approximately 4 trucks of bottom ash per day will be recycled. This will be considerably less traffic than was generated by previous industries on the site. In 1992, Akzo Salt had up to 70 trucks per day and in 1999, Ambar Chemical Company had up to 20 trucks per day.

The following map shows the designated truck route from the site to the two landfills.



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F. Freighter Traffic

Approximately 13 shiploads of coal per month will be brought to the Northern Lights plant. Vessels will be in operation 10 months per year. Tondu Corporation will make an effort to work with the shipping companies to avoid bridge openings during peak hours if at all possible. Unfortunately, the arrival of vessels is dependent on a number of factors, such as weather and lake conditions, which are entirely out of our control.

G. Lakefront Setback

A pump house is proposed in the lakefront setback area and is shown on the site plan. This is permitted under section 6704-e.

H. CSX Railroad

The rail facilities that service the site and the additional rail to be constructed through and into the facility are expected to be used for delivery of materials and equipment during the Plant's construction and during major maintenance periods. Typically, major maintenance is conducted twice per year. The facility is not designed to receive coal by railroad. The costs associated with shipping coal by rail and retrofitting the facility to receive these shipments make it an option that will most likely not be utilized.

I. Decibel Levels

The design parameter for this facility is 65 decibels or less at the property line.

J. Parking

The design intent for parking is as follows:

Largest anticipated work shift..... 25

Second work shift arriving..... 25

Visitor parking..... 10

TOTAL AVAILABLE PARKING 60

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The additional issues addressed below have been discussed in meetings with city officials, engineers, consultants and Planning Commission members.

K. Design for Chimney

The chimney will be a 400-foot concrete stack. The controlling code for the design of a structural reinforced concrete shell is the American Concrete Institute 307-Design and Construction of Reinforced Concrete chimneys. Current revisions are 1998. The code covers the design techniques to be used for the design of cylindrical concrete shells. The controlling factors in the design of these structures are wind and earthquake loadings. In the case of a chimney located in Manistee, Michigan the controlling design loads will be wind. The base wind speed for this design plus a critical structure Importance Factor is applied which results in a design Factor of safety of 1.4 for these loads. The design will be certified and sealed by a registered professional engineer. The stack will be lighted and painted in accordance with requirements to be provided by the FAA.

L. Lighting

Lighting for the facility will be adequate to provide for the safety and security of both employees and visitors. There will be no uplighting. Once a final site plan has been designed, outdoor lighting will be submitted for review.

M. Relationship between Tondu Corporation, Northern Lights and Manistee Saltworks

The question has been brought up of who is developing this project and why there are so many different names. Hopefully the following explanation will clear up any confusion.

Tondu Corporation is in the process of developing a Coal Fueled Power Plant project named "Northern Lights".

Tondu Corporation has developed a company by the name of Manistee Salt Works Development Corporation. This Corporation has secured the option to purchase the General Chemical property along with both the North and South Seng properties.

Manistee Salt Works Development Corporation is also the applicant for the Special Use permit with the City of Manistee.

N. Coal Receiving, Handling and Storage

The plant will be designed and permitted only to burn low sulfur coal from the Southern Powder River Basin located near Gillette, Wyoming. Coal will be delivered to the site via lake freighters. The freighters will have self-unloading capabilities and will utilize conveyors for the transfer of coal from the ship to the storage pile and transfer from the pile to the boiler. Installation of baghouse collectors at strategic locations along the enclosed conveyor system(s) will ensure adherence to the fugitive dust plan proposed for the site.

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O. On-site Haul Roads

To minimize fugitive dust, the project proposes to minimize vehicular speeds, require frequent wet sweeping of paved areas, and wet suppression application on all unpaved areas.

P. Site Emissions (Regulated by the MDEQ and EPA)

The facility will use a single flue, 400-foot tall stack. Emissions of criteria pollutants (Particulate, SO2, NOx, CO, Volatile Organics) will be minimized in the following manner(s), consistent with state and federal requirements. A copy of Manistee Saltworks Air Quality Permit applicationis on file and available for public review at the Manistee County Planner's office.

Particulates (PM, PM10, PM2.5)

A baghouse collector will minimize particulate emissions. A baghouse collector is considered the Best Available Control Technology (federal BACT) and is currently in use at the TES Filer City Station Power Plant.

Sulfur Dioxide (SO2)

A flue gas desulfurization system will be used. The same system is used at the TES plant and has an excellent track record for maximum removal of SO2 and high operational reliability.

Nitrogen Oxides (NOx)

A Selective Catalytic Reduction (SCR) system will be installed to minimize NOx emissions. This system currently represents federal BACT control for coal-fired boilers.

Carbon Monoxide and Volatile Organics (CO and VOC)

Consistent with the most recent permits issued nationally for coal fired boilers; these emissions will be minimized by the use of optimum combustions controls inherent in the design of the boiler.

Monitoring Controls

The plant will be continually monitored and manned 24 hours a day, 7 days a week.

Q. Dredging

Should any dredging be required, all spoils will be properly disposed of in a manner consistent with DEQ requirements.

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e-mail: gwsh@gwsh.com
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e-mail: Richard M. Wilson, Jr.
rmw@gwsh.com

November 5, 2003

Mr. James Tondu
3315 Brookhollow N.E.
Rockford, MI 49341

Re: General Chemical/Manistee Salt Works Development Corporation

Dear Jim:

This will confirm for you that I have in my possession a fully executed, duplicate original of the Asset Sale Agreement between General Chemical Industrial Products, Inc., as seller, and Manistee Salt Works Development Corporation, as purchaser, with an effective date of September 9, 2003. Among other things, this agreement provides for the sale and purchase of General Chemical's lands located in the City of Manistee. This will also confirm for you that the earnest money deposit has been placed in escrow with Manistee Abstract & Title Co., as required by the agreement.

If you need anything further, please let me know.

Very truly yours,

GOCKERMAN, WILSON, SAYLOR & HESSLIN, P.C.

Richard M. Wilson, Jr.

c: Bruce C. Gockerman, City Attorney
RW/rmw

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November 5, 2003

Planning Commission
City of Manistee
70 Maple Street
Manistee, MI 49660

Re: Northern Lights Project

Dear Planning Commission members:

This will confirm for you that Manistee Salt Works Development Corporation has reached agreements in principle with Seng Dock & Trucking, Inc., to acquire an option on these parcels. The Seng Dock parcels consist of parcel numbers 51-51-713-175-10, 51-51-713-175-15, 51-51-713-175-20, and 51-06-018-325-01. While final details of the option agreements are being worked out between the parties and their attorneys, the principals of Seng Dock & Trucking Inc. have authorized me to submit this letter to you.

Very truly yours,

Jim A. Tondu

Edward L. Seng

November 5, 2003

Planning Commission
City of Manistee
70 Maple Street
Manistee, MI 49660

Re: Northern Lights Project

Dear Planning Commission members:

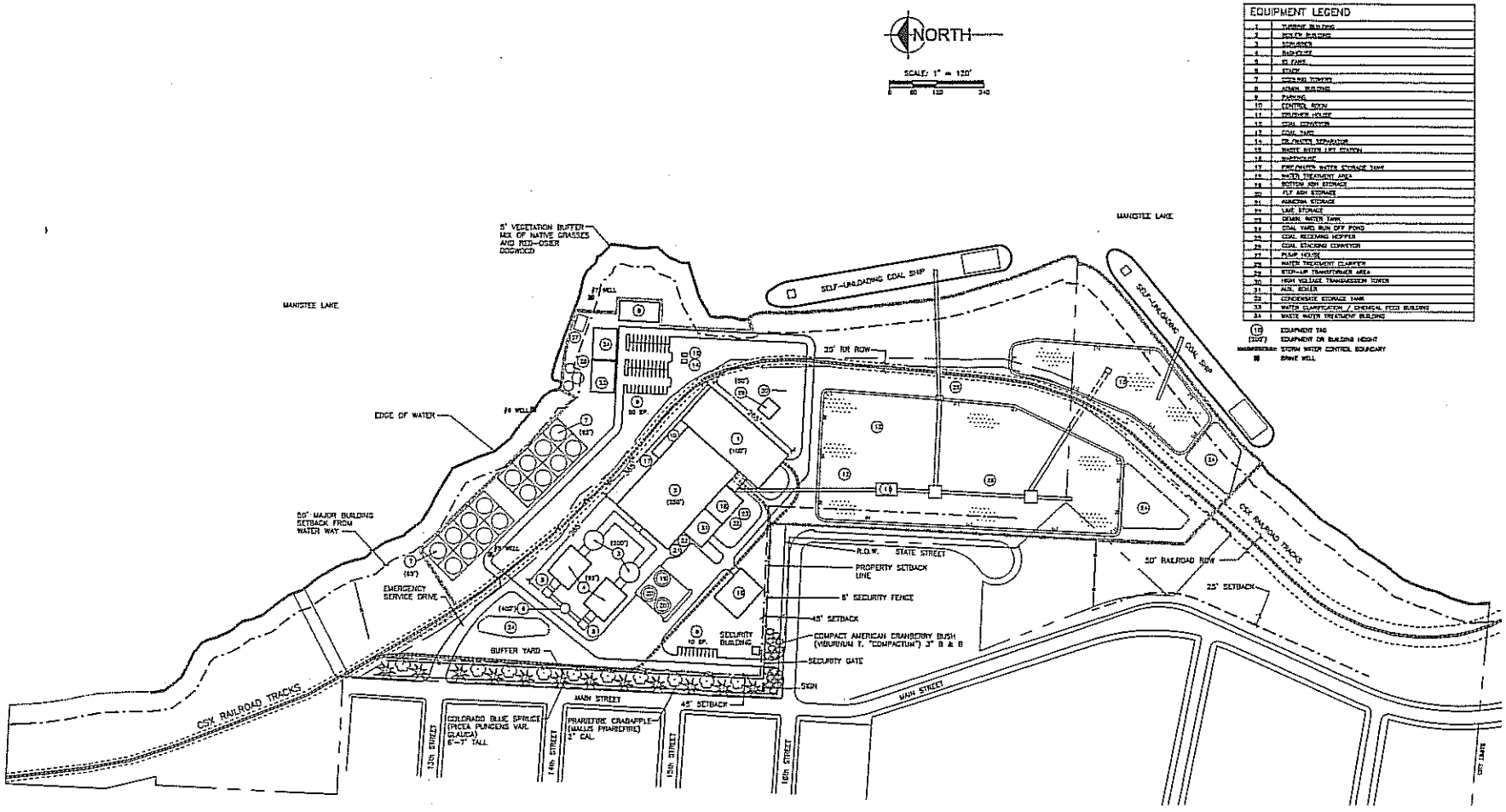
This will confirm for you that Manistee Salt Works Development Corporation has reached agreements in principle with C & E Enterprises, Inc., to acquire options on their properties. C & E parcel consists of parcel number 51-51-712-475-02. While final details of the option agreements are being worked out between the parties and their attorneys, the principals of C & E Enterprises have authorized me to submit this letter to you.

Very truly yours,

Jim A. Tondu

Edward L. Seng

Jeff Seng



PLAN PREPARED BY:

FISHBECK, THOMPSON, CARR & HUBER
1515 ARBORETUM DRIVE
GRAND RAPIDS, MI 49546

NOTES

1. THIS PLAN IS INTENDED AS A SCHEMATIC REPRESENTATION OF THE PROPOSED SITE FOR USE IN THE SPECIAL USE PERMIT APPLICATION SUBMITTAL. IT IS NOT INTENDED TO REPRESENT ALL PROPOSED SITE IMPROVEMENTS NOR BE INTERPRETED AS CONSTRUCTION DRAWINGS. SITE IMPROVEMENTS, INCLUDING BUILDING LOCATION AND SIZES, MAY BE MODIFIED PRIOR TO BUILDING PERMIT APPLICATION SUBMITTAL.
2. THE PROPOSED PARKING PLAN INDICATES 80 TOTAL SPACES TO ACCOMMODATE VEHICLES FROM TWO SHIFTS
5. ALL STORM WATER FROM DEVELOPED SITE AREAS (COAL PILE) WILL BE DIRECTED TO RETENTION AND/OR PRETREATMENT BASINS PRIOR TO OFF-SITE DISCHARGE.
6. FINAL 5' VEGETATION BUFFER AND 50' WATERWAY SETBACK WILL BE BASED ON THE ORDINARY HIGH WATER MARK ESTABLISHED BY TOPOGRAPHIC AND BOUNDARY SURVEY.
7. BRINE WELLS NO.6 AND NO.7 HAVE BEEN CAPPED. BRINE WELL NO.5 IS CURRENTLY IN USE.

Drawn By: MDS
Checked: DJV
Manager: BCV

11/30/01 ISSUED FOR SPECIAL USE PERMIT

Land survey is based on the 27 CSF Index plane.
Contractor to verify all dimensions and conditions prior to construction.

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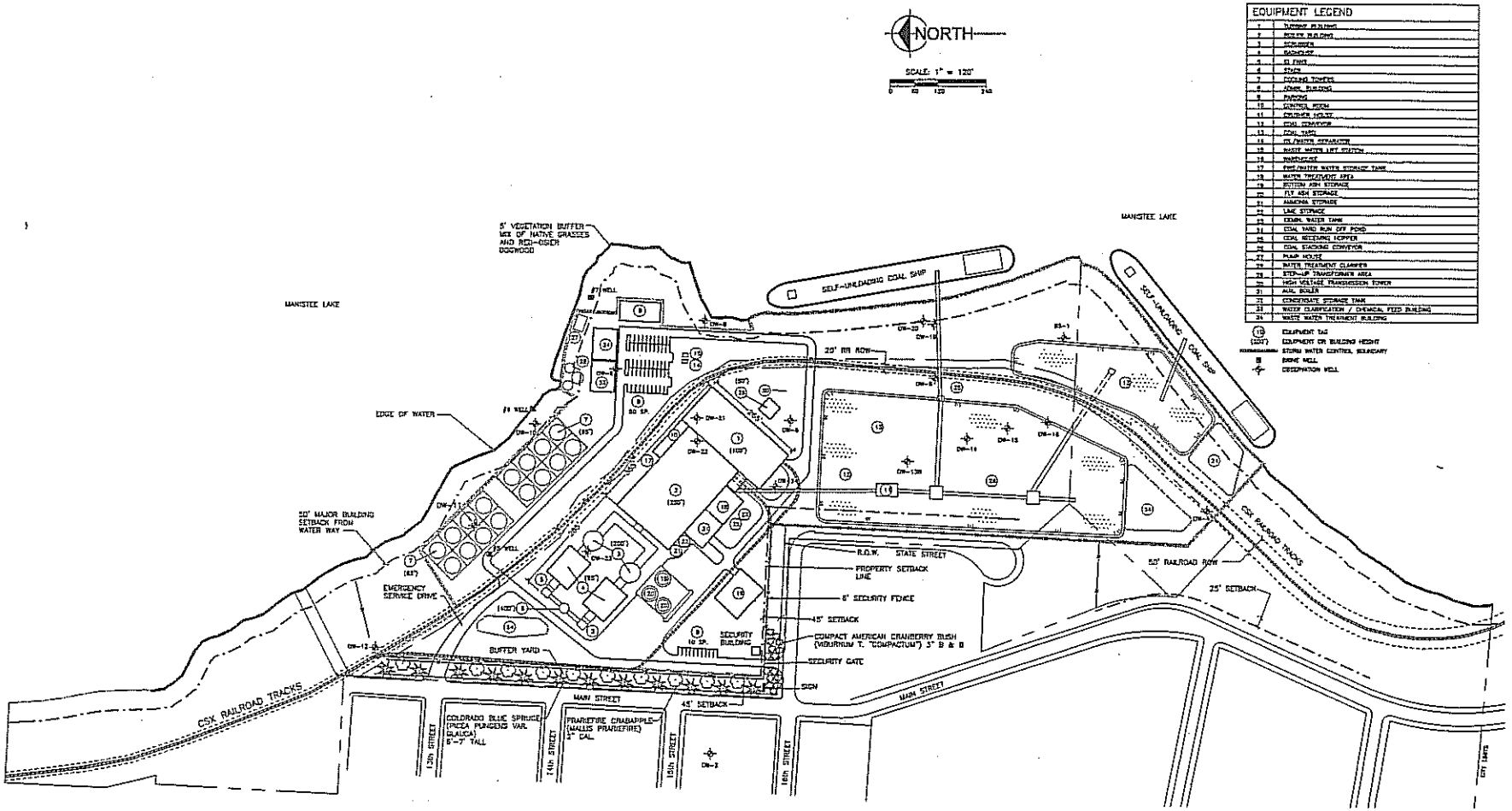
fTC&h
Fishbeck, Thompson, Carr & Huber
Engineers • Scientists • Architects
Grand Rapids, Michigan (616) 575-3824

Manistee Saltworks Development Corp.

Manistee County, Michigan

PROJECT NO.



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2. THE PROPOSED PARKING PLAN INDICATES 60 TOTAL
5. ALL STORM WATER FROM DEVELOPED SITE AREAS (COAL PILE) WILL BE DIRECTED TO RETENTION AND/OR PRETREATMENT BASINS PRIOR TO OFF-SITE DISCHARGE.
6. FINAL 5' VEGETATION BUFFER AND 50' WATERWAY SETBACK WILL BE BASED ON THE ORDINARY HIGH WATER MARK ESTABLISHED BY TOPOGRAPHIC AND BOUNDARY SURVEY.
7. BRINE WELLS NO.6 AND NO.7 HAVE BEEN CAPPED. BRINE WELL NO.5 IS CURRENTLY IN USE.

Drawn By	Checked By	Date	Revision
MEG	DGV	11/30/10	REVISED FOR SPECIAL USE PERMIT

fteh
Fishbeck, Thompson, Carr & Huber
Engineers • Scientists • Architects

Manistee Saltworks Development Corp.

Manistee County, Michigan

Memorandum

TO: Planning Commission Members

FROM: Jon R. Rose
Community Development Director

DATE: November 14, 2003

RE: Public Hearing/Special Meeting

The Public Hearing will be at 7:00 p.m. on Thursday, November 20, 2003 in the Library at the Manistee Middle School. This hearing is to allow public comment on the proposed power plant. We have received several comments/concerns from citizens about the project and they are enclosed in your packet. These items have also been forwarded to the consultants and Tondu.

The Public Hearing/Special Meeting cannot go past 10:30 p.m. because we must vacate the building before 11:00 p.m. It appears that there may be a large number of audience members in attendance and Chairman Yoder may impose the public comment to five minutes per speaker as written in our by-laws. Jay Kilpatrick has provided a guide for speaking during the meetings which is printed on the back of the agenda.

The Public Hearing/Special Meeting is to allow input from the Public in regards to the proposed Power Plant. **I am recommending that no decision be made during the Special Meeting of November 20, 2003.** We will attempt to respond to questions we receive prior to the meeting, but will not be able to provide answers to every issue raised that night. Out of respect to the public and the issues they may raise at the public hearing it is only fair to give due deliberation on a project of this magnitude. It is especially appropriate to include the information furnished by the public in the decision process.

The Planning Commission can continue their deliberation at the regular Planning Commission Meeting on December 4, 2003. The Consultants will be in attendance at both meetings.

If you have any questions, please call me at 723-2558.

JRR:djb

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♦ Engineers
♦ Planners
♦ Surveyors

MEMORANDUM

TO: Jon Rose, Community Development Director
City of Manistee

FROM: Jay Kilpatrick, AICP, PCP

DATE: November 13, 2003

RE: **Special Land Use and Site Plan Review for Proposed Northern Lights Coal-Fueled Power Plan, Manistee Salt Works Development Corporation**

As requested, we have reviewed the materials submitted for the subject special land use and site plan approval. The following comments are based on the materials provided, the City of Manistee Zoning Ordinance, Master Plan and current planning practice in Michigan.

BACKGROUND. The applicant, Manistee Salt Works Development Corporation has been formed by the Tondu Corporation to develop a 425 megawatt coal-fueled power plant to be known as the "Northern Lights Plant." The proposed development will be located on approximately fifty acres located on the western side of Manistee Lake at 1501 Main Street. The virtually inactive General Chemical brine plant currently occupies the site. The existing facilities include brine wells, storage and processing equipment as well as a coal-fuel power facility and outdoor storage of coal. The site is located within the area of the City planned for General Industrial uses and the current zoning of the site is I-2 – Lakefront Industrial District. The City's Master Plan adopted in 2002 describes the General Industrial land use category as including "heavy manufacturing, processing, mining and other types of general industries consistent with existing development." The I-2 zoning district permits a range of heavy industrial uses, based on the Standard Industrial Classification (SIC) system, including the Transportation category, 40 through 4971. A power plant falls into SIC code 4911, "Electrical Services, establishments engaged in the generation, transmission, and/or distribution of electric energy for sale."[1]

The applicant proposes to remove the General Chemical buildings, storage piles and equipment and construct a coal-fueled power plant on the site. The developed portion of the site will include the generation plant, the baghouses, scrubbers and stack, coal storage piles, two freighter docks,

[1] Occupational Safety & Health Administration, U.S. Department of Labor

Phone (616) 224-1500 ♦ Fax (616) 224-1501
549 Ottawa Ave., N.W. ♦ Grand Rapids, MI 49503
www.williams-works.com

water treatment, cooling towers, administrative offices and parking areas. The total developed area of the site is approximately 30 acres. The remainder of the site will be left undeveloped, due largely to sloping terrain.

THE PROPOSED USE. Both the master plan and the Zoning Ordinance contemplate heavy industrial uses in this portion of the City. In fact, the Master Plan describes General Industrial uses as "consistent with existing developments." Nearby developments include, in addition to the General Chemical facility, warehousing and manufacturing facilities, as well as similar industrial uses in Filer Township to the south. The Zoning Ordinance describes the purpose of the I-2 district as seeking to protect Manistee Lake, its water quality and shoreline while encouraging industrial uses that require access to the Lake. In addition, the Zoning Ordinance uses SIC codes to identify uses that are permitted in the various districts.

As indicated, a power plant (SIC 4911) is a permitted use in the I-2 District. However, the applicant proposes a power plant that would involve (1) activity outside an enclosed building; (2) discharge of treated process water to Manistee Lake; and, (3) alteration of the Manistee Lake shoreline. Pursuant to Section 6703 of the Zoning Ordinance, any of these three characteristics of the proposed use trigger the special land use provisions of Article 86. This aspect of the proposed development is discussed below.

SPECIAL LAND USE. The coal-fueled power plant is permitted by right in the I-2 District, subject to site plan approval. However, since this use is likely to be an imposing addition to the shoreline, it is certain to generate community interest. Furthermore, since the proposal includes three aspects that trigger the special land use provisions of the Zoning Ordinance, it is appropriate for the Planning Commission to consider those three aspects of the facility and the entire development under the special land use provisions of Article 86.

As a general observation, most of the comments submitted to date regarding the proposal question environmental impacts from the power plant. The Zoning Ordinance gives the Planning Commission and the City limited authority to address such concerns and many of the technical issues associated with air and surface water impacts are already regulated by State and Federal agencies. However, the site plan review requirements do include a reference to the regulatory requirements of other agencies and site plan approval may be conditioned on documentation of compliance with the requirements of those agencies. This is the approach taken in this analysis.

The application incorporates the following elements which trigger the special land use provisions of Article 86:

1. **Activity outside an enclosed building.** This relates to the proposed coal piles to be maintained on site. The off-loading of coal from Great Lakes freighters and the eventual conveyance of the coal into the boiler facility will essentially occur in the open.

2. **Discharge of treated process water to Manistee Lake.** The application indicates that sanitary sewage from the restrooms, showers etc., in the facility will be discharged to the municipal wastewater collection system. However, water for cooling and other process functions of the power plant and storm water will be treated on site for eventual discharge to Manistee Lake in accordance with the terms of a National Pollutant Discharge Elimination System (NPDES) permit issued by the Department of Environmental Quality.
3. **Alteration of the Manistee Lake Shoreline.** The applicant proposes that the power plant will receive coal from Great Lakes freighters to be docked on the shoreline adjacent to the site. This will require docks, sheet pile and seawall reconstruction which will be subject to the requirements of the Department of Environmental Quality and the U.S. Army Corps of Engineers.

The applicant has submitted a City of Manistee Special Use Permit application for the project, including the above elements. Section 8609 provides the Planning Commission with standards for the review of the special use permit application. Accordingly, we have the following comments for the consideration of the Planning Commission. These comments are organized to address the special land use standards of each of the three special land use triggering elements, and the overall project, as follows:

1. **Standard: Is the use reasonable and designed to protect the health, safety and welfare of the community?**
   a. **Activity outside an enclosed building.**

      Comment: It is reasonable to expect that a coal-fueled power plant would require outdoor storage of coal, especially since the source of supply is freighters. The design of the coal pile is proposed to include dust abatement irrigation and storm water run-off containment that will be an improvement over the current situation where no containment is provided. In addition, the enclosed conveyor coal feed system with wetting and baghouse collectors are a reasonable measure to mitigate fugitive dust. Subject to the proper installation and maintenance of these systems, we believe this requirement will be met.

   b. **Discharge of treated process water to Manistee Lake.**

      Comment: The use of a separate, on-site wastewater treatment facility for the process water offers a reasonable alternative to connection to the municipal system. The primary benefit of this is that the installation will be subject to the rigorous review of the MDEQ for a new discharge permit (NPDES) based on the actual rates of flow and loadings for the proposed system.

      Question/Issue: The applicant should address the quality and quantity of water anticipated to be discharged along with anticipated water temperatures. Any approval

of the special land use must be conditioned upon the satisfaction of the permitting requirements of the MDEQ.

c. **Alteration of the Manistee Lake shoreline.**

Comment: Since the proposed facility is to be serviced by Great Lakes freighters, it is reasonable to expect some shoreline changes to accommodate the vessels. The permitting requirements of the MDEQ and the Corps of Engineers will dictate the extent of any change in the shoreline, including sheetpiling, docks and seawalls. Thus, the nature and extent of actual alteration in the shoreline will not be established until the reviews of these agencies are complete. Any approval of the special land use must be conditioned upon the satisfaction of the permitting requirements of the MDEQ.

d. **Overall Project.**

Comment: A coal-fueled power plant is permitted by right in the I-2 District. In other words, the use itself is reasonable, essentially by definition. Whether it is designed to protect the health, safety and welfare of the community is, however, within the purview of the Planning Commission. In reaching this judgment, the Planning Commission should consider the following impacts:

- Health: This relates to off-site impacts that may affect the physical well-being of area residents and to on-site operations that might impact workers. In this instance air and water quality impacts are the primary off-site issues of concern. Both the air emissions from the facility and the treated water effluent are regulated by the MDEQ. The application indicates that the facility will be designed and permitted to only burn low-sulfur coal to minimize air emissions. This report and its recommendations rely on that declaration and the review and approval authority of the MDEQ.

  The City of Manistee has not established any objective standards to measure or monitor off-site air or water quality impacts, and like most other communities, it relies on State and Federal regulatory agencies in these areas. Furthermore, Section 9410 of the Zoning Ordinance permits the attachment of specific conditions of approval which include demonstration of full compliance with State and Federal standards.

- Safety: The primary issues of safety concern with regard to this facility would include fire suppression and protection pertaining to the plant and its workers as well as nearby properties. In addition, the facility will generate some truck traffic and shipping traffic which will impact the surrounding community. Traffic impacts on local roadways will be similar to those generated by existing uses. Less than 30 truck round-trips daily from the facility will use local, all-season truck route roads. This level of use cannot be characterized as an unreasonable addition to the local road system. The freighter traffic of 13 shiploads per month will cause an

average of 26 draw-bridge cycles per month, during the 10-month Great Lakes shipping season. This may create some traffic congestion and the applicant has indicated a willingness to work with shippers to avoid causing bridge cycles during heavy traffic periods. With regard to potential fire safety impacts, the applicant has provided information concerning the compliance standards the facility must meet. The fire protection aspects of the outdoor storage of coal are addressed in Attachment A, Subparagraph C of the application.

Question/Issue: Concerning fire safety on site, any approval should be conditioned on a complete review and approval by the City of Manistee Fire Chief and/or the office of the State Fire Marshall. Concerning traffic delay related to increased drawbridge use, the Planning Commission may seek further information on the extent of traffic delay that may result from the additional bridge cycles.

- Welfare: Outside of health and safety impacts, it is appropriate to consider whether the proposed project will advance or retard the overall welfare of the community. This question relates primarily to economic benefit or impact. Clearly, the investment the power plant represents will be a significant addition to the tax base of the City and the School District. In addition, the approximately 60 jobs generated will help strengthen the local economy. The replacement of the virtually defunct General Chemical facility with a new – and larger – power plant will strengthen the industrial character of the southern portion of the Lake. This is consistent with the City's Master Plan and the type of development that is desired by the Plan.

  A final possible issue of concern in the area of public welfare is the issue of the imposing nature of the facility and any off-site noise it may generate. This may not have a direct impact on health or safety, but it could impact quality of life in the vicinity. With regard to the imposing nature of the facility, it is clear that its height and bulk will be a predominate feature on the Lakeshore. The 250' high boiler building, the 200 foot high scrubbers and the 400 foot high stack will have a strong aesthetic impact on the shoreline and on adjoining properties. While they are not inconsistent with other uses in the area, they will be significantly larger and more imposing. It should be noted that the Zoning Ordinance was amended in 1999 to permit structures of any height in the I-2 District if approved by the Planning Commission in connection with a special land use permit. Since this application is being submitted through that process, the application for these proposed structures is consistent with the ordinance. The applicant should be prepared to explain the need for structures of this height.

  As to off-site noise, the applicant has proposed that the facility will not generate noise at the property line in excess of 65 decibels. This is comparable to

conversational speech. In an area of other industrial uses, this should be an acceptable standard.

Question/Issue: The Planning Commission may seek further information from the applicant regarding the need for the structure heights illustrated on the site plan.

2. **Standard: Is the use consistent with the intent and purpose of the land Use District?**

   a. **Activity outside an enclosed building.**

   Comment: Both the Master Plan and the Zoning Ordinance anticipate uses similar to power plant in this area of the City. The outdoor storage of coal is consistent with the use as a power plant. Other uses in the vicinity have outdoor storage, so such a facility would be consistent with the existing character of the area. In addition, the improvement of the site with adequate containment of stormwater runoff from the outdoor storage should help to restore both the shoreline and improve water quality by eliminating direct runoff into the Lake.

   b. **Discharge of treated process water to Manistee Lake.**

   Comment: The General Industrial classification in the Master Plan seeks to encourage industrial uses that are consistent with neighboring uses. Many of those uses, including the existing use on the site, make some use of the lake. The I-2 District in the Zoning Ordinance is intended to encourage land uses that require the use of the Lake and proximity to the Lake. Therefore, the discharge of the process water to Manistee Lake is consistent with the land use district. Of course, both the Zoning Ordinance and the Master Plan also stress the need to stabilize the shoreline and improve water quality in the lake, so as indicated above, any approval must be conditioned on the completion of the NPDES and the Corps of Engineers permit processes.

   c. **Alteration of the Manistee Lake shoreline.**

   Comment: Both the Master Plan and the I-2 District in the Zoning Ordinance seek to improve and stabilize the Manistee Lake Shoreline. The proposed alteration may aid this process since the existing site reportedly has some deterioration and erosion, as well as, direct run-off from existing coal piles. The MDEQ and Corps of Engineers requirements for the proposed improvements will establish the proposed design for the shoreline alterations and those requirements must be a condition of any approval.

   d. **Overall Project.**

   Comment: The General Industrial future land use district contemplates "heavy manufacturing, processing, mining and other types of general industries consistent

with existing developments." A coal-fueled power plant is consistent with this description.

3. **Standard: Is the use compatible with adjacent uses?**

   a. **Activity outside an enclosed building.**

   Comment: Since the current use and others in the area have outdoor storage of materials, the proposed outdoor storage will be consistent with other industrial uses. The primary off-site impact from the outdoor storage of coal on nearby residential areas will be the potential for blowing dust. The materials submitted provide for constant dust mitigation for the coal piles, the off-loading system and the coal-feed system.

   Question/Issue: The Planning Commission should seek satisfactory assurances that these systems will be effective in minimizing fugitive dust impacts on residential property and that they will be maintained to remain effective.

   b. **Discharge of treated process water to Manistee Lake.**

   Comment: Other industrial uses in the area that discharge either storm water run-off or treated process water to Manistee Lake include PCA, Morton Salt and the General Chemical plant. However, the discharge from the proposed power plant will be subject to the most current permitting standards and should, therefore, provide a higher quality effluent. Thus, the proposed discharge to the Lake is both compatible with adjacent uses and an improvement of the current situation.

   c. **Alteration of the Manistee Lake shoreline.**

   Comment: Since Great Lakes shipping activity has been a fixture in Manistee Lake, the shoreline has been improved over the years to accommodate numerous uses, including neighboring industrial uses. For example, other land uses import or export aggregate, coal or brine using Great Lakes freighters. Therefore, the proposed alteration of the shoreline is consistent with past practice and existing uses.

   Comment/Issue: Since the nature of the proposed alteration of the shoreline will depend on the MDEQ and Corps of Engineers permitting requirements, the applicant should provide as much detail as possible on likely changes to the shoreline and any approval must be conditioned on compliance with the requirement of the MDEQ and Corps of Engineers.

   d. **Overall Project.**

   Comment: The southern end of Manistee Lake includes a broad variety of land uses ranging from heavy manufacturing, warehousing and processing to some residential and commercial uses. The City's Master Plan includes medium density residential development juxtaposed adjacent to industrial land uses. Thus, the proposed power

plant would be compatible with the adjacent manufacturing and no different than the current situation where industrial uses abut residential in some parts of the area.

4. **Standard: Is the use designed to insure that public services and facilities are capable of accommodating increased loads caused by the land use or activity?**

   a. **Activity outside an enclosed building.**

      Comment: Specific areas of concern would include water and wastewater systems and fire protection. The report of the City's Engineer addresses impacts on municipal water and wastewater systems. The fire protection aspects of the outdoor storage of coal are addressed in Attachment A, Subparagraph C of the application. These materials primarily address the nature of fire suppression systems including water source and distribution on site.

      Question/Issue: The Planning Commission may seek further information from the applicant regarding fire suppression within the coal piles. In addition, any approval should be conditioned on a complete review and approval by the City of Manistee Fire Chief and/or the office of the State Fire Marshall.

   b. **Discharge of treated process water to Manistee Lake.**

      Comment: The discharge of treated process water to Manistee Lake enables the facility to function without any need to draw water from, or discharge wastewater to, the public systems, thus meeting this standard.

   c. **Alteration of the Manistee Lake shoreline.**

      Comment: Any proposed alteration of the Manistee Lake shoreline will not result any increased load or demand on public facilities or services.

   d. **Overall Project.**

      Comment: The primary demands placed on public services and facilities as a result of the overall project will be traffic impacts as well as the fire safety impacts discussed above. The impact of truck traffic generated by the facility is discussed in the City Engineer's report. The added bridge cycles will have the traffic congestion impacts discussed above. The report of the City's Engineer provides information regarding the condition of the bridge.

      Question/Issue: The Planning Commission may seek further information regarding the capability of the drawbridge to handle the added work and, as indicated above the comments and approval of the City Fire Chief and the State Fire Marshall may be a condition of any approval granted.

5. **Standard: Does the use comply with all applicable regulations of this Ordinance?**

   a. **Activity outside an enclosed building.**

Comment: With the conditions of approval outlined below under the discussion of the Site Plan, the activity outside an enclosed building can comply with the requirements of the Zoning Ordinance.

b. **Discharge of treated process water to Manistee Lake.**

Comment: Subject to the permitting requirements of the MDEQ under the NPDES permit, the discharge of treated process water to Manistee Lake can fulfill the requirements of the Zoning Ordinance.

Question/Issue: It must be noted that a final determination with regard to this approval criteria cannot be made until the permit requirements are known and a design is provided that will fulfill those requirements.

c. **Alteration of the Manistee Lake shoreline.**

Comment: Once the requirements of the MDEQ and the Corps of Engineers have been determined, it will be possible for the proposed alteration of the Manistee Lake to comply with the requirements of the Zoning Ordinance.

Comment/Issue: Since the nature of the proposed alteration of the shoreline will depend on the MDEQ and Corps of Engineers permitting requirements, the applicant should provide as much detail as possible on likely changes to the shoreline and any approval must be conditioned on compliance with the requirement of the MDEQ and Corps of Engineers.

d. **Overall Project.**

Comment: The proposed development can meet all the requirements of the City's Zoning Ordinance. As discussed under the Site Plan review section below, portions of the current submittal are viewed as conceptual since they depend on the final review comments of State and Federal regulators. A final submittal based on those review comments must be structured to meet all ordinance requirements.

6. **Standard: Does the use comply with all specific standards found in the respective Land Use District?**

a. **Activity outside an enclosed building.**

Comment: With the conditions of approval outlined below under the discussion of the Site Plan, the activity outside an enclosed building can fulfill the requirements of the Master Plan for compatible general industrial land uses.

b. **Discharge of treated process water to Manistee Lake.**

Comment: Subject to the permitting requirements of the MDEQ under the NPDES permit, the discharge of treated process water to Manistee Lake can fulfill the

requirements of the Master Plan in terms of maintaining and improving Manistee Lake water quality and bank stability.

Question/Issue: It must be noted that a final determination with regard to this approval criteria cannot be made until the permit requirements are known and a design is provided that will fulfill those requirements.

c. **Alteration of the Manistee Lake shoreline.**

Comment: Once the requirements of the MDEQ and the Corps of Engineers have been determined, it will be possible for the proposed alteration of the Manistee Lake to fulfill the objectives of the Master Plan with regard to the General Industrial land use district.

Comment/Issue: Since the nature of the proposed alteration of the shoreline will depend on the MDEQ and Corps of Engineers permitting requirements, the applicant should provide as much detail as possible on likely changes to the shoreline and any approval must be conditioned on compliance with the requirement of the MDEQ and Corps of Engineers.

d. **Overall Project.**

Comment: The power plant is consistent with the future land use requirements for the General Industrial land use classification. The language of the Master Plan also establishes objectives for improving and maintaining the Manistee Lake shoreline, limiting the removal of natural vegetation, re-stabilizing the shoreline with appropriate planes and recognizing the desire of the public to use the shoreline and water resource for recreation. As indicated below, the concept site plan includes improvements to the shoreline and seawall for shipping, but with the added benefit of reducing shoreline erosion. Also the existing coal piles which have no containment to prevent run-off into the Lake will be replaced with contained piles. Further the site plan indicates the preservation of the required 5 foot vegetative buffer and a 50 foot shoreline setback to further stabilize the shoreline.

SITE PLAN. A site plan is a required element of a special land use application. Article 94 of the Zoning Ordinance establishes the requirements for site plan review and approval. Section 9406 details the required content of the site plan. It also provides that the Zoning Administrator may waive certain information to be included if it is determined to be not reasonably related to the proposed use. This degree of flexibility is appropriate and useful, both for the City and an applicant. In this case, much of the information required by Section 9406 has been provided but other elements cannot be produced until State and Federal Regulators have completed the review and tentative approval process. This creates in an awkward and confusing regulatory environment in which adjustments made to satisfy one set of regulators necessitates a revised submittal to another. In reaction to those changes, the previous approval could be jeopardized.

To address this confusion, we have recommended that the special land use and site plan approval process of the City be handled in a two-step process. The initial step would be the primary review and approval of the special land use and concept site plan. This process is the subject of this memo and is scheduled for public hearing on November 20th. The site plan submittal would be reviewed as a concept with most of the key details established at the primary review step. Where some details of the plan cannot be produced at this stage due to the regulatory requirements of State or Federal agencies, the final approval would be deferred until such other agencies have provided their final review. Thus, the Zoning Administrator and Planning Commission would be called upon not to waive those requirements, but to defer action on those elements pending final approval by others.

Based on this approach, we have the following comments on the completeness of the Site Plan submitted with the special land use application and carrying the revision date of November 4, 2003.

1. All of the information required for a Basic Site Plan has been provided, except for Subparagraph 9404, G., concerning parcel splits established since the Zoning Ordinance was adopted. The submittal does not indicate when the various parcels on the site were established, so it is not possible to determine whether this section applies. If it does, the submittal must show all buildings on adjoining properties. While these are not reflected on the Site Plan, they are apparent noted on the aerial photograph submitted with the Project Development Information submitted earlier this fall.

   Question/Issue: The applicant should provide information to establish when the various parcels on the site were created and, if this provision applies, provide the required indication of the location of buildings on adjoining parcels. Alternatively, the Planning Commission may accept the aerial photograph provided earlier as a sufficient response to this item.

2. With regard to the information required for a Medium Site Plan pursuant to Section 9405, we have the following comments:

   A. Basic site plan requirements (see above).

   B. Parcel legal description has not been provided except in the form of the permanent parcel tax numbers which reference the City's own tax records. This is acceptable for this primary review since a metes and bounds legal description of the site will likely change somewhat based on the final permit issued by the U.S. Army Corps of Engineers for the shoreline alteration.

   C. Boundary dimensions on natural features, which in this instance is the Manistee Lake Shoreline, cannot be provided accurately until the final permit issued by the U.S. Army Corps of Engineers for the shoreline alteration is issued.

D. The location of all proposed structures on the site is established in the concept site plan. However, utility lines cannot be designed and the final location of particular features cannot be established until the MDEQ completes its review of the site for both the Air Quality permit and the NPDES permit. In addition, the permits of the U.S. Army Corps of Engineers may impact the location of water intake and discharge facilities along the shoreline. The footprint of the structures is established along with their approximate height. This may be acceptable for this primary review of the concept site plan and final approval of the location of utility lines and the specific location of on-site features may be deferred until the final permit approvals have been received.

E. The location of surface storm water facilities is indicated on the concept site plan. In addition, the City Engineer has established overall design criteria the storm water retention and drainage system must meet. Final engineered design of the site for storm water handling will, however, depend on the requirements of the MDEQ and the NPDES permit. The concept site plan as supplemented by the requirements of the City's Engineer is adequate for this primary review step.

F. Neighboring driveways are not reflected on the concept site plan, although they do appear on the aerial photograph provided with the Project Development Information submitted earlier. The on-site circulation, parking and service lanes are indicated on the concept site plan. This should be adequate for the primary review step.

G. Proposed alterations to the topography of the site are dependent on the Corps of Engineers review of the shoreline alteration permits. The concept site plan reflects minimal change along the shoreline, but a final approval of this may be deferred until the Corps of Engineers permit is issued.

H. The location of connections to public water and wastewater systems is not reflected on the concept plan. Because the final engineering of the site plan will depend on the final DEQ and Corps of Engineers permits, the actual location of these lines may need to be adjusted. The City Engineer will review the final design of the utility connections and those facilities must meet the requirements of the City Engineer. The concept site plan as supplemented by the requirements of the City's Engineer is adequate for this primary review step.

3. With regard to the information required for a Detailed Site Plan pursuant to Section 9406, we have the following comments:

   A. Basic and Medium site plan requirements (see above).

   B. Greenbelts and shoreline buffering is properly illustrated on the concept site plan. The Report of the City's Engineer suggests improvements to the landscape plan for the Main Street frontage.

C. The finished floor elevations and final site grades will be a part of the final storm water handling design which will depend on the requirements of the MDEQ and the NPDES permit. The concept site plan as supplemented by the requirements of the City's Engineer is adequate for this primary review step.

D. As a non-residential development, the requirements of this section are not applicable and should be waived.

E. On site circulation features are properly illustrated on the concept site plan.

F. As indicated above, final changes to the topography of the site will be dependent on the shoreline alteration permit issued by the U.S. Army Corps of Engineers. The concept site plan reflects minimal change along the shoreline, but a final approval of this may be deferred until the Corps of Engineers permit is issued.

G. Generalized soils information will not be required since the applicant's engineer must assume responsibility for soils stability.

H. Soil erosion and sedimentation measures will be dependent on the shoreline alteration permit issued by the U.S. Army Corps of Engineers. In addition, the County Enforcement Agent (CEA) for Act 451 will establish specific standards to minimize construction-related soil erosion. The concept site plan as supplemented by the requirements of the City's Engineer is adequate for this primary review step.

I. Changes necessitated by applicable regulatory agencies must be reflected in the final site plan. However, since those agencies are continuing their review of the application any such changes cannot be incorporated in the concept site plan.

COMMENTS and RECOMMENDATION. With the forgoing review of the submittal and the basis of review described above, we offer the following recommendations.

1. **Special Land Use.** Subject to the analysis set forth here, satisfactory responses to the questions outlined in this memorandum and set forth below and a final site plan review and approval; and in view of the substantial economic benefit and added tax base the project represents to the community; it is recommended that the Planning Commission grant special land use approval for the proposed Northern Light power plant. This recommendation is subject to the following conditions:

   a. That the applicant disclose to the City the proposed discharge water quality, quantity and temperature to be applied for through the NPDES permit and the subsequent review and acceptance of such limits by the City's Engineer;

   b. That the applicant take steps satisfactory to the City's Zoning Administrator to secure the cooperation of the shippers to serve the facility to minimize traffic delays during peak traffic periods caused by drawbridge openings.

c. That the applicant provide the City with justification for the proposed structure heights acceptable to the Planning Commission.

d. That the applicant provide assurances satisfactory to the Planning Commission that the dust mitigation measures will be effective and will remain effective during operation.

e. That the applicant maintain close communication with the City Zoning Administrator regarding shoreline alteration permitting procedures with the MDEQ and U.S. Army Corps of Engineers.

f. That the final design of the fire suppression and fire protection systems proposed be reviewed and approved by the City of Manistee Fire Chief and/or the office of the State Fire Marshall.

g. That the applicant provide a complete site plan pursuant to Section 9406 incorporating the final permitting requirements of the MDEQ and U.S. Army Corps of Engineers and that, as outlined below, said site plan shall be generally consistent with the Special Use Permit Application signed November 6, 2003 including all of the attachments provided.

h. That the facility shall be operated continuously in compliance with all required City, State and Federal permits and licenses and any violation of the terms of such permits or licenses may be grounds for the revocation of the special use permit.

2. **Site Plan.** The concept site plan illustrates a facility that meets the land use and dimensional requirements of the I-2 District, with the exception of the height limitation, as discussed below. The concept site plan is as complete as possible, given the uncertainties of the MDEQ and U.S. Army Corps of Engineers permitting process. Therefore, it is recommended that the Planning Commission grant conditional approval to the Northern Lights power plan concept site plan dated November 4, 2003, subject to the comments of the City's Engineer and the following conditions:

   a. No zoning permit or Michigan Construction Code permit shall be issued for the proposed facility until a completed site plan is submitted, addressing the items listed in this report, any comments of the City Engineer and the following items, to the satisfaction of the Zoning Administrator:

      1) Documentation of the approval of all required permits as outlined in Required Permits Attachment to the Special Land Use Application signed November 6, 2003;

      2) Adjustment of the concept site plan to incorporate actual permit requirements of the Michigan Department of Environmental Quality and the U.S. Army Corps of Engineers (subject to paragraph b, below);

      3) Limitation of the height of outdoor coal storage piles to not more than fifty feet.

   b. The applicant shall submit a final site plan in accord with Subparagraph a above and in accordance with the comments of the City's Engineer within twelve months of the date of

this approval. It is understood that some minor adjustments may be made in the final site plan when compared to the concept site plan dated November 4, 2003. Minor adjustments in the site plan may be approved by the Zoning Administrator, subject to the following limitations:

1) Any permitting modifications that change the nature of the operation in terms of the types of the fuel used or an increase the power output of the facility shall require the review and approval of the Planning Commission.

2) Any permitting modifications that change the footprint or increase the height of any building by more than 10% shall require Planning Commission approval. Provided, that any increase in the stack height above 400 feet shall require Planning Commission approval.

3) Any permitting modifications that change in the Manistee Lake shoreline that results in more than 50 feet of either cut or fill shall require Planning Commission approval.

4) Any permitting modifications that change the concept site plan such that the requirements of the City Engineer cannot be fulfilled shall require the approval of the Planning Commission.

5) Any additional modifications which, in the judgment, of the Zoning Administrator results in a significant change in the proposed facility or which significantly changes the basis upon which the Planning Commission adopted the special land use approval or the concept site plan approval, shall require the review of the Planning Commission.

November 12, 2003

City of Manistee Planning Commission
70 Maple Street
P.O. Box 358
Manistee, Michigan 49660

RE: Manistee Saltworks Development Corporation
Northern Lights Project

Dear Planning Commission:

The following report is being submitted to outline the engineering review for the Northern Lights Project, special use permit. Our review encompasses the following areas of interest as it relates to City infrastructure and resources including: Storm water runoff and management, wastewater management (any flow directed to the sanitary sewer system), potable water supply, traffic flow, and site plan considerations. This review does not include any scrutiny of environmental considerations that will be directly addressed by the Michigan Department of Environmental Quality or the Environmental Protection Agency such as emissions or discharge into nearby waterways. Our goal is to provide an objective review based on facts to provide the City with the proper information to make an informed decision. Our report on each of the above-outlined review areas follows in more detail.

Storm Water Runoff and Management

The proposed site is divided into two basic areas, developed and un-developed. The developed area includes the site proper and encompasses all buildings, roads, drives etc. It is this area where we are most concerned with the storm water generated from storm events. This area is depicted on the site plan by a heavy gray line. Any storm water generated from the area encompassed by this line will be treated by their onsite water treatment plant prior to being discharged to Manistee Lake. Areas outside of this line or the un-developed area will be vegetated and will drain directly to Manistee Lake without prior treatment. The site is to be designed for a 25-year storm event which equates to 3.9-inches of rain in a 24-hour period for Manistee County. This is an industry standard for commercial sites of this nature.

Storm water will be utilized for dust control on the coal piles. Spray irrigation will be applied to the coal to keep it wet and minimize fugitive dust problems. This will not only help reduce the dust, but it will also be a good use for the accumulated storm water.

Potential conditions for approval:

- *The developer will submit a site plan showing the existing and proposed contours for the site in 1-foot intervals.*
- *All storm water from the developed area will be captured and treated by the proposed onsite water treatment plant prior to entering Manistee Lake.*

- *All areas outside the developed area will be vegetated enough to eliminate erosion of surface soils into Manistee Lake.*

- *The perimeter of the developed area will be graded so no water leaves the developed area and directly or indirectly enters Manistee Lake without prior treatment by the onsite water treatment plant.*

Wastewater Management

As discussed in Attachment A of the submitted application, the only flow that is proposed to be directed to the City's sanitary sewers and Wastewater Treatment Plant will be standard sanitary waste from the bathrooms, showers and kitchenette areas. The existing sanitary sewer mains that serve the existing site are 10 and 12-inch mains. The proposed development will discharge less sanitary flow than that of the previous occupant. Therefore, at this time, upgrades to the existing sewer mains are not anticipated for the proposed development. As the flows will be less than that generated by the previous occupant and the fact that the flow will be made up of standard sanitary sewage, it will not adversely affect the existing wastewater treatment plant and will not require the need for the existing treatment plant to be upgraded. Any future changes to the volume or makeup of this flow will need to be assessed to determine the adequacy of the existing system.

Potential conditions for approval:

- *The flow directed to the City sanitary sewer system will only consist of sanitary waste and will not include any process or storm water unless prior approval is granted by the City of Manistee.*

- *The cost for any future upgrades to the City's sanitary sewer and/or wastewater treatment system resulting from a change in sanitary sewage flow makeup or volume will be borne through joint efforts between the project owner and the City of Manistee.*

Potable Water Supply

The existing site is supplied with municipal water from 6" water mains. The proposed development will only use municipal water for potable uses such as drinking, washing and toilets. Sufficient potable water supply is currently available in comparison to past uses on the site.

Potential conditions for approval:

- *Any future upgrades to the City's water mains resulting from a change in water demand will be funded solely by the owner proposing the changes and will include the cost of restoration.*

Traffic Flow

Shipping

Due to the nature of the proposed development, there are several areas where traffic flow will be affected. The first is shipping traffic. The proposed development will increase the volume of shipping traffic by 13 ships per month. This equates to 26 bridge openings per month based on the average numbers. With each opening, traffic is disrupted in the downtown area. Along with regular passenger and overland commercial traffic disruptions, emergency vehicle routes also become more of an issue due to the increased bridge activity. Currently, emergency providers are notified when the bridges will be open and from this, they plan alternate routes accordingly. This has been successful in the past; however, adding 26 operating cycles per month will add to the chance of problems with emergency vehicle access.

Recently, the City has experienced erratic problems with the operation of the bridge. After the inspection was complete, the report stated that the electrical system is at the end of its useful life and that this was the cause of the operation problems. From this, the City applied for a Critical Bridge Grant to secure funding in an effort to fix the problem; however, the review period is not complete and decisions have not been made to determine successful applicants. From this, if the City does not get funding to repair the bridge, will the existing system be able to handle the increased shipping traffic without a major expense to the City?

Overland traffic flow

The largest change in overland traffic flow will be the addition of ingress and egress trips for the normal operation of the plant. The largest reason for this traffic is to remove ash and haul it adjacent to the T.E.S. and Shoreline Landfill. Attachment A of the application shows the haul routes proposed to each of the landfills. A good portion of the routes are in outlying townships.

Rail traffic is not expected to increase, as the proposed development is not anticipating the need to utilize the railroad for transporting material. The largest potential for increased rail traffic is during the construction period when contractors may opt to have materials delivered by rail.

Site Plan Considerations

The submitted site plan is lacks information in a few areas; however, due to the size and nature of the project, these items should be allowed to be submitted at a later date pending approval of the various permits. In order to review the proposed drainage courses for storm water, it is helpful to review the existing and proposed contours of the site.

The landscape plan is abbreviated other than that area along Main Street. In this location, they call for a mixture of coniferous and deciduous trees. I feel that these should be placed on a small berm (approximately 4' high). This will allow the trees to have a higher influence and will aid in screening the adjacent residential area from the proposed development. It appears that the building setbacks have been met, although this will be scrutinized in more detail in the Zoning Compliance Review completed by Williams and Works under separate cover.

Conclusion

Although the package is lacking in some areas, I feel that they are minor and can be resolved or addressed by placing the conditions listed in each section above. With all of the State and Federal regulatory issues aside, I feel that this meets the requirements of the existing Zoning for an I2 Industrial Lakefront District. The storm water will be handled properly, the need for infrastructure upgrades is minimal to non-existent, and the added traffic flow will have minimal impact on the downtown area of the City of Manistee with the exception of freighter traffic.

Very truly yours,

WADE-TRIM, INC.

Brian C. Sousa

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cc: Mr. Mitch Deisch
Mr. Jon Rose

MEMO TO: Jon Rose, Community Development Officer

FROM: Sid Scrimger, Fire Chief

DATE: November 7, 2003

SUBJECT: Northern Lights Project

I have read the excerpt you gave me regarding the Northern Lights project and would make the following comments:

As I understand it the current issue before the Planning Commission is the coal pile and storage. There are a number of issues regarding the plant itself that require significant research and assurances on the part of Tondu that I couldn't address now.

As for the coal pile, the most significant fire problem seems to be a relatively high tendency toward spontaneous combustion in Powder River Basin coal. In the coal pile itself, this is best managed by proper storage techniques and maintenance of an adequate access road all around the storage pile to facilitate firefighting.

In the coal conveyers, there should be assurances that an adequate fire suppression will be in place throughout the conveyer system. In addition, firefighting may require application of large amounts of foam. To Tondu's benefit, The city is well equipped to use foam, and the new pumper has a very capable foam system. It may be necessary, however for the city to purchase large quantities of foam stock to be prepared for a coal dust fire. Since the exact amount of foam would need to be determined along with construction plans, you should simply get the assurance that if the city needs larger stocks specifically for Northern Lights, Tondu will bear the cost.

Please keep me abreast of developments.

cc: Mitch Deisch, City Manager

MEMO TO: Jon Rose, Community Development Director

FROM: Sid Scrimger

DATE: November 14, 2003

SUBJECT: Northern Lights

Pursuant to our conversation yesterday, I would like to make the following clarification regarding my previous memo:

I mentioned that there are issues I have am not prepared to or able to address at this time. Specifically, I was referring to issues involving hazardous materials, building access, fire protection, and the potential for confined space rescue within the building. Since I have seen no specific plans regarding these issues, I could not comment on them at this time. If all state and local codes are followed as the planning and construction of this facility move forward, these issues will not present problems.

I did not want to imply any reservations with the application as presented. I also didn't want to imply that I was "signing off" on any further fire department oversight. I am looking forward to continued involvement in the planning process.

Memorandum

TO: Planning Commission Members

FROM: Jon R. Rose
Community Development Director

DATE: November 13, 2003

RE: Health Statistics

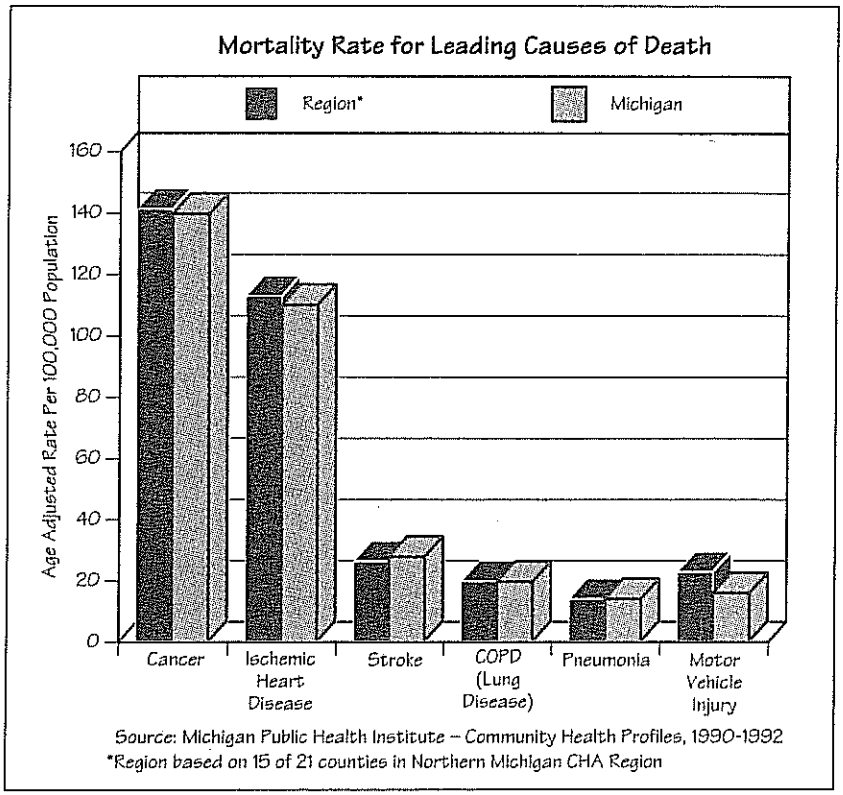
Attached is information from the Health Department regarding Health Statistics- Mortality Rates for Northern Michigan. This is information that was requested during one of our worksessions/meetings for the proposed power plant.

JRR:djb

Building a Healthier Northern Michigan

Mortality Rate for Leading Causes of Death

- Heart disease and cancer are the leading causes of death in northern Michigan, as they are elsewhere in the state.
- After heart disease and cancer, the rates of death due to other causes are substantially lower. The next most frequent causes of death include stroke, motor vehicle injury, COPD and pneumonia.
- Compared to the state overall, our region has a significantly higher death rate due to motor vehicle injuries (especially among teens and young adults).

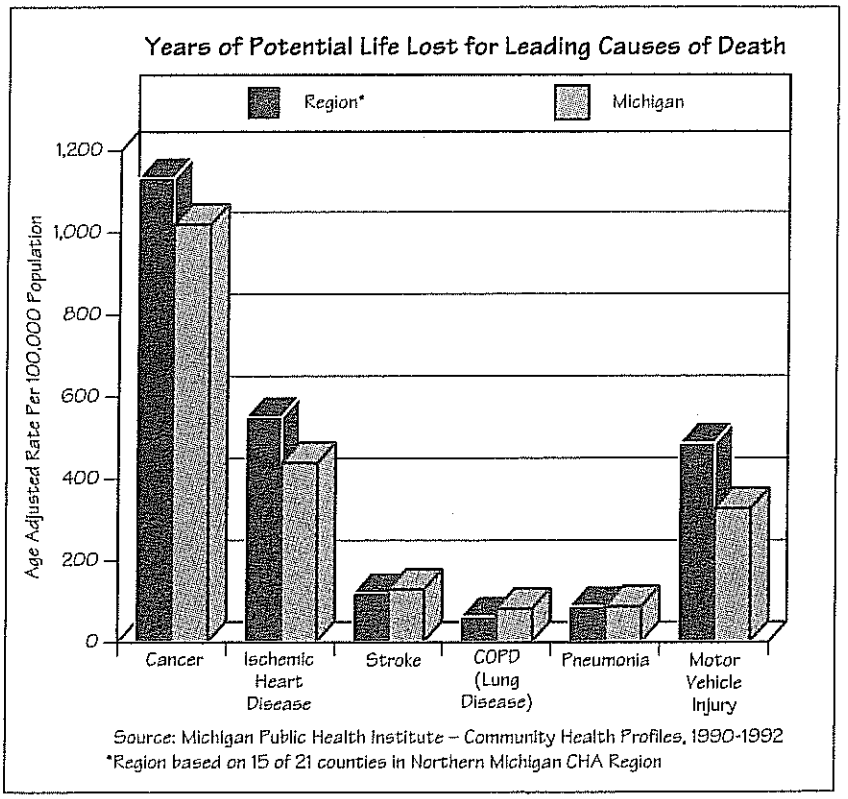


Source: Michigan Public Health Institute – Community Health Profiles, 1990-1992
*Region based on 15 of 21 counties in Northern Michigan CHA Region

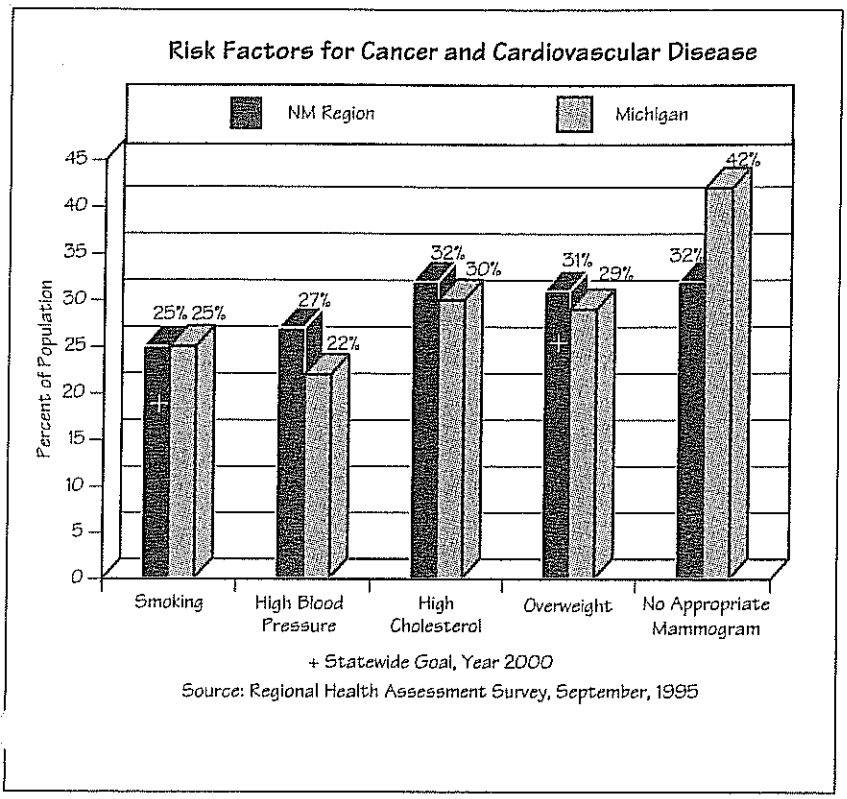
Ischemic heart disease includes chest pain and heart attacks.

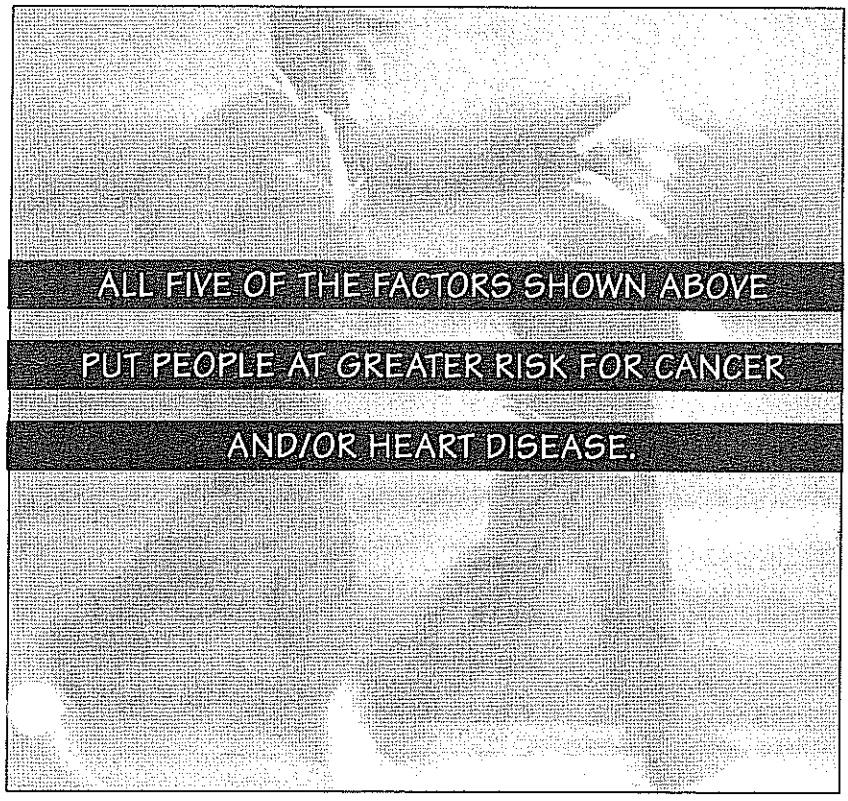
Years of Potential Life Lost for Leading Causes of Death

- Looking at years of potential life lost is a way to examine what might be considered "premature death" and measure the number of years of life that are lost. Here, age 65 is chosen as a comparison, so if an individual died at 45 we would attribute 20 years of potential life lost due to their death.
- Cancer, ischemic heart disease and motor vehicle injuries lead the causes of potential life lost in northern Michigan.
- The region is higher than the state for years of potential life lost in all three of these areas (cancer, ischemic heart disease and motor vehicle injury). This indicates that in northern Michigan, people are dying from these causes at younger ages relative to



Source: Michigan Public Health Institute – Community Health Profiles, 1990-1992
*Region based on 15 of 21 counties in Northern Michigan CHA Region





LIFESTYLE FACTORS

Risk Factors for Cancer and Cardiovascular Disease

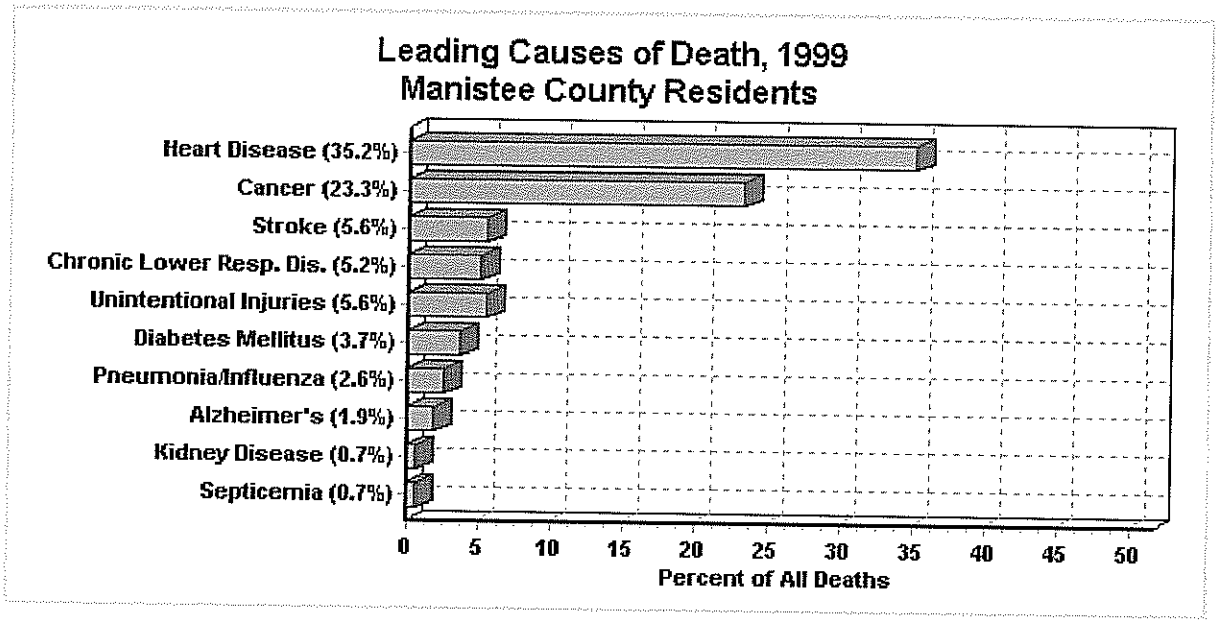
- All five of the factors shown on the left put people at greater risk for cancer and/or heart disease.
- One-quarter to one-third of northern Michigan residents have at least one of these risk factors for cancer or heart disease.
- Twenty-five percent of residents in northern Michigan currently smoke. This is substantially higher than the state-wide goal of 15% by the year 2000.
- Thirty-one percent of residents in northern Michigan are overweight, which is significantly higher than the statewide goal of 20% by the year 2000.
- Thirty-two percent of women in northern Michigan have not had a mammogram in accordance with guidelines recommended by the American College of Surgeons.
- Many risk factors and personal health behaviors coincide with socioeconomic indicators such as income and education. This information is useful if you are attempting to target intervention strategies to reach segments of the population at greatest risk. For instance, while 32% of all women in northern Michigan have not had a mammogram within the recommended timeframe, this level rises to 43% among women in the lowest income group compared with 19% of women in the highest income group.

Health Statistics - Mortality Rates 1998-2000

County	Heart Disease	Cancer	Stroke	Chronic Lower Resp. Disease	Unintentional Injuries
Crawford	314.6	215.4	59.2	51.9	X
Kalkaska	292.6	233.0	56.4	X	X
Lake	279.1	226.8	64.4	53.1	61.6
Manistee	286.5	201.9	55.4	30.7	50.3
Mason	271.6	207.9	56.6	41.5	28.9
Mecosta	264.3	204.8	78.9	54.2	38.6
Missaukee	227.6	185.3	68.1	43.8	59.3
Newaygo	271.5	160.3	58.3	59.2	57.5
Oceana	292.2	196.4	43.2	46.8	57.7
Wexford	253.5	205.2	58.8	53.5	52.0
DHD#10 Totals	273.4	198.8	59.8	48.1	47.2
Michigan	290.7	204.1	61.8	43.3	32.5

Note: All mortality rates except for infants are aged-adjusted and based on a population of 100,000. Standard population is based on year 2000 distribution. The rates are at a 95% confidence interval. The underlying cause of death is the condition giving rise to the chain of events leading to death, From 1979-1998 the Ninth Revision of the International Classification of Diseases (ICD9) was used. Starting in 1999, causes of death were classified using ICD10 codes. There is differences in classifying the underlying cause of death between the two codes. Caution should be taken in drawing specific inferences from comparisons of mortality statistics over time because of this.

X- indicates the data did not meet standards, reliability, or precision.


Leading Causes of Death, 1999
Manistee County Residents
Heart Disease (35.2%)
Cancer (23.3%)
Stroke (5.6%)
Chronic Lower Resp. Dis. (5.2%)
Unintentional Injuries (5.6%)
Diabetes Mellitus (3.7%)
Pneumonia/Influenza (2.6%)
Alzheimer's (1.9%)
Kidney Disease (0.7%)
Septicemia (0.7%)
0 5 10 15 20 25 30 35 40 45 50
Percent of All Deaths

Selected Health Statistics
Manistee County and Michigan Residents

Selected Natality Statistics, 1997-1999
Three-Year Averages

Natality	Manistee	Michigan
Abortion rate	5.3 ±1.3	12.2 ±0.1
% Births with adequate prenatal care	72.1 ±3.3	75.0 ±0.1
Teen pregnancy rate	55.3 ±9.9	70.9 ±0.5
% Low weight births	7.7 ±2.0	7.9 ±0.1

Selected Mortality Statistics, 1999

Mortality Rates	Manistee	Michigan
AIDS	-	2.4 ±0.3
Alcohol-Induced	*	6.3 ±0.5
Alzheimer's Disease	*	15.1 ±0.8
Cancer	191.6 ±47.8	203.8 ±2.8
Chronic Liver Disease	*	10.5 ±0.6
Chronic Lower Respiratory Disease	*	44.6 ±1.3
Diabetes-Related	63.1 ±26.5	82.3 ±1.8
Heart Disease	279.6 ±56.5	288.1 ±3.4
Homicide	-	7.5 ±0.5
Infant mortality	7.0 ±6.1	8.1 ±0.3
Kidney Disease	*	14.8 ±0.8
Pneumonia & Influenza	*	24.1 ±1.0
Septicemia	*	11.8 ±0.7
Stroke	*	63.2 ±1.6
Suicide	*	9.8 ±0.6
Unintentional Injury	*	32.3 ±1.1

Notes:

Abortion rates are per 1,000 Michigan women aged 15-44.
Adequate prenatal care is as defined by the Kessner Index, a classification of prenatal care based on the month in which care began, the number of prenatal visits and the length of the pregnancy.
Teen pregnancy rates are per 1,000 females ages 15-19. Pregnancies are the sum of live births, reported induced abortions and estimated miscarriages. Miscarriages are estimated by adding 20% of the live births and 10% of the reported induced abortions.
Low weight births are less than 2,500 grams.

Infant mortality rates are per 1,000 live births.
Death rates are per 100,000 population age-adjusted to the **2000** U.S. population. Death data displayed are by the underlying cause of death which is the condition giving rise to the chain of events leading to death. Causes of death are classified in accordance with the Tenth Revision of the International Classification of Diseases (ICD-10), a coding structure developed by the World Health Organization. This revision has been used to classify deaths since January 1, 1999. The ICD-10 codes are grouped into broader categories for the causes listed in this table in order to classify these selected causes of death.

Adding and subtracting the number shown after the ± symbol to and from the rate creates the lower and upper bounds of the confidence interval. The true rate lies between the interval with 95% statistical confidence.

* indicates that data do not meet the standards of precision or reliability.

Source: Michigan 1997-1999 Resident Birth, Death and Reported Induced Abortion Files,
Division for Vital Records and Health Statistics,
Michigan Department of Community Health;
Population Estimate (revision 10/2000), Office of the State Demographer, Michigan Department of Management and Budget

Last updated 3/30/2001

Rates of Years of Potential Life Lost Below Age 75, Due to Selected Causes of Death Manistee County and Michigan Residents, 1999

Michigan Rank	Cause of Death	Manistee			Michigan		
		Total	Male	Female	Total	Male	Female
1	Cancer	1,700.3	1,587.3	1,819.9	1,555.1	1,644.6	1,469.7
2	Heart Disease	1,187.9	1,542.0	814.2	1,324.3	1,838.7	835.4
3	Unintentional Injuries	*	*	*	876.5	1,263.7	508.5
4	Homicide	-	-	-	319.9	521.3	128.4
5	Suicide	*	*	*	309.5	520.9	108.6
6	Stroke	*	*	*	202.6	208.5	197.1
7	Chronic Lower Respiratory Diseases	*	*	*	188.6	191.2	186.0
8	Chronic Liver Disease & Cirrhosis	*	*	*	173.9	248.7	102.8
9	Diabetes Mellitus	*	*	*	167.8	188.8	147.9
10	Pneumonia/Influenza	*	*	*	90.5	101.8	79.8
11	AIDS	-	-	-	78.0	130.5	28.1
12	Septicemia	*	*	*	75.5	87.8	63.8
13	Kidney Disease	*	*	*	69.1	80.5	58.3
14	Alzheimer's Disease	*	*	*	8.9	8.2	9.5

Note: The years of potential life lost below age 75 is a measure of mortality designed to emphasize mortality which is prevalent among persons under age 75. The number of years of potential life lost is calculated as the number of years between the age at death and 75 years of age for persons dying before their 75th year. Records with sex unspecified are included only in the total column.

Rates are per 100,000 population.

Asterisk (*) indicates that data do not meet standards of reliability or precision.

Data displayed are by the underlying cause of death which is the condition giving rise to the chain of events leading to death. Causes of death are classified in accordance with the Tenth Revision of the International Classifications of Diseases (ICD-10), a coding structure developed by the World Health Organization. This revision has been used to classify deaths occurring on or after January 1, 1999. The ICD-10 codes are grouped into broader categories for the causes listed in this table in order to classify these selected causes of death (e.g., ICD-10 codes C00-C97 are used to indicate deaths due to cancer).

Source: 1999 Michigan Resident Death File, Division for Vital Records and Health Statistics, Michigan Department of Community Health.
Population Estimate (latest update 10/2000), Office of the State Demographer, Michigan Department of Management and Budget

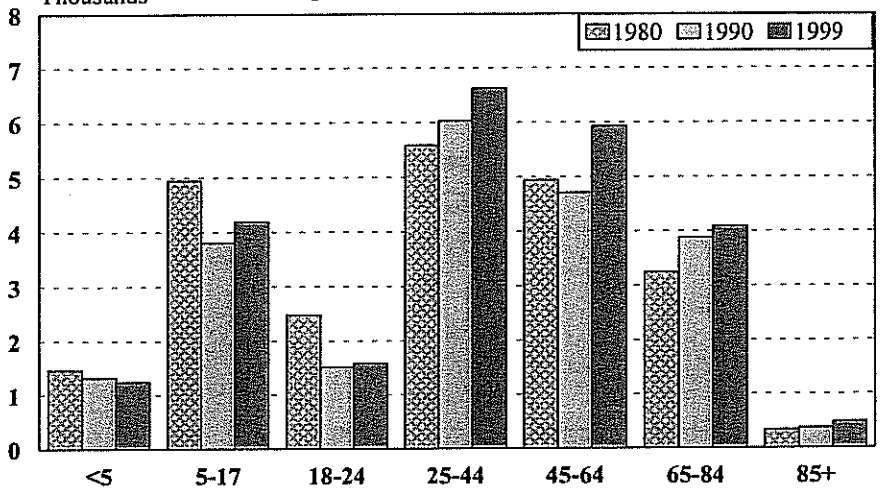
Age

The Median age of Manistee residents continues to go up:

	1980	1990	1999
Manistee	**32.8**	**38.1**	**39.2**
Michigan	**28.8**	**32.6**	**35.9**
U.S.	**30.0**	**33.0**	**36.5**

- Of the 23,665 people who lived in Manistee in 1999, 59.7 percent were between 18 and 64 years of age; the remaining 40.3 percent included 5.3 percent children under the age of 5, 17.7 percent youth ages 5 to 17 and 17.3 percent over the age of 65.
- The fastest growing age group is the 45 to 64 year -olds, which includes the oldest of the "baby boomers." This group grew by 1,222 or 26.0 percent since 1990.
- "Seasoned citizens," those age 65 and over, grew by 206 or 5.3 percent since 1990. One in six Manistee residents is age 65 or older.

Age Distribution



MANISTEE COUNTY DATA

Demographics: Manistee County has seen a 15.3% increase between 1990 and 2000. Of this increase, 11-20% are age 65 or older. We range in the middle compared to the other 20 counties, but are well above the 6.9% for the state. The northern 21 states are seeing a drastic population increase, particularly of the 65+ population. This will drive future social and medical needs of the county.

Health Insurance Coverage: About 11% of our county residents have no insurance coverage. Although this is higher then the state average, it is in line with the other counties participating in the survey.

Body Mass Index: About 36% of our residents are considered overweight, which falls in line with the other counties. Our percentage of obesity is higher at 24%. Data from the past survey indicates that our population has gone from overweight to obese. This trend has very specific consequences in regards to future health trends for the county as high blood pressure and diabetes are related to obesity. We have seen a 10% increase in acute hospitalizations in adults with a diagnosis of hypertension and an 8% increase for those diagnosed with diabetes.

Smoking: In Manistee 22% of our current smoking population started before the age of 16. Almost half (48%) of our citizens smoke. This is similar to surrounding counties. We are the only county that saw a decrease in smoking for the 18-24 age cohort (from 43 to 40%), but this brings us back down to the regional average. Those who still choose to smoke are smoking fewer cigarettes a day than they were five years ago.

Alcohol: At the time of the survey, 14% of our population had been binge drinking at least once in the past month compared to the regional rate of 5.7% and 10% had been binge drinking 5 or more times compared to the regional rate of 5 %. Other data collected indicates that in the past five years those who were drinking 1 or less drinks on an occasion are now drinking 2 to 4 drinks per occasion, showing a 10% increase.

Mental Health: Ninety-one percent of our population indicates their general mental health is good. Of those, 81% indicate they are happy all or most of the time. This is in keeping with area trends.

Violence: In the 21 county region, 2.6% of respondents indicated someone in their household had experienced some type of violence in the past 12 months. The Manistee rate is similar at 3%.

Air Quality: The 49660 zip code is one area that reported they were less then satisfied with the quality of air. (7.5%) This may be the result of the number of industries with in the zip code area.

Social Capital: Manistee County rates are similar to the total rates for all 21 counties but we are higher in this area then many of the other individual counties. Although our residents report the same rates of good physical health, they do have slightly higher rates of regular doctor visits and are more satisfied with their usual source of medical care. Our rate for residents participating in organizations such as clubs, church, neighborhood groups, sports teams or musical or theatre groups is higher then the regional total.

Mammography and PSA: Manistee County rates for women having appropriate mammograms is higher than the regional rate (82%), but we are lower in regards to women who perform self- breast exams. Sixty-one percent of our male residents have had an appropriate PSA or DRE, while we would like to see this number increase it is higher than other counties in the region. Only 38% of them perform self-testicular exams, which is average with the region.

Conclusions: Overall, Manistee County is very similar with the other counties in the 21 county survey, but there are a few areas where we stand out. The outcomes follow distributions of age and social economic status so closely local programs seem of small importance in the differences. Our health care systems will continue to be challenged by the growing population, particularly in regards to our aging population. Risky behaviors are largely unchanged since 1995, but we have seen a slight improvement in the smoking trends and worsening trends in the alcohol behaviors. Risky behaviors are more likely to be practiced by people who are at the end of the socio-economic spectrum and be unmarried with children.

Residents in Manistee County report feeling happier and more socially connected then the other counties, but the trend for those under 25 to feel the least happy and unhealthy is the same as the regional rates.

Obesity and physical inactivity rates are increasing as are the number of people diagnosed with hypertension and diabetes. The increase in diagnoses may be in part to the higher rate of residents who receive regular health care, but national health reports indicate that the health risks of obesity and physical inactivity are being seen in a younger population, many as

young as elementary school. This trend puts our youth at risk to develop serious disease such as diabetes and heart disease at a much earlier age than we have seen previously.

More women are receiving mammograms than were five years ago and we need to improve this trend for the number of men receiving PSA and DRE. More residents are seeing physicians and are having tests for serious conditions such as hypertension, diabetes, mammograms, pap smears etc. This will help with early diagnosis and appropriate medical interventions, but prevention of the disease conditions would be the best trend.

What Next: Many groups in the area are using the data to establish trends. Locally, obesity and physical inactivity are being targeted by several agencies that work together collaboratively through the community health assessment process. The Human Services Collaborative Body of Manistee County is looking to work with senior groups to determine needs and help target services. They are also looking at what assets we can build with our youth to help prevent risky behaviors and help them feel more connected to their community. Regionally several groups are looking at the issue of health care access and insurance coverage needs. There are also several regional groups looking at the health trends of obesity and physical inactivity. Smoke-free Manistee continues to work with area youth and residents in the area of smoking prevention. If you would like more specific information on these efforts, would like to participate with local committees or have ideas or questions please contact Sonia Dygert at 231-398-3038.

PROPOSED TONDU FACILITY
Questions for the Consultants hired by the City of Manistee, MI
Submitted by

Shirley Skiera
1307 24th St
Manistee, MI 49660

Regarding the environment & health: At the first public meeting Joe Tondu presented a bar-graft that was based on pounds of emission per 1 million BTU's. However the plant will produce 4,342,000.00 BTU's per hour. That changes the look of the graft considerably. How many pounds of emission does that create in a 24 hours? How many pounds in a year?

Mercury which will be present in the fine particulates, (which the EPA does not require to be monitored.) is known to be harmful to children & the elderly.
There is a paper published by National Wildlife Federation (www.nwf.org) in May of 2003 called "Cycle of Harm: Mercury's Pathway from Rain to Fish in the Environment "that is well worth reading. In part it states that "For most watersheds, deposition of mercury from the air is the primary pathway by which mercury enters the water, building up to levels that threaten wildlife and people." However the water surface branch of the EPA has no say in this permit, only the air quality division does. Can that be addressed?

Also disturbing to me is that the EPA codes have become so relaxed that ones wonders if they are at all useful. In an article "The Radioactive Threat of Coal Combustion" by John Berry & published by the "independent media center" (see handout) it states that "Americans living near coal-fired power plants are exposed to higher radiation doses then those living near nuclear power plants" said J.P.McBride a former Oak Ridge National Laboratory researcher. . The article also states that coal-fired power plants are the dirtiest most primitive means of producing power and should at the very least by equipped with uranium traps to trap radioactive elements harmful to humans. Is that being suggested?

Regarding tourism & the quality of life in Manistee: The amount of freighter ships that would be coming through our harbor was projected at 13 per month – which coming and going would average 26 trips per month. If you take the 26 trips that would probably not occur during the months of Jan., Feb., and March (78 trips) and add them to the remaining 9 months the average is more like 48 trips a month, closer to 2 a week. This would take place during Manistee's prime recreational boating and fishing time. This does not take into account other freighters accessing the harbor on a regular basis. The average time that the brides are open when one of these comes through the harbor is approximately 20 minutes.
What type of an impact on traffic, both in the water and on the roads would you see happening

What impact on the roads leading from the plant to the landfill would take place? From the existing two truckloads of ash hauled from the present plant (although they are covered) there is a good amount that falls from the trucks and creates a dirty, slushy coating on the road. Times that by the amount of new truck loads, 2 trucks 15 times per day – back & forth that equals 60 road trips per day.

Please take a few minutes to observe the emissions from the present plant. A good time is between midnight and 5:00am. It would be helpful if there was a warm muggy morning when you could walk and see, smell & "feel" the air in the Filer City and Oak Hill area, it is not to pleasant. Homes and cars are where you see the most dirt, but if it's there it's on everything else too. Please come and see.

I am enclosing some documents from various sources. I hope they may have some useful information.

Copies to Manistee Planning Commission
Manistee News Advocate

TRIBAL FISHING DECEMBER 2002

Coal fired power plants a major source of pollution

By Mike Ripley,
Environmental Coordinator,
Inter-Tribal Fisheries and
Assessment Program

Over the next 10 years, the Bush administration projects that as many as 1,900 new power plants will be needed to keep up with consumer and industrial energy demand – that's one new power plant per week and many of those plants are predicted to be coal fired.

While investments in energy efficiency could substantially reduce the number of new power plants needed to meet growing demand, there is no doubt that utilities will be investing billions of dollars in new generating facilities over the coming years.

These new power plants — likely to operate for 50 years or more — mean a future of either cleaner, healthier air or of worsening pollution.

The decisions public officials make now will determine whether air pollution improves or worsens over the next several decades.

A study was completed in 2000 for the Clean Air Task Force which John Spengler of the Harvard School of Public Health called "the most rigorous look to date at the contribution of air emissions from the nation's power plants to fine particle levels and the impact of those emissions on public health."

The study found that fine particle pollution from these plants shortens the lives of more than 30,000 Americans every year and causes hundreds of thousands of asthma attacks, cardiac problems, and upper and lower respiratory tract problems. In other words, pollution from dirty power plants kills more people every year than drunk drivers (16,000 deaths each year) or murderers (17,000 deaths per year).

The elderly, children, and those with respiratory diseases are most severely impacted by this pollution; people living in metropolitan areas near coal-fired plants are more at risk than those who live far from power plants. The study concluded that "approximately two-thirds (more than 18,000) of the deaths due to fine particle pollution from power plants could be avoided by implementing policies that cut power plant sulfur dioxide and nitrogen oxide pollution 75 percent below 1997 emission levels."

One of the main concerns of the tribal fisheries is contaminants in fish. According to the U.S. EPA's Mercury Report to Congress, coal-fired power plants are the single largest source of mercury pollution in the U.S. and, according to the National Wildlife Federation, a single 100 megawatt (MW) coal-fired power plant emits approximately 25 pounds of mercury per year. As little as 0.002 pounds of mercury a year can contaminate a 25-acre lake to the point where the fish are above fish consumption advisory guidelines!

Although whitefish and lake trout commercially caught in the 1836 Treaty waters of the Great Lakes remain well below the guidelines, CORA is especially concerned with the proliferation of new coal-fired power plants and the weakening of clean air regulations by the Bush administration.

Recently, the Bush administration announced a plan that would punch dangerous new loopholes in the Clean Air Act. These loopholes, which seriously undercut the "New Source Review" (NSR) provision of the Clean Air Act, will result in more pollution and dirtier air from hundreds of power plants and oil refineries throughout the country — and will undermine ongoing attempts to enforce the law at facilities that have already been charged with illegally polluting.

New Source Review directly benefits public health by requiring the oldest and dirtiest industrial facilities to add state-of-the-art pollution controls whenever they make major modifications that significantly increase air pollution. According to a study by EPA's own consultants, Abt Associates, as many as 9,000 American lives are shortened each year due to exposure to pollution just from the plants that have already been charged with violating NSR. Up to 7,000 of these deaths could be avoided just by complying with the existing law.

Comparison of Bush Administration "Clear Skies" Power Plant Initiative with Existing Clean Air Act Programs

	Nitrogen Oxides (NOx)	Sulfur Dioxide (SO2)	Mercury (Hg)
Clean Air Act (existing programs)[1]	1.25 million ton cap by 2010[2]	2 million ton cap by 2012[3]	5 tons per year by 2008[4]
Bush "Clear Skies Initiative" (two-step approach)[5]	2.1 million ton cap by 2008 Optional 2nd Step 1.7 million ton cap by 2018	4.5 million ton cap by 2010 Optional 2nd Step 3 million ton cap by 2018	26 tons per year by 2010 Optional 2nd Step 15 tons per year by 2018
Increase allowed by Bush Plan over Clean Air Act existing programs[6]	850,000 tons more NOx Optional 2nd Step 450,000 tons more NOx	2.5 million tons more SO2 Optional 2nd Step 1 million tons more SO2	21 tons more mercury Optional 2nd Step 10 tons more mercury
% Increase allowed by Bush Plan over Clean Air Act existing programs.	68% more NOx Optional 2nd Step 36% more NOx	125% more SO2 Optional 2nd Step 50% more SO2	420% more mercury Optional 2nd Step 200% more mercury
Delay allowed by Bush Plan over Clean Air Act existing programs	Up to 8 year delay	Up to 6 year delay	Up to 10 year delay

Source: Clear the Air Campaign <http://cta.policy.net/relatives/20340.pdf>

Dave Aftandilian of Conscious Choice, sums it up when he says " ... of course, we need to stop subsidizing fossil fuels and start leveling the playing field for renewable energy instead. If the costs to public health, the environment, and crops from dirty fossil-fueled power plants were included in the price of the power they generate, power from the much cleaner wind and solar sources would suddenly look much more affordable. Unless we begin to write the social and environmental costs of cheap power from dirty coal into the energy equation, we'll continue to squander our health and that of our children and our environment."

Tondu's coal/wood/ ... all landfilled

W.M.U.– alternative fuel 3/4/02

Jp in Smoke

J's Wood Chip Boiler Raises Environmental Concerns

JOHN BERRY

MU's wood chip power genera- sn't saving much money and is aging the environment.

'ith natural gas prices as high as were last summer, the decision made to supplement the natural generator with an old wood chip er. The start-up cost for bring- the boiler back was $250,000. or to start-up, the boiler was sup- ed to save the university 0,000 a month.

But natural gas prices have fallen ce last winter, and the wood boil- savings fall well short of the imate, totaling between $15,000 d $20,000 during the five weeks been operational.

Besides saving the university ich less than expected, the wood ip boiler is also less clean than the tural gas generator. The ash from e wood chips is currently carted f to a landfill. If the necessary per- its could be obtained, the ash uld be used as a fertilizer for rms in Clare. Leftover ash could so be recycled into materials for ad construction, but there are no

Noble Forestry Inc. of Wiedman, does not use short-rotation cropping. According to the International Energy Agency, short rotation cropping involves the planting of fast growing trees that are harvested every 3 to 10 years. Instead, Noble Forestry sells the University the scrap wood from existing contracts. By doing so, the current agreement eliminates the environmental benefits of wood chip power generation.

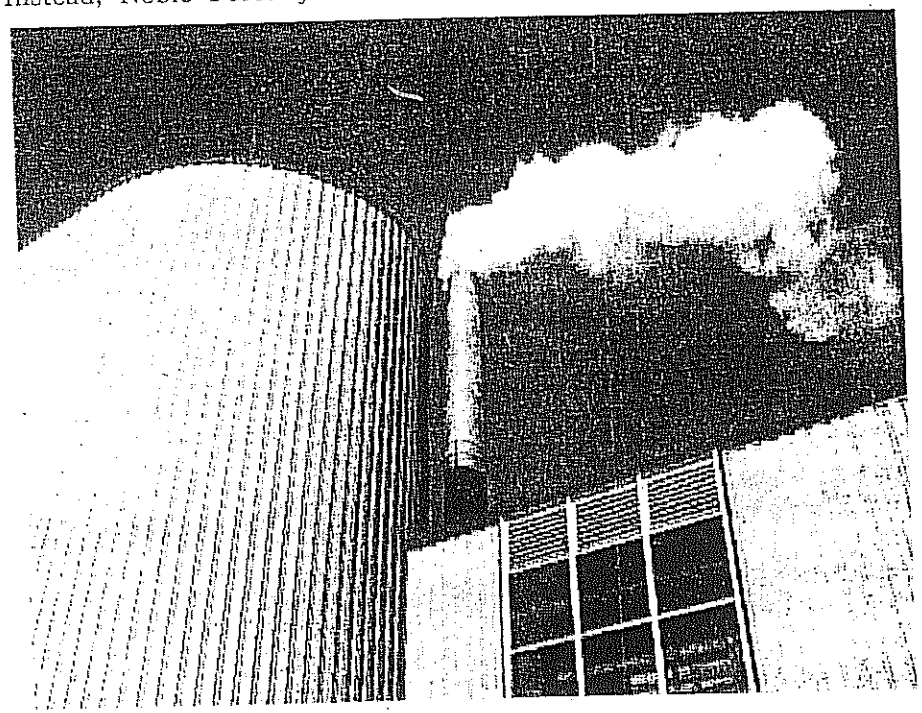
One of the advantages of utilizing short rotation cropping is that there is no net increase in carbon dioxide emissions. Trees absorb carbon dioxide to create the energy they need to grow, and in that way act as a carbon dioxide sink. When a tree rots or burns the stored carbon dioxide is released back into the atmosphere. Other trees then absorb the carbon dioxide and grow. Without short rotation cropping, new trees are not planted and there is a net carbon dioxide increase.

In addition to carbon dioxide emissions, the burning of wood chips releases particulate matter (microscopic dust).

"Wood combustion causes some particulate emissions, but CMU is well within the Michigan Department of Environmental Quality requirements," said John Fisher, Residences and Auxiliary Services senior officer.

Wood chip power generation can be good for the environment. It is considered a form of biomass energy production when done correctly. That includes utilizing short rotation cropping, ash recycling and proper emission control that reduces particulate matter to a minimum.

But CMU isn't recycling their ash and the supplier is not providing the fuel in an environmentally friendly manner. This means bigger landfills and particulate emissions that were not here when CMU used natural gas. Selling the ash rather than paying to put it in a landfill seems like a more intelligent decision. But perhaps the five months the university had to plan wasn't enough time.



CMU resurrected its wood chip boiler last year at a cost of $250,000. So ... have fallen well below estimates, and the environmental

Comment on this article at

By Peter Jaret

Why Tiny Particles Pose Big Problems

A FEW YEARS AGO, if you had driven along certain residential streets in Long Beach or Los Angeles, you might have seen Ann Miguel pushing a vacuum cleaner down the center of the road. No, she's not an obsessive neatnik. A scientist at California Institute of Technology, Miguel is one of a growing number of researchers studying an environmental threat all around us: dust.

Dust is not just the collection of lint that drifts into the corners of your rooms. Tiny particles, often called particulate matter, are swept up by passing car tires, blown into the wind from construction sites and farms and spewed into the air by tail pipes and power plants. And experts say there is growing evidence that all this dust and soot may cause serious health problems—not only for humans but for other species as well.

One alarm sounded last summer, when a comparison of levels of particulate matter and death rates in the nation's 90 largest metropolitan areas was released. The study, conducted by scientists at the Johns Hopkins University School of Public Health, found that for every cubic meter of air, an increase of 20 micrograms of airborne particulate matter (that's a scant 70 millionths of an ounce) brought a 1 percent rise in the death rate. Hospital admissions for elderly people exposed to the increased pollution rose between 2 and 4 percent.

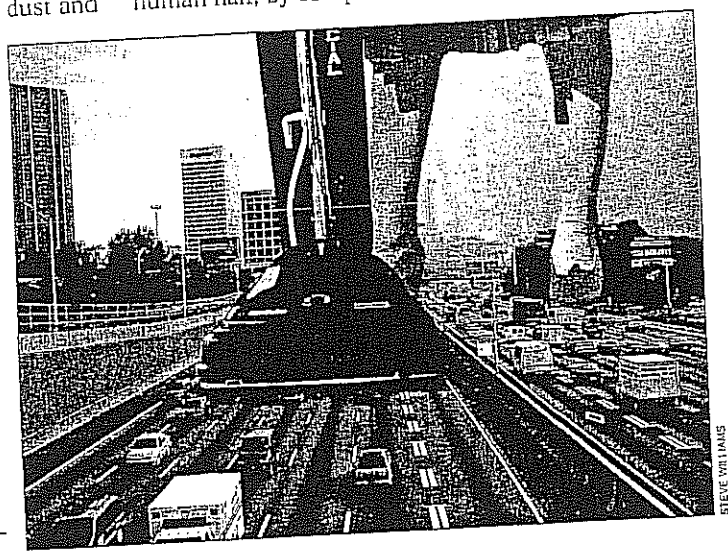
These troubling findings are just the latest danger sign. "Once we got rid of most of the big, obvious nasty stuff in the air during the 1970s and 1980s, we thought we had addressed the particulate-matter problem," says John Vandenberg, director of the National Particulate Matter Research Program at the U.S. Environmental Protection Agency (EPA). "Then in the early 1990s studies came along that knocked us back on our heels." In one, the nonprofit Natural Resources Defense Council calculated that as many as 60,000 Americans die each year from lung diseases, heart conditions and other health problems brought on by breathing concentrations of airborne dust. More people may die prematurely as a result of exposure to minute particles in the air than die in accidents on the highway, experts now think.

The particles of greatest concern are 10 microns or less in diameter. (A human hair, by comparison, is about 70 microns thick.) Dust motes that spin in the air when the sun pours in the window measure roughly 10 microns. The much smaller airborne bits that make up cigarette smoke are only about half a micron or less in diameter—so small that instead of seeing individual particles you perceive a cloud of them concentrated together. About 60 percent of particulate matter 10 microns or less in size comes from combustion sources, such as cars and power plants. The rest come from construction, agriculture and particles stirred into the air by passing cars on the nation's roads and highways.

When Miguel and her team analyzed road dust vacuumed off byways of Southern California using a standard Shop-Vac, they found soil, deposited motor vehicle exhaust, pollens, animal dander, even minute particles from brake linings and tires. Scientists have also identified heavy metals, cancer-causing toxic substances, bacteria and viruses in airborne dust.

The problem of particulate pollution isn't limited to cities and suburbs. Jay Turner, an engineer at Washington University in St. Louis, set up monitors on both an urban interstate and a rural Illinois road. The average urban vehicle generates between 30 and 40 milligrams of particulate matter per mile traveled, he found. The average rural vehicle sends between 200 to 300 milligrams into the air. The reason: There is more soil dust on rural roads and more diesel-powered vehicles.

Those particles can cause breathing problems. In 1999, British researchers exposed 15 volunteers to air mixed with diesel exhaust particles for the period of one hour—about the level you would inhale on a smoggy day in Los Angeles. Six hours later, the scientists found signs of inflammation in the lungs. In another experiment, researchers from the University of Texas-Houston Health Science Center exposed immune cells called macrophages to ash collected from the Mount St. Helen's eruption and to airborne dust



STEVE WILLIAMS

BLOWING IN THE WIND: In recent years, researchers have used everything from vacuum cleaners to monitoring equipment to measure levels of microscopic particles in the air. Experts now think more Americans may die prematurely each year from exposure to such dust than from highway accidents.

Grand Rapids Press
Dec. 14, 2000

Tiny bits of bad air are killers, study says

Researchers say they have the final word: Tiny smog particles raise death rates in the 20 largest U.S. cities.

By Janet McConnaughey
The Associated Press

You don't have to be able to smell or see air pollution to die from it.

A study of the nation's 20 largest cities confirms that small amounts of particles less than one-fifth the width of a human hair are enough to raise the death rate. And the death rate climbs steadily along with the number of fine particles.

The study, conducted by researchers at the Johns Hopkins School of Public Health, supports Environmental Protection Agency standards that were set in 1987 and revised in 1997, said Bob Perciasepe, EPA assistant administrator for air quality.

The findings should squelch criticism that earlier research at the EPA, Harvard and elsewhere was inconclusive, said James H. Ware, dean of the Harvard School of Public Health.

He said it shows the fine particles of polluted air, and not the weather, certain chemicals or other factors, drive increases in the daily death rate.

Death rates checked

The study, which is being published in today's New England Journal of Medicine, looked at death rates and at the amount of "fine particulate pollution" — that is, particles less than 10 microns across. A micron is one-1,000th of a millimeter.

Such particles come from just about everywhere — cars, power plants, factories, construction, agriculture and road-related pollution, such as bits of brakes and tires.

The study deals in amounts that are almost staggeringly small: micrograms — ten millionths of a gram, or about four ten-millionths of an ounce — per cubic meter of air.

Under EPA rules, the maximum allowable level of 10-micron particles in 24 hours is 150 micrograms per cubic meter. All 20 cities averaged levels of one third or less of the maximum.

For each 10 micrograms of particles per cubic meter of air over a 24-hour period, the death rate from all causes rose just over one-half of a percentage point, the researchers said.

To put it another way: If you take a large city where about 100 people die each day, and the fine particle pollution rises by 20 micrograms per cubic meter over 24 hours, you can add one death to the daily rate. If it rises 40 micrograms, you can add two deaths.

Los Angeles averaged 148 deaths a day from 1987 through 1994, when the study took place. New York averaged 190.9, and Chicago 113.9.

"Total mortality is a relatively crude indicator of population health. Even though we are using this relatively crude measure, we are still finding an effect," said Dr. Jonathan M. Samet of Johns Hopkins.

The EPA rules on fine particulate pollution are now before the Supreme Court, but the findings have no direct bearing on the case, which looks at the evidence the EPA used to make its decision in 1997. The main question before the high court is whether pollution regulations must consider the costs of compliance.

The Radioactive Threat of Coal Combustion

BY JOHN BERRY

While Republicans attach various provisions of President Bush's energy plan to everything from defense authorization bills to the economic stimulus package to the farm bill, many Americans are unaware of the major health hazards associated with the plan. The centerpiece of the Bush energy plan is the construction of between 1,300 and 1,900 new power plants, the vast majority being coal-fired. Criticism of the plan usually focuses on its omission of renewable energy sources. But few have noted the harmful radioactivity associated with coal combustion.

Trace amounts of radioactive materials, like uranium and thorium, are present in coal. Though coal power plants contain precipitators, which act as filters removing human health hazards like sulfur and nitrogen oxides, they are not able to capture heavy metals like uranium. As a result, 801 tons of uranium and 1,971 tons of thorium escape from the smokestacks of U.S. coal-fired power plants every year.

Radioactive elements, such as uranium and thorium, are harmful to humans because of the unstable nature of their atoms. The nuclei of these elements continually decay to become more stable, emitting radiation while doing so. This radiation is what can cause damage to cells in the body, or worse yet, mutations in DNA, hence greatly increasing cancer risks.

Over 52 percent of the nation's electricity comes from coal-fired plants and President Bush's energy plan simply fails to address radioactive discharge from these plants.

"Americans living near coal-fired power plants are exposed to higher radiation doses than those living near nuclear power plants," said J.P. McBride, a former Oak Ridge National Laboratory researcher.

The National Council on Radiation Protection and Measurements reported that people living near coal-fired power plants are exposed to 100 times more radiation than people living near nuclear power plants. Further, coal-fired power plants do not have to comply with the regulations that are imposed on nuclear facilities.

If President Bush ends up getting more coal-fired power plants, still the dirtiest, most primitive means of producing power, we should demand the plants be equipped with uranium traps. As early as 1978, uranium traps were demonstrated to be an effective way of removing significant levels of radioactive elements harmful to human beings.

Uranium traps capture radioactive elements. When processed, these wastes can be used to refuel nuclear plants. In fact, the monetary value of radioactive elements escaping from plants into the lungs and drinking water of surrounding residents exceeds the national debt.

"Clearly, coal-fired power plants are not only generating electricity but are also releasing nuclear fuels whose commercial value for electricity production by nuclear power plants is over $7 trillion," said Alex Gabbard of the Metals and Ceramics Division of the ORNL.

No matter how clean Bush calls his energy plan, it does nothing to address the accumulation of radioactive elements from coal combustion. At the very least, uranium traps should be mandatory on all new coal-fired plants. It seems like the government would encourage something that saves them money and provides a healthier environment for taxpayers. After all, the longer a taxpayer lives the more tax money the government can collect, a simple fact which Congress might remember the next time it decides to give itself a pay raise.

Alternative Fuel, Central Michigan Univ 1/21/02

AUGUST 17, 2001 DAILY NEWS

eport claims air pollution kills greater number than traffic accidents

PAUL RECER
Science Writer

WASHINGTON (AP) — More ople are being killed by pollution m cars, trucks and other sources n by traffic crashes, researchers imate in a report that says clean- up would prolong the lives of usands of people.

The researchers, in a study in journal Science, said that cut- g greenhouse gases in just four ajor cities — Sao Paulo, Brazil; exico City; Santiago, Chile and ew York City — could save 4,000 lives over the next 20 ears.

Greenhouse gases, principally rbon dioxide or ozone, are those ollutants that tend to trap the n's heat in the atmosphere or to ffect solar radiation.

The gases have been blamed for ausing global warming, but the tudy's lead author, Devra Lee Davis, a professor at Carnegie Mellon University's Heinz School in Pittsburgh, said the effects are not just long-term.

"The message in our study is that there are real and immediate health benefits" in reducing greenhouse gases, she said.

She said that ozone, particulate matter, carbon dioxide and other pollutants from the burning of fossil fuels are causing people, particularly in cities, to die prematurely from asthma, breathing disorders and heart disease.

"It is our best estimate that more people are being killed by air pollution from traffic than from traffic crashes," said Davis. "There are more than a thousand studies from 20 countries all showing that you can predict a certain death rate based on the amount of pollution."

Some experts, however, say that the direct connection between air pollution and death is not that clear, even in cities.

Dr. Russell V. Luepker, a cardiologist and professor at the University of Minnesota, said that air pollution is not recognized as a significant cause of heart disease in the United States.

"It is not a major factor in developing heart disease, but it does play a role in acute episodes that can kill you," said Luepker, an expert designated by the American Heart Association as a spokesman. "More people either come to emergency rooms or die of heart disease during pollution episodes," but the pollution did not start the disease, he said.

Dr. Marian Frieri, a professor of medicine and an asthma expert at State University of New York at Stony Brook, said that air pollution can contribute to asthma inflammation but is only one factor on top of another condition.

"We have a lot of patients who are affected by pollution," she said. "Ozone can increase the reaction to allergies, for instance. It is like a second whammy effect."

Ozone problems still nagging the lakeshore

By KEVIN BRACISZESKI
Daily News Staff Writer

5-2-02

The east shore of Lake Michigan again was cited as a risky area to live in for people with lung problems, at least the Michigan counties where there are ozone monitoring stations.

Mason County, with its ozone monitoring station in Scottville, Muskegon County, and Benzie County all received F grades by the American Lung Association for ozone levels that were recorded in 1998-2000.

In those three years, Mason County's monitor recorded 19 "orange days," in which the ozone level reaches .085 parts per million and breathing is considered unhealthy for at-risk groups, and four of those days were "red days" when the ozone level reached .105 ppm and breathing "was unhealthy for pretty much everybody," said Elliot Levinsohn, air quality environmental health man- [illegible] American Lung Association of

OZONE: Transport across lake a regional issue

Continued from page A1

According to figures posted on the Michigan Department of Environmental Quality Web site, Mason County also had eight more orange days in 2001 with a high of .100 ppm on Aug. 1.

Levinsohn wasn't surprised that the monitored counties on Lake Michigan all had failing grades.

"Unfortunately, they're all in the same transport area where the ozone is transported across the lake from Wisconsin," he said.

He said the issue of transporting ozone across the lake from Milwaukee and Chicago is a regional issue that needs to be taken care of at the national level.

According to a list of selected Michigan counties, the American Lung Association reported that at least 10,598 of Mason County's 27,966 residents are at risk for lung problems that can be caused by air pollution.

In addition to the 5,942 children under 14 years old who were counted by the American Lung Association, and the 4,656 people who are over 65 years old, the list includes 381 people with pediatric asthma, 1,500 people with adult asthma, 954 people with chronic bronchitis and 359 people with emphysema as being at risk for problems from air pollution.

The list for Michigan also includes numbers for at-risk people in Muskegon County, with at least 60,634 people; and Benzie County, with at least 5,596 people. The list does not have any numbers for 62 of Michigan's 83 counties including Manistee, Oceana and Lake counties. Those counties were not listed, or studied because they do not have ozone monitoring stations.

Lung Cancer, Cardiopulmonary Mortality, and Long-term Exposure to Fine Particulate Air Pollution

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Richard T. Burnett, PhD
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Kazuhiko Ito, PhD
George D. Thurston, ScD

Context Associations have been found between day-to-day particulate air pollution and increased risk of various adverse health outcomes, including cardiopulmonary mortality. However, studies of health effects of long-term particulate air pollution have been less conclusive.

Objective To assess the relationship between long-term exposure to fine particulate air pollution and all-cause, lung cancer, and cardiopulmonary mortality.

Design, Setting, and Participants Vital status and cause of death data were collected by the American Cancer Society as part of the Cancer Prevention II study, an ongoing prospective mortality study, which enrolled approximately 1.2 million adults in 1982. Participants completed a questionnaire detailing individual risk factor data (age, sex, race, weight, height, smoking history, education, marital status, diet, alcohol consumption, and occupational exposures). The risk factor data for approximately 500 000 adults were linked with air pollution data for metropolitan areas throughout the United States and combined with vital status and cause of death data through December 31, 1998.

Main Outcome Measure All-cause, lung cancer, and cardiopulmonary mortality.

Results Fine particulate and sulfur oxide–related pollution were associated with all-cause, lung cancer, and cardiopulmonary mortality. Each 10-μg/m^3 elevation in fine particulate air pollution was associated with approximately a 4%, 6%, and 8% increased risk of all-cause, cardiopulmonary, and lung cancer mortality, respectively. Measures of coarse particle fraction and total suspended particles were not consistently associated with mortality.

Conclusion Long-term exposure to combustion-related fine particulate air pollution is an important environmental risk factor for cardiopulmonary and lung cancer mortality.

JAMA. 2002;287:1132-1141 www.jama.com

Based on several severe air pollution events,[1-3] a temporal correlation between extremely high concentrations of particulate and sulfur oxide air pollution and acute increases in mortality was well established by the 1970s. Subsequently, epidemiological studies published between 1989 and 1996 reported health effects at unexpectedly low concentrations of particulate air pollution.[4] The convergence of data from these studies, while controversial,[5] prompted serious reconsideration of standards and health guidelines[6-10] and led to a long-term research program designed to analyze health-related effects due to particulate pollution.[11-13] In 1997, the Environmental Protection Agency adopted new ambient air quality standards that would impose regulatory limits on fine particles measuring less than 2.5 μm in diameter ($PM_{2.5}$). These new standards were challenged by industry groups, blocked by a federal appeals court, but ultimately upheld by the US Supreme Court.[14]

Although most of the recent epidemiological research has focused on effects of short-term exposures, several studies suggest that long-term exposure may be more important in terms of overall public health.[4] The new standards for long-term exposure to $PM_{2.5}$ were originally based primarily on 2 prospective cohort studies,[15,16] which evaluated the effects of long-term pollution exposure on mortality. Both of these studies have been subjected to much scrutiny,[5] including an extensive independent audit and reanalysis of the original data.[17] The larger of these 2 studies linked individual risk factor and vital status data with national ambient air pollution data.[16] Our analysis uses data from the larger study and

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EPA study recommends tightening Clinton-era airborne soot standards

9.15.03

New federal health standards that limit the amount of soot in the air do not adequately protect the elderly and people with respiratory problems and should be tightened, according to an internal government report.

The findings could become the basis for additional pollution-control requirements to reduce the amount of microscopic soot emitted by diesel-burning trucks, cars, factories and power plants.

Such a step would put the Bush administration at odds with business groups.

They have argued the current federal soot-control standards, issued by the Clinton administration, are based on uncertain science and have cost industry tens of billions of dollars.

The new findings are in a draft paper by Environmental Protection Agency staff and are being circulated for review by outside scientists.

The 1997 standards have not had significant impact. They were delayed by several years of litigation as industry opponents unsuccessfully challenged the rules all the way to the Supreme Court, which eventually upheld them.

The EPA soon expects to determine what areas of the country will have to impose additional pollution-control measures because their air is so dirty it does not meet the standard.

Even as the rules are being put in place, the EPA staff review of the latest scientific studies on the effects of soot on health has concluded that the standards may not produce the intended health benefits.

The 400-page draft paper says that since 1997, some scientific studies "have confirmed and strengthened" the association between exposure to microscopic soot and premature deaths, cardiovascular problems and respiratory illnesses. Such soot contains particles and gases 20 times smaller than a strand of human hair.

Furthermore, the paper says, in many cases these studies showed adverse health effects when airborne soot concentrations were well below the maximum allowed by the 1997 standard, particularly during days when the air is especially dirty.

As a result, the staff analysis recommends the allowable concentrations be reduced further, possibly as much as 50 percent for the 24-hour standard and 20 percent for the annual average standard.

The annual average under the 1997 rule of no more than 15 micrograms of soot per cubic meter of air might have to be cut to 12 micrograms to achieve adequate health benefits, and the 24-hour standard of 65 micrograms per cubic meter to between 30 and 50 micrograms, according to the staff paper.

EPA spokeswoman Lisa Harrison said the draft paper has not been peer-reviewed by scientists and that no new soot regulations are imminent.

"EPA will not base any regulatory decision on this draft staff paper," said Harrison.

"It's very early in a lengthy (review) process." She said a final draft paper, expected next year, "will include recommended options for the administrator to consider."

Health advocates cited the EPA staff finding as a major development, supporting their contention that tougher air quality standards are needed for microscopic soot because it can become easily lodged deep inside lung tissue.

"This represents the best judgment of the EPA staff in their interpretation of the science," said Deborah Shprentz, a consultant for the American Lung Association.

She said it reflects that numerous studies support aggressive actions to curtail this type of air pollution.

"New research has shown that even short-term exposure to particulate pollution can be dangerous for some people, particularly the elderly, young children and people with asthma and other serious lung diseases," said John Kirkwood, the association's president.

Industry spokesmen questioned the staff conclusions and indicated they are ready to challenge the analysis' scientific underpinnings.

"Of course, we're going to question the adequacy of the science. We'll be citing different studies, different results," said Glen Kedzie, an attorney for the American Trucking Associations, which led the legal battle against the 1997 standards.

Bill Kovaks of the U.S. Chamber of Commerce said business opposes the soot rules "because of the cost of these programs," estimated from $50 billion to $150 billion. "You're talking about wreaking economic havoc."

In 1997, the Clinton administration issued the government's first standards for extremely fine particle pollutants — those shorter than 2.5 microns, or one-millionth of a meter.

The standards were prompted by worries about adverse health effects from these pollutants on the elderly, those with asthma and other respiratory illnesses and other people.

The Bush administration endorsed the new standards and made no effort to scale them back once the courts rejected the legal challenges brought by industry.

– *The Associated Press*

Association® Fact Sheet Particulate Matter Air Pollution

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September 1999

Particulate matter is the generic term used for a type of air pollution that consists of complex and varying mixtures of particles suspended in the air we breathe. Particles are present everywhere, but high concentrations and/or specific types of particles have been found to present a serious danger to human health.

- Particulate matter is a combination of fine solids such as dirt, soil dust, poliens, molds, ashes, and soot; and aerosols that are formed in the atmosphere from gaseous combustion by-products such as volatile organic compounds, sulfur dioxide and nitrogen oxides.

- Particulate pollution comes from such diverse sources as factory and utility smokestacks, vehicle exhaust, wood burning, mining, construction activity, and agriculture.

- Particles of special concern to the protection of lung health are those known as fine particles, less than 2.5 microns in diameter. (For comparison, a human hair is about 75 microns in diameter.) Fine particles are easily inhaled deeply into the lungs where they can be absorbed into the bloodstream or remain embedded for long periods of time. A recent study showed a 17% increase in mortality risk in areas with higher concentrations of small particles.

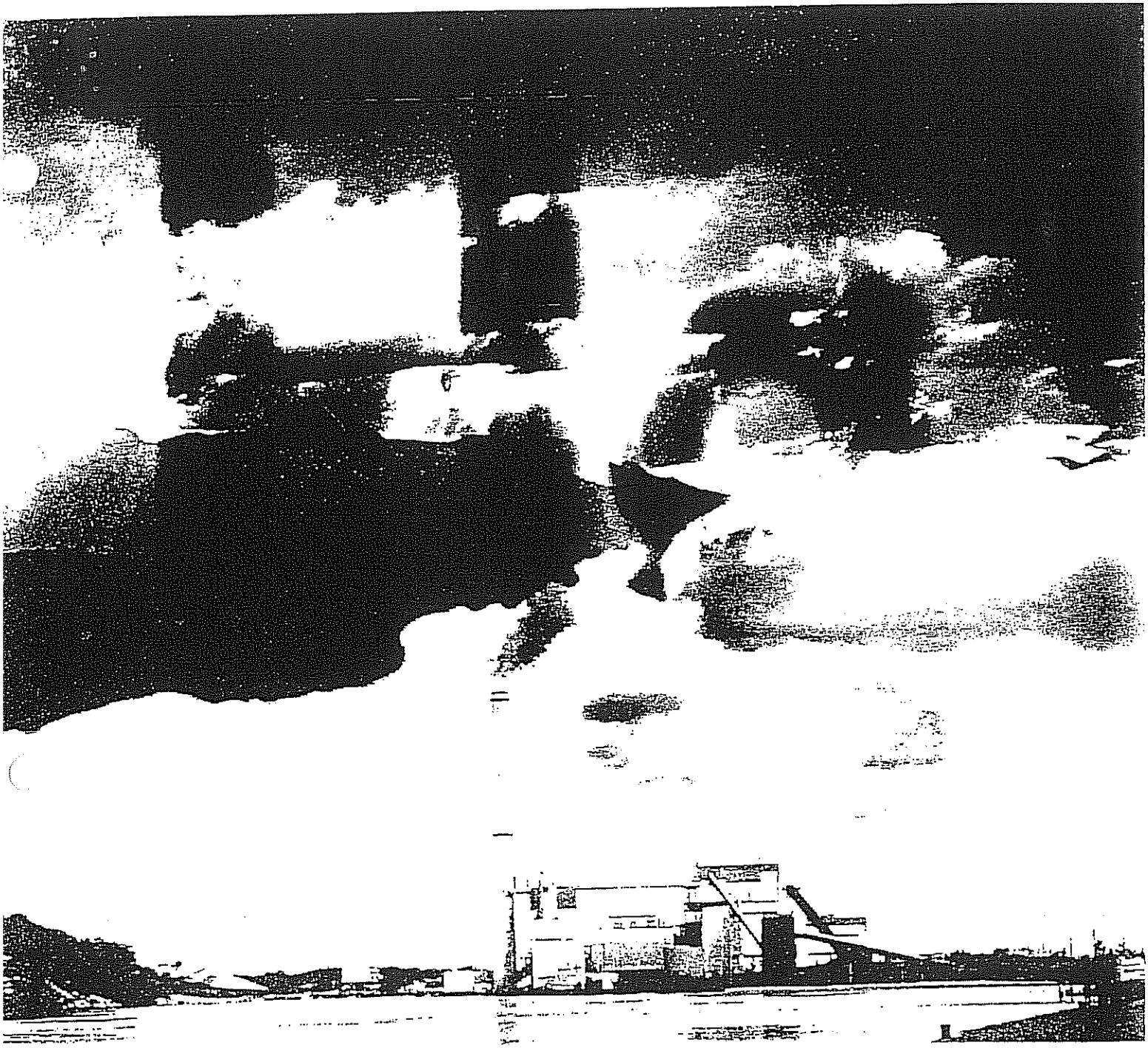
- Particulate matter air pollution is especially harmful to people with lung disease such as asthma and chronic obstructive pulmonary disease (COPD), which includes chronic bronchitis and emphysema, as well as people with heart disease. Exposure to particulate air pollution can trigger asthma attacks and cause wheezing, coughing, and respiratory irritation in individuals with sensitive airways.

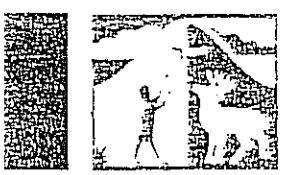
- Recent research has also linked exposure to relatively low concentrations of particulate matter with premature death. Those at greatest risk are the elderly and those with pre-existing respiratory or heart disease.

- To limit one's exposure to particulate air pollution, the American Lung Association offers the following tips:

  - Avoid exercising near high-traffic areas
  - Do not exercise outdoors when air pollution levels are high
  - Eliminate smoking indoors

- The current federal standard for particulate matter (PM10) is 150 micrograms per cubic meter (ug/m3) of air averaged over 24 hours and 50 ug/m3 averaged over a one-year period.
- In July 1997, the EPA set a new stricter standard that will regulate fine particulate matter (PM2.5) for the first time: 65 ug/m3 measured over a 24-hour period and 15 ug/m3 averaged over a year. This new standard will be phased in over the next decade.





WILDLIFE

May 2003
2nd Edition

Cycle of Harm:
Mercury's Pathway from Pollution to Fish in the Environment

Cycle of Harm:

Mercury's Pathway from Rain to Fish in the Environment

Todd Kuiken & Felice Stadler

May 2003
2nd Edition

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2nd Edition
This edition updates some incorrectly calculated data that appeared in the first edition. These updated calculations are not significantly different and do not change the findings in the first edition.

The National Wildlife Federation (NWF) is a non-profit conservation and education organization with national headquarters in Reston, Virginia. Founded in 1936, NWF, its members and supporters, and a national network of affiliated organizations, work to educate citizens about the need for sustainable use and proper management of our natural resources.

The mission of the National Wildlife Federation is to educate, inspire and assist individuals and organizations of diverse cultures to conserve wildlife and other natural resources and to protect the earth's environment in order to achieve a peaceful, equitable and sustainable future.

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Chapter 1

Mercury Cycling in the Environment

Mercury is a highly volatile, naturally occurring metal found in small amounts throughout the environment: in rocks, soils, lakes and the oceans. Mercury is an element, never breaking down, persisting in the environment, cycling among the land, air, and water (See Figure 1). Mercury can circulate in the atmosphere for one year or more before falling to the ground, and can be re-released into the atmosphere after it deposits. Because mercury can be transported over long distances and cycle through the environment for a very long time, it may take decades for mercury releases to be buried by sediments and removed from the long cycle of evaporation, transport, transformation, and deposition.

Although mercury is a naturally occurring metal, its concentration in our environment has increased dramatically over the past 150-200 years due to mining and industrial activities—particularly coal combustion and incineration of wastes containing mercury.[5] During this time, these and other human activities have caused the rate of mercury deposition around the world to increase by two to 10 times over pre-industrial levels.[6]

Mercury can take on different chemical forms in the environment, which are categorized into three "species": elemental, inorganic, and organic mercury. Elemental mercury is the pure metal, and is also the form most commonly found in low concentrations in the air. The inorganic species involves a combination of mercury with one or more elements, forming compounds such as mercuric chloride, mercuric oxide, and mercuric sulfide. Combustion of coal and wastes containing mercury produces both inorganic and elemental mercury emissions. In addition, elemental mercury can be converted in the atmosphere to the inorganic species, which is more readily deposited from the air to land or water. Recent research has also linked ozone pollution (smog) to mercury deposition. Ozone and certain reactive compounds containing chlorine or bromine can oxidize elemental mercury to form inorganic mercury, which can then deposit locally.[7]

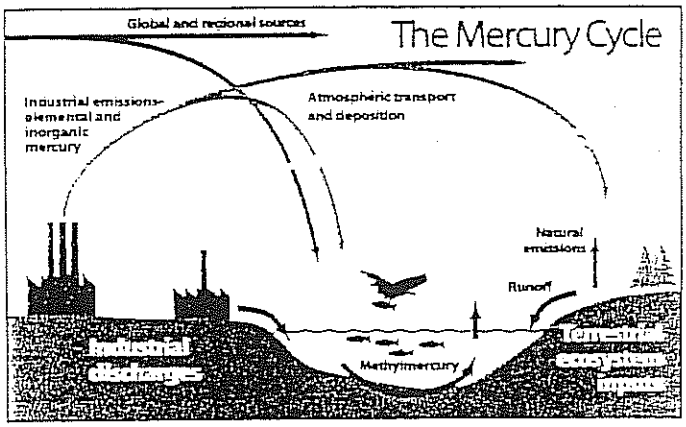

Figure 1

Once mercury is deposited onto the water, it can be converted by certain bacteria in the lake or river sediments from inorganic mercury to methylmercury, an organic form of mercury. The amount of methylmercury produced and taken up by organisms is influenced by a number of factors, including organic carbon concentrations, pH, and sulfate levels.[8] Methylation and mercury buildup in fish is often more significant in lakes with lower pH (i.e., more acidic). Combustion processes—in particular the burning of fossil fuels such as coal and oil—that form acid gases, such as sulfur dioxide and nitrogen oxides, can exacerbate the mercury problem by increasing acid deposition in watersheds, leading to acidification of surface waters and increased methylmercury production.

Accumulation of Mercury in the Food Chain

All forms of mercury can be very dangerous if inhaled or ingested in sufficient quantity. However, organic mercury, specifically methylmercury (MeHg), is of special concern to people and wildlife because it is easily absorbed. The concentration of methylmercury builds in each link of the food chain in contaminated systems, a process called bioaccumulation (see Figure 2).

The first and most important step in this process is the uptake of inorganic mercury by bacteria in a lake or stream.[9] Some of these bacterial organisms, which form the base of the food chain, convert inorganic mercury into methylmercury. While there is still much to learn about the transformation process, research has shown that sulfate-reducing bacteria found in sediments are key in affecting this change. Algae (phytoplankton) can then take up the methylmercury produced in the sediments and released to the water. When zooplankton consume the phytoplankton, they gain not only energy, but stored methylmercury as well. Zooplankton and other organisms are consumed in large quantities by amphibians and small fish, which in turn become food for larger predator fish. Through this process, top predator fish such as lake trout, pike, or walleye can harbor mercury concentrations in their tissues that are over one million times higher than in surrounding water. When people or animals like otters and loons eat these fish, the accumulated methylmercury is transferred to their bodies.

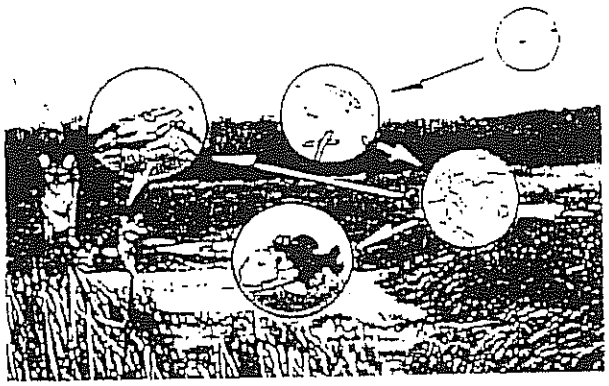

Figure 2

For most watersheds, deposition of mercury from the air is the primary pathway by which mercury enters the water, building up to levels that threaten wildlife and people. Mercury can be transported long distances in the air, resulting in elevated mercury levels even in wildlife found in remote areas.[7, 10]

Although there have not been massive wildlife poisoning incidents recently in the U.S. due to mercury contamination,[11] the mercury threat is nevertheless widespread and insidious, due to the potential for mercury to bioaccumulate and cause harmful effects at low, chronic exposure levels.

Mercury Cycling in the Environment: Old vs. New Mercury

Mercury can enter a lake or river from the atmosphere directly through wet deposition (precipitation), influxes from streams that flow into the lake and from mercury that is already present in the soil. In many cases, the majority of deposited mercury falls in the surrounding watershed, rather than directly on the lake or river. Mercury can also attach itself to plant surfaces and soil organic matter. Through runoff mercury makes its way into the lake or river, transported either in particle form or in liquid form (dissolved in water).

Research currently underway is shedding light on a previously unanswered question, namely, whether the mercury being deposited in watersheds today has a more immediate impact on an ecosystem than mercury deposited months or many years earlier. The METAALICUS (Mercury Experiment To Assess Atmospheric Loading In Canada and the U.S.) study currently underway in the Experimental Lakes Area in Ontario, Canada is examining the effects of mercury deposition on an entire watershed. The main objective of the study is to determine how mercury levels in various components of the ecosystem (in particular, fish) respond to changes in mercury loadings (i.e., inputs to different parts of the watershed). The research involves adding different stable isotopes of mercury (i.e., different forms that can be analyzed to identify unique contributions) to uplands, wetlands, and the water surface to track the relative importance of different mercury sources and to estimate the time lag between deposition, methylation, and accumulation in fish tissue. Preliminary results suggest that mercury newly deposited on lakes and wetlands transforms more rapidly into methylmercury than mercury already present in the system or mercury deposited several years earlier.[12] Follow-up monitoring is planned to assess how long the deposited mercury remains in the biota.

This is the first study of its kind that is able to distinguish methylation rates and bioaccumulation depending on when deposition occurred. The significance of these findings should not be underestimated. These preliminary findings offer compelling evidence to support the need for swift action to reduce ongoing sources of atmospheric mercury. It suggests that mercury reduction at the source can lead to relatively rapid results in the reduction of methylmercury in the environment.

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Low level methylmercury exposure affects neuropsychological function in adults

Edna M Yokoo, Joaquim G Valente, Lynn Grattan, Sérgio Luís Schmidt, Illeane Platt and Ellen K Silbergeld

Environmental Health: A Global Access Science Source 2003 **2**:8 (published 4 June 2003)

Abstract (provisional)

Background

The neurotoxic effects of methylmercury have been demonstrated in both human and animal studies. Both adult and fetal brains are susceptible to the effects of methylmercury toxicity. However, the specific effects of adult exposures have been less well-documented than those of children with pre-natal exposures. This is largely because few studies of methylmercury exposures in adults that have used sensitive neurological endpoints. The present study reports on the results of neuropsychological testing and hair mercury concentrations in adults (>17 yrs) living in fishing communities of Baixada Cuiabana (Mato Grosso) in the Pantanal region of Brazil.

Methods

A cross-sectional study was conducted in six villages on the Cuiaba River. Participants included 129 men and women older than 17 years of age. They were randomly selected in proportion to the age range and number of inhabitants in each village. Questionnaire information was collected on demographic variables, including education, occupation, and residence history. Mercury exposure was determined by analysis of hair using flameless atomic absorption spectrophotometry. The neurocognitive screening battery included the Wechsler Memory Scale, Digit Symbol, Concentrated Attention Test of the Toulouse-Pierron Factorial Battery, the Manual Ability Subtests of the Tests of Mechanical Ability, and the Profile of Mood States.

Results

Mercury exposures in this population were associated with fish consumption. The hair mercury concentration in the 129 subjects

ranged from 0.56 to 13.6 mcg/g; the mean concentration was 4.2 2.4 mcg/g and the median was 3.7 mcg/g. Hair mercury levels were associated with detectable alterations in performance on tests of fine motor speed and dexterity, and concentration. Some aspects of verbal learning and memory were also disrupted by mercury exposure. The magnitude of the effects increased with hair mercury concentration, consistent with a dose-dependent effect.

Conclusions

This study suggests that adults exposed to methylmercury may be at risk for deficits in neurocognitive function. The functional domains disrupted in adults, namely attention, fine-motor function and verbal memory are similar to but not identical with those previously reported in children with prenatal exposures.

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Questions for the Consultants hired by the City of Manistee regarding the Tondu Project

1. What was the charge (question-wise) to the consultants? Specifically, what areas were they to address?

2. What are the current standards for emissions of Mercury, Particulate Matter and Radioactive Matter as of 11/2003 according to the Federal and /or Michigan Agencies responsible for these evaluations?

3. Are there any anticipated changes in these standards in the next 5-10 years and if so what are they?

4. Given the proposed amounts of coal to be burned and the types of coal to be burned what are the expected discharges of Mercury, Particulate Matter and Radioactive Matter from the Manistee site?

5. What do you expect these discharges to do the health of the humans and animals in the immediate and surrounding areas (within a radius of 50miles)? Be specific.

6. Other than reducing the volume of coal to be burned on a daily basis, what can be done to bring the volumes of emissions to those mandated by the standards mentioned in question 2? Scrubbers, etc.? How can these modifications be mandated?

7. Storage of the volumes of coal needed to run this operation has concerns independent of the combustion problems. What contamination problems can be anticipated from coal dust blown from the storage site by the prevailing winds and what can be done to prevent them? What contamination problems will occur due to runoff from the coal piles into Manistee Lake and what can be done to prevent them? What contamination problems will occur to the groundwater and aquifers below the coal piles due to rain and melting snow and what can be done to prevent them?

8.What agencies should be involved in the ongoing evaluation of this problem and what is their responsibility and who do they report to? Who must request these evaluations?

9 Assuming the emissions in question will be excessive and unhealthy; can the owners of the proposed plant be forced to put up a bond to offset the expenses of any needed remedy? If the answer is yes, how much should the bond be for and what should the term be?

Submitted by:

Charles Dumanois M.D.
6580 Lakeshore Road
Manistee, MI 49660

Helen Ann Yunis
444 Third Street
Manistee, Michigan 49660

November 12, 2003

Manistee Planning Commission
City Hall
Maple Street
Manistee, Michigan 49660

Dear Commissioners:

At the November 6, 2003, Planning Commission meeting, concerned citizens were asked to place questions in writing and deliver them to Jon Rose at the City Office. I have the following questions and concerns.

1. What are the current levels of toxicity/pollutants being emitted into the air and Manistee Lake by the industries surrounding Manistee Lake[1]?

2. After identifying what level of pollutants are currently in the area and how much the new Tondu Industries will add to it, please research other areas in the United States that have these level of pollutants and determine if any studies have been completed regarding illnesses related to the pollutants in the area. Please gather these studies and provide them to the Commission, City official and the public.

---

[1] At the Commission meeting, several Commissioners stated that they are aware that many industries around the Lake do not have to comply with the new Federal standards. It was also stated that the emissions of other industries are not their concern and that the DEQ and EPA are responsible for monitoring them. A Commissioner also stated that the paramount concerns for the Commission "are the health, safety and welfare of the community." It is my concern that the area is already heavily polluted and that additional industry, no matter how much in compliance with the current Federal standards will only create a greater problem long-term for the community.

3. Please complete research regarding the effect the emmittance of mercury will have on the health and welfare of the community.

Thank you for taking the time to research these concerns.

Sincerely,

Helen Ann Yunis

November 12, 2003

QUESTIONS/INFORMATION FOR CONSULTANTS

RE: Manistee Saltworks Development Corporation (Coal Fired Power Plant)

Enclosed please find information for consideration for the proposed power plant. The information includes Industrial Job information prepared by Michigan University Extension for Manistee County in February 1999.

Also enclosed is information about Wind Turbines. This information indicates that 2,056 wind turbines would be needed to generate the same amount of power as the proposed Coal Fired Power Plant. This would require 10,280 acres of property to construct the wind turbines as per Otsego County's Zoning Ordinance.

Alan W. Marshall
914 Vine Street
Manistee, Michigan

MANISTEE COUNTY MICHIGAN

Community Assessment Team
Michigan State University Extension

February, 1999

MICHIGAN STATE UNIVERSITY EXTENSION

Economic development is the creation of wealth within a geographic area such as Manistee County. Creation of wealth means bringing money to an area to buy goods and services. In order to create wealth, a community needs primary jobs that will change products into a value-added commodity. The product is sold in other areas and the dollars are brought back to Manistee County. Each time an industry imports dollars from products sold, the money is distributed into the county. A formula has been identified by the State of Michigan regarding the flow of this money. Each dollar imported is used eight times internally before being exported. Industry in Manistee County imports many millions of dollars to pay the payrolls. These payrolls are then used to buy goods and services. The jobs relating to the sale of these goods and services are called secondary jobs (e.g. stores, schools and medical services). In fact, one primary industrial job will support the creation of three secondary jobs. During the last twenty years, Manistee County has lost these ever-important primary industrial jobs. This has caused high unemployment and a lack of funds to support schools, services, and government.

In order to create wealth, a community needs primary jobs that will change products into a value-added commodity.

The community leaders felt the need to change the system, and in doing so they have combined all the disciplines (economic development, Chamber of Commerce, convention and visitor bureau, etc.) into one office. The MECCA combining concept, however, may not be the best answer. Many counties in Michigan have just created new economic development corporation boards separate from the Chamber of Commerce and convention and visitor bureau, because private enterprise was not competing in the market place. The new boards are being given the responsibility to undertake programs of job creation, retention, and marketing for the total county. Economic development competition needs the support of government through its many incentive packages. In order to obtain them, the economic development boards must have full support of the governmental units throughout the county.

In the review of the Manistee County program and the creation of MECCA, there has been a major shift from the citizen-appointed program to that of the Chamber of Commerce business approach. The organizational chart (see Appendix E) identified that the director of the total program will be answerable to MECCA's board of directors, who will be representatives of businesses (except for the chairman of the board of commissioners and the mayor of the city of Manistee). This shift in control was apparent because of this limited government participation except for funding of the program. The elimination of the government appointed board of economic development and the total lack of communication of the changes outside the immediate city of Manistee has caused a considerable concern of the county's citizens. These observations have led to the development of the following key considerations and possible actions that the citizens of Manistee County could consider relating to MECCA.

Key Considerations:

- A proposed redraft of a proactive, positive, forward-thinking economic development plan that meets the needs of the local development authorities.
- A clear and separate identification of roles for all participants is not documented, especially economic development and tourism. The lack of clear definitions leads to instability of the boards of directors, leading to overlapping of responsibilities and memberships. This will lead to the inability of leaders to meet all demands efficiently.
- The Economic Development program as proposed under MECCA does not have good funding sources or a formula for government participation. The city council and county boards have not been given clear or distinct leadership.
- The proposed program does not have total countywide buy-in or citizen participation.

- The physical program location does not meet requirements of all participants.
- The county citizens are not clear about the structure and roles of the new organization.
- The local economic development organizations have not created strategies or marketing plans for their activities.
- The county has not demonstrated a good business/industrial retention program, which has severely impacted the economy, jobs, and services.
- The county lacks a training program and good public relations network to advise the county citizens of economic development activities.
- A comprehensive economic development organization with components such as local development authorities, retention programs, a marketing program, etc. is not in place.
- All education programs are not being utilized to service the total county because of the lack of control with the ISD, non-central location of the community college, and no comprehensive approach and funding, thereby not creating the trained employees needed for industrial growth.

Possible Actions:

There are several ways to begin the process of determining your organizational structure. These include identifying yourself by customer, audience, and function.

- The customer of industrial development is not someone you will sell something to or someone that will come to visit for a short time and shop. This customer is someone to invest into your community after he/she has determined that the community can help make a profit for their business.
- The audience is not comprised of tourists or citizens. The audience is a very limited number of manufacturing companies being sought after by communities. The audience can also be the local industry that needs help to expand and grow in your community. [75 percent of all new jobs for Manistee County during the next five years will come from the audience of local industry.]
- The function of industrial development is not in a chamber of commerce purview. Industrial development requires special skills.

75 percent of all new jobs for Manistee County during the next five years will come from local industry.

The second possible action may be to begin your analysis of the creation of MECCA by distinguishing separate definitions for the organizations and creating boards that can help fund their programs. You can accomplish this through the creation of a mission statement, the development of a vision with citizen input, and the determination of an organizational philosophy. These activities will set the basis of the policy statement or strategy.

The third action will be to develop separate marketing strategies for each board. These will include an external market strategy and an internal communication system.

The fourth action should include the development of a funding strategy. After all of the parties have created the necessary plans and strategies under their development boards, a formula should be created to fund the implementation of the county program.

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TRAVERSE CITY RECORD-EAGLE

January 12, 2003

Wind turbines a turbulent issue for area

- Many northern Michigan communities stuck between enthusiastic wind energy supporters, vocal opponents

By KEITH MATHENY
Record-Eagle staff writer

TRAVERSE CITY - Already a pioneer in the harnessing of wind power for electricity in the state, northwest Lower Michigan is also the frontlines in a debate over wind turbine generators.

In one corner, wind energy proponents. They cite increasing power needs; harnessing a free, never-ending resource in a non-polluting way; and weaning ourselves from dependence on coal, petroleum and the Middle East. An added bonus: Open space preservation and income for farmers, who lease their land to wind turbine operators.

"In general, the public and visitors that come to the village have given us positive comments," said Jeffrey Lawson, village manager of Mackinaw City, which has been host to two wind turbines since December 2001.

In the opposite corner, residents who want to preserve the natural beauty and rural character of the area. By necessity, wind turbine generators must be erected in open, elevated areas, and that typically means they are prominent on the landscape.

Neighbors cite noise, light strobing through the spinning turbines, and potentially decreased property values from having the tall turbines nearby.

"They don't belong in northwest Michigan," said Nancy Ferguson, who has led an effort to keep a proposed turbine out of Charlevoix County's Eveline Township.

"We have something here. People come here and say this is the prettiest place they have ever seen,"

she said. "Are we willing to give that up for the little bit of power this is going to provide?"

Between the enthusiastic wind energy supporters and the vocal opponents stand many northern Michigan communities, trying to determine whether the benefits indeed outweigh the costs and how best to plan for a landscape altered by huge towers with blades.

'A good thing'

More wind turbines are coming to the area - or at least that is the hope of Bay Windpower of Lowell. The company, which has operated two, 256-foot wind turbines in Mackinaw City since December 2001, has plans for three more in the village this year and another across the Straits in St. Ignace.

The company also is working preliminarily with property owners and local governments in many areas of northern Lower Michigan and the Upper Peninsula.

Wind is the world's fastest-growing power source, though that may have more to do with how much room it has to grow, and the saturation of coal- and petroleum-based power across the globe. Denmark, Germany and the rest of Europe have expanded use of the resource since the 1970s and have a considerable head-start over the United States.

In America, states such as Minnesota, Iowa, Texas, Colorado and California are much farther along than Michigan in harnessing wind energy.

But the commodity is still in its infancy. In 2000, wind-driven turbines produced less than 0.1 percent of America's electricity supply, compared to 52 percent generated from coal, U.S. Department of Energy statistics show.

Recent studies indicate the price of wind power is comparable to that of coal power, when factoring in the environmental and health costs brought about by burning coal.

Wind power absolutely has its supporters. Michigan's first commercial wind turbine generator began operating in 1996 near Traverse City. Traverse City Light & Power had no trouble finding 110 homeowners and 15 businesses willing to pay about $7.50 more per month on their bills for the "green energy."

The two towers operating in Mackinaw City similarly sold out, through a Consumers Energy

program allowing customers to pay 3 cents a kilowatt hour more to help support renewable energy.

"We need new power, and we have limited choices," said Bay Windpower president Richard Vander Veen.

"Wouldn't it be a good thing to focus in on ways in which power can be generated renewably, with no pollution - clean air, clean water, protecting our Great Lakes and farmland? These are the attributes wind power brings."

Uninvited in Eveline

Perhaps nowhere is the conflict between wind power supporters and those who believe it's not a good fit for northern Michigan more clearly defined than in Charlevoix County's Eveline Township.

Bay Windpower proposed to install a wind turbine generator nearly 400 feet tall on farmland there. But vocal opposition to the project caused the company to put its plans on hold earlier this year.

"It would have been the tallest free-standing structure between here and the Renaissance Center," said Ferguson, a township resident who helped lead the effort against the project.

Nevertheless, Ralph Richardson would welcome it. He is one of the farmers who signed a 30-year lease with Bay Windpower to provide for the wind turbine generator in Eveline. Richardson stood to receive $400 a month once the tower was built and operating.

"It keeps the land in open space," he said. "It stops the sprawl that's going on. It's also a source of income. And it's well-known how environmentally good it is.

"It's land that adjoins a landfill. It provides a suitable use for land that is being farmed, and wants to continue to be farmed."

Ferguson disagrees. She said wind turbines will mar the picturesque views for which the region is renowned. She also questioned the noise allowances for the turbines.

"What's proposed here is (up to) 65 decibels," she said. "The supporters like to say, 'That's like a person talking to you.' Let me stop over to your house, while you sleep, and let me talk for a couple of hours."

Ferguson and others are seeking to recall two township officials, and have filed a lawsuit against the township, over how it developed zoning for wind

turbine generators. A revised ordinance is in the works in the township, which will almost certainly go before voters in a referendum.

Bay Windpower in August informed township officials they were withdrawing their requests for the Eveline project.

"We have communities where we have been invited," Vander Veen said then. "We want to be a good, solid neighbor. Let's work with communities who want to work with us."

Vander Veen said he hopes for a reconsideration in Eveline Township at some point in the future.

A fair profit

Why is northern Michigan the focus of wind development in the state? Because the Straits area and along the Lake Michigan shoreline is where the best, most consistent wind blows, Vander Veen said. Michigan overall ranks 14th in the nation among states for wind power potential.

Vander Veen, an attorney, said that after working on electrical restructuring laws and air pollution issues, he was interested in starting a business that adhered to the "triple bottom-line" of sustainable economic growth, public health and energy security, and environmental friendliness. He formed Bay Windpower with Tom Fehsenfeld, president of the Crystal Flash petroleum company, and Suttons Bay resident Steve Smiley.

After searching for an appropriate location, the company found a suitable parcel owned by the village of Mackinaw City and zoned industrial. It installed its first two turbines at a cost of $1.5 million each. The turbines, which went online in December 2001, provide 4 million kilowatt hours per year, enough electricity to power about 600 homes per year. The company leases the property from the village, and in turn will pay the village $400 a month per turbine, as well as provide electricity for municipal buildings at a low, set fee.

Bay Windpower has a contract with Consumers Energy to provide up to nearly 36 megawatts to the Consumers power grid via its turbines. Bay Windpower also will receive 3 cents per kilowatt hour for the energy it produces, provided enough customers sign into the renewable energy program for the power produced by each turbine.

Assisting in making such a project feasible is a federal subsidy for wind power, 1.5 cents per kilowatt hour produced.

"There is a decent and fair profit to be made in doing this," Vander Veen said. "(But initially) it comes out of the pocket of the people who make the investment in the first place."

Michigan has only about 5 percent of the wind energy potential of the nation's windiest states, North Dakota and Texas. So why invest in building wind turbines here? Because of the proximity to the Consumers Energy power grid, the interconnected system of supplying power to 61 of 68 Lower Michigan counties, Vander Veen said. A similar system of substations, power lines and other transmission capabilities out of North Dakota to the energy-craving industrial Midwest is currently next to non-existent, he said.

Sixty decibels from sleep

Vander Veen said the state's three current commercial wind turbine generators in Mackinaw City and Traverse City are "universally loved."

"More than 98 percent of the people think they are just fine," he said.

Kelly Alexander, who lives just outside of Mackinaw City, is one of the 2 percent.

Bay Windpower's turbines spin only a few thousand feet from Alexander's home on Trails End Drive, where he lives with his wife and three children. His elderly parents live in the house next door, a key reason why Alexander said he decided to build a home there seven years ago, and refused to sell at a large profit when land was being sought for a possible Indian casino near Mackinaw City a few years ago.

Alexander said he and some other neighbors had concerns when the wind turbines were proposed. But in meeting after meeting, they were assured by village and Bay Windpower officials that they would have no problems.

"Obviously, when you've never seen one before, it's hard to envision what it's going to look like," he said. "We had concerns, but we went by their word. Who am I to stomp my feet? I'm not an engineer."

Alexander said the noise levels recorded on his property do not exceed the 60 decibels allowed for the turbines in Bay Windpower's special-use permits. But

that does not mean it is not a problem at times, he said.

"It's definitely a mechanical sound, and it doesn't dissipate over distance, as a voice would," he said. "I had my 15-year-old niece staying with us and she was sleeping on the couch; she couldn't sleep because of the sound of the windmills."

Alexander said the turbines have diminished his and his family's quality of life - and he has no doubt it has diminished his property's value.

"Even with a race car track, that's not 3 a.m.," he said. "At least a mill has operating hours. (The turbines') operating hours are whenever the wind blows.

"I shudder to think what three more wind turbines is going to be like."

Alexander urges residents and government officials in other areas to carefully examine any proposals, and how they might impact a neighborhood or community.

"I believe in wind power," he said. "Are there places these can go? I don't think there's any question. I think the planning commissions and boards should carefully look at where they can put these things. Make the setbacks that protect the residential areas more appropriate.

"It might cost them a little more, but do it right the first time."

Mackinaw City village president Jeffrey Lawson said the village will consider farther setbacks for any future projects.

But Bay Windpower already has a site plan in place with allowances in it that the company is following, he said. Zoning setbacks for wind towers in the village are currently half of the tower's height, including its turbines in a vertical position.

"We were trying to place them in an area that was aesthetically correct and as far away from adjoining neighbors as possible," Lawson said. "We feel for the most part we have done that. But there are areas that are affected."

Vander Veen said his company will welcome public feedback as it moves forward with other projects.

"We want to listen to the neighbors' concerns and interests, before they are put up in the first place. Then put them up in accordance with a site plan and

special-use permit, that sets out specifications for what they will look like, what the sound will be, what the limitations will be."

Protests and planning

Other states have their own wind-power controversies. In the Cape Cod area of the East Coast, a 28-square-mile wind farm proposed offshore has led to the formation of The Alliance to Protect Nantucket Sound, a group of thousands of residents and businesses who believe the project will negatively alter viewsheds and the community's character forever.

The zoning committee for the town of Lincoln, Wis., significantly altered the conditional use permits for Madison Gas and Electric wind towers, and issued a moratorium on any new wind-tower construction, following resident complaints after the company's first two wind developments.

As often occurs with societal changes, courts are being asked to weigh in on wind turbine development issues in northern Michigan.

In addition to the Eveline Township lawsuit by wind tower opponents, a landowner is suing the Cheboygan County planning commission over denial of a special-use permit for wind towers. Planners there are continuing to work on zoning restrictions for wind tower sites, prior to the issuance of any permits.

In Charlevoix County's Bay Township, a farming couple has sued the township in U.S. District Court, claiming their constitutional rights were violated when the township denied them the ability to install wind turbine generators.

Otsego County Commissioners in December amended the county's zoning ordinance to regulate wind turbine generators, despite concerns raised by some. That ordinance calls for wind turbines only in the county's forest recreation, agriculture and business districts; 20 acres of property minimum to install wind generators, 5 acres for each installed; setbacks of one-and-a-half times the height of towers; and noise from generators not to exceed 65 decibels, about the noise level associated with conversation in a restaurant or office. By comparison, a very quiet rural area is about 30 decibels whereas a chain saw is about 120.

Otsego planning and zoning administrator Tacy

assuming this was the zoning ordinance here

2056 generators
× 5 Acres minimum for each
10,280 Acres to replace Tondus energy output.

Schlink said commissioners worked on the ordinance for up to a year. Plans call for a six-member committee, including members of the public, to continue to study wind turbine generator issues and come back to the county board this month with more information.

"This is a starting point; not a finishing point," Schlink said. "This gives us an opportunity to begin looking at these structures. Without anything in place, we wouldn't be able to regulate them at all."

Charlevoix County's Evangeline Township, adjacent to Eveline, has written its opposition to wind turbines into its master plan. The plan states, "Discourage windpower generating facilities and structures as undesirable encroachments on the rural character of the township."

Charlevoix County Planner Larry Sullivan said it would be difficult for a local government that outright banned wind towers to win if the landowners filed a court challenge.

Though many may not want a wind turbine near them, or any other power-generating source, the nation's and Michigan's need for new power grows unabated.

Vander Veen points to President Bush's energy plan, which notes the United States needs 350,000 megawatts of new power within the next 20 years. Michigan, which has 20,000 megawatts of capability, needs an additional 12,000 in the next 20 years, Vander Veen said.

The state currently gets 70 percent of its power from coal; 20 percent from nuclear plants; 9 percent from natural gas, and only 1 percent from all renewables, including hydroelectric and wind power.

"We have three wind turbines operating now in Michigan, and all three are completely sold out, at a premium," Vander Veen said. "It demonstrates that these pilot programs can work; that people believe in environmental stewardship."

Keith Matheny is the reporter for Antrim, Charlevoix and Emmet counties. He can be reached at (231) 536-0345, or at tcre_keith@yahoo.com

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Tribe opposes coal plant

By ALLISON SATDORFF
Staff Writer

MANISTEE — Bold print emphasized the right to invoke tribal authority over air and water quality in a document opposing the construction of a proposed 425-megawatt coal plant submitted to the City of Manistee Planning Commission by the Little River Band of Ottawa Indians Thursday.

On the grounds that the tribe has sovereign authority to legislate air and water quality standards that exceed state and federal standards to protect the tribe's natural resources, the Tribal Council resolution opposed the city's issuance of permits allowing construction of the "Northern Lights Project" on Manistee Lake.

"As a separate political entity we have the responsibility and right to look at standards that meet our needs and those of our community. Air and water doesn't stop at a border," said Little River Band of Ottawa Indians Tribal Ogema Lee Sprague. "There are numerous instances where tribes have used jurisdictional authority to establish this kind of criteria."

The resolution disputes the "Northern Lights Project" proposal submitted by the Manistee Saltworks Development Corporation, which envisions a $700 million power plant located on the 50-acre former General Chemical site. According to the plan, the plant would be up and running by 2008, creating electricity by burning 1.8 million tons of coal a year and discharging 1.1 million gallons of daily wastewater into Manistee Lake.

The resolution's opposition argument flows from this discharge as it maintains the wastewater would have a "detrimental impact" on the plants and animals in the Manistee Lake and river system, especially on the endangered lake sturgeon and the reintroduced wild rice, it said.

The tribe is instead advocating for alternative means for energy production, such as wind turbines, Sprague said.

"Coal plants are a step backward in our development," Sprague said. "Energy production is in Manistee's future, but we would like to discuss energy production in line with a 21st century economy, not an industrial one. We think the jobs, the technology, and the long-term concerns for Manistee Lake are better serviced in alternative energy production than those currently being supplied by coal power plants."

The tribe's action did not come a surprise to Jim Tondu of Manistee Saltworks Development Corporation.

"We've been expecting the resolution and want to review it further," Tondu said. "There are a lot of issues and we want to work with the tribe as much as possible in hopes that we can educate each other. We are a part of the community too."

Tondu is also affiliated with the Texas-based Tondu Corporation that co-owns the T.E.S. Filer City Station, a 60-megawatt cogenerational plant located in Filer City. Tondu said that the company is checking into the tribe's authority to enact stricter standards and said that they've never dealt with the situation before.

However, City Manager Mitch Deisch said that tribal authority over air and water quality standards does not figure into the City of Manistee Planning Commission's charge, which is to review the project's Special Use Permit application in preparation for a public hearing Nov. 6.

"The EPA and Michigan Department of Environmental Quality controls air and water — the City of Manistee does not set those standards. Our responsibility is to review the site plan and we will continue to do so," Deisch said. "There has also been some interest in touring the T.E.S. Station and a power plant in Lansing. We're also looking at the engineering impacts and at enlisting more professional assistance."

As long as the City of Manistee and the Little River Band of Ottawa Indians "treat each other with dignity and respect," the opposition should not damage the good relationship between the governments, Deisch said. Both parties have been recognized through federal grants for their team-oriented approach.

"I believe there will always be times when two entities will differ on a variety of factors," Deisch said. "The key is that we treat the disagreement with respect and dignity. We can't always agree with everyone — that's impossible."

"In any partnership, there are areas of agreement and disagreement," said Sprague. "This issue does not define the entirety of our relationship. We are willing to work with the City of Manistee and Tondu in creating clean energy and a clean Manistee County."

The Little River Band of Ottawa Indians' resolution also opposes the project's Air Quality Permits currently being considered by the Michigan Department of Environmental Quality and "other permits that would allow construction of the proposed Northern Lights Project." A copy of the Air Quality Permit application is on file and available to the public in the Manistee County Planning Department.

Wind Energy Projects

Wisconsin Public Service Corporation 1.2-MW Wisconsin Low Wind Speed Wind Turbine Project Glenmore, Wisconsin

Turbines: Two Tacke 600-kW wind turbines
Rotor Diameter: 46 meters (151 feet)
Tower Height: 50 meters (164 feet)
Installation Date: 1998
Other Participants, Supporters: Madison Gas and Electric Company, Wisconsin Electric Power Company, Alliant Energy (co-owners); U.S. Department of Energy/Electric Power Research Institute
For More Information: Wisconsin Public Service Corporation

Project Description:
In order to better understand the operation of wind turbines in lower wind resource areas, a group of Wisconsin utilities purchased two utility-scale wind turbines in 1998. The average annual wind speed at the site is 6.1 meters per second (13.7 miles per hour). The turbines are optimized for low wind speeds. The two Tacke 600-kW turbines are two-speed, stall-regulated machines with 46-meter (151-foot) rotors and 50-meter (164-foot) hub height. Annual power generation is estimated to be 1.63 million kilowatt-hours per turbine per year.

The project is participating in TVP as an associate project. Though receiving no money from TVP for wind turbines, the project does receive monitoring equipment to gather operating data, which will be shared with other TVP participants and interested parties.

DOE Wind Energy Program Home || DOE Wind Webmaster

This exercise is an analysis of how many wind turbines of the low wind speed type as installed in Glenmore,Wisconsin (information on previous page) would be required to equal the power generating capacity of the proposed 425 megawat coal fired plant in Manistee.

The Wisconsin project was chosen for comparison because it has a similar capacity factor as Michigan.

Some calculations, which follow, will be necessary for the comparison.

The data from the Wisconsin project states that the 600-kW turbines will produce and estimated 1.63 million kilowat hours per turbine per year. There are 8760 hours per year. It follows that a 600 kW turbine should produce 600 X 8760 or 5,256,000 kW hours per year. Because of the capacity factor, 31% in this case, the expected electrical output of one wind turbine is **1,630,000** (1.63 million) kW hr. per year.

The proposed plant in Manistee has the capacity to generate 425 megawats. 1,000 kW = 1 megawat.
Therefore the proposed Manistee has the capacity to generate 425,000 kW.
425,000 kW X 8760 hours per year gives 3,723,000,000 kilowat hours per year.
Experience shows that a coal fired plant runs at a 90% capacity factor so the expected electrical energy output would be **3,350,000,000** (3.35 billion) kW hours per year.

3,350,000,000 (1 coal plant) ÷ 1,630,000 (1 wind turbine) = **2,056** wind turbines needed to equal the electrical energy output of the proposed coal plant in Manistee.

Wind Energy Basics & Favorite Links

- *Links*
- *Quick Facts*
- *Homeowner Help*
- *Resources for Teachers and Students*
- *Photos*
- *FAQs*

Frequently Asked Questions

Question: What happens when the wind stops blowing?

Answer: Wind energy is an intermittent resource. When the wind blows between about 7 meters per second (16 miles per hour) and 27 meters per second (60 miles per hour), wind turbines can generate electricity. When the wind doesn't blow, or blows too hard, the turbines can't generate electricity. Unfortunately, the wind doesn't always blow when electricity is needed. Batteries can store only a modest amount of electricity to be used when the wind doesn't blow.

Power producers that are installing wind turbines understand and plan for the intermittent nature of wind energy. They also appreciate that wind turbines offer a number of benefits that conventional generation doesn't: shorter construction lead times, modularity (more turbines can always be added if loads grow), no fuel costs, no air emissions, and higher customer approval. If the wind resource is well matched to peak loads, wind energy can effectively contribute to system capacity. Winds are often higher in the afternoon, for example, when electricity usage is high.

Question: If this technology is so great, why isn't it everywhere?

Answer: Wind technology is, in fact, the fastest-growing generation source in the world. In the United States, growth is slow because power producers have delayed construction of all types of new generation until uncertainties about utility deregulation are resolved.

Despite the slowdown in new generation, the United States is experiencing the largest surge in utility-scale wind development since the 1980s. In 1998, more than 200 megawatts of wind energy was installed. Another 600 megawatts are projected to be on-line before 2000. Low wind energy costs, combined with a Production Tax Credit of $0.017 per kilowatt-hour, have made wind energy projects financially attractive. The cost of electricity from the wind, however, is still higher than from conventional generation but other benefits add to the value of wind energy.

Question: Are wind turbines hazardous to birds?

Answer: Bird deaths are the most controversial biological issue related to wind turbines. The deaths of federally protected birds at a wind farm site in California has raised concerns by fish and wildlife agencies and conservation groups. On the other hand, several large wind facilities have operated for years with only minor impacts on birds.

To prevent further bird deaths, both the wind industry and government agencies are sponsoring or conducting research into

collisions, relevant bird behavior, and mitigation and avoidance measures at wind facilities. And project developers are conducting biological surveys to avoid choosing sites for new wind projects near major bird feeding, roosting, and resting areas, wetlands, rookeries, or low-level flight paths.

Although bird mortality is a serious concern for the wind industry, structures such as smokestacks and radio and television towers have been associated with far larger numbers of bird kills than have wind facilities. Other sources of bird mortality, such as highways and pollution, are responsible for a much higher proportion of total bird deaths.

Question: Are wind turbines noisy?

Answer: Noise may be a concern to people living near wind projects. However, much of the turbine noise is masked by the sound of the wind itself, and the turbines only run when the wind blows. Noise from wind turbines has diminished as the technology has improved. Early model turbines are generally noisier than most new and larger models. As blades have become more efficient, more of the wind is converted into rotational torque and less into acoustic noise. Under most conditions, modern turbines are quiet.

Question: Do wind turbines pose a safety hazard?

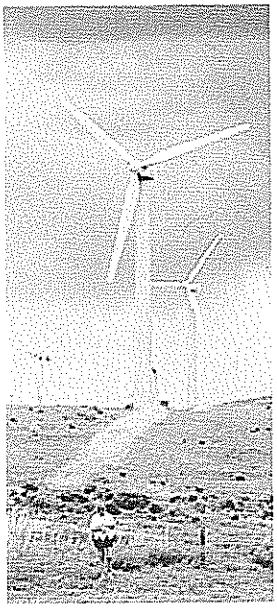
Answer: Unlike most other generation technologies, wind turbines do not use combustion to generate electricity and hence don't produce air emissions. The only potentially toxic or hazardous materials are relatively small amounts of lubricating oils and hydraulic and insulating fluids. Therefore, contamination of surface or ground water or soils is highly unlikely. The primary health and safety considerations are related to blade movement and the presence of industrial equipment in areas potentially accessible to the public. Depending upon their locations, wind facilities may represent an increased fire hazard. And like all electrical generating facilities, wind generators produce electric and magnetic fields.

Question: Is wind power cost competitive?

Answer: Today, the cost of electricity from wind is about $0.05 or less per kilowatt-hour, which represents an 85% drop over the past 15 years. A modest federal Production Tax Credit, now valued at $0.017 per kilowatt-hour, is available to encourage wind energy development. Even so, wind must compete on a cost basis with other generation sources with costs of about $0.015 to $0.03 per kilowatt-hour. Recognizing that wind energy must be cost-competitive with other generation, the U.S. Department of Energy (DOE) has set a cost goal of $0.025 per kilowatt-hour by 2002 (at sites with annual average wind speeds of 7 meters per second [15 miles per hour]). DOE is working with industry to develop these new, low-cost new turbines.

Despite its higher cost, wind energy offers many benefits that add to its value. It is a clean, renewable technology that does not pollute the air with greenhouse gasses or other emissions. Wind energy projects bring economic development in the form of jobs, tax revenues, and land lease payments to rural areas. The wind is a free

Pictures of California Wind Farms



<<Back

To: Manistee City Planning Commission and Mr. John Rose
Manistee City Council via City Manager, Mitchell Deisch

From: Richard T. Albee and Linda S. Albee
365 Lighthouse Way South
Manistee, Michigan 49660

Subject: Proposed Power Plant-Manistee Saltworks Development Corporation

Date: November 12, 2003

We are sorry we are unable to attend the scheduled public hearing, Thursday, November 20, 2003, concerning the proposed power plant by Manistee Saltworks Development Corporation.

We have many concerns we would like the City Planning Commission to hear before their consideration of the Special Use Permit Application.

Reasons why we think this Special Use Permit application should be turned down are:

1. Coal burning power plants throughout the country are responsible for pollution of waste water, air and noise as well as ruining the visual landscape. These items adversely affect the health, safety and enjoyment of property not only for individuals living close to the plant, but for all people living in Manistee County.

2. We only have two organizations that will be responsible for policing the pollution caused by this power plant, the EPA and DEQ. Neither of those organizations have done a stellar job at policing our current industrial corporations. What makes us think they will do a great job with the proposed plant?

3. The Cities Master Plan identifies the proposed site as industrial, however, we believe:
a "heavy" industrial base located on any of our water ways (Manistee Lake, Manistee River, or Lake Michigan) will have a severe detrimental affect on our tourism industry. Any jobs that may be created by the power plant will be offset by jobs lost in the tourism industry as well as individuals moving away from Manistee.

4. Some believe that the proposed plant would be cleaning up the current industrial mess caused by the past business owner of the property. We believe they will not be cleaning up the current site, but merely replacing it with another industrial mess.

5. We are very concerned as to what would happen to the proposed site if for some reason Manistee Saltworks Development Corporation had to discontinue business. This could easily happen due to financial problems or environmental regulations. Could the city afford to tear down the proposed infrastructure (smoke stack, building, equipment, coal stacks) as well as reconstitute the land to make it resalable? This situation could possibly be remedied by Manistee Saltworks offering the City a long term letter of credit to fund the clean up in case of business discontinuance. Has Manistee Saltworks offered a letter of credit or will it be requested?

6. We understand that the proposed plant will bring to the city significant tax revenues. We also realize that the proposed plant will bring to the city additional expenses such as fire protection, wastewater treatment, additional administrative burdens and a possible loss of tax revenues through reductions in SEVs for homes located in the City. Has the City Planning Commission identified these costs and netted them against any possible gains?

Besides the above listed concerns, we believe that the City Planning Commission, as well as the City Council, should also review and understand completely the **Special Use Permit** as submitted by Manistee Saltworks Corporation on November 6, 2003. The following areas on the Special Use Permit application do not seem to be accurate or need further clarification:

1. **Environmental Permits Checklist**
   Are the following Yes or No questions answered correctly? We would question numbers 2, 8, 9,10,11,18,20.

2. **Part 1: Management of Hazardous Substances and Polluting Materials**
   Number 7. We disagree with their answer.

3. **Hazardous Substance Reporting Form for Site Plan Review**
   This list of hazardous substances is frightening. Who will control and police?

3. **Attachment A**

   A. **Wastewater**-Treatment of their wastewater will be extremely expensive. Solution should be negotiated and resolved before a special use permit is approved.

   B. Coal Pile Runoff-
   What if we get more rain in a 24 hour period than 3.9 inches? This whole solution does not sound satisfactory.

D. Dust Suppression-

What about dust suppression needed when unloading the boat? When sprinkling the coal piles for dust suppression, how is the ground protected?

E. Ash Handling

Can the Shoreline Landfill handle this much ash?

F. Freighter Traffic

Will the additional 13 freighters per month traversing the Manistee River add to a better quality of life for the citizens of Manistee dependent upon the river and road ways? Tondu, by their own admission, will have no control as to the scheduling of this traffic.

H. CSX Railroad

What does it mean when Tondu says, " will most likely not be used"?

I. Decibel Levels

Because 65 decibels is the design parameter, does not mean the decibels will be 65 or less. It is our understanding that the decibels are much more than 65, especially when the plant shuts down and starts up on a weekly basis.

K. Design for Chimney

This **400 foot stack** will become the **"landmark"** for Manistee.
Ugly, Ugly, Ugly, Ugly, Ugly.

P. Site Emissions

If we do not have a complete understanding of the possible hazards of these emissions, why approve the application? Even if we pretend to understand the site emissions, do we have 100% confidence in the EPA's enforcement of the site emission regulations?

In summary, we do not believe that the short term tax gains from this project will be advantageous over the long term detrimental affects to the beautiful City of Manistee.

Please do not approve the "Special Use Permit" for Manistee Saltworks Development Corporation.

11-12-03

11-12-03

November 17, 2003

Questions Regarding Manistee Salt Works Development Project

A brief review of relevant documents on file in the County Building has been conducted. The documents consist of

-Permit to Install Application (Manistee Salt Works Development)

-Modeling Analysis (Air Dispersion Assumptions and Calculations)

After review of these documents, the following questions are respectfully submitted to the City of Manistee. This submission is in line with instructions recently published in The Manistee News Advocate.

1. The documents contain estimates of combustion byproducts that will potentially be emitted into the atmosphere (for example, 4000+ tons/year sulfur dioxide, 2000+ tons/year nitrogen oxides). Have potential health impacts of these emissions on the local population been estimated? If not, is there a plan to do so?
2. In addition to combustion byproducts, there are certain toxic metals expected to be emitted into the atmosphere, including lead, mercury and arsenic. For example, there are annual emission potentials of 800+ lbs of lead and 400+ lbs of mercury included in the air permit application. Although these toxics will be dispersed over a wide geographic area, their local land-based concentrations would be expected to grow over the years. What are the anticipated health effects on the local human population of the increasing toxic metal levels to which they will be exposed? What are the expected impacts to local fish and game populations?
3. The coal grinding and conveying operations would be expected to have the potential of generating significant noise levels. Is the City planning to enforce rigid noise standards to minimize these levels and their impact on the neighbors?
4. Regarding economic costs and benefits to the community, what are the expected additional fulltime payroll and tax revenue benefits to the area? What is the expected impact on property values in the area? What is the expected impact on tourism and the second home market in the area?
5. The air permit application and air dispersion analysis are on file at the County Building. At the time of our visit, there was no water permit application on file. Have impacts on the local waters been determined?
6. Regarding solid waste management: Substantial quantities of solid waste will be generated. Have the negative environmental impacts of leachates, dust from handling, etc. been quantified in the overall cost/benefit analysis? Have the additional costs such as higher road maintenance and shorter landfill lifespan been accounted for?
7. Is there a plan to complete an overall environmental impact study for this project? Does the City plan to render a decision without such a study?

Paul Pavlinski Jane Reynolds

Shirley Galloway William Kracht

[illegible] Mary L. Kracht

Jan Pavlinski

November 17, 2003

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PAUL GAVLINSKI
JAN GAVLINSKI
WILLIAM KRACHT
MARY KRACHT

SHIRLEY GALLOWAY
JANE REYNOLDS
SHARON LAPP

An Open Letter to the City of Manistee Planning Commission of Great Importance to the Community:

The Manistee Salt Works Corporation (aka. Tondu Corporation) proposes to build a 425 megawatt coal-fired power plant on Manistee Lake. The new power plant would be located at the vacant General Chemical site in the City of Manistee.

Representatives of the Manistee Salt Works Corporation (MSWC) have participated in a number of public meetings at which they have extolled the virtues of their proposed power plant. To summarize, they promise employment opportunities and that this project will be good for the economy of the Manistee area and for the whole state. At the same time, they assure us that advanced pollution control equipment will be utilized to minimize the adverse impact this proposed plant will have on the environment, and on the health of the people who live here and downwind.

This claim is only one perspective on the potential economic and environmental impact this proposed coal-fired plant will have on our community. As the Ogema of the Little River Band of Ottawa Indians, and as a husband and father, I would like to offer an alternative perspective to that which has been advanced by the MSWC. Although, I need to qualify that my comments here are not intended to be an exhaustive analysis of the issues, impacts, or alternatives to such a development in our community.

The economy in Manistee is in the midst of a dynamic shift from an industrial base to a tourism base. This has not happened just by accident, but rather has been a deliberate effort that has taken place substantially over the previous decade. This has been accomplished through the cooperative and coordinated efforts between the Tribe, the City, County, Townships, the Manistee Chamber of Commerce and other economic development concerns.

Anyone who has lived in Manistee for any period of time knows how this community was devastated by the loss of jobs and tax base that resulted in the last twenty years when many local industries closed their doors and relocated to other states or countries. Manistee was not alone – dozens of other communities in the Midwest and Northeast were facing similar and profound setbacks.

Contrary to many other communities who were struggling to develop their economic recovery plans, this community had certain 'natural' advantages. Here in Manistee, the sun rises over the National Forest and it sets over Lake Michigan, and in between we have two beautiful rivers, and what can slowly but surely become a jewel – Manistee Lake. For anyone who likes to hunt, fish, hike, ski, boat, canoe, swim, snowmobile, golf, or just be outdoors - this place is a recreationer's dream.

Recognizing these strengths, it was determined that if this community was going to survive, or in any way prosper as it once had, then a new direction would have to be charted – one based more on tourism and less on industry.

This was the very argument and strategy that the Manistee City Council employed when they advocated for the Harbor Village development in the early 1990's. And on the whole, I think they were wise to advance this as the cornerstone of their strategy for reviving the economy of Manistee.

The remaining industrial operations around Manistee Lake still contribute to the local economy, just less than they used to. For Manistee, the tax base and employment opportunities that would be derived by commercial, retail and residential development are significantly greater, in my estimation, than the industrial use proposed by MSWC.

To allow for the proposed coal plant to locate here would be like turning the clock back a century. It's regressive, and it would serve to undermine all the progress and investment that has been made here in the last decade. Furthermore, the proposed coal plant will have a long-term and cumulative detrimental impact on Manistee Lake, on the environment as a whole, and on human populations here and downwind.

Federal law provides that the proposed coal-fired power plant will have to use the "Best Available Control Technology" (BACT) to minimize pollution. BACT legally means the best technology that is *affordable* - not the best technology period. There is no such thing as "clean coal". The new power plant, as proposed, would have relatively low pollution emissions for a coal-fired power plant, however there will still be harmful pollution emissions.

The emissions from this power plant will be added to current emissions levels. The MSWC representatives are telling the public that Manistee has good air quality and that this area is designated as an "attainment" area for all EPA criteria pollutants. In this context "attainment" means that a pollutant level has not exceeded a certain safe threshold.

The truth is that there is no known evidence to document that the air quality in Manistee has ever been tested. There are no monitoring stations here. The present "attainment" designation is based on the fact that there is no monitoring data on which to establish a designation. Federal law only provides for two designation categories: "attainment" and "nonattainment." When there is no data available for an area, federal law states that the area will have a designation of "attainment" unless the weight of evidence suggests otherwise.

There are ozone monitoring stations in Benzie and Mason County. Both of those counties are designated "nonattainment" for ozone. It would therefore be reasonable to

conclude, given that the counties immediately to the north and south of us are classified as "nonattainment", that Manistee County would also have an ozone problem.

Ozone resulting from coal-fired power plant operations can be transported great distances. Here in Manistee we are affected by ozone pollution produced in Wisconsin. Ozone is not emitted directly by coal plants. Coal plants emit the precursors of ground level ozone, mainly oxides of nitrogen.

Ozone causes respiratory problems. Young children, elders, and people with existing respiratory problems such as asthma are at greatest risk.

Ozone also has a negative effect on plant-life, reducing their ability to produce and store food, thereby increasing their susceptibility to disease and pests. Research shows that ground level ozone causes decreased yields of agricultural crops, and will permanently alter forest ecosystems.

Before any decisions are made regarding the development of the coal plant in Manistee, a monitoring station should be established in Manistee for a period of time sufficient to determine whether this community would qualify as a "nonattainment" designation for ozone. One of our Tribal attorney's is currently inquiring with EPA about the costs and timeframes for establishing a monitoring station in Manistee.

Particulate matter is a form of pollution directly emitted by coal plants. The proposed plant will have to operate within federal and state law in regards to particulate matter emissions, but those laws do not sufficiently protect humans, nor do they protect wildlife.

The representatives of MSWC tell us that they will remove so much of the pollution from the proposed plant's emissions that it will be hard to see anything coming out of the smoke stack. The emissions that we cannot see are at least as harmful as those we can see.

Particulate matter can be solid or liquid and have almost any sort of chemical make-up. Particulate matter is a danger to us because it lodges in our lungs - causing tissue damage and a decreased ability to take in oxygen and expel carbon dioxide. The EPA estimates that particulate matter causes over 15,000 premature deaths each year in the United States. Researchers have shown that exposure to particulate matter correlates with increased incidence of severe asthma attacks, worsening of lung disease and heart damage. These are not mere statistics; they are somebody's mother, father, sister, brother, or child.

The Manistee Salt Works Corporation is promising to use low mercury content coal to minimize mercury pollution emissions. The bulk of mercury pollution comes from long-range atmospheric transport. There is literally no place on earth that has not been polluted by mercury from fossil fuel burning.

Any amount of mercury pollution is too much. Mercury affects the reproductive success of all creatures, including humans. Birth defects and arrested development can result.

Exposure to mercury is most often through the ingestion of food, in particular fish. Adding any amount of mercury to the environment further compromises our ability to safely eat fish caught in the Manistee River watershed. .

The effects of mercury on wildlife are similar to those on humans. Fish and birds experience decreased rates of reproduction, and increased birth defects.

When speaking about mercury pollution during a recent City of Manistee Planning Commission meeting Joe Tondu, the principal owner of MSWC, stated that the 'solution to pollution was dilution.' This is 19th century industrial thinking that is not supported by the weight of evidence. Joe Tondu stated that the overall plant design called for a 400 foot smoke

stack. He told the City Planning Commissioners that a stack of this height would spread mercury pollution down wind over great distances and even beyond the United States.

Mercury does not go away. Once in an ecosystem it stays there and it will accumulate over time. Sending the pollution down wind does not solve the problem, it only makes it someone else's problem. This is not responsible citizenship – civic or corporate.

Other aspects of the proposed plant design call for a discharge of process water to Manistee Lake that MSWC has said will be warmer than the ambient lake water. Joe Tondu has told the public that this will improve water quality and create better fishing. This is a gross misrepresentation of the facts. Even if the process water is scrubbed clean of all pollutants, this is not true. Manistee Lake is part of a cold water system. This type of warmer than ambient discharge is a form of thermal pollution that would degrade the Manistee Lake ecosystem.

Another element of concern is the mining of the coal. The coal that MSWC intends to use would be strip mined in Wyoming. Joe Tondu claims that the coal would be scraped off the top – as if to imply that this method is not an environmental issue. There is no way that Joe Tondu can acceptably understate the destructive effect that strip mining has on the environment. Suffice it to say that millions of years of ecosystem development are wiped away by this activity.

I do not want the electricity in my home or in our Tribal offices to fuel additional ecological damage through strip mining, nor do I want to be a consumer for an archaic Appalachian-mode economy somewhere else.

Our Tribal offices and operations certainly depend on electricity and we also depend on car traffic for our economic well-being. Understanding this, we have and will continue to take measures that mitigate the environmental impact. With the support of EPA, we have explored wind turbine development and alternative transportation methods at our new housing

development. Although these are currently small-scale explorations we believe they can have large scale implications for the future of the Tribe and the Manistee community as a whole.

In fact, the Tribe will soon be requesting a meeting with the City of Manistee to negotiate the location and installation of an Anemometer, which will be used to measure and determine the feasibility for wind energy in this community.

The Little River Casino Resort will also be giving away two hybrid (gas/electric) vehicles in the near future as promotions. These vehicles have substantially lower emissions than conventional internal combustion engines.

The Tribe has been exploring alternative energy systems, in particular wind energy, for over two years now. In the news lately, I see that Mason County has been approached by a corporation interested in developing wind energy systems along the lake shore, and the County is now proceeding to adopt land use regulations to allow for this. Oceana County already has. Leaders in Mason and Oceana Counties seem to be recognizing the feasibility and potential profitability in advancing 21st Century technologies. And yet, Manistee may return to 19th Century technology?

I believe that there is more wind energy that can be harnessed along the lakeshore of Manistee County than all of the shipments of coal that could feasibly be brought up the river channel. And that, among other reasons are why we want to explore a partnership with the City to install an Anemometer.

The economic impact of alternative power production through a joint venture with the Tribe, the City of Manistee and other entities could have a significant and positive multiplier effect on the local economy. Profits from *our* proposal would stay in Manistee.

The vast majority of our current employees are non-Tribal. The vast majority of the profits currently generated by the Tribe remain in the local economy; it is not funneled to other states. Unlike corporations, we do not export jobs out of the country.

The Little River Band of Ottawa Indians has been diligent in our commitment to build and maintain good relations with our neighbors - here in Manistee and in other places. But we also have a responsibility to the land and all of its creatures. The land is our Mother. And I know that we, as Native people, are not the only people who share those values and that sense of obligation to the Earth.

The issues involved with the proposed power plant are many and complicated. The information I offer, I give with confidence. I also firmly believe that we can work together to develop viable alternatives for energy generation that are ecologically sound, would provide meaningful employment opportunities for Manistee, and are based on 21st century technology.

Miigwetch.

Lee A. Sprague, Ogema
Little River Band of Ottawa Indians
375 River Street
Manistee, Michigan
231/723-8288

Questions for Planning Committee

1. Coal burning emits particulate matter, hydrochloric acid, mercury, radiation, hydrogen fluoride, sulfuric acid, nitrogen oxide, uranium, thorium, and sulfur dioxide. Which of these does the EPA monitor?

2. Manistee Lake has elevated levels of mercury, PCBs, and pathogens. There is an advisory about eating bluegills from the lake. Coal burning releases mercury. Can Tondu keep from adding more? Will the site be monitored independently?

3. A former lobbyist for coal and power companies is now Deputy Secretary of the Department of the Interior. The current Presidential administration seeks to weaken the EPA regularly. New legislation allows for more pollution under the Clean Air and Clean Water Acts. Many people are not reassured when hearing about EPA enforcement of pollution violations. With the public's health involved, will Manistee independently monitor emissions and fine for violations?

4.The EPA does not regulate coal ash. Coal combustion products, or CCPs, are mainly ash, usually mixed with coal pile wastes and residue from the pollution scrubbers. CCPs can contain toxic heavy metals. Again, the public's health is involved. Will the landfill have a liner on this dump site? Will the groundwater be monitored?

5. What will happen to the scrubber sludge?

6. Will power rates go down if this plant is built? If so, when?

Steve Klein
98 Green Bush

YATES CHEVROLET-CADILLAC, INC.
"YOUR DEALER ON THE HILL"
1303 Manistee Hwy U.S. 31 South
Manistee, MI 49660
231-723-3578 • FAX 231-723-3762

November 17, 2003

To Whom It May Concern,

It is indeed refreshing to hear that TES Energy is interested in an additional capital investment in our community.

As I sit and reflect on the irradiation of our Manistee Industrial base and the employment opportunities for our youth over the last 30 years - ie: Manistee Drop Forge, Hardy Salt, Excello and Century Boat we would/should encourage and endorse their efforts.

Robert Yates
President
Yates Chevrolet Cadillac Inc

Laura Horvat
President
Wenco Of Michigan

Mark Sanford
260 East Piney Rd.
Manistee, MI 49660

November 19, 2003

City of Manistee Planning Commission

RE: Manistee Salt Works Corporation (AKA Tondu Corp) proposal to build a coal fired power plant on Manistee Lake

I am a citizen of Manistee County writing to express my opposition to this proposed construction. I relocated here from Grand Rapids because of this area's great beauty including Lake Michigan, Manistee Lake and the Manistee National Forest.

Since moving here I have attended a forum relating to the sediment in Manistee Lake sponsored by Grand Valley State University. I learned that most of Manistee Lake is essentially dead with two exceptions being where the Little Manistee and Big Manistee Rivers empty into the lake adding fresh water. I have also talked with fishermen who talk about the high numbers of fish caught in those locations with abnormal tumors on them.

Because of my interest in the National Forest I have read information regarding the problem of forests dying in Appalachia. These forests are thought to be dying and more susceptible to disease as a direct result of acid rain produced by coal plants up-wind from them.

The prospect of locating a larger coal burning plant on Manistee Lake which empties into Lake Michigan and is up-wind from the Manistee National Forest is a horrifying prospect. This area's natural resources must serve as it's future economic base and must be protected and managed carefully.

I would encourage those who have authority and power in this situation to work to attract businesses to Manistee that use clean non-fossil based energy and which enhance the tourism and the natural resource potential of this beautiful community. This would likely be an easy thing to do since there are incentives available to companies from the federal government and other entities to promote clean energy resource development.

I would encourage those making decisions about the health and well being of this community and it's natural resources to model our community after other progressive communities that appeal to tourists and natural resource enthusiasts rather than on an outdated model promoted by dirty polluting industries. I would also encourage them not to fall victim to a fear based mentality thinking that our community needs to take whatever industry it can attract (meaning industries that other progressive communities will not allow in their communities).

Thank you for your consideration of my opposition to this project and my concern for the health of our community members and our natural resources. Frankly, I am surprised this proposal is even being considered in this day and age of environmental awareness and health consciousness.

Sincerely,

Mark A. Sanford

Manistee County

OFFICE OF
CONTROLLER/
ADMINISTRATOR
231-398-3500
Fax 231-723-1795

Manistee County Courthouse • 415 Third Street • Manistee, Michigan 49660

November 19, 2003

Mr. Roger Yoder, Chairman
City of Manistee Planning Commission
70 Maple Street
Manistee, MI 49660

RE: Support for Northern Lights Project

Dear Mr. Yoder:

On Tuesday, November 17, 2003, the Manistee County Board of Commissioners voted unanimously to support the concept of the Northern Lights Development Project being proposed by Tondu/Manistee Salt Works Development Corporation. Based upon the information received to date, we feel a project of this magnitude will provide the Manistee County area with major economic growth and benefits.

It is our understanding that on Thursday evening, the City Planning Commission will be holding a Public Hearing on whether to grant a Special Use Permit for this project. Please consider the substantial economic impact of this project as you deliberate a final decision.

Thank you for the opportunity to present the County's support.

Sincerely,

Thomas D. Kaminski
County Controller/Administrator

TDK/jlp
Enclosure
cc: Megan Kempf

[jp c:\office\letters\yoder11_19_03]

Mr. Jon R. Rose
Community Development
City of Manistee

Mr. Rose,

This letter is coming from an extremely upset resident of Maxwell Town – the area in which the new energy producing coal plant is soon to begin operations.

I am extremely upset and agitated because the knowledge of the health effects of coal burning are so tremendous that I literally fear for my life, along with the lives of my neighbors – this being said without any unnecessary drama but with a true reality. While some of the pertinent information residents have been given concerning the supposed positive effect the 400 foot smokestacks which would be put in place by this company will have, I cringe at the thought that you, our city council and Joe Tondu himself, could even begin to believe they would alleviate the risk of any potential air ridden carcinogens, and think we could believe the same thing.

How stupid do you think the residents of Manistee are?

Currently the air pollution in Manistee, as a result of the factories currently in operation, combined with the pollution blown over from Wisconsin, and make no mistake, we are affected by that also, regardless of our seemingly (deadly) pristine air, looking at facts according to medical information, we have an extremely high rate of pollution which is accompanied by one of the highest ratios of cancers per population in the country. Our deception has only increased our death rates.

The added air pollution caused by the production of energy (energy which will not be used by this area) created by this "proposed" coal plant, coinciding with the runoff into Manistee Lake, along with barges full of coal arriving approximately 4 times a week, dumping tons of coal, with the unavoidable coal dust mixing into the air we breathe, damaging our lungs and hearts, along with the financial costs of this black substance coating our homes and vehicles, is filling most "thinking" residents with fear.

What would be a sign of good faith on the part of Joe Tondu, who currently lives a thousand miles away from this latest venture of his, would be for him to buy, or build, a suitable home within the area and commence living here with HIS family. This would settle any fears we, the people of Manistee, may have.

However, even as I write this letter, I truly am filled with the futility of a beaten person -- knowing this new plant has been a "done deal" for some time now. The viable effect of a negative letter or vote is probably nothing more than a waste of time. But I am hoping even the little guy gets a say-so in the future of his town, his children and his own life.

Ronald Schramski
Maxwell Town, Manistee, MI
Ronald Schramski
917 Vine St
Manistee, Michigan

RESPONSE TO FREQUENTLY ASKED QUESTIONS MANISTEE SALTWORKS DEVELOPMENT CORPORATION COAL FIRED POWER PLANT

BOATS

The applicant projects an additional 13 boats per month for 10 months. What is the anticipated impact from this?

The projected boat traffic would generate 260 bridge openings per year. In 2002 there were 554 bridge openings. This range is from 109 in September with a low of 18 in March. The 26 additional openings in September represents a 16.5% increase, whereas the 26 additional openings in March represents a 145% increase. In total the 260 openings represent a 47% increase in bridge openings.

BONDING

Is the Planning Commission going to require a bond for clean up of the site if they go out of business?

The Planning Commission could require bonding for this project if they feel it is necessary.

COAL PILE

Coal piles are a potential source of pollution, both from blowing coal dust and waterborne runoff. How is this being addressed?

The applicant has proposed a sprinkler system to keep the surface of the coal piles wet to minimize blowing coal dust. Additionally will have enclosed conveyers to carry the coal from the piles to the power plant. Waterborne runoff will be captured and piped to detention ponds. The water will be reticulated for dust abatement.

The ponds will be designed to accommodate a storm of 3.9 inches over a 24 hour period. Additional storage for rainfall in excess of this 25 year storm event is provided by the capacity of the collection system which will provide a 30% reserve. In the event the design capacities are unable to handle exceptional quantities of rainfall water may be utilized for cooling or run through the Waste Water Treatment System. Impervious barriers will prevent infiltration into the groundwater. The site will be designed and contoured to preclude any runoff or discharge of untreated storm water to the lake.

LANDFILL

What are the impacts on the landfill? How will the proposed coal ash affect the life span?

A study by Golder Associates Inc. on behalf of Allied Waste Services was completed in July 2003. This study concluded under current permits the landfill would have a functional life of 30.3 years. Golder also stated that they believed that permitting for expansion to the south would be readily achievable.

MONITORING

Who will be responsible for monitoring the emissions from this plant? How often will they be evaluated and who must request the evaluations?

The Department of Environmental Quality (DEQ) will be in charge of permitting and monitoring the emissions. The emissions will be constantly monitored by the DEQ through computer sensors installed in the stack. This computer is remotely accessible by the DEQ at any time.

NOISE

What is being done to address potential noise impacts from the project?

The design parameter for this facility is 65 decibels or less at the property line. This means that the noise at the property line will be 65 decibels or less (normal conversation is 60 decibels).

PROPERTY VALUE/TAXES/WAGES

What is the anticipated property tax revenue?

The property tax revenue is impossible to determine. Unknown factors include; tax abatements, tax credits, state rulings on assessment methodology, etc.

What is the anticipated impact on property values?

This neighborhood has always been adjacent to industrial facilities. Any impact this facility might have on the adjoining property values cannot be determined.

What is the anticipated full time payroll?

Unknown

INDUSTRIAL DEVELOPMENT CORPORATION
OF MANISTEE COUNTY
11 CYPRESS STREET • MANISTEE, MI 49660

November 19, 2003

The Planning Commission
City of Manistee
70 Maple Street
Manistee, Michigan

Re: Northern Lights Project

The Industrial Development Corporation, Manistee, Michigan, is in favor of the concept of the Northern Lights Project as proposed by Tondu Corp./Manistee Salt Works Development Corp. The City of Manistee's master plan recognizes the important role lakefront industry plays in the City's economic well-being. The General Chemical site has historically been industrial for over 100 years, and only a project of this size and magnitude can finance the clean up and demolition required for that site. All of these aspects are important to Manistee. This project should be given favorable consideration.

Sincerely,

Thomas Kubanek
Executive Director
Industrial Development Corporation

PHONE: (231) 723-4325

Travelers Motel
5606 Eight Mile Rd.
Onekama, MI 49675
231-889-4342 Res: 1-800-769-0184

November 20, 2003

To the Manistee City Council, Planning Commission, Department of Environmental Quality, business owners, and all concerned citizens:
I am writing as a local citizen and business owner in support of the proposed Northern Lights Project. This project would inject a tremendous amount of economic life into our current state of business. The only direction a planner can advocate in a progressive civilization is to control but allow technology to move forward. We can control the technology put before us with the Northern Lights Project by placing authority in the proper place. The DEQ is the appropriate agency to deal with issues regarding our environment and the potential risks with a coal burning facility. The employees at Tondu have already described at great length the advancement of techniques and the technology used within the modern coal burning facilities. At this juncture we need to allow the project to move to the next phase. If we vote for staying the same, we will regress. Manistee is on the right track. Let's not derail her.

The positives associated with this project are incredible and the numbers are staggering in terms of our economy. We instantly increase the tax base and avoid future tax shortages that would be passed along to the residents of Manistee County. With Tondu, we have a big business to help in this regard. The proposed Brownfield Development site cleanup alone should be enough to move this project forward. This site is a huge eyesore and hazardous to our health as it exists today. No other entities have been able or willing to correct this piece of property. Tondu would be cleaning this up and making this a viable, thriving section of our city and lake again. The power produced from the plant would obviously benefit our area from a long-term basis as it would many residents of Michigan. This project, as we all know, would take 3 years to complete needing an incredible amount of manpower. The jobs at the plant (60) would be good paying jobs with a stable employer. These jobs would also help create more balance in relation

to the shifting of jobs to the service sector. The jobs created to build the facility would also give union laborers a position near home in some cases. The manpower coming from distances too far to travel will be staying in our motels, eating at our restaurants and shopping at our stores. We would be hard pressed to be able to bus in 300 people per day that will do this for 3 years.

I would strongly urge you to listen to the majority of the public and not just the strongest voices of anti-progress when making this decision to welcome the Northern Lights Project to Manistee.

Sincerely,

John Mattson

John Mattson, owner
Travelers Motel

Jim Reithel
1339 Meadow Wood Drive
Manistee, MI 49660

I am the General Manager for Martin Marietta Magnesia Specialties Operations, responsible for four plants located in Michigan, Ohio, Tennessee, and Connecticut. I consider myself fortunate to have called Manistee my home now for over 14 years. It is a great place to live and raise a family. I have come forward to speak this evening because I am concerned about the future of our community.

I value the opinion of the many concerned citizens about the potential impact that this proposed power plant will have on the community and our way of life. However, I also think it is extremely important to consider all the aspects of the project.

As I'm sure everyone is aware, it continues to be a daily struggle for industry and manufacturing to perpetuate jobs in this country. I have experienced this first hand, as have the other 130 employees at Martin Marietta's Manistee operation. The pressure from every aspect of society to regulate businesses and the fierce environment of global competition way heavily on the ability to simply survive. As industry and manufacturing succumb to these pressures and close their doors the opportunity for communities such as ours to sustain our current standard of living becomes very difficult, and in many cases impossible. There should be no dispute that industrial and manufacturing jobs have historically paid a "living wage" with benefits, and replacing them competitively with employment from other sectors of the economy is difficult at best. This project will bring long term employment opportunities to our community, providing both direct and indirect positive, sustainable improvement to the local economy.

It is also important to consider our needs a society. As a large industrial consumer of electricity I understand firsthand the need for economical, reliable sources of power. This commodity is required not solely for the benefit of industry, but for commerce and every day life. Imagining our lives without it is not a pretty picture. The implications of not enhancing our current domestic power infrastructure are far reaching. Pursuing alternative sources of power is important, but we also need to be realistic and understand the need to continue power generation via conventional techniques until reasonable alternatives can be achieved. One can also take the tact that power plants need to be built, but just not in my back yard.

Continuing to adhere to this philosophy will push us further toward an environment of unreliable and unstable power supply. While there remains much rhetoric about the issue, most experts agree that we need to respond to aging power generation and transmission facilities in this country, or be faced with an uncertain and unreliable future power supply.

Another principal issue is the environmental impact this project will have on our community. This is a complicated issue that merits the kind of detailed research and discussion that is taking place. It should be understood that the technology available today, accompanied by the regulatory restrictions imposed by the responsible governing agencies, would provide for a state of the art power plant that furnishes a commodity we all consume every day, supplying it safely and with minimal impact to the environment. Of equal importance is the requirement for any successful company to work proactively with the community and regulators as responsible community citizens. This obligation is the kind of commitment that the principles responsible for this project are willing to make to our community. They have demonstrated this by their current cooperative efforts and the historical operation of their existing facility. Cooperative effort by industry and the community presents a powerful tool for retaining the quality of life in our community, striking a balance between our economic needs and our priority to preserve our environment. Working together I believe we can achieve what are truly mutual objectives.

This is an important opportunity for our community, and I encourage everyone involved to go forward in an informed manner, with a spirit of cooperation and compromise that supports the successful construction of this new facility.

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Name	Address	Signature	Registered Voter (yes/no)
Robert Robles	609 Davis		Yes
LAURIE Willis	285 TENTH ST	Laurie Willis	Yes
JIM GRABOWSKI	635 CORNELL		Yes

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take

Name	Address	Signature	Registered Voter yes/no
Zach Stellman	270 5th Ave	Zach Stellman	No
Chris McClain	24 Cabefish Hwy Lot #6	Chris McClain	YES
Linda Hall	617 Second St	Linda Hall	YES

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Name	Address	Signature	Registered Voter yes/no
Patricia Baumbach	211 SECOND ST PO BOX 342	Patricia Baumbach	yes
[illegible] A. Cook	1012 Ransdell ST	[illegible]	yes
Amber Hirpakka	744th St. Eastlake	Amber Hirpakka	yes
Rachel Davis	284 2nd Ave.	Rachel Dav	yes
Connie Aves	2405 Filer City Rd.	[illegible]	yes
Ronda [illegible]	9433 8mi Rd Kaleva		yes
Barbara Valdez	17248 Airport Wellston, Mi		yes
NICK TABACZKA	11½ LYNN CT	[illegible]	YES
[illegible]	PO Box 755 Manistee		yes
[illegible]	10861 Old Freesoil Rd		YES
[illegible]	10861 Old Freesoil Rd		yes
Nathan Fischer	1489 Red Apple Rd	Nathan Fischer	yes

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Name	Address	Signature	Registered Voter yes/no
Steve Klein	88 Greenbush		yes
Richard Albee	365 Lighthouse Way		yes.
Linda Albee	365 Lighthouse Way		yes.
Deborah Nale	8424 3rd St Onekama		yes
Mark Ward	6520 Maidens Bear Lake	Mark Ward	yes
Britt Uecker	297 4th st. Manistee	Britt Uecker	yes

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DAVE VAVRA 2636 RED APPLE [signature] 49660 YES
Gert Bresnahan 915 S. Clayburn Manistee yes

Name	Address	Signature	Registered Voter yes/no
AINCIA A. DIDION	88 GREENBUSH ST.	[signature]	yes
rett A. Van Drie	207 Pine St. Manistee	[signature]	Yes
JOHN NALE	8424 Third St	Onekama	yes [signature]
David Roskoski	430 Water St. Apt. D	[signature]	yes
Monica Edikauskas	254 4th Ave Manistee	[signature]	yes.
GARY ANDERSON	8389 LEE CREST BLVD	[signature]	YES [signature]
Julie Parker	8389 LEECREST BLVD		yes Julie Parker
Joe Dumas	1854 Lakeview Dr.		yes [signature]
Judy Cunningham	4466 Potter Road		yes Judith Cunningham
[signature]	315 Third St.		yes
Molly Wolfe	250 S Nelson St	[signature]	yes
Mary L. Kracht	403 First St. Manistee		yes.
HELEN ANN YUNIS	444 3RD STREET MANISTEE		yes

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Lake

Name	Address	Signature	Registered Voter yes/no
WILLIAM R. KRACHT	403 FIRST ST, MANISTEE	William R. Kracht	YES
Lee Sprague	5475 Pine Creek Rd MI 49		NO

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Name	Address	Signature	Registered Voter yes/no
ELLYN NIESEN	1603 NIESEN DR.	Ellyn Niesen	YES
DIANA KING	27 Clay St. #B	Diana K. King	Yes
Luke Hunter	622 Pine St	Luke J. Hunter	Yes
HEATHER PARKER	913 ENGLEMAN ST.		YES
MEGAN MAGEE	POBOX 1710	Megan Magee	YES
Danne Hoffman	361 Second St		yes
MARK HOFFMAN	"		YES
Britt Uecker	297 4th st.	Britt Uecker	yes
Jennifer Volkema	310 Hughes St.	Jennifer Volkema	yes
Dana Kuczynski	629 16th St	Dana M Kuczynski	yes
Michael Dedmon	MA, CF-SLP 244½ 5th		yes
Nathan Davis	125 Washington St		yes
DA KROLCZYK	231½ 2nd Ave		YES
Eric	2306 FILER CITY rd.		

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Nate Svoboda	PO Box 735 Manistee, MI		yes
Stephanie Ogren	465 8th St. Manistee Mi		yes
Mark Knee	4290 N. Sherman Ludington, MI		yes
Donnie B. Harnish	5655 Leckrone Rd. Brethren, MI 49619	Donnie Harnish	yes
Joe Hodshire	52 High Bridge Kaleva MI 49689		YES
Robert L. Sanders	3680 E Chauvez RD Custer MI 49405		YES

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Name	Address	Signature	Registered Voter (yes/no)
Brown Arrow Flint Knife	307 McKee Street	RORY SNOWARROW FLINT KNIFE	N
MARK Dougher	244 FREMONT	[illegible]	Y
JoANNE HOUSE	277 3rd	[illegible]	Y
Kathleen Block	7231 Orchard	Kathleen Block	Y
Angela Willis	106 McKee Street	Angela Willis	Y
Ryan Nash	823 Kosciusko St	[illegible]	Y
Frankie L. Medacco	6639 Pine Cr Fck Apts	[illegible]	Y
Ben Hamilton	362 First St.	[illegible]	Y
Leo A. Ivinson	6455 S. Shore Dr. Bear Lake	Leo A Ivinson	Y
BILL WILLIS	285 TENTH ST., MANISTEE	[illegible]	Y
Jon Anderson	4076 LAKESIDER, BRETHREN, MI	[illegible]	N
Nancy McCaslin	613 Hopkins Street, Manistee	Nancy McCaslin	Y

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lake

Name	Address	Signature	Registered Voter yes/no
Amy Sedelmaier	1472 Hill Rd.	Amy Sedelmaier	No
Sue Setzer	12349 Lyon St	Susan M Setzer	Yes
Rennae Hansen	526 2nd St	Rennae Hansen	yes
Kathy Schultz	321 Peterson Rd	Kathy Schultz	yes
Maria Dykgraaf	575 N Amsdell Rd	Maria Dykgraaf	yes
Scott A. Kogut	6987 Blue Creek Rd	Scott A. Kogut	yes
Lynn Bushaw	12108 Seventh St Bear Lake	Lynn Bushaw	yes
Justin Sheaks	342 1/2 4th St Manistee, MI	J. Sheaks	yes
Peggy Bennett	259 5th Ave Manistee, MI	Peggy A Bennett	yes
Matt Umlauf	231 5th Street Manistee, MI	Matt Umlauf	
Linda Hiller	121 Terpak Rd. Manistee mi	49660	yes

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8. Hiring only one "outside consultant" would be like not getting a second medical opinion about a life-threatening condition;
9. That Lake Manistee, after decades of pollution and neglect, does not need another potential pollution source near it, but rather needs time to recover;
10. That profits for a few are not worth risking the health of all.

Therefore, we the undersigned do hereby petition the Planning Board of, and the City of Manistee, and/or any other governmental agencies to DENY any zoning changes, special use permits, building permits, or take any other action to allow the building of any type of coal burning plant in Manistee County.

Name	Address	Signature	Registered Voter (yes/no)
Arthur Leonard de Bros, Jr.	581 Beatrice Rd Manistee		YES
Tammy S. Carter	13 Bridge St Manistee	Tammy S. Carter	yes
Valerie Chandler	16 N. Snyder Rd Wellston	Valerie Chandler	Yes
Sandra Chandler	11825 River Rd. Brethren	Sandra Chandler	yes
Laura Verheek	267 5th Ave Manistee	Laura Verheek	Yes
	10 Baverman Rd		Yes
Rose M. Crawford	296 3rd St. Manistee	Rose M Crawford	NOT HERE
	306 Parkdale Ave. Manistee	Bob Hardenburgh	Yes
Sheri Lyn Hunt	124 Hancock St Manistee	Sheri Hunt	Not Here
Monica Cabot	725 S Skocelas Rd Manistee	Monica Cabot	yes
JANETTE SUMMERS	PO Box 71 Filer City, MI 49634		yes

International Brotherhood of Electrical Workers
LOCAL UNION NO. 498

3912 Blair Townhall Road W.• Traverse City, Michigan 49684 • (231) 943-4980 • FAX 943-8000
Email: ibew498@bignetnorth.net

Bernard R. Mailloux
Business Manager, Financial Secretary

November 20, 2003

My name is Bernie Mailloux, I am the business manager of the International Brotherhood of Electrical Workers, Local 498 located in Traverse City, Michigan. The local was founded September 08, 1949. Our jurisdiction encompasses eighteen counties in northwest lower Michigan. The local has 400 members, 270 construction journeyman and apprentice electricians, 82 retirees and 48 manufacturing personnel. There are 17 IBEW members and their families living in Manistee County, eleven of which live in the city of Manistee.

I have been in the electrical trade for over thirty-two years. I have worked in all areas of heavy industrial and commercial electrical construction. Through the years I have noticed stricter laws put in place concerning worker safety, asbestos abatement, noise and environmental pollution, etc. There is always room for improvement! Recently while in Washington DC, I read an article in the Washington Post that addresses this. Please let me share a couple paragraphs of this article, I have copies available.

In today's Traverse City Record-Eagle, an article spoke of the commission to gather power plant opinions. There are comments in this article that are pro and con. This is expected and needed! In this process both sides need to come together. With level heads and open minds, Manistee and the surrounding communities will continue to prosper.

Sincerely,

Bernard R. Mailloux

Bernard Mailloux
Business Manager
IBEW LOCAL 498

THE REGULATORS

Cindy Skrzycki

EPA Seeks Middle Ground in Toxic-Release Reporting

The **Environmental Protection Agency** has convened a new phase of an electronic dialogue designed to encourage "thoughtful comment" on how to improve its Toxics Release Inventory Program, which measures how much of 650 toxic chemicals are released into the environment every year.

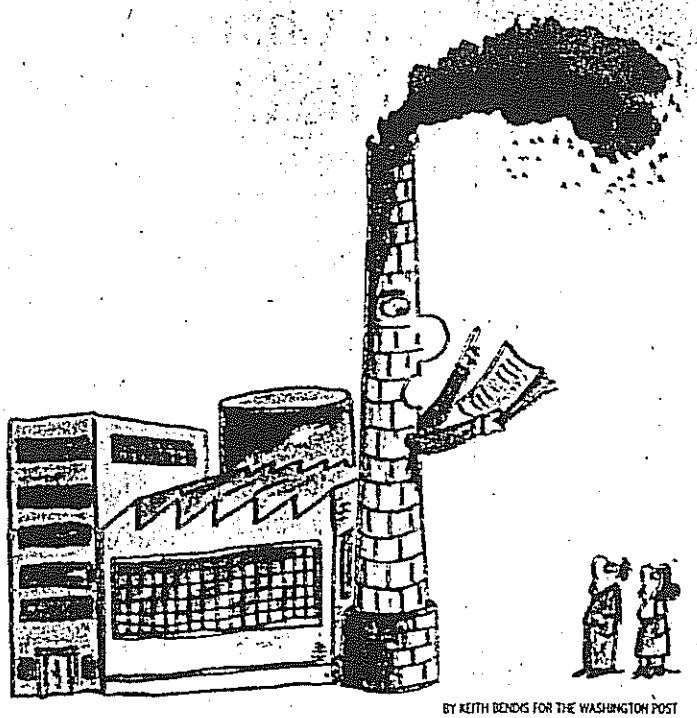
The question at hand is how to make it easier for industry to file—or reduce—the voluminous annual reports, while not compromising the value of an important public database.

Industry and environmentalists alike say the TRI, as it is called, is one of the federal government's most successful "right-to-know" information databases. It was established in 1986 and has become a primary source for community activists and public-interest groups that want to track sources of pollution in their regions, such as chemical runoff into Chesapeake Bay.

Over the years, in fact, it has spurred some industries to figure out successful ways to reduce toxic releases. Total releases in 2001 were 1.4 billion pounds; in 1988 they were 3.1 billion pounds.

But industry has long been irritated by the paperwork involved, especially since the reporting program has been expanded by EPA over the years, sometimes without formal rulemaking that allows companies a chance to comment. So when the EPA opened an electronic meeting a year ago, after years of directives from the **Office of Management and Budget** to cut the paperwork burden, the "discussion" focused on the collection and release of the data.

The EPA received about 200 comments, and the second phase of the online meeting presented a variety of "burden reduction options": the possibility of exempting more small businesses from reporting (those with more than 10 full-time employees have to file the reports now), raising the reporting thresholds for certain industrial sectors or classes of facilities; allowing more companies to fill out a "short form," rather than a more detailed questionnaire; permitting companies to skip reporting if they have no significant changes to report, and allowing companies to report ranges of pounds of chemicals rather than actual amounts.



BY KEITH BENDIS FOR THE WASHINGTON POST

For the companies that filled out more than 91,000 forms in 2000, the new round of discussion is welcome. "If anything is going to happen, it's going to happen this year," said Glen Barrett, senior

See REGULATORS, *E3, Col. 5*

EPA Tries to Strike Balance In Toxic-Release Reporting

REGULATORS, *From E1*

health scientist with the **American Petroleum Institute,** who is heading a new industry coalition on the issue. He said refineries spend hundreds of hours filling out the reports.

Most industries say they support the community-right-to-know program on which the TRI was founded. But they also complain about how complicated and time-consuming it is.

"The Toxics Release Inventory comes at significant cost and burden. We estimate the TRI costs the U.S. $600 million a year," said Michael Walls, senior counsel for the **American Chemistry Council,** which represents 90 percent of chemical producers. "The burden is in collecting the data—monitoring it, checking it, and all that. You don't just scratch down a few numbers and send them to EPA."

"We, and many others, are for biennial reporting. That would cut the burden in half," said the API's Barrett. The electric utility industry also would like to see the EPA adopt biennial reporting "and put the numbers in context so they don't frighten the public," said Michael Rossler, manager of the **Edison Electric Institute's** environmental program.

The mining industry brought two lawsuits against the EPA in recent years, one challenging the agency's authority to include it in the inventory at all, and one making it collect data on mining byproducts called waste rock. Carol Raulston, spokeswoman for the **National Mining Association,** said a recent court decision was favorable, so some companies stopped reporting the data on waste rock, reducing total amount of toxic releases they had to report to the EPA.

Environmental groups, on the other hand, aren't pleased with most of the ideas that the EPA is floating. They asked the agency during the first round of comment to concentrate more on ease of access to the data and expanded reporting.

They fear the electronic discussion might be the first step toward reducing the number of reports on toxic releases, especially since some of the options would allow companies not to report materials they recycle.

The agency cautioned in materials it posted to set up the "discussion" that talking about options does not mean they are "technically, practically and legally feasible." Still, some public-interest groups fear the EPA will be receptive to what industry is pushing.

Lexi Shultz, legislative director for the **Mineral Policy Center,** which monitors the mining industry, said some of the suggestions are "relatively benign." But she worries that Michael O. Leavitt, the new EPA administrator and former governor of Utah, will be sympathetic to the mining industry, especially since he and other Western governors signed a "policy resolution" in 2002 stating that "some materials in the mining and utility sectors are not appropriately included in the EPA reporting requirements."

"This is EPA proposing an industry wish list of options to change the nation's preeminent right-to-know law," said Paul Orum, director of the **Working Group on Community Right-to-Know,** a nonprofit organization that monitors the TRI program. "Depending on what goes forward, this could be a significant weakening of the program."

Tom Natan, research director for the **National Environmental Trust,** a nonprofit educational organization, said potential changes could compromise the "integrity of the data."

The EPA is using the electronic "dialogue" through Jan. 5, to "put lots of options out there and examine the pros and cons of them" and has made no decisions on a formal regulatory proposal, said Kimberly Nelson, assistant administrator for the office of environmental information. "Rulemaking is very costly and it locks you into a position."

As for those who fear a weakening of the TRI: "If they have concerns . . . I hope they will engage in this dialogue," Nelson said.

MANISTEE

Commission to gather power plant opinions

BY MARLA MCMACKIN
Record-Eagle staff writer

MANISTEE — The key to a vibrant city is a balance between tourism and industry and city officials say a proposed power plant could provide that balance.

That's why city manager Mitchell Deisch supports a 425-megawatt, coal-burning power plant proposed by Manistee Salt Works/Tondu Corporation for the former General Chemical site on the shores of Manistee Lake.

"We live in northern Michigan, where there is phenomenal natural beauty all around us," he said. "But we need more than the natural beauty."

Manistee's planning commission is set to hold a public hearing on a special land-use permit for the plant at 7 p.m. today in the Manistee Middle School library.

The proposal has created a stir in this Lake Michigan community, which during the '90s actively marketed itself as a tourist destination and retirement resort. Heavy industry had dominated the scene for decades.

Project proponents say the coal plant will create 60 jobs with wages ranging from $15 to $20 an hour. Tondu spokeswoman Meagan Kempf said it also could generate as much as $112 million in construction wages and an additional $10 to $12 million annually into the local economy.

But Dana Schindler, supervisor of neighboring Filer Township, wonders if the economic benefits are worth potential environmental risks.

Tondu first looked to build the plant in Filer Township, but turned to Manistee when the township's engineering consultant recommended against it.

"The coal dust and the emissions, the noise level were incompatible with the residential area," Schindler said.

There also were health concerns related to coal dust, Schindler added, citing a District 10 Health Department study from the 1990s that said Manistee County had a higher than national average rate of heart and respiratory diseases and cancer.

While Schindler sees a potential eyesore and polluter, Kempf says the project would improve the shores of Manistee Lake.

Kempf said the company would have to demolish existing buildings at the site and reconstruct the lakefront area. The plan also includes a 400-foot-tall smokestack to tower above Manistee Lake.

The company plans to address concerns about the coal fuel by expanding an existing coal storage area and adding a lining to prevent infiltration into the groundwater or runoff into the lake.

Good Evening! My name is Allan Domres and I am a lifelong resident of Manistee County. Over my lifetime, I have seen MANY changes in the business, economic, and employment climate in Manistee County. As I'm sure you are aware, the availability of jobs, good jobs, jobs for people that enable them to support their families are crucial to the well being of any community. Schools, churches, businesses providing goods and services who in turn employ others.....on and on.

The new jobs that will become available with the advent of the Northern Lights Cogeneration Plant will be those kinds of jobs. In addition, with the state-of-the-art technological planning going into the new plant, those jobs will have a minimal impact on the environment of Manistee County.

For just one example, through the collection and reuse of rainwater, dust control will be accomplished with very little impact on the environment.

Concerns of the 'Northern Lights Project' by: Tondu's Corp and the 'Manistee's Saltwork's Development Corporation'.

Assumptions:

1. 425 Megawatt Power Coal Burning Generator Plant
2. $700 Million Dollar Project
3. 13 Boats of Coal per Month
4. Treatment Plant for residue from coal runoff into Manistee lake
5. 400 foot smokestack
6. 60 Full Time Jobs
7. Bunch of indirect part time employees
8. Expenditure of 4.4 Million Dollars/Year on General Maintenance
9. Burn 1.8 Million Tons of Coal per Year

Concerns:

Several important issues have not been addressed or have been largely ignored by the town as well as Tondu's Corporation that impact both the long and short term health and well being of the town of Manistee.

The size of the plant is such that it will overwhelm and dominate this small town's atmosphere. The daily requirement to keep the plant running from the noise of truck activity as well as from the plant itself will be considerable. No longer will the sound of the Lake Michigan's waves be present on a quiet night. Additionally, security lights will light the night and there will be no 'end of day' closedown, ever. With a seven day a week, twenty-four hour operation and the plants close proximity to the town; there will be no relief from the constant activity and noise associated with its operation.

The 400-foot smokestack will dominate the landscape and will be a constant source of a water vapor, which will be overwhelming during the winter months. It will be a constant reminder of the Generator Plants close location to the town. While the polluting aspects of this discharge have been disregarded, long-term aspects of the vapor cloud as well as the micro-particle pollution from the coal itself should be the concern of everyone. While the coal dust pollution has been greatly reduced with modern scrubbers and washers, it has not been eliminated. Additionally, there will be discharge into Manistee Lake and this will be accumulative for the life of the plant.

There are planned deliveries of thirteen ships a month to feed the coal fuel requirements of the Generating Plant. There have been events in this past year where the bridge did not operate (fully open or close) when commanded. There cannot be a stoppage of the coal supply once the power plant is in operation. If there is an occurrence where one of the bridges is damaged and the ships transportation of coal is stopped, the operation of the plant remains paramount. It stands to reason that during winter months when the river is closed to ship traffic, alternate delivery systems will have to be in place. The obvious method will be by train. A small generating plant needs three trains of 60 to 80 carloads of coal, three times a week for its operation. A 425 Megawatt plant will require many more carloads and the railroad network in place to support those trains. I see no existing network to deliver coal to the town or the plants planned location via train cars.

The picture of the planned generating plant shows a single existing high-line across the Manistee Lake. The high-voltage power lines required to distribute the energy from a 425 Megawatt Generating Plant are considerable. The high-voltage power lines that are required to deliver that energy to a sub-station will change the towns' appearance in a way that has not been addressed to date. The location of the sub-station is unknown, but it will have to sizeable to handle the plants power output and power distribution.

The desirable tourist attractions will be altered and may impact both the sport fishing and the Village Condominium attraction. The river walk of this advertised 'Victorian Community' might not be as desirable as it is today, once the generating plant is in operation. These are just a few of the considerations, which will negatively impact this small community. Considerable research needs to be accomplished and much thought given before this variance is issued and approval of the Power Generating Plant is considered at its planned location.

Respectfully Submitted:

William and Martha Day
320 1st Avenue
Manistee, MI 49660
Phone: 231-723-8709

SPECIAL NOTICE

The Public Hearing for Manistee Saltworks Development Corporation Coal Fired Power Plant. will be Thursday, November 20, 2003 at 7:00 p.m. in the Library at the Middle School (Old High School) 550 Maple Street (use the entrance off Sixth Street).

This room will accommodate a larger number of people than the Council Chambers.

and domestic resource, which can reduce U.S. reliance on foreign fuel imports.

Question: How has the technology improved since wind turbines were first developed?

Answer: Turbines designs have improved since the 1980s, when a large number of turbines where put up in California. Many lessons were learned from the performance of these early designs. Thanks to the DOE Turbine Research Program, and the trend towards wind turbine certification, today's turbine designs undergo rigorous engineering analysis and testing before they are commercially available.

Question: Are aesthetics a concern for wind farms?

Answer: Wind projects have different visual impacts than most other electric generation technologies, in part because wind projects usually are located in rural or even remote areas, often with few nearby homes and only occasional human visits and use. Aesthetics may be an issue, depending upon the value people place on the visual quality of the project setting and other considerations. Strategies to minimize visual effects involve the spacing, design, and uniformity of the turbines, markings or lighting, roads, and service buildings.

DOE Wind Energy Program Home || DOE Wind Webmaster